Town of CANMORE

ADDENDUM

DESCRIPTION: Miners' Union Hall Repairs and Maintenance	**ADDENDUM NUMBER: 01**
	DATE OF ISSUE: 21 January 2025
RFP #: FAC-17-12	**ISSUED BY: Amy Bernard**
	PAGE(S): 40

INSTRUCTIONS:

1. Amend your copy of the proposal in accordance with the detail below.
2. Retain one (1) copy for your file; sign a 2nd copy and attach to your submission as confirmation that the Addendum was taken into account in your proposal submission.
3. Failure to sign and attach this form with your submission may result in a non-compliant proposal.

DETAILS OF ADDENDUM:

1. **Question – Roofing System Specifications**
   Answer: See attachment (38 pages)

2. **Question: Must the roof step flashing be removed if they are found to be in good condition?**
   Answer: Given that critical interface between the siding and roof system, the Town does request that the flashing should be replaced and lapped properly with the weather resistive barrier. Some siding will be required to be removed and replaced to accomplish this task. New siding will be provided by the successful Proponent and installed as required.

3. **Question: Section 1.4.1.2 Main Room Flooring Replacement, part e.**
   Answer: The original RFQ states one large metal return-air floor register. There are in fact TWO (2) metal return-air floor registers to be removed and replaced with new.

4. **Question**: **Kitchen Cupboard Clarifications:** Which cupboards are to be priced for replacement?
   Answer: Only the 10 upper cupboards over the stove area are requested to be priced for replacement. Carcasses will remain in place.

5. **Question: Where can lay down areas be set-up?**
   Answer: The row of parking spaces adjacent to the building in the parking lot can be blocked off for laydown areas. The sidewalk along 7the Avenue can also be blocked off with a Road Use Permit application.

6. **Question: Will the Town act as General Contractor or expect the successful Proponent to act as GC?**
   Answer: The Town will act as General Contractor for all scopes of work.

7. **Question**: **Section 1.4.1.4 Kitchen counter Replacement**: It is advisable to remove the existing counters and replace with two ¾" plywood pieces and install the new SS surfaces directly onto the plywood.
   Answer: Instead of covering the existing counters, the request is to remove the existing counters and supply and install new stainless-steel counters as specified in section 1.4.1.4. The pass-through bar will include SS up the trim sides, and the taller counter will include SS trim up approximately 1' up the walls to avoid damage from dish trays up the walls.
8. **Clarification: Delete Section 1.4.1.4.2** – Replace upper and lower cupboards with stainless steel integrated counter and cupboard systems.

9. **Clarification:** If I am only bidding on the kitchen work, can I bid only on supplying and installing the counters but stipulate wood backing and tile work is completed by others?
   Answer: Yes. If you are bidding the entire scope of work, stipulate and separate the pricing (wood backing work and tile work included versus not included).

10. **Clarification: Section 1.4.1.2.1 Alternative Flooring Pricing:** Provide pricing for engineered hardwood flooring, either oak or maple, wide plank (6" wide or wider) in a rustic type of finish (such as saw marks). Specify the care required for the floors, and the commercial application warranty.

11. **Question: There are visible uneven spots in the flooring, do you want these corrected?**
    Answer: A price and a scope of work may be provided but is not required.

Name of Firm _____

Authorized Signature _____

Printed Name _____ **Date** _____

Part 1 General

1.1 RELATED SECTIONS

.1 Section 06 10 00 Rough Carpentry

.2 Section 07 31 13 Fibreglass Reinforced Asphalt Shingles

.3 Section 07 92 00 Joint Sealants

1.2 CONDITIONS

.1 Read and conform to the requirements details in Division 1, which apply to, and form part of all sections of the work.

.2 All work shall be carried out in strict accordance with the requirements of all relevant sections of the latest edition of the Provincial Building Code and all relevant standards referenced therein, including all amendments up to project date.

.3 Roofing Contractor shall be trained and experienced in the removal of roofing assemblies and any related demolition work.

.4 Inspect existing conditions, and substrates upon which work of this section is dependent. Report to the Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assuming full responsibility for the finished condition of the work.

1.3 REGULATORY AGENCIES AND PERMITS

.1 Coordinate and pay for all permits, notices and inspections required for the appropriate execution and completion of demolition work.

.2 Acceptable standards for materials and methods specified in the Alberta Building code are part of this Specification.

.3 Canadian Standards Association – CSA S350-M-1980 (R2003), Code of Practice for Safety in Demolition of Structures.

.4 Alberta Occupational Health & Safety Act & Regulations for Construction Projects.

.5 Comply with all fire safety regulations and procedures required by Alberta Construction Safety Act, and Municipal authorities having jurisdiction.

1.4 SCOPE OF WORK

.1 Provide all labour, products, equipment, and services necessary to perform the demolition, removal and disposal work specified in this section and in accordance with Bid Documents.

.2 This section specified the work associated with the removal of the existing roof assemblies.

.3 Disconnect, lift and reconnect all HVAC equipment as required to allow completion of roofing work as specified.

.4 Unless otherwise specified, materials for removal become the Contractor's property and shall be taken from site.

1.5 JOB CONDITIONS

.1 Parts of the structure that are not part of this contract shall be maintained in the condition existing on the date that tender is accepted.

.2 Should material resembling spray or trowel-applied asbestos be encountered work shall stop and the Consultant shall be immediately notified. Do not proceed until written instructions have been received from the Consultant.

1.6 PROTECTION

.1 It is the Contractor's responsibility to prevent movement of the existing building, settlement or damage of adjacent structures, services, walks, paving, trees, landscaping, and adjacent grades. The Contractor shall make good any damages occurred and be liable for any injuries caused by the demolition.

.2 The Contractor shall prevent debris from any building, site, municipal drainage system, or roof drains. All drains and mechanical and electrical systems shall be maintained in operation.

.3 Install barricades, guard rails, overhead protection, and other protection as required, giving full protection to occupants, general public, and workers employed on the demolition, and to adjacent buildings, properties and landscaping.

.4 Provide protection to adjacent building surfaces and properties against damage as a possible result of falling debris or other causes related to the work. Maintain free and safe passage to and from within the buildings.

.5 Where work leaves unprotected openings in exterior walls of building, provide temporary protection against weather.

Part 2 Products

Not Applicable

Part 3 Execution

3.1 PREPARATION

.1 Post warning signs at electrical lines and equipment that must remain energized to serve other properties during period of demolition.

.2 Disconnect designated mechanical services in accordance with the requirements of the local authority having jurisdiction.

.3 Active or energised utilities designated to remain undisturbed shall not be disrupted.

3.2 DEMOLITION AND DISPOSAL

.1 Disposal of all materials shall be in accordance with the requirements of the authorities having jurisdiction, unless otherwise directed in writing by the Consultant.

.2 Remove and dispose of parts of the existing roofing assembly to permit construction of remedial work as indicated in the Bid Documents that include but is not limited to the following:

.1 Existing metal flashings and trim, sleeves, vents, power vents, shingles, membrane, membrane flashings, securement bars, and all other items that will not be used as part of the new work.

.2 Removal of substrate sheathing at eaves to allow access to soffit airspace.

.3 Remove only portions of the existing roofing systems that can be replaced with the new specified roofing system, complete with membrane flashing on the same day.

.4 Make certain that the method of roofing removal will not damage the existing roof decking, other substrates, or adjacent components to remain.

.5 Alert Consultant of unusual or deteriorated construction found during roof removal operations. Permit Consultant to review conditions before roof replacement.

.6 At end of each day's work, ensure that new roofing is watertight. Leave work in a safe condition such that objects do not topple or fall. Protect interior of building from damage at all times.

.7 Do not use hoists or other equipment in a manner which would overload the structure.

.8 Provide means to keep dust to a minimum during demolition operations. Keep dusty material wetted.

.9 Remove existing equipment, services, and obstacles where required for refinishing or making good of existing surfaces, and replace same as work progresses

.10 Remove contaminated or dangerous materials from site and dispose in a safe manner to minimize danger at site or during disposal.

3.3 DISPOSAL

.1 Remove and dispose of debris continuously. Do not stockpile debris in a manner that could overload the structure or contaminate the grounds. Dispose of demolished materials except where noted otherwise.

.2 Do not sell or burn materials on site. Take measures to control dust during disposal operations.

.3 Implement a waste management program on this project site wherever feasible. Segregate from debris all materials that presently can be recycled or reused. Transport these materials to a reuse or recycling facility.

.4 Materials not for reuse or recycling shall be disposed of at an authorized landfill site. Cost(s) to transport to dump site, and for disposal of materials, etc., shall be included in the Bid Price.

3.4 MECHANICAL EQUIPMENT

.1 Use authorized Mechanical Contractor and Electrician to remove and reinstate identified mechanical equipment from rooftop to allow new roofing system installation.

.2 Coordinate all mechanical disconnects with Engineer and Owner's Representative to minimize disruption of services within the building.

.3 Ensure all systems are tested and functional before completion of work.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Carpentry work on perimeter walls, curbs and substrates.

.2 Carpentry work on sheathing and structure, as required.

1.2 RELATED REQUIREMENTS

.1 Section 07 31 13 Fibreglass Reinforced Asphalt Shingles

.2 Section 07 62 00 Sheet Metal Flashing and Trim

.3 Section 07 92 00 Joint Sealants

1.3 CONDITIONS

.1 Read and conform to the requirements detailed in Division 1, which apply to, and form part of all sections of the work.

.2 All work shall be carried out in strict accordance with the requirements of all relevant sections of the latest edition of the National Building Code Alberta Edition and all relevant standards referenced therein, including all amendments up to project date.

.3 All rough carpentry Work shall be performed by skilled carpenters.

.4 Inspect existing conditions, and substrates upon which work of this section is dependent. Report to the Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assuming full responsibility for the finished condition of the work.

.5 Defective work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the work of this section.

1.4 SCOPE OF WORK

.1 Provide all labour, products, equipment and services required to complete carpentry work specified in this Section according to Contract Documents.

.2 This section specifies the installation of rough carpentry to facilitate the installation of the new roof membrane.

1.5 REFERENCE STANDARDS

.1 American National Standards Institute/National Particleboard Association (ANSI/NPA)

.1 ANSI/NPA A208.1-[2009], Particleboard.

.2 ASTM International

.1 ASTM A653/A653M-[11], Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.2 ASTM D1761-[06], Standard Test Methods for Mechanical Fasteners in Wood.

.3 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-11.3-[M87], Hardboard.

.2 CAN/CGSB-51.32-[M77], Sheathing, Membrane, Breather Type.

.4 CSA International

.1 CSA O80 Series; Preservative Treatment for all Timber Products by Pressure Processes.

.2 CSA O121-[08], Douglas Fir Plywood.

.3 CSA O141-[05(R2009)], Softwood Lumber.

.4 CSA O325-[07], Construction Sheathing.

.5 CSA O437 Series-[93(R2011)], Standards on OSB and Waferboard.

.6 CAN/CSA-Z809-[08], Sustainable Forest Management.

.5 Forest Stewardship Council (FSC)

.1 FSC-STD-01-001-[2004], FSC Principle and Criteria for Forest Stewardship.

1.6 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section [01 33 00 - Submittal Procedures].

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for wood products and accessories and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Shop Drawings:

.1 Shop drawings shall indicate the following: All dimensions, material grade (stress designation), surface finish (sawn), fabrication details, Connection details, materials, sizes and finishes.

1.7 QUALITY ASSURANCE

.1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board. Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

.2 Sustainable Standards Certification:

1.8 DELIVERY, STORAGE AND HANDLING

.1 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.2 Storage and Handling Requirements:

.1 All materials shall be stored level on the site and raised off the ground, stacked using separate spacers, and covered with a waterproof material. In the case of wrapped members, the wrapping shall be slit on the underside to prevent the accumulation of condensation.

.2 Replace defective or damaged materials with new.

.3 Store Products away from open flame or ignition sources.

Part 2 Products

2.1 FRAMING STRUCTURAL AND PANEL MATERIALS

.1 OSB:

.1 Urea-formaldehyde free, CAN/CSA-Z809 or FSC or SFI certified.

.2 In conformance with CSA O437 OSB and Waferboard

.3 Minimum thickness: 15.5 mm (5/8")

.2 Lumber for Wood Blocking: softwood, S4S, kiln dried (S-dry) to a moisture content 19% or less

.1 In accordance with following standards, and showing required grade stamp:

.1 CSA O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.2 Grade No. 2 or better, dressed (not rough sawn)

.3 S-P-F, Hem-Fir, or D. Fir-L

.4 Permissible Sizes: 38 x 89 mm (2 x 4 in.), 38 x 140 (2 x 6 in.), 38 x 184 mm (2 x 8 in.), 38 x 235mm (2 x 10 in.).

.5 No preservative treatment

.3 Furring, blocking, nailing strips, grounds, rough bucks, curbs, fascia backing and sleepers:

.1 Board sizes: "Standard" or better grade.

.2 Dimension sizes: "Standard" light framing or better grade.

.3 Post and timbers sizes: "Standard" or better grade.

.4 Plywood, OSB sheathing and decking: to CSA O325 Construction Sheathing.

2.2 ACCESSORIES

.1 Nails, spikes and staples: to CSA B111.

.2 Proprietary fasteners:

.1 Fastening to Concrete or solid masonry (except for access ladders or safety equipment): toggle bolts, expansion shields and lag bolts, screws and inorganic fibre plugs,

.2 Fastening to Steel: bolts of explosive actuated fastening devices, recommended for purpose by manufacturer.

.3 Roof sheathing H-Clips are not to be used.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.

.1 Inform Consultant of unacceptable conditions immediately upon discovery.

.2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.2 MATERIAL USAGE

.1 Roof sheathing:

.1 OSB, thickness to match existing.

.2 Remove and replace sheathing at eaves (approximately 48" up-slope) with new plywood to match existing thicknesses.

.3 In locations of removed projections requiring in-fill of roof sheathing;

a. Roof openings less than 8" in diameter must be covered using sheet steel and fasteners.

b. Roof openings larger than 8" in diameter must be covered by removing sheathing back to midspan of the rafters for adequate fastening and allow new sheathing to span three rafters minimum.

3.3 INSTALLATION

.1 Install members true to line, levels and elevations, square and plumb.

.2 Construct continuous members from pieces of longest practical length.

.3 Install spanning members with "crown-edge" up.

.4 Install OSB roof sheathing at openings (removed projections) in accordance with requirements of NBC.

.5 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

3.4 CLEANING

.1 Progress Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.5 PROTECTION

.1 Protect installed products and components from damage during construction. Repair damage to adjacent materials caused by rough carpentry installation.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Asphalt roof shingles.

.2 Leak barrier and roof deck protection.

.3 Metal flashing associated with shingle roofing.

.4 Attic ventilation.

1.2 RELATED REQUIREMENTS

.1 Section 06 10 00 Rough Carpentry

.2 Section 07 62 00 Sheet Metal Flashing and Trim

.3 Section 07 92 00 Joint Sealants

1.3 REFERENCE STANDARDS

.1 American Society for Testing and Materials (ASTM) - Annual Book of ASTM Standards

1. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM D 3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
3. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
4. ASTM D 3462 – Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
5. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
6. ASTM D 7158 - Standard Test Method for Wind-Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).
7. AC438-1011-R1 – New Acceptance Criteria for Alternative Asphalt Roofing Shingles
8. UL 790 - Tests for Fire Resistance of Roof Covering Materials.
9. UL 997 - Wind Resistance of Prepared Roof Covering Materials.
10. UL 2218 – Impact Resistance of Prepared Roof Covering Materials.

.2 Asphalt Roofing Manufacturers Association (ARMA)

1. Sheet Metal and Air Conditioning Contractors National Association, 1nc. (SMACNA) - Architectural Sheet Metal Manual.

.3 National Roofing Contractors Association (NRCA)

.4 American Society of Civil Engineers (ASCE).

11. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.

1.4 CONDITIONS

.1 Read and conform to the requirements detailed in Division 1, which apply to, and form part of all sections of the work.

.2 All work shall be carried out in strict accordance with the requirements of all relevant sections of the latest edition of the Manitoba Building Code and all relevant standards referenced therein, including all amendments up to project date.

.3 All rough carpentry Work shall be performed by skilled carpenters.

.4 Inspect existing conditions, and substrates upon which work of this section is dependent. Report to the Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assuming full responsibility for the finished condition of the work.

.5 Defective work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the work of this section.

1.5 SUBMITTALS

.1 Submit copies of product data sheets, detail drawings and samples for each type of roofing product.

1.6 QUALITY ASSURANCE

.1 Manufacturer Qualifications: Provide all primary roofing products, including shingles, underlayment, leak barrier, and ventilation, by a single manufacturer.

.2 Installer Qualifications: Installer must be approved for installation of all roofing products to be installed under this section.

.3 Products must be single sourced from one manufacturer, and/or compatibility of all products used in this section must meet manufacturer's requirements for warranty.

1.7 DELIVERY, STORAGE AND HANDLING

.1 Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.

.2 Store products in a covered, ventilated area, at temperature not more than 43^{o}C; do not store near steam pipes, radiators, or in direct sunlight

.3 Store bundles on a flat, properly drained surface. Maximum stacking height shall not exceed manufacturer's recommendations. Store all rolls on end.

.4 Store and dispose of solvent-based materials in accordance with all federal, provincial and local regulations.

1.8 WEATHER CONDITIONS

.1 Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturer's recommendations.

1.9 MANUFACTURER'S WARRANTY

.1 The shingle manufacturer's limited warranty for laminated shingles shall be a minimum of thirty (30) years. The first seven years (minimum) of the warranty shall be "full start" non- prorated.

.2 The limited warranty shall be transferable to a new owner should the property be sold.

.3 Submit a written limited warranty signed by the manufacturer agreeing to refund money or replace materials, on a prorated basis sufficiently to cover both materials and application labor to compensate for asphalt shingles that fail in materials or manufacturing workmanship within the specified warranty period. The first seven years of the warranty shall require full refund or replacement on a non-prorated basis.

.4 Submit a five (5) year written limited warranty signed by manufacturer agreeing to replace or, if applicable, hand seal asphalt shingles that fail due to wind blow-offs for winds up to the design capabilities of the shingles included in the product literature. All reasonable costs for labor and material shall be covered by the manufacturer during this five (5) year period without proration.

.5 Submit a ten (10) year written limited warranty signed by manufacturer agreeing to replace or clean asphalt shingles manufactured with fungicide treatment that discolor or otherwise deteriorate in a manor the fungicide is intended to prevent. Cleaning that is potentially provided within this warranty provision shall be accomplished in a manner that is completely non-destructive and non-damaging to the shingles or the roofing system.

1.10 CONTRACTOR'S WARRANTY

.1 Contractor shall furnish warranty covering material and workmanship that shall include all items installed and/or repaired by the contractor. This includes proper installation of, but is not limited to, underlayment, shingles, flashing and counter flashing, roof penetrations, edge metal, ridge cap, and any other items installed by the contractor.

.2 Contractor shall agree to inspect and perform repairs within seventy-two hours of notification of a roof leak.

.3 If the roof leak is determined to not be related to the workmanship or material installed by the contractor in the opinion of the Owner after review with the Contractor, the contractor shall perform required repairs for which the owner shall reimburse the contractor.

a. For minor repairs, the Contractor shall proceed with the repair immediately upon general agreement of the associated costs with the Owner.
b. For major repairs, the Contractor shall immediately perform temporary

repairs to stop the leaks and submit a proposal to address the full extent of required work. Consultant shall be notified to review the major repair procedures.

Part 2 Products

2.1 MANUFACTURERS

.1 Acceptable Manufacturer: Malarkey Roofing Products, which is located at: 3131 N. Columbia Blvd. P. O. Box 17217; Portland, OR 97217; Toll Free Tel: 800-545-1191; Tel: 503-283-1191; Fax: 503-289-7644; Email: request info (bmichiels@malarkeyroofing.com); Web: www.malarkeyroofing.com

.2 Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

.3 Color: As selected by Owner from manufacturers' full range

2.2 SHINGLES

.1 Legacy (272) as manufactured by Malarkey Roofing Products.

.1 Malarkey Legacy shingles hold a Class A Fire Rating.

.2 As manufactured, Legacy meets the requirements of:

.1 ASTM D7158 Class H, ASTM D3462, ASTM D3161 Class F, ASTM D3018 Type I, ASTM E108 Class A, UL 2218 Class 4 Impact Resistance, ICC-ES AC438, and CSA A123.5.

.2 ICC Approval: ESR-3150.

.3 FBC Approval: No. 14809.

.4 Listed with UL and Intertek/WHI.

.3 Performance:

.1 Limited Material Warranty: 50 years.

.2 Limited Wind Warranty: 15 years. 110 mph (177 kph).

.3 Enhanced Wind Warranty Available: 130 mph (209 kph).

.4 Your Choice Warranty Program.

.5 Right Start Period: 15 years.

.6 Legacy Silverwood is listed with CRRC and compliant with CEC Title 24, Part 6 Cool Roof Requirements.

.7 NEX polymer mix includes recycled rubber and plastics.

.8 SEBS polymer modified asphalt laminate adhesive.

.9 SEBS asphalt seal-down adhesive.

.10 3M Smog-Reducing Granules.

.11 Enlarged nailing area of The Zone.

2.3 HIP AND RIDGE SHINGLES

.1 Flexor Polymer Modified 10 inches (254 mm) High-Profile Hip and Ridge: Malarkey No. 224 EZ-Ridge XT Scotchgard.

2.4 STARTER STRIP

.1 Full-Width Perforated Starter Shingle: Malarkey Smart Start No. 220.

2.5 LEAK BARRIER (ICE AND WATER SHIELD)

.1 Flexor Polymer Modified, Self-Adhering Fiberglass Underlayment:

Product: Malarkey 401 Arctic Seal.

.1 As manufactured, 401 Arctic Seal meets the requirements of ASTM D1970.

.2 Self-adhering sheet shall be nominal 55 mils (1.4 mm) thick.

.3 Self-adhering sheet shall be 36 inches (914 mm) in width.

.4 One roll covers 200 sq ft (18.58 sq m) of roof

2.6 SHINGLE UNDERLAYMENT

.1 Synthetic Underlayment:

Product: Malarkey 1031 SecureStart Plus.

.1 As manufactured, SecureStart Plus meets the requirements of ASTM D226, ASTM D4869, CSA A123.3, and ICC-ES AC188.

.2 FBC Approval - FL 23186.

.3 Code Approval - CCRR-1082.

.4 Sheet shall be 48 inches (1219 mm) in width.

.5 One roll cover 1000 sq ft (92.90 sq m) of roof.

2.7 ROOFING CEMENT

.1 Asphalt Plastic Roofing Cement meeting the requirements of ASTM D 4586, Type I or II.

2.8 ROOF ACCESSORIES

.1 Plumbing vent flashing; Flexible Base Flashing as manufactured by DuraFlo, or Approved equivalent.

2.9 ATTIC VENTILATION

.1 L-OmniRoll by Lomanco. LOR-30, or approved equivalent.

.1 Rigid plastic ridge ventilator designed to allow the passage of hot air from attics.

2.10 ACCESSORIES

.1 Standard round wire, zinc-coated steel or aluminum; 10 to 12 gauge, smooth, barbed or deformed shank, with heads 3/8 inch (9mm) to 7/16 inch (11mm) in diameter. Length must be sufficient to penetrate into solid wood at least 3/4 inch (19mm) or through plywood or oriented strand board by at least 1/8 inch (3.18mm).

Part 3 Execution

3.1 EXAMINATION

.1 Do not begin installation until the roof deck has been properly prepared.

.2 If roof deck preparation is the responsibility of another installer, notify the architect or building owner of unsatisfactory preparation before proceeding.

3.2 PREPARATION

.1 Remove all existing roofing down to the roof deck and dispose of properly.

.2 Remove existing power vents, roof vents and related roof flashings, and dispose of properly. Electrical connections to power vents shall be terminated by qualified electrician.

.3 Opening in roof sheathing shall be covered in coordination with Section 06 10 00 Rough Carpentry.

3.3 SUBSTRATE PREPARATION

.1 Verify that the deck is structurally sound and free of deteriorated decking. All deteriorated decking shall be removed and replaced with new materials

.2 Cover with sheet metal, all holes over 1 inch (25mm) in diameter, cracks over 1/2 inch (12mm) in width, loose knots and excessively resinous areas. Openings larger than 8" in diameter require installation of new sheathing. Support sheathing using dimensional lumber.

.3 Replace damaged deck with new materials.

.4 Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.

.5 Install crickets as required, on the upslope side of all chimneys in the north, any chimney wider than 24" (610mm), and on all roofs steeper than 6/12.

3.4 INSTALLATION OF UNDERLAYMENTS

.1 Apply specified underlayment as follows:

.1 Slopes of 4 units in 12 units or greater, apply single layer, polymer modified fiberglass or synthetic underlayment laid parallel to eaves, lapping to the 2 inches (51 mm) or 4 inches (102 mm) ply line, and 6 inches (152 mm) on ends, end laps staggered 6 feet (1829 mm) from course to course.

.2 Slopes of 4 units in 12 units or greater in ice dam regions, apply self-adhering, polymer modified underlayment along eaves and rakes to a point 24 inches (610 mm) beyond the interior surface of exterior walls. From there, apply single layer polymer modified fiberglass or synthetic underlayment, lapping over self-adhering underlayment a minimum of 6 inches (152 mm).

.3 Slopes of less than 4 units in 12 units in ice dam regions, apply single layer of self-adhering underlayment over entire roof surface.

.4 Apply full coverage self-adhering underlayment over entire low roof area above dining hall.

.2 Valleys: Open valleys utilizing 'W' valley metal:

.1 Begin application by centering a full-width valley liner of self-adhering underlayment to the roof deck in all valleys.

.2 The field underlayment is then woven through the valley over the layer of self-adhering underlayment or lapped 6 inches (152 mm) on each side. If fastening the field underlayment, be aware no fasteners are allowed within 6 inches (152 mm) of the valley centerline.

.3 Install min. 26-gauge prefinished sheet steel valley metal in a 'W' configuration.

.3 Pipe Flashing: Apply a bead of roofing cement around the pipe, sealing it to the underlayment prior to installing the metal pipe flashing. Install and secure the metal jack so that the bottom flange laps over onto the shingles. Side and top flanges shall have shingles lapping onto the flange. Shingles that lap onto metal shall be laid into a bed of roof cement. A bead of urethane sealant shall be applied where the pipe penetrates the cone of the jack.

.4 Perimeter Flashing: Use non-corrosive, 26-gauge (0.55 mm) sheet metal drip edge flashing. Install prior to underlayment on eave edges of roof and then along rake edges over the ends of installed underlayment. Install drip edge with flanges large enough (recommend 4-inch (102 mm) flanges) to completely cover roof edges. Secure with galvanized roofing nails, centered on the top flange at 8 to 10 inches (203 to 254 mm) O.C.

3.5 INSTALLATION OF LAMINATE SHINGLES

.1 Laminate Shingle Application; 5-5/8 inches (143 mm) Offset - Diagonal Pattern:

.1 Starter courses: Use Malarkey starter shingles or 3-tab shingles with the tabs cut off; apply to eave and rake edges of roof.

.2 Cut 6 inches (152 mm) off the length of the starter strip and apply at the lower, left-hand corner of roof. The starter course shall overhang the edge metal 1/4 to 3/4 inch (6 mm to 19 mm). Fasten with four (4) nails, 1-1/2 to 3 inches (38 to 76 mm) up from the eave with one fastener 1 inch (25 mm) from each end and the remaining two evenly spaced on the same line as the end fasteners.

.3 Continue starter course across the roof with a full-length shingles, butting them loosely together to avoid buckling.

.4 First course: Start with a full shingle applied directly over the starter course at the lower left-hand corner of the roof, and secure with fasteners.

.5 Second course: Cut 5-5/8 inches (143 mm) off the left end of a full shingle and apply the remaining 34-3/8 inch (873 mm) piece over the first course shingle. Align the bottom edge along a line level with the "sawtooth" overlay in the preceding course, exposing the first course 5-5/8 inches (143 mm). Secure with fasteners.

.6 Succeeding Courses: Courses three through seven are begun with partial shingles, each progressively 5-5/8 inches (143 mm) shingle shorter,

establishing the overall diagonal pattern or stair-step effect. (Pieces cut from shingles along one rake edge can be used to finish off courses on the opposite rake.)

.7 Apply a full shingle adjacent to each of the first seven courses to extend the pattern.

.8 Courses eight through fourteen repeat the process beginning with a full shingle and repeat the 1-to-7 course cycle on up the roof.

.9 Strike a chalk line every six courses or so to ensure straight courses. Shingles may be laid from either the left- or right-hand side. Start at either rake edge and follow layout and cutting instructions as required for proper application. Fill-in pieces less than three inches (76 mm) in width are not acceptable at rake edges.

3.6 FASTENERS

.1 Laminate Nailing Pattern: Nails must be placed within the nailing zone, 1 inch (25 mm) in from each end of the shingle and the remaining nails evenly spaced on the same line as the end nails. Fasteners shall not be overdriven to cut into shingles or underdriven. Fasteners shall be seated flush to the shingle surface as illustrated on the shingle wrapper. When fastening, butt shingles loosely together to prevent buckling.

.1 Fasteners per shingle/high wind areas: Six, including starter shingles.

3.7 INSTALLATION OF PROJECTIONS

.1 STATIC VENTS

a. Remove static vents at existing locations and dispose of properly.

b. Install 24-gauge sheet metal over existing openings, approximately 4" larger than openings on all sides. Secure using fasteners spaced 4" o.c.

c. Seal as per manufacturer's guidelines.

.3 ROOF CURBS

a. Roof curbs wider than 20" require saddles to be constructed to divert water. Saddles to be constructed using compatible materials.

b. Install 24-gauge sheet metal over existing openings, approximately 4" larger than openings on all sides. Secure using fasteners spaced 4" o.c.

c. Seal as per manufacturer's guidelines.

3.8 INSTALLATION OF ATTIC VENTILATION

.1 GENERAL

a. Ventilation must meet or exceed current and local code requirements.

.4 RIDGE VENTILATION

a. Install ridge vent along the entire length of ridges:

b. Cut continuous vent slots through the sheathing, stopping 6 inches (152mm) from each end of the ridge.

c. On roofs without ridge board, make a slot 1 inch (25mm) wide, on either side of the peak (2 inch (51mm) overall).

d. On roofs with ridge board, make two slots 1-3/4 inches (44.5mm) wide, one on each side of the peak (3 ½ inch (89mm) overall).

e. Install ridge vent material along the full length of the ridge, including uncut areas.

f. Butt ends of ridge vent material and join using roofing cement.

3.9 PROTECTION

.1 Protect installed products from foot traffic until completion of the project.

.2 Any roof areas that are not completed by the end of the workday are to be protected from moisture and contaminants.

3.10 CLEANING

.1 All materials removed from the roof shall be disposed of properly off site. Refuse shall not be stockpiled on site. Use 20, 30, or 40-yard bins located on site, and cover as required to prevent refuse blowing out of bins during high wind events.

.2 Debris shall be removed from eavestroughs, gutters, splash pad locations, and all grounds. Gutter and eavestrough drainage systems shall be cleaned and flushed to remove all blockages and debris.

.3 Use magnetic sweeper to collect fasteners and metal debris from all landscaping, lower roof levels and parking lot. Dispose of all debris properly from site.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 02 41 19 Selective Demolition

.2 Section 06 10 00 Rough Carpentry

.3 Section 07 31 13.13 Fibreglass-Reinforced Asphalt Shingles

.4 Section 07 92 00 Joint Sealants

1.2 REFERENCE STANDARDS

.1 American National Standards Institute (ANSI)

.1 ANSI/SPRI/FM 4435/ES-1, Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems 2017.

.2 ASTM International

.1 ASTM A606/A606M-[15], Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.

.2 ASTM A 653/A 653M-17, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.3 ASTM A755/A755M-16e1 Standard Specification for Steel Sheet, Metallic coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.

.4 ASTM D 523-14, Standard Test Method for Specular Gloss.

.5 ASTM D1970/D1970M-17a Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.

.6 ASTM F1667-17, Standard Specification for Driven Fasteners: Nails, Spikes, and Staples

.3 Canadian Roofing Contractors Association (CRCA)

.1 Roofing Specifications Manual 2012.

.4 Canadian Sheet Steel Building Institute (CSSBI)

.1 CSSBI S8-2008 Quality and Performance Specification for Prefinished Sheet Steel Used for Building Products.

.2 CSSBI B17-2002 Barrier Series Prefinished Steel Sheet: Product Performance & Applications.

.3 CSSBI Sheet Steel Facts #12 [2003] Fastener Guide for Sheet Steel Building Products.

.5 Health Canada/Workplace Hazardous Materials Information System (WHMIS 2015)

.1 Safety Data Sheets (SDS).

.6 Sheet Metal and Air-Conditioning Contractors National Association (SMACNA) (SMACNA)

.1 Architectural Sheet Metal Manual (2012)

.2 Residential Sheet Metal Guidelines (2001)

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit a PDF copy of manufacturer's product literature including product specifications and technical data sheets for sheet metal flashing fasteners and accessory materials. Include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit a PDF copy of WHMIS 2015 SDS - Safety Data Sheets in accordance with Section 01 35 29.06 - Health and Safety Requirements.

.3 Shop Drawings:

.1 Submit shop drawings only for sheet metal flashing and trim items that differ from those indicated in Contract Documents.

.2 Indicate sheet thickness, flashing dimensions and fastenings. Include anchorage, expansion joints and other provisions for thermal movement.

.3 Submit manufacturer's catalogue cut sheets for manufactured items.

.4 Samples:

.1 Submit two (2) 50 x 50 mm samples of each type of sheet metal material, finishes and colour to Consultant for approval prior to purchase.

1.4 PRE-INSTALLATION MEETING

.1 Include sheet metal flashing and trim on agenda of pre-installation meetings of affected sections.

1.5 MOCK-UPS

.1 Include flashings in mock-ups as specified for work of other affected sections.

.2 Prepare mock-ups for copings at an inside and outside corner, with starter strips extending past the cap flashing (coping) for easy review of starter strip (hook strip) securement.

.3 Prepare a mock-up of any sheet metal flashing or trim detail not indicated in Drawings upon request of Consultant.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Handle and store flashing materials to prevent creasing, buckling, scratching, or other damage.

Part 2 Products

2.1 BASE SHEET METAL MATERIALS

.1 Provide sheet metal in base metal thickness specified. Where no thickness specified, provide base sheet metal in thickness recommended in SMACNA Architectural Sheet Metal Manual for type of item being fabricated, but not less than the thickness required by the authority having jurisdiction.

.2 Zinc coated steel sheet: 0.70 mm nominal thickness (26 Ga.), commercial quality to ASTM A653/A653M, with Z275 designation zinc coating.

2.2 PREFINISHED STEEL SHEET

.1 Prefinished steel sheet with coating system consisting of base metal pre-treatment, primer, silicone modified polyester (SMP) or polyester topcoat meeting requirements of CSSBI S8.

.1 Finished one side with wash coat on back with finish system:

.1 Perspectra Plus Series, or

.2 WeatherXL coating system, by Valspar Corporation,

.3 Approved equivalent.

.2 Colour selected by Owner from manufacturer's standard range.

.3 Specular gloss: 30 units +/- 5 gloss units in accordance with ASTM D 523.

.4 Exposed coating thickness: dry film coating system thickness not less than 22 micrometres.

2.3 ACCESSORIES

.1 Isolation coating:

.1 Description: Alkali resistant bituminous paint.

.2 Specified Products:

.1 Sopralastic 120, by Soprema,

.2 810-07 Non-fibrated Asphalt Roof and Foundation Coating by Henry Bakor

.3 Or approved alternate

.2 Self-adhesive membrane underlay and tie-in membrane for metal flashings: To CSA A123.22 or ASTM D1970, minimum 1.0 mm thickness.

.1 Specified Product: Lastobond Shield HT, by Soprema, or Approved equivalent

.3 Sealants: in accordance with Section 07 92 00, exposed sealants in colour to match flashing finish colour.

.4 Starter strip (hook strips): of same base material, and temper as prefinished sheet metal, continuous. Nominal thickness 85 mm (22 Ga).

.1 Provide continuous hook strip at outside face of parapets.

.5 Nails: of same material as sheet metal, ring shank flat head roofing nails of minimum length of 50 mm (2") and minimum thickness of 0.155".

.6 Exposed screws:

.1 Description: Hex-head, sharp point carbon steel screws with corrosion resistant coating, with pre-mounted EPDM bonded washer. Colour to match surrounding prefinished metal colour.

.2 Specified Products:

.1 #10-15 x 2"L - 1/4" woodGrip HiLo HWH Milled Point, Assembled bond Seal Washer, metal to wood, by SFS Intec Inc.

.2 #10 X 2" WoodTite HLX, by Atlas Bolt & Screw Company

.3 #10 X 2" Master Gripper, by Leeland Industries Inc.

.7 Concealed screws for continuous starter strip (hook strip):

.1 Description: #10 x 1-1/2" corrosion resistant carbon steel screws with type A point style and pancake head.

.8 Touch-up paint: as recommended by prefinished material manufacturer.

2.4 FABRICATION

.1 Fabricate sheet steel flashings and other sheet steel work as indicated in Drawings.

.2 Form pieces in 3 m (10') maximum lengths.

.1 Make allowance for expansion at joints.

.3 Hem exposed edges on underside 12 mm.

.1 Mitre and seal corners with sealant.

.4 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.

.5 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.5 METAL FLASHINGS

.1 Form flashings, copings and fascias to profiles indicated of 0.70 mm nominal thickness (26 Ga.) prefinished steel.

2.6 REGLETS AND TERMINATION FLASHINGS

.1 Form recessed reglet terminations and surface mounted reglets of 0.70 mm nominal thickness (26 Ga.) prefinished steel sheet metal as per Drawings.

.1 Provide slotted fixing holes and steel screws with coloured head with integral neoprene washers.

2.7 EAVES TROUGHS AND DOWNPIPES

.1 Eavestrough and downpipe repairs shall be made using compatible materials, matching in type, size, and colour as existing, unless indicated otherwise in Drawings.

.2 Extend downpipes to ground level and install new splash pads at downpipe discharge.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSTALLATION

.1 Install sheet metal work as detailed.

.2 Use concealed fastenings on front (exposed) faces, and exposed fasteners in areas hidden from view.

.3 Provide underlay under sheet metal.

.1 Secure in place and lap joints 100 mm.

.2 Provide self-adhesive membrane under sheet metal flashing, over wood blocking or concrete blocking not covered by P.V.C. membrane.

.4 Counterflash membrane flashings at intersections of roof with vertical surfaces and curbs.

.1 Flash joints using S-lock seams and standing seams in corners, forming tight fit over hook strips, as detailed.

.5 Lock end joints and caulk with sealant.

.6 Reglet terminations: Turn top edge of flashing into recessed reglet or mortar joint minimum of 25 mm. Lead wedge flashing securely into joint and caulk flashing at reglet with compatible sealant.

.7 Where flashing installed with mechanical fasteners, install fasteners in slotted or oversize holes to allow expansion and contraction of flashings.

.8 Provide isolation coating or impervious self-adhesive membrane to separate aluminum items from concrete and masonry.

3.3 EAVES TROUGHS AND DOWNPIPES

.1 Repair existing eavestrough joints and outlets with new sealants, as required. .

.2 Install downpipe extensions to ground level at existing locations.

.1 Secure downpipes to substrates using fasteners and seal as required to maintain watertight surfaces.

.2 Supply and install concrete splashpads at downpipe spill outs.

3.4 CLEANING

.1 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

.2 Leave work areas clean, free from grease, finger marks and stains.

.3 Utilize magnet sweepers to remove ferrous metal cut-offs and fasteners. Ensure all cut-ends are removed from grounds.

END OF SECTION

Part 1 General

1.1 SECTIONS INCLUDES

.1 Preparation of surface to be sealed and application of various types of joint sealants.

.2 Provisions to complete other various sections containing sealant or caulking specifications, including related requirements.

1.2 RELATED REQUIREMENTS

.1 Section 07 31 13.13 Fibreglass Reinforced Asphalt Shingles

.2 Section 07 54 19 Polyvinyl-Chloride Roofing (P.V.C.)

.3 Section 07 62 00 Sheet Metal Flashing and Trim

1.3 REFERENCE STANDARDS

.1 ASTM International

.1 ASTM C920-14a – Standard Specification for Elastomeric Joint Sealants

.2 ASTM C1311 – 14 Standard Specification for Solvent Release Sealants

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-19.13-M87, Sealing Compound, One-Component, Elastomeric, Chemical Curing.

.2 CGSB 19-GP-14M-1984, Sealing Compound, One-Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing (Reaffirmation of April 1976).

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS and WHMIS 2015)

.1 Material Safety Data Sheets (MSDS)

.2 Safety Data Sheets (SDS).

.4 Sealant, Waterproofing and Restoration Institute (SWRI)

1.4 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for joint cleaners, sealant primers, backer rods, tapes, fillers and joint sealants. Include product characteristics, performance criteria, physical size, finish and limitations.

.2 For each type of sealing compound, manufacturer's product data to include:

.1 Caulking compound material type and standard for which it complies

.2 Compatible primers for applicable surfaces

.3 Compatibility when different sealants are in contact with each other.

.4 Available colours

.3 Submit a pdf copy of WHMIS MSDS or WHMIS 2015 SDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.

.3 Samples:

.1 Submit samples of each type of material and colour

.2 Cured samples of exposed sealants for each colour where required to match adjacent material.

.4 Manufacturer's Instructions:

.1 Submit instructions to include installation instructions for each product used.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:

.1 Store materials in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.2 Replace defective or damaged materials with new.

1.6 SITE CONDITIONS

.1 Ambient Conditions:

.1 Proceed with installation of joint sealants only when:

.1 Ambient and substrate temperature conditions are within limits permitted by joint sealant manufacturer or are above 5 degrees C.

.2 Joint substrates are dry.

.3 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

.2 Joint-Substrate Conditions:

.1 Proceed with installation of joint sealants only after contaminants capable of interfering with adhesion are removed from joint substrates.

1.7 ENVIRONMENTAL REQUIREMENTS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS 2015) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of Safety Data Sheets (SDS) acceptable to Health Canada.

1.8 QUALITY ASSURANCE/MOCK-UP

.1 Construct mock-up in location directed by Consultant.

.2 Construct mock-up to show location, size, shape, and depth of joints complete with back-up material, primer, caulking, and sealant.

.3 Mock-up will be used to judge workmanship, substrate preparations, operation of equipment and material application.

.4 Allow 24 hours for inspection of mock-up by Consultant before proceeding with sealant work.

.5 When accepted, mock-up will demonstrate minimum standard of quality required for this Work. Approved mock-up may remain as part of finished work.

1.9 WARRANTY

.1 Installers Warranty:

.1 Original statement on installer's letterhead in which installer agrees to repair or replace joint sealants that demonstrate deterioration or failure within two (2) years warranty period.

.2 Include coverage for installed sealants and accessories which fail to achieve air tight seal, water tight seal, and exhibit loss of adhesion or cohesion, or do not cure.

.2 Defective joint sealant installation covered under the warranty shall include but not be limited to: joint leakage, hardening, craze cracking, crumbling, melting, bubbling, shrinkage, runs, sags, change of colour, loss of adhesion, and staining of adjoining or adjacent material surfaces.

.3 Provide replacement of defective work prior to the end of the warranty period according to the Engineer's recommendations at no additional cost to the Owner.

Part 2 Products

2.1 COMPATIBILITY WITH ROOFING SYSTEM

.1 All sealants to be incorporated into the roofing system must be compatible and qualify to be included with total system manufacturer warranties.

.2 At the request of the Consultant, provide written declaration from the manufacturer that components/materials to be installed as part of the roofing system are compatible and will not reduce the performance of the roofing system, or void the Warranty.

2.2 SEALANT MATERIALS

.1 Where sealants are qualified with primers use only primers as recommended by sealant manufacturer.

2.3 DESIGNATIONS

.1 Butyl Sealant: single component, solvent release butyl rubber sealant, polyisobutylene plasticized; non-skinning, non-sagging, black colour:

.1 In conformance with: ASTM C1311 or CGSB 19-GP-14M
.2 Elongation Capability 7 to 10 percent
.3 Service Temperature Range 25 to 82degrees C
.4 Shore A Hardness Range 10 to 30
.5 Acceptable Products:
.1 Tremco Butyl, by Tremco Ltd., a division of RPM Company.
.2 or approved equivalent.

.2 Butyl Based Mastic – For use with Single-ply PVC Roofing:

.1 Description: One-part mastic for use in compression seals. Not designed to be used as an exposed caulk.
.2 Specified Products:
.1 Water Cut-off Mastic, by Carlisle SynTec

.3 Polyether Sealant:

.1 Universal Single-Ply Sealant, by Carlisle SynTec
.2 Sopramastic SP2, by Soprema
.3 M-1 Structural Sealant by ChemLink
.4 Supra Elite, by Mulco, a division of AkzoNobel
.5 or approved equivalent.

.4 Gutter Sealant:

.1 Gutter Seal, by Tremco Ltd., a division of RPM Company.
.2 Gutter, by Mulco, a division of AkzoNobel

.5 High Temperature Silicone, single component:

.1 Dow Corning Hi-Temp Silicone Sealant by Dow Corning
.2 Sikasil-GP manufactured by Sika Canada Inc.
.3 or approved equivalent.

.6 Urethanes one-part, Non-Sag, Low Modulus:

.1 In conformance with:
.1 CGSB-19.13, Type 2, MCG-2-40, MCG-2-25, colour to match adjacent materials.
.2 Type S, Grade NS
.2 Elongation Capability: 50 percent
.3 Specified Products:
.1 Dymonic 100 (+/-50% movement capability), by Tremco Ltd., a division of RPM Company
.2 Sikaflex 15LM, by Sika Canada Inc.
.3 or approved equivalent.

.7 Thermoplastic Sealant:

.1 Supra Expert, by Mulco, a division of AkzoNobel
.2 Kop-R-Lastic, by Henry Company Canada

.8 Air/Weather barrier Sealant: Caulking to polyethylene face membranes

.1 Dow Corning® 758 Weather barrier Sealant or Dow Corning® 756 SMS Silicone Building Sealant

.2 Spectrem 1 by Tremco

.9 SikaSil WS-305 CN by Sika Canada Inc. Pre-formed Silicone Seal: Preformed, ultra-low modulus silicone extrusion for bonding to substrates with silicone sealant:

.1 Dow Corning 123 Silicone Seal, by Dow Corning Corporation

.2 Dow Corning STS, by Dow Corning Corporation

.3 Tremco Simple Seal

.4 Sika Silbridge-300 by Sika Canada Inc.

.10 Single Ply Termination Sealant:

.1 Specified Products:

.1 Universal Single-Ply Sealant, by Carlisle SynTec

2.4 JOINT CLEANER:

.1 Description: Non-corrosive and non-staining type, compatible with joint forming materials and sealant in accordance with sealant manufacturer's written recommendations.

2.5 MASKING TAPE

.1 Non-staining, non-absorbent material compatible with joint sealant and surface adjacent to joints.

2.6 SEALANT PRIMERS:

.1 Description: Non-staining type recommended by sealant manufacturer, where deemed necessary.

Part 3 Execution

3.1 EXAMINATION

.1 Before commencing work, verify that joint configuration and surfaces have been provided as specified under the work of other sections to meet intent of sealant specification, that joint conditions will not adversely affect execution, performance, or quality of completed work, and that they can be put into acceptable condition by means of preparation specified in this section.

.2 Inspect existing conditions and substrates upon which work of this section is dependent. Report to the Consultant in writing any defects or discrepancies. Commencement of work implies acceptance of existing conditions and assuming full responsibility for the finished condition of the work.

.3 Ascertain that sealers applied to sealant substrates are compatible with the sealant used and that full bond between sealant and substrate is attained.

Request samples of the sealed or coated substrate from their fabricators for testing of compatibility and bond if necessary.

.4 Inspect sealant configuration for width and depth. Depth of joint should be 1/2 joint width with a minimum depth of 6 mm (1/4") and a maximum depth of 13 mm (1/2") unless specified otherwise. For fillet joints, a minimum of 6 mm (1/4") adhesion between sealant and substrate must be achieved on both sides of the joint unless specified otherwise.

.5 Defective work resulting from application to unsatisfactory joint conditions will be considered the responsibility of those performing the work of this section.

.6 Install sealant mock-up on all substrates to be caulked to determine sealant and primer requirements and surface prep/removal of any existing failed sealants.

3.2 SURFACE PREPARATION

.1 Clean with specified Joint Cleaner, bonding joint surface of harmful substances including dust, rust, oil grease, and other matter which may impair Work.

.2 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings; unless tests have been performed to ensure compatibility of material. Remove coatings as required.

.3 Ensure joint surfaces are dry and frost free.

.4 Ensure drain / weep holes are unobstructed.

.5 Prepare surfaces in accordance with manufacturer's directions.

.6 Removal and replacement of sealants:

.1 Remove existing sealants, dust, oil, grease, oxidation, mill scale, coatings and all other loose material by cutting, brushing, scrubbing, scraping and/or grinding. In no case, however, shall components be damaged during surface preparation.

3.3 MASKING TAPE

.1 Where necessary to prevent staining or for neat appearance, mask adjacent surfaces prior to priming and caulking.

3.4 APPLICATION

.1 Sealant:

.1 Apply sealant in accordance with manufacturer's written instructions.

.2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.

.3 Apply sealant in continuous beads.

.4 Apply sealant using gun with proper size nozzle.

.5 Use sufficient pressure to fill voids and joints solid

.6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.

.7 Tool exposed surface before skinning begins to give concave shape.

.1 Tooling to be performed by proper tool or "spatula". Dry tooling is preferred, although compatible wetting agents can be used in limited amounts after an initial pass.

.8 Remove excess compound promptly as work progresses and upon completion.

.2 Curing:

.1 Cure sealants in accordance with sealant manufacturer's instructions.

.2 Do not cover up sealants until proper curing has taken place.

3.5 CLEANING:

.1 Progress Cleaning:

.1 Leave Work area clean at end of each day.

.2 Clean adjacent surfaces immediately.

.3 Remove excess and droppings, using recommended cleaners as work progresses.

.4 Remove masking tape after initial set of sealant.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.6 PROTECTION

.1 Protect installed products and components from damage during construction.

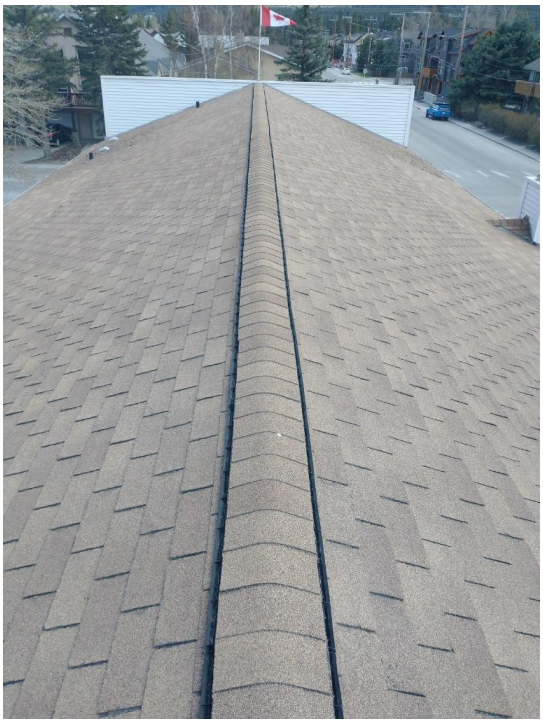
.2 Repair damage to adjacent materials caused by joint sealants installation.

END OF SECTION

Appendix F - Photographic Documentation

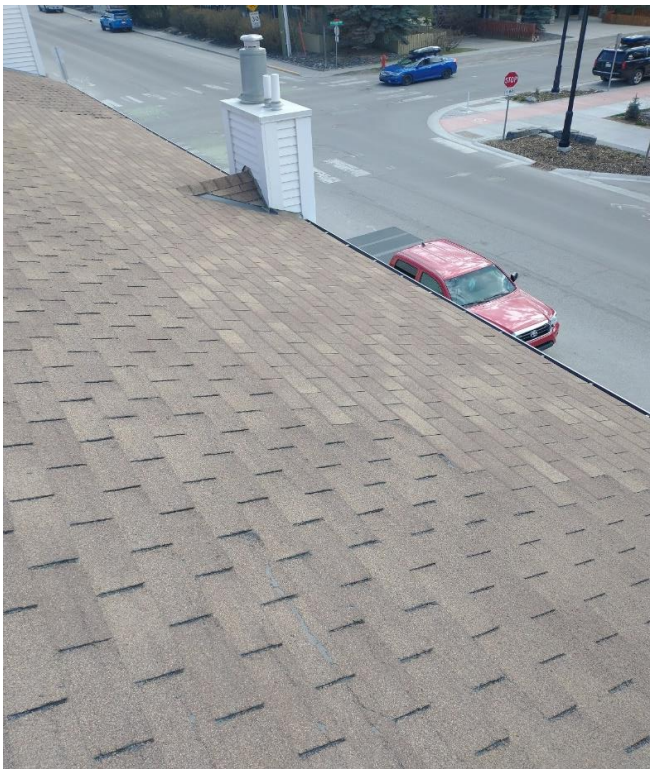
1) Overview of Front Entrance.

2) Overview of Section 1.1 facing South.



3) Overview of lower roof Section 1.2.

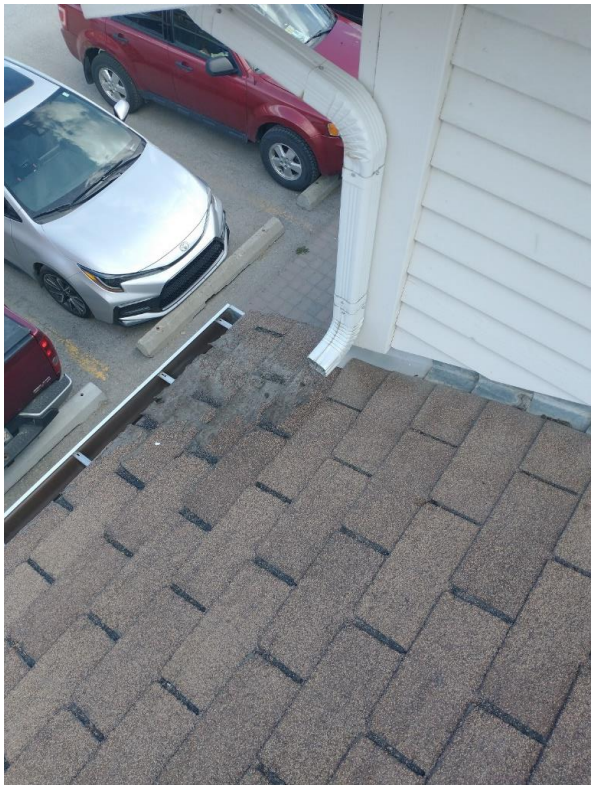
4) Overview of larger shingle repair area at chimney chase.



5) Overview of roof saddle at chimney.

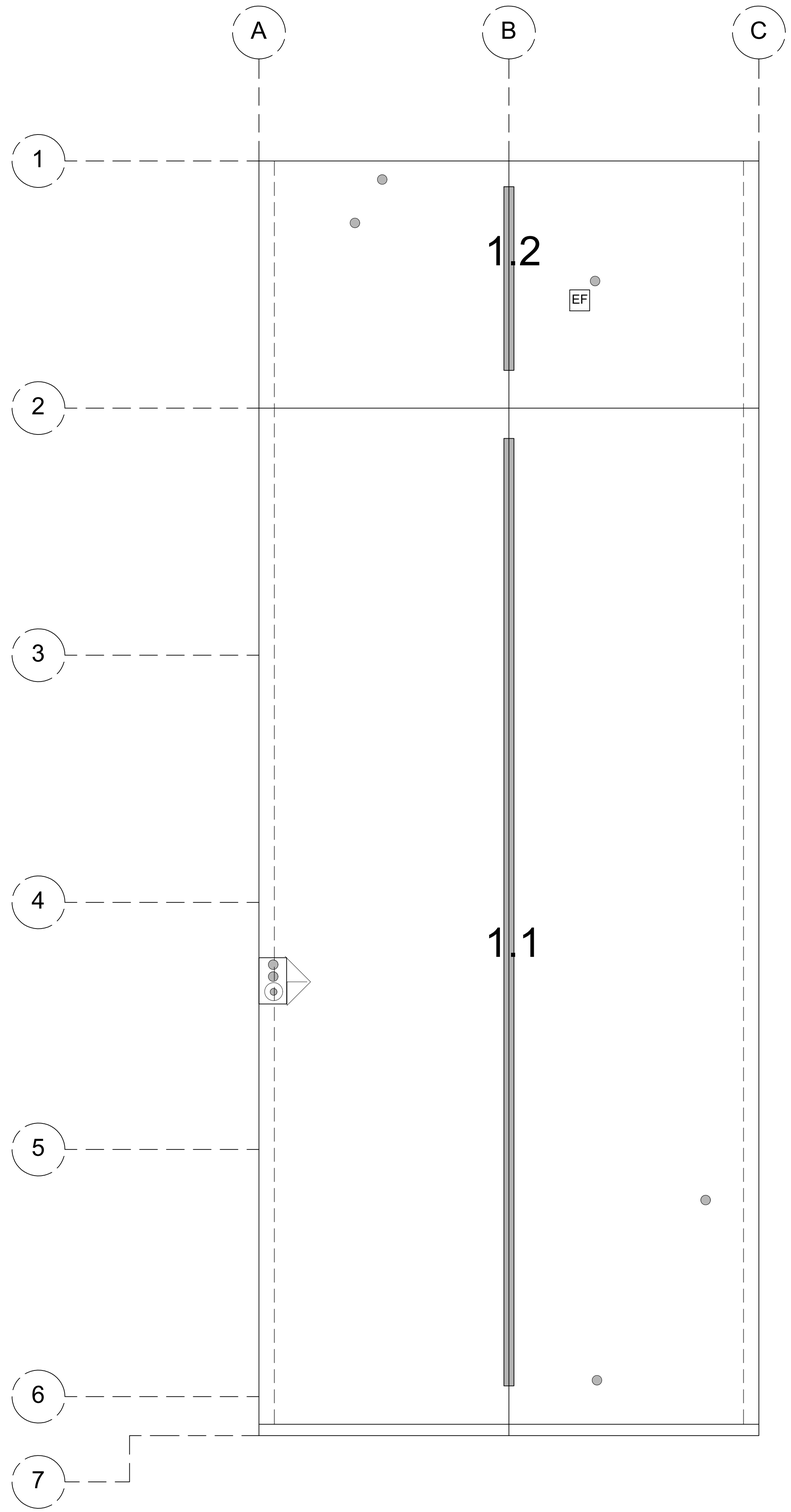
6) Overview of vertical transition and step flashing.

7) Downpipe to be relocated to drain to ground.



8) Downpipes to extend to ground.

9) Downpipes requiring splash pads and extensions.



1 / R1 ROOF PLAN
NOT TO SCALE

N

EXISTING ROOF SYSTEM 1.1 & 1.2

- 1 LAYER OF 3 TAB ASPHALT SHINGLES
- FELT PAPER,
- EXISTING 1/2" WOOD DECK

BASE BID 1.1 & 1.2

- SHEET METAL FLASHING AND TRIM
- NEW GUTTER FLASHING
- EXTEND DOWNSPOUT WHERE REQUIRED
- NEW ASPHALT SHINGLES
- NEW UNDERLAYMENT
- NEW SELF-ADHERING ICE AND WATER MEMBRANE AT EAVES.
- EXISTING 1/2" WOOD DECK

GENERAL NOTES

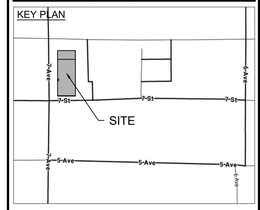
1. DRAWING IS NOT TO BE SCALED.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP THE BUILDING WATERTIGHT AND SECURE AT ALL TIMES.
3. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL SITE MEASUREMENTS & EXISTING CONDITIONS FOR ESTIMATING & MATERIAL ORDERING.
4. ROOF TOP UNITS, VENTS, EXISTING DRAINS,ROOF EQUIPMENTS AND FLUES SHOWN ON THIS ROOF PLAN ARE FOR INFORMATION ONLY. CONFIRM EXACT LOCATIONS OF RTUS, VENTS AND FLUES ONSITE.
5. IF HVAC EQUIPMENT IS MOVED OR DISCONNECTED, CONTRACTOR IS TO PROVIDED CONFIRMATION UPON COMPLETION OF WORK THAT ALL WORK WAS COMPLETED IN CONFORMANCE WITH GAS CODE AND ALL APPLICABLE CODES AND BY-LAWS.
6. REMOVE ALL ABANDONED PLUMBING VENTS, RTU CURBS, SLEEPERS, EXHAUST FANS AND FLUES. REINSTATE DECK EXTENDING TO SUPPORT JOINTS AND INSTALL NEW ROOF ASSEMBLY.
7. AT THE START AND UPON COMPLETION OF THE PROJECT, REMOVE ALL DEBRIS, GARBAGE, CONSTRUCTION MATERIAL, BROKEN PATIO STONES, AND CAULKING / ADHESIVE FROM ALL AFFECTED SURFACES. REMOVE DEBRIS OF CURRENT/PREVIOUS RENOVATIONS AND OBJECTS/MATERIALS THAT ARE NOT REQUIRED.
8. CLEAR OUT EAVESTROUGH, DOWN SPOUTS AND ENSURE ROOF IS FREE DRAINING THROUGHOUT THE PROJECT.
9. REMOVE AND REPLACE ALL SHEET METAL FLASHING AND TRIM INCLUDING HOOK STRIPS WHERE PRESENT ON ALL ROOF SECTIONS IN CONTRACT WITH NEW SPECIFIED SHEET METAL.
10. REMOVE EXISTING DETERIORATED SEALANTS AND REPLACE WITH NEW AT WALL.

DATE	REV	ISSUE

ROOF WIND LOADS	
ROOF AREA	WIND LOAD
ROOF TYPE 1:	
End Zone Width, Z	3.8 FT
Corner, C	-42 PSF
Edge, S	-32 PSF
Field, R	-23 PSF

ROOF REPLACEMENT AREA	
ROOF AREA	4,202 SQ.FT.

KEY PLAN



LEGEND:

- HEAT STACK ON CONE BASE
- PLUMBING STACK
- EF — EXHAUST FAN

Town of CANMORE

Contractor shall confirm and be responsible for all dimensions and existing conditions that may affect the scope of work.

A [detail no.]
B [location no.]
C [drawing no.]

Client:	TOWN OF CANMORE
Project Name:	ROOF REPLACEMENT
Address:	738 7 STREET, CANMORE, ALBERTA
Project No.:	A25005-RR25
Drawing Title:	ROOF PLAN
Scale:	N.T.S.

Designed By:	D.D.	Date:
Drawn By:	D.A.	Date:
DRAWING PACKAGE R1-NN STAMPED AND APPROVED BY: P.S.		Date:

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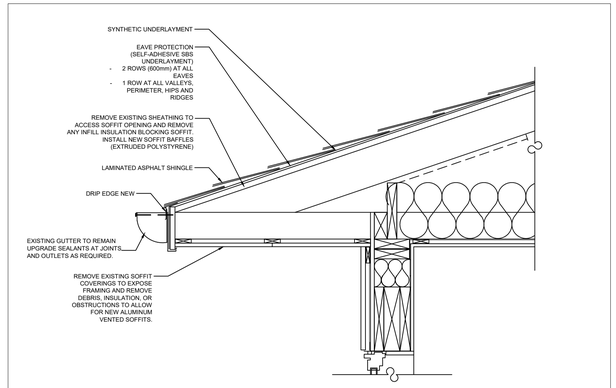
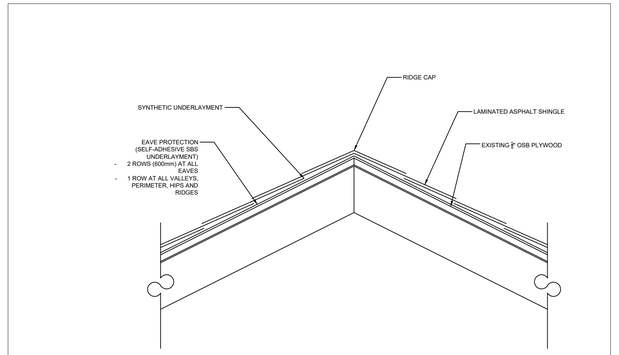
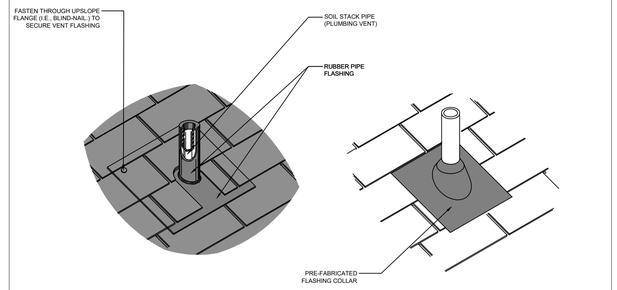
Page Number: R1



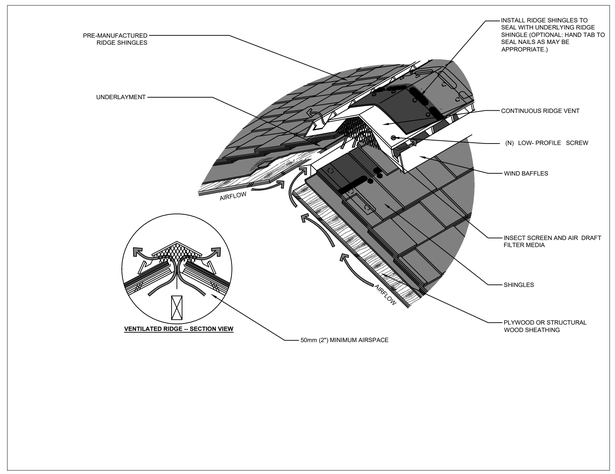
1 / D1 SOFFIT DETAIL
NOT TO SCALE



2 / D1 HIP DETAIL
NOT TO SCALE



3 / D1 SOIL PIPE STACK/PLUMBING VENT
NOT TO SCALE



4 / D1 RIDGE VENT
NOT TO SCALE

DATE	REV	ISSUE

ROOF WIND LOADS	
ROOF AREA	WIND LOAD
ROOF TYPE 1:	
End Zone Width, Z	
Corner, C	
Edge, S	
Field, R	

ROOF REPLACEMENT AREA	
ROOF AREA	

Town of CANMORE

Contractor shall confirm and be responsible for all dimensions and existing conditions that may affect the scope of work.

A [detail no.]
B [location no.]
C [drawing no.]

Client:	TOWN OF CANMORE
Project Name:	ROOF REPLACEMENT
Address:	738 7 STREET, CANMORE, ALBERTA
Project No.:	A25005-RR25
Drawing Title:	DETAILS
Scale:	N.T.S.

Designed By:	D.D.	Date:
Drawn By:	D.A.	Date:
DRAWING PACKAGE R1-IAN STAMPED AND APPROVED BY: P.S.		Date:

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