MACEWAN VILLAGE
ASPHALT SHINGLE REPLACEMENT

BUILDING 616

BUILDING 636

ARCHITECTURAL

LABEL	EXISTING ROOF SCHEDULE
ER1	THREE TAB ASPHALT SHINGLES c/w 1-PLY #15 FELT UNDERLAYMENT 12.7 mm OSB PLYWOOD DECKING c/w 1-PLY RUBBERIZED EAVE PROTECTION MEMBRANE WOOD TRUSSES c/w COMMON INSULATED ATTIC SPACE
ER2	THREE TAB ASPHALT SHINGLES c/w 1-PLY #15 FELT UNDERLAYMENT 12.7 mm OSB PLYWOOD DECKING c/w 1-PLY RUBBERIZED EAVE PROTECTION MEMBRANE WOOD TRUSSES c/w UN-INSULATED ATTIC SPACE

LABEL	NEW ROOF SCHEDULE
R1	NEW ARCHITECTURAL LAMINATE ASPHALT SHINGLES NEW 1-PLY SYNTHETIC MEMBRANE UNDERLAYMENT EXISTING 12.7 mm OSB PLYWOOD DECKING c/w 1-PLY RUBBERIZED EAVE PROTECTION MEMBRANE WOOD TRUSSES c/w COMMON INSULATED ATTIC SPACE
R2	NEW ARCHITECTURAL LAMINATE ASPHALT SHINGLES NEW 1-PLY SYNTHETIC MEMBRANE UNDERLAYMENT EXISTING 12.7 mm OSB PLYWOOD DECKING c/w 1-PLY RUBBERIZED EAVE PROTECTION MEMBRANE WOOD TRUSSES c/w UN-INSULATED ATTIC SPACE

Legend

- Exhaust Fan
- Plumbing Vent
- Water Flow
- Drawing Note
- Curbed Chimney Pipe
- Roof Drain
- AC Unit
- Curbed Gooseneck
- Roof Access Hatch
- Scupper Drain
- Multi-Pipe Curb
- Concrete Paver

General Notes

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Revision #	Revision Date

Consultant

KRAIN PROFESSIONAL ROOF CONSULTING SOLUTIONS

109 Pointe Marcelle
Beaumont, AB T4X 0G2

Office: (780) 929.6480
KrainConsulting.com

Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

Drawing Title

TITLE PAGE
ROOF SCHEDULES

Scale	File No.	Drawing No.
-	24-1162	SK-A

Drawing Date

JULY 5, 2023

1. LIST OF SPECIFICATION SECTIONS

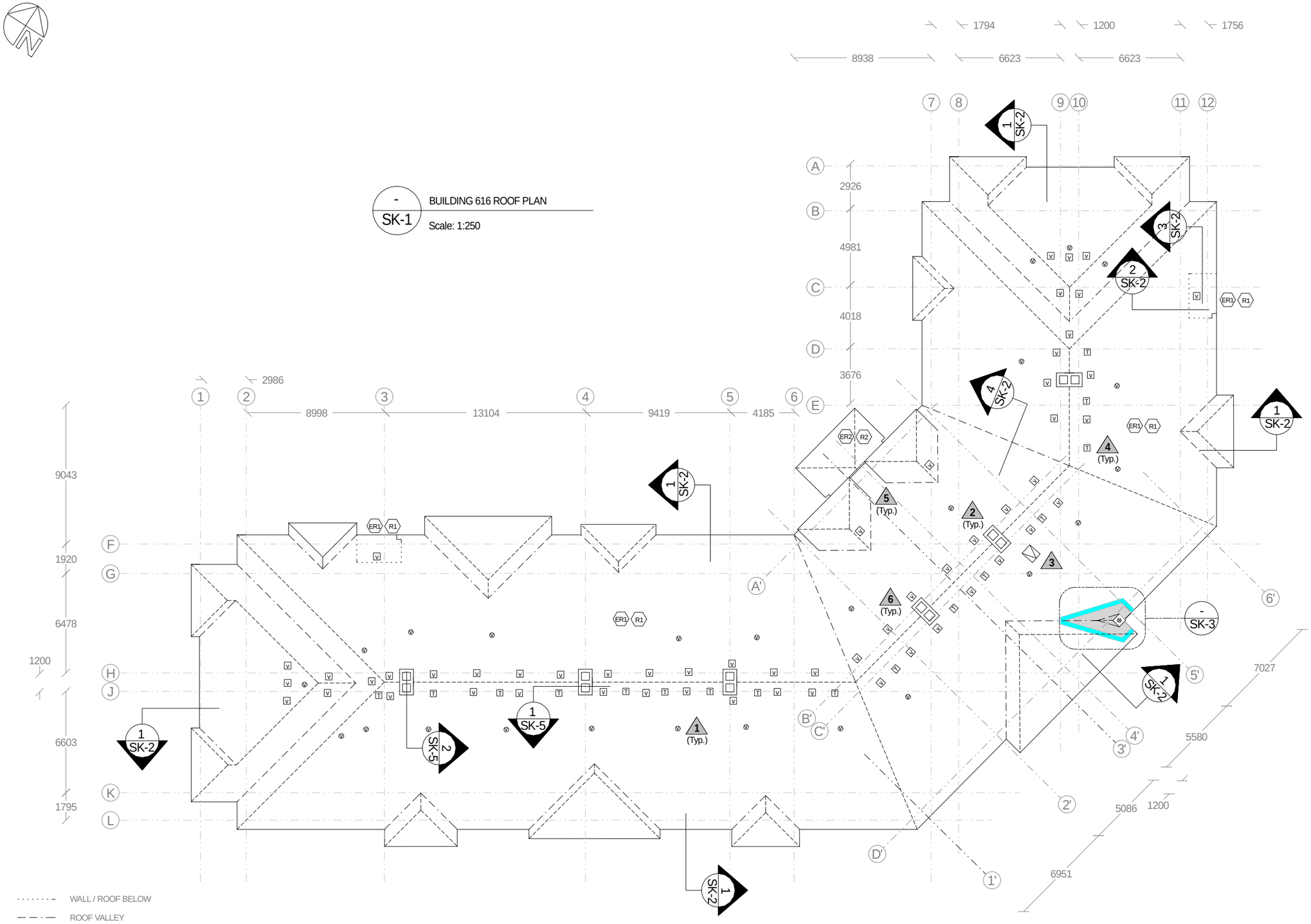
END OF SECTION

CONTRACT DRAWINGS

The following is a list of the contract drawings:

SERIES	NAME/TITLE	DATE	REVISION
SK-A	Title - Schedules	July 5, 2023	
SK-1a	Roof Plan – Building 616	July 19, 2023	
SK-1d	Roof Plan – Building 636	July 23, 2023	
SK-2	Details	July 10, 2023	
SK-3	Details	July 15, 2023	
SK-4	Details	July 19, 2023	
SK-5	Details	July 27, 2023	
SK-6	Construction Notes	July 28, 2023	

END OF LIST OF DRAWING SHEETS



Legend

- F Exhaust Fan
- Ⓥ Plumbing Vent
- Water Flow
- 2 Drawing Note
- Roof Drain
- Curbed Chimney Pipe
- G Curbed Gooseneck
- AC AC Unit
- V Low-Profile Vent
- Scupper Drain
- T High Profile Vent

General Notes

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Consultant

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Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

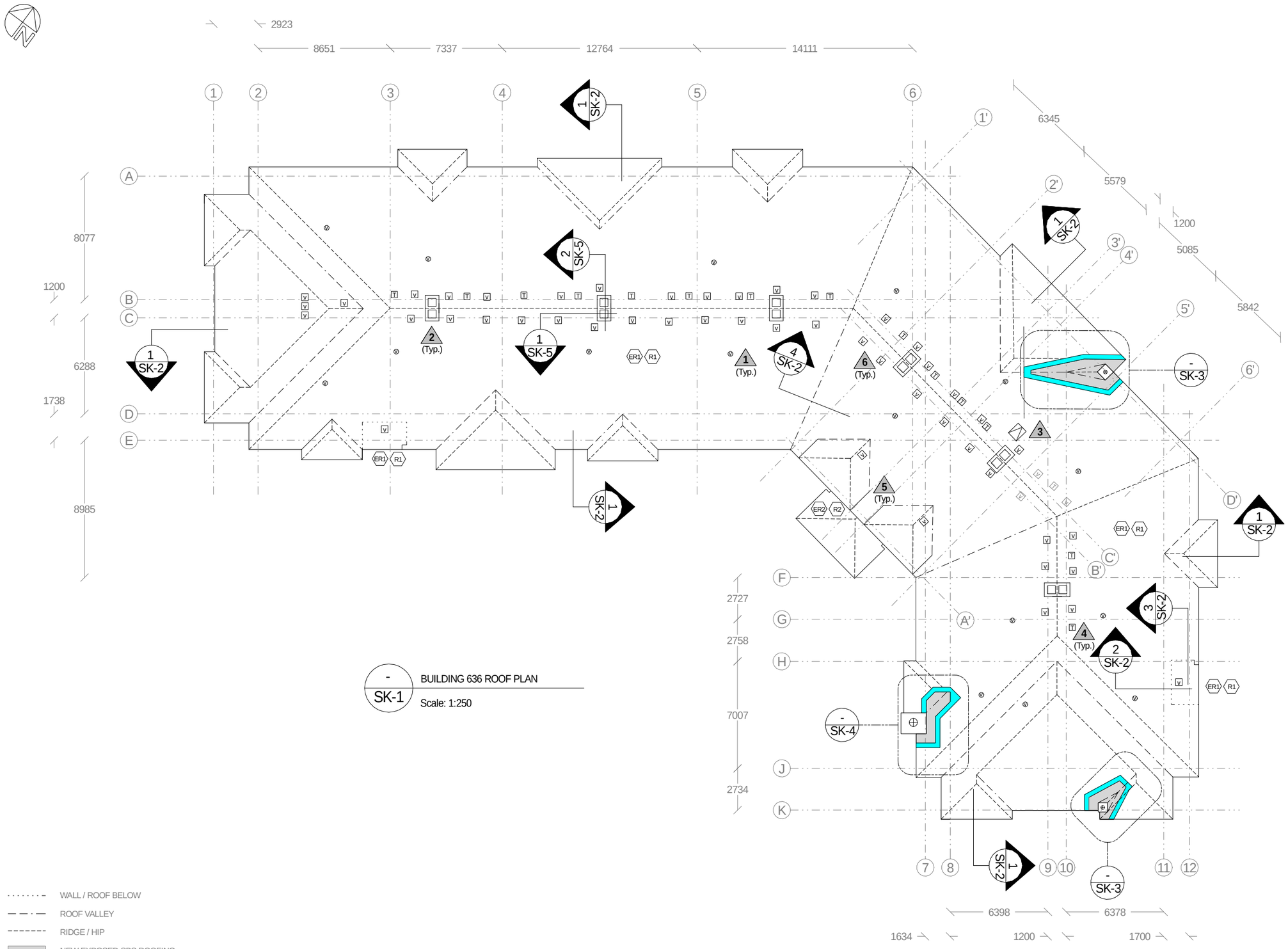
Drawing Title

ROOF PLAN

Scale	File No.	Drawing No.
1:250	24-1162	SK-1a

Drawing Date

JULY 19, 2023



- SK-1 — BUILDING 636 ROOF PLAN

Scale: 1:250

WALL / ROOF BELOW

ROOF VALLEY

RIDGE / HIP

NEW EXPOSED SBS ROOFING APPLIED ON VALLEY SADDLES

NEW SBS MEMBRANE EXTENDED UNDER NEW FIELD SHINGLES

Legend

- F — Exhaust Fan
- Ⓥ — Plumbing Vent
- Water Flow
- 2 — Drawing Note
- Roof Drain
- Curbed Chimney Pipe
- G — Curbed Gooseneck
- AC — AC Unit
- V — Low-Profile Vent
- Scupper Drain
- T — High Profile Vent

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Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

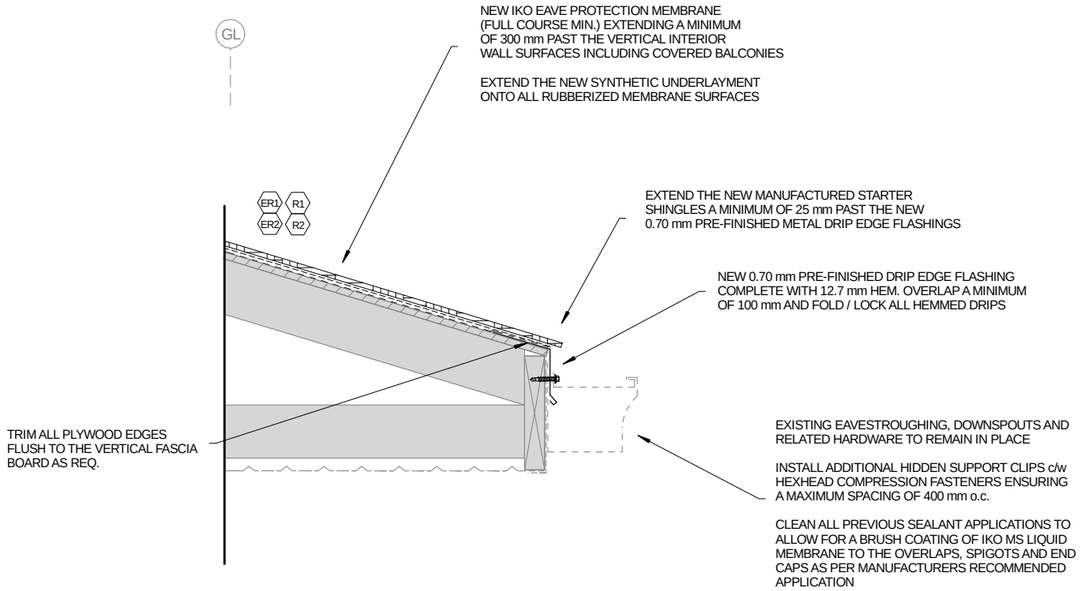
Drawing Title

ROOF PLAN

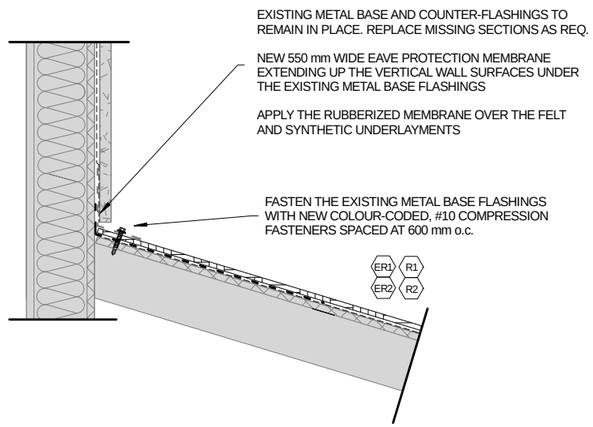
Scale	File No.	Drawing No.
1:250	24-1162	SK-1d

Drawing Date

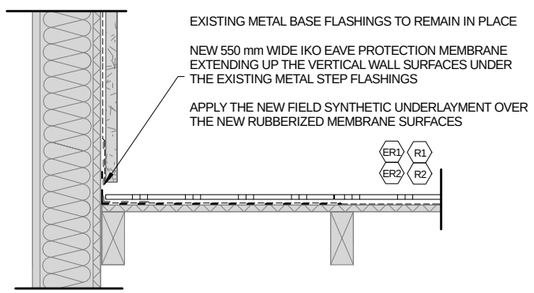
JULY 23, 2023



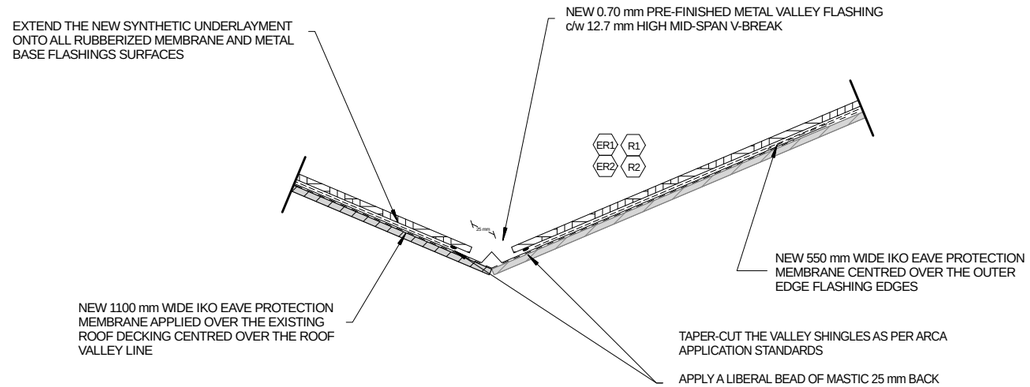
1 / SK-2 EAVE SOFFIT (TYP.)
Scale: 1:10



2 / SK-2 HIGH / LOW WALL (BASE TYP.)
Scale: 1:10



3 / SK-2 HIGH / LOW WALL (STEP - TYP.)
Scale: 1:10



4 / SK-2 ROOF VALLEY (TYP.)
Scale: 1:10

Legend

- F — Exhaust Fan
- Ⓥ — Plumbing Vent
- 2 — Drawing Note
- Water Flow
- Roof Drain
- Curbed Chimney Pipe
- G — Curbed Gooseneck
- AC — AC Unit
- Scupper Drain

General Notes

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Revision #	Revision Date

Consultant

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KrainConsulting.com

Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

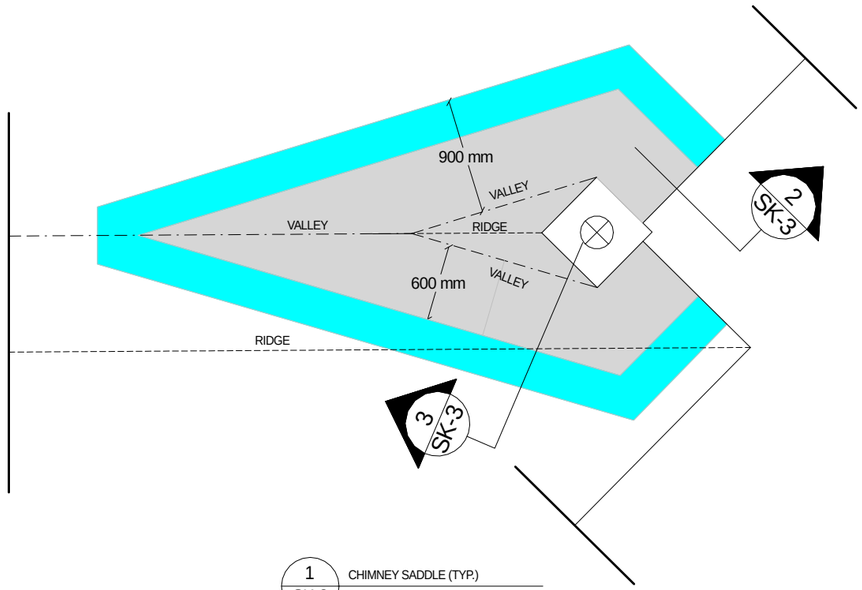
Drawing Title

DETAILS

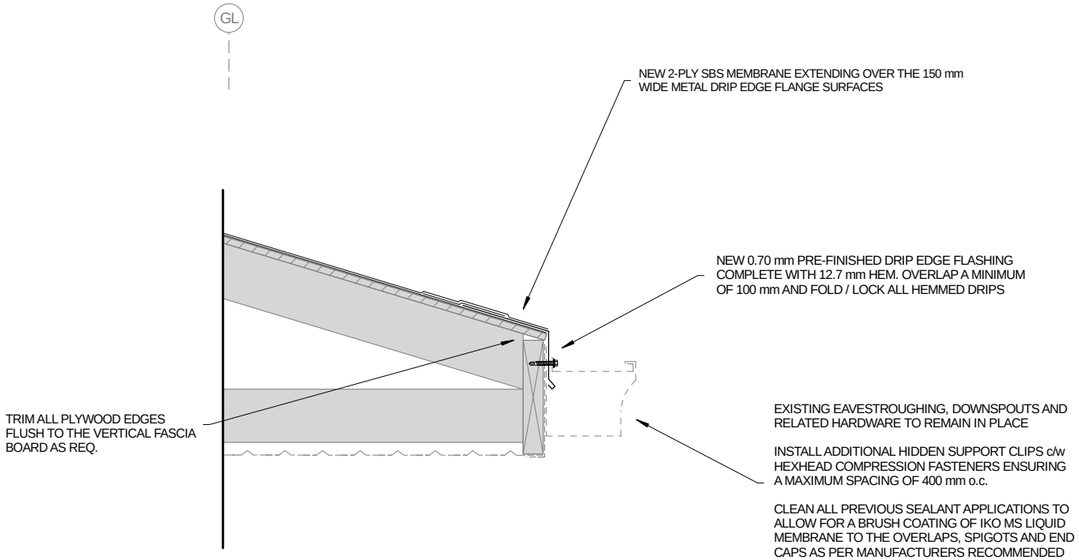
Scale	File No.	Drawing No.
-	24-1162	SK-2

Drawing Date

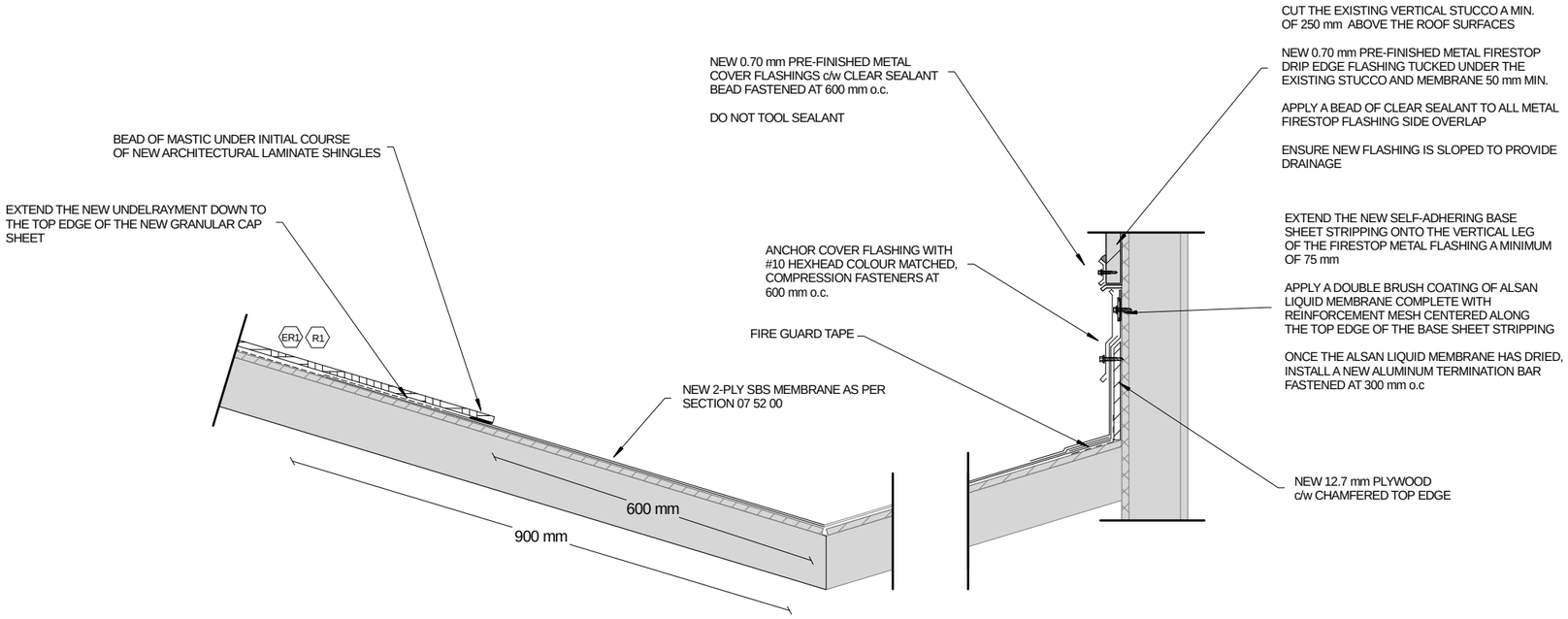
JULY 10, 2023



1 / SK-3 — CHIMNEY SADDLE (TYP.)
Scale: NTS



2 / SK-3 — EAVE SOFFIT (TYP.)
Scale: 1:10



3 / SK-3 — CHIMNEY SADDLE (TYP.)
Scale: 1:10

Legend

- F — Exhaust Fan
- Ⓥ — Plumbing Vent
- Water Flow
- 2 — Drawing Note
- Roof Drain
- Curbed Chimney Pipe
- G — Curbed Gooseneck
- AC — AC Unit
- Scupper Drain

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Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

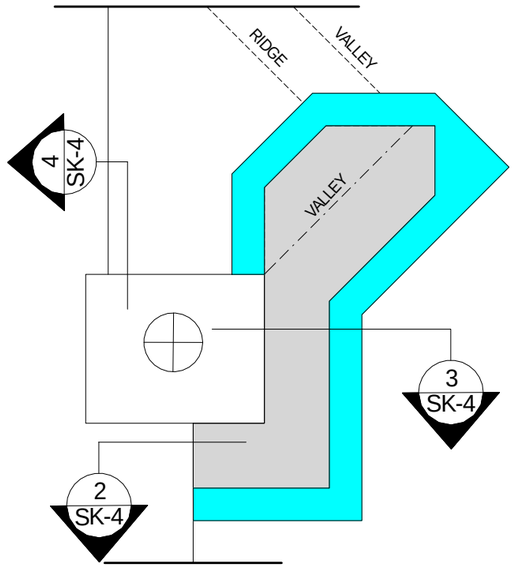
Drawing Title

DETAILS

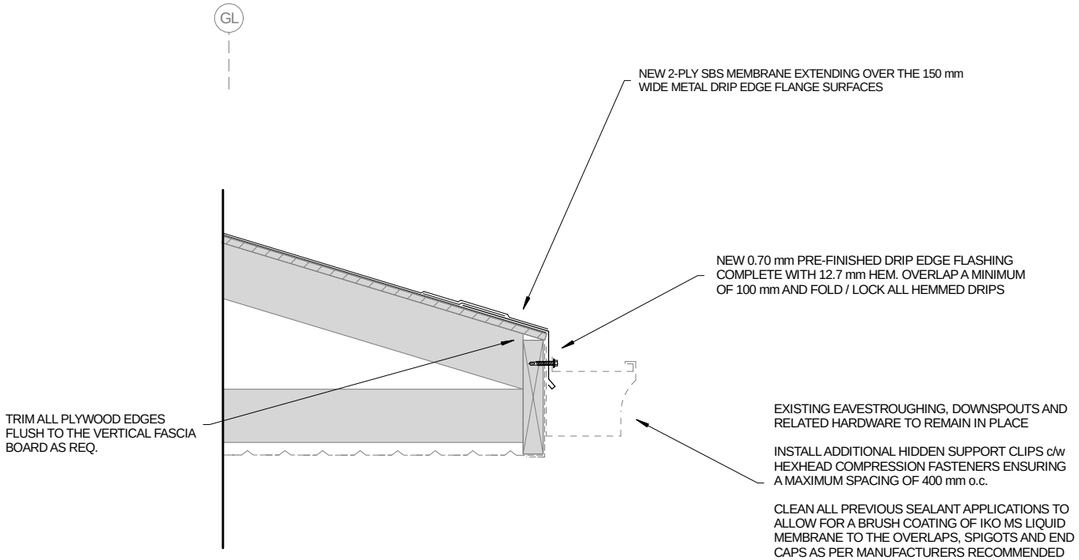
Scale	File No.	Drawing No.
-	24-1162	SK-3

Drawing Date

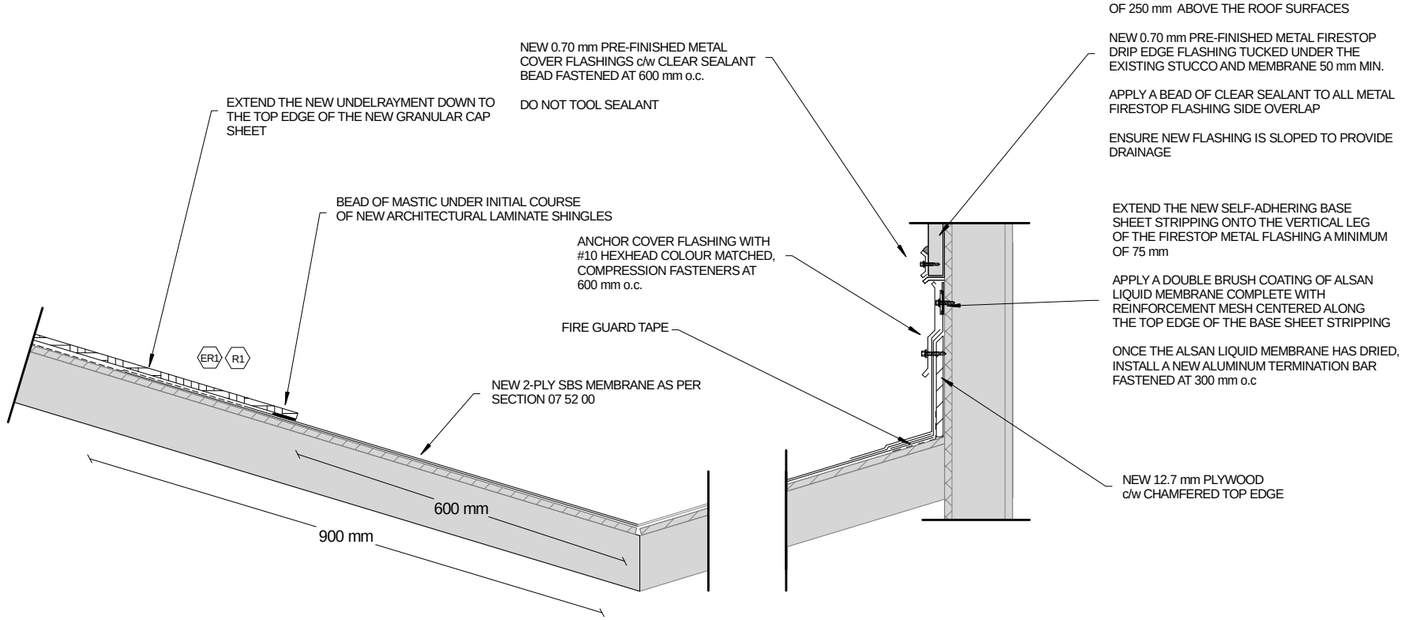
JULY 15, 2023



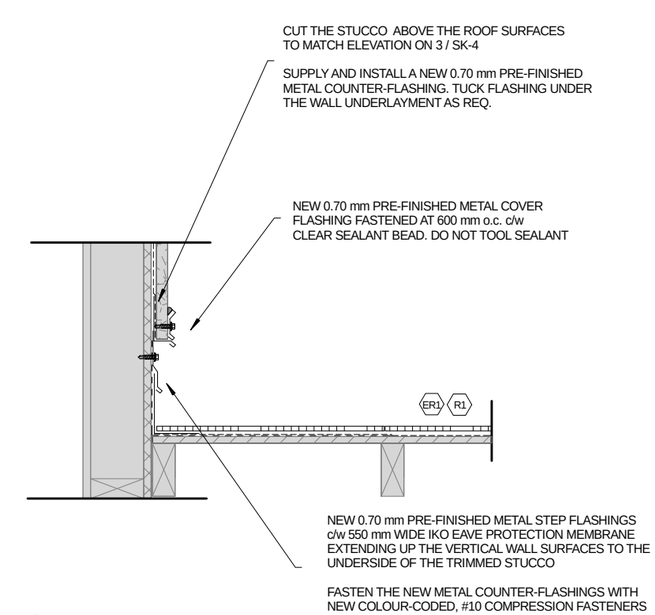
1 / SK-4 — CHIMNEY BACKPAN (TYP.)
Scale: NTS



2 / SK-4 — EAVE SOFFIT (TYP.)
Scale: 1:10



3 / SK-4 — CHIMNEY BACKPAN (TYP.)
Scale: 1:10



4 / SK-4 — CHIMNEY STEP
Scale: 1:10

Legend

- F — Exhaust Fan
- Ⓥ — Plumbing Vent
- Water Flow
- 2 — Drawing Note
- Roof Drain
- Curbed Chimney Pipe
- G — Curbed Gooseneck
- AC — AC Unit
- Scupper Drain

General Notes

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Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

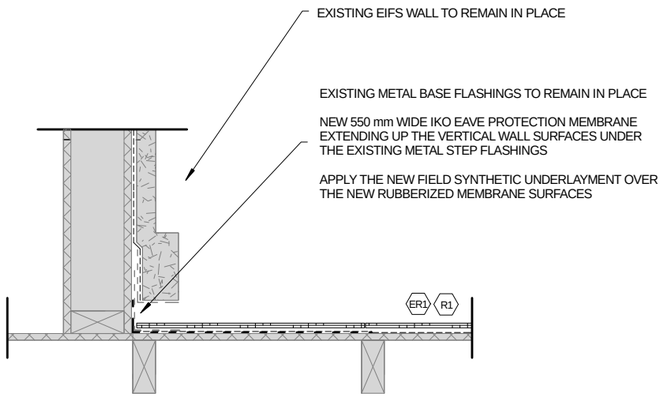
Drawing Title

DETAILS

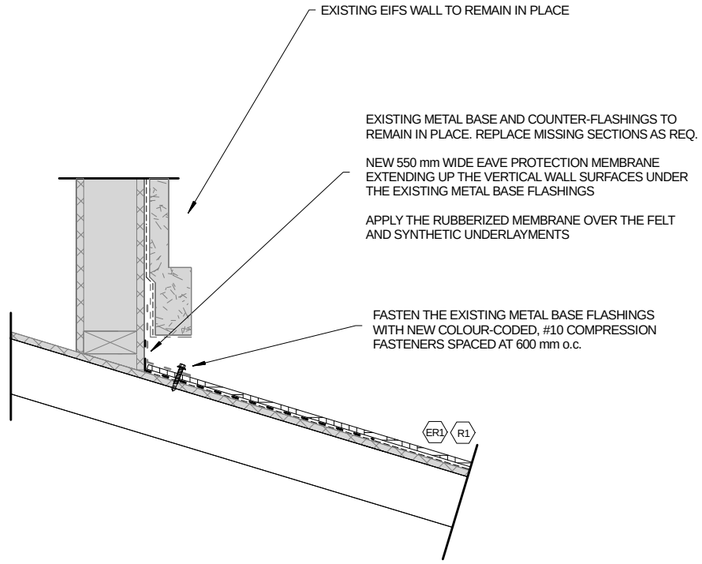
Scale	File No.	Drawing No.
-	24-1162	SK-4

Drawing Date

JULY 19, 2023



1 / SK-5 ARCHITECTURAL CHASE (STEP - TYP.)
Scale: 1:10



2 / SK-5 ARCHITECTURAL CHASE (BASE - TYP.)
Scale: 1:10

Legend

F Exhaust Fan
Plumbing Vent
2 Drawing Note
Water Flow
Roof Drain
Curbed Chimney Pipe
G Curbed Gooseneck
AC AC Unit
Scupper Drain

General Notes

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Revision #	Revision Date

Consultant

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KrainConsulting.com

Client

LAIDLEY MANAGEMENT LTD.

Project No.

KRAIN CAD FILE NO.: 25-24568

Project

MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

Drawing Title

DETAILS

Scale	File No.	Drawing No.
-	24-1162	SK-5

Drawing Date

JULY 27, 2023

1 Plumbing Vents

.1 Remove and dispose of all rubber and lead sheet flashings as required. Ensure internal piping is secure and insulation wrappers prior to installing new flashings. Extend all PVC piping that does not extend a minimum of 50 mm above the new vent collars.

.2 Supply and install new self-adhering membrane target patches as per Section 07 31 13, Item 3.4.2 once the new field underlayment has been installed.

.3 Install new Oatey flashings along with the installation of the new shingles. Supply and install a liberal bead of mastic under the shingle units that overlap onto the various new flashings. Hand-press the surface of the new asphalt shingles into the bead of new mastic to create a seal.

.4 Fasten the lower portion of the plumbing vent flashing with a minimum of three (3), new #10 Hex head, neoprene backed fasteners. All fasteners shall penetrate the roof decking a minimum of 25 mm.

2 Architectural Chase Curbs

.1 Along the main roof ridges, adjust the existing metal cladding around the curbs mounted on the top of architectural chases to ensure that the corner s-locks are engaged (yellow arrow – typ.).

.2 Fasten all curb corner with a minimum of two (2), new #10 Hex head, colour-coded neoprene backed fastener (yellow dot – typ.) per curb corner. All fasteners shall penetrate the roof decking a minimum of 25 mm. Refer to photograph below for typical conditions.

3 Roof Access Hatch

.1 Remove and dispose of all asphalt shingles along with related underlayments, metal base, step backpan and counter-flashings exposing the roof decking and roof curb surfaces.

.2 Apply new rubberized membrane up all steel hatch surfaces extending a minimum of 300 mm on the side and base of the hatch. On the backside of the hatch, a full 1100 mm piece of membrane is required to be applied.

.3 Supply and install new 0.70 mm pre-finished metal base, step backpan flashings along with metal counter-flashings as required.

4 New High-Profile Attic Ventilators

.1 Along the main roof ridges, remove and dispose of the existing vents as required.

.2 Trim the existing plywood decking between the roof trusses at the existing and / or new locations as indicated on the roof plans. Ensure the new vent openings are no lower than 600 mm from the roof ridge or upper drip line.

.3 Ensure the new roof deck opening matches the size of the new attic vent opening.

.4 Prior to the placement of the new flashings, apply a liberal bead of clear mastic onto the shingle and underlayment membrane surfaces.

.5 Integrate the new metal attic vent flanges into the new asphalt shingles as required. Ensure that the metal side vent flanges are overlapped with new asphalt shingles.

.6 Supply and install a liberal bead of mastic under the shingle units that overlap onto the various new attic vents. Hand-press the surface of the asphalt shingles into the bead of new mastic to create a wind resistant seal.

.7 Fasten all exposed metal nailing flanges with a minimum of three (3), new #10 Hex head, neoprene backed fasteners. All fasteners shall penetrate the roof decking a minimum of 25 mm.

.8 Install the new top portion of the high-profile vent as per manufacturers instruction. Ensure the vent top is level.

5 Eavestrough End Caps and Downspout Extensions

.1 Remove and dispose of the existing damaged downspout elbows as required. Install additional hidden support clips between the current eavestrough supports ensuring a maximum spacing of 400 mm on center. Refer to Detail 1 / SK-2 for additional information.

.2 At the un-capped eavestrough sections, cut the taper-cut eavestroughing at a 90-degree angle to allow for the installation of a new matching metal end cap complete with Alsan or MS liquid membrane. The end cap shall be a minimum of 150 mm away from the adjacent roof valley opening and 50 mm clearance above the shingle roof surfaces.

.3 Supply and install new custom drainage spigots complete with pre-finished metal downspout elbows complete with a minimum of two (2) sheet metal screws per unit. Apply a single brush coating of liquid Alsan or MS membrane to all spigot penetrations.

.4 Extend the new downspout piping from the dormers to the lower eavestroughing. Install one (1) anchor strap fastened to the roof surfaces with new #10 Hexhead, colour-coded, neoprene backed fasteners. Downspouts and elbows are to be anchored to the lower eavestrough as required.

6 New Low-Profile Attic Ventilators

.1 Cut the new asphalt shingles and plywood decking between the roof trusses at the approximate locations. Ensure the new vent opening is no lower than 600 mm from the roof ridge or wall transition. At existing vent opening locations, enlarge the existing plywood cut-out as required.

.2 Ensure the new roof deck opening matches the size of the new attic vent opening.

.3 Integrate the new plastic attic vents into the new asphalt shingles as required. Ensure that the plastic side vent flanges are overlapped with new asphalt shingles.

.4 Supply and install a liberal bead of mastic under the shingle units that overlap onto the various new attic vents. Hand-press the surface of the new asphalt shingles into the bead of new mastic to create a seal.

.5 Fasten all exposed plastic nailing flanges with a minimum of three (3), new compression fasteners. All fasteners shall penetrate the roof decking a minimum of 25 mm.

Legend

F Exhaust Fan
Plumbing Vent
Water Flow
2 Drawing Note
Roof Drain
Curbed Chimney Pipe
G Curbed Gooseneck
AC AC Unit
Scupper Drain

General Notes

All drawings are to be read in conjunction with project specifications.

All dimensions and conditions are to be site verified.

Revision #	Revision Date

Consultant
KRAIN
PROFESSIONAL ROOF CONSULTING SOLUTIONS
109 Pointe Marcelle
Beaumont, AB T4X 0G2
Office: (780) 929.6480
KrainConsulting.com

Client
LAIDLEY MANAGEMENT LTD.

Project No.
KRAIN CAD FILE NO.: 25-24568

Project
MACEWAN VILLAGE
616 - 636 MCALLISTER LOOP
EDMONTON, AB

Drawing Title
CONSTRUCTION NOTES

Scale: -
File No.: 24-1162
Drawing Date: JULY 28, 2023
Drawing No.: SK-6

1.0 SUMMARY

.1 The intent of this bid call is to solicit and receive formal offers to perform the following Work:

MacEwan Village
616 – 636 McAllister Loop
Edmonton, AB

Asphalt Shingle Replacement

.2 Project Representative:

Condominium Corporation No. 042 1647
MacEwan Village Condominium Association
c/o Laidley Management Ltd.
10004 105 Street NW
Edmonton, AB
T5J 1C3

Attention: Nancy Ternowski - Broker

.3 Bids shall be prepared, submitted and the bidding process shall be administered in accordance with these bidding requirements.

.4 Refer to Section 01 00 00 – General Requirements for a summary of the Project, including requirements pertaining to Contract Time.

2.0 BID SUBMISSION

.1 Bids will be received by email on behalf of the Owner, before 2:00 p.m. local time on **August 8, 2023** directed to NTernowski@laidley.ca

Technical Inquires: Krain Consulting Ltd. - Will Kotylak, ***RRO, C. Tech.***

Office: (780) 929.6480
Mobile: (780) 991.3595
E-mail: will@krainconsulting.com

.2 Submit bids on forms provided within the specification.

.3 Submit one copy of Bid Form, and all supplements required to be submitted with Bid Form, in a sealed envelope. Clearly indicate on outside of envelope the addressee as specified in Item 2.1 above, the Bidder's name and the Project name.

.4 Oral, telephoned, telegram, or fax bids will not be accepted nor acknowledged.

.5 Paragraph 2.1 states the date and time up to which Bids will be received, hereinafter called the 'bid closing time'. The Owner may extend the bid closing time by addendum.

3.0 INVITATION TO BID

.1 This bid call is by invitation only.

.2 Bids submitted in a name different to that indicated on the invitation, and from Bidders not invited to bid, may cause the bid to be declared invalid and rejected.

4.0 BASIS OF BID - STIPULATED PRICE

.1 Bids shall be on a stipulated price basis.

5.0 SUFFICIENCY OF BID

.1 The submission of a bid shall constitute an incontrovertible representation by the Bidder that:

.1 the Bidder has complied with all bidding requirements,

.2 the Bidder is qualified and experienced to perform the Work in accordance with the Bid Documents,

.3 the bid is based upon performing the Work in accordance with the Bid Documents, without exception, and

.4 the price or prices stated in the bid cover all the Bidder's obligations under the Contract and all matters and things necessary for the performance of the Work in accordance with the Bid Documents

6.0 BID DOCUMENTS

.1 The Bid Documents are the documents issued or made available to Bidders by the Owner for the purpose of preparing a bid. The Bid Documents consist of the following:

.1 Letter of Invitation to Bid
.2 Instructions to Bidders
.3 Bid Security
.4 Stipulated Price Bid Form
.5 Performance and Payment Security
.6 General Conditions of Contract
.7 Specifications, Divisions 1 to 16 inclusive
.8 Addenda issued during bid period

7.0 BID FORM

.1 Fill-in all blanks in Bid Form and sign as follows:

.1 Limited Company: Print or type in space provided full name of company and name(s) and status of authorized signing officer(s). Authorized signing officer(s) shall sign. Sign Bid Form in the presence of a witness who shall also sign, or in the absence of a witness, affix corporate seal.

.2 Limited Company Joint Venture: Each joint venture company shall sign as for a limited company.

.3 Partnership: Print or type in space provided firm name and name(s) of person(s) signing. One or more of the partners shall sign in the presence of a witness who shall also sign.

.4 Sole Proprietorship: Print or type in space provided business name and name of sole proprietor. Sole proprietor shall sign in the presence of a witness who shall also sign.

.2 Complete Bid Form in its entirety. Any required information that is omitted or illegible, any alterations to the text, or any conditions added on or submitted with the Bid Form, may cause the bid to be declared invalid and rejected.

.3 Enclose Bid Form in envelope. Indicate name of Bidder on envelope. Seal envelope and deliver to address specified in Item 2.1.

8.0 BID MODIFICATION

.1 A bid submitted in accordance with these bidding requirements may be modified, provided the modification:

.1 is in the form of an email received specified in Item 2.1, before the bid closing time, or

.2 is in the form of a letter received at the address specified in Item 2.1 before the bid closing time, and

.3 states the name of the Bidder, the nature of the modification, and is signed by an authorized person.

.2 For bid closing purposes, the official time of receipt of faxed bid modifications shall be the time of receipt automatically printed on the fax transmission by the receiving fax machine.

.3 When submitting a modification directing a change in a bid amount, do not reveal the original amount nor the revised amount. State only the amount to be added to or deducted from the original bid amount.

.4 When submitting a second or more modifications related to a single bid amount ensure that there is no ambiguity as to the intended bid price. The written modification shall clearly indicate whether:

.1 bid amount first submitted is being modified and any previous modifications are to be disregarded, or

.2 revised bid amount derived from a previous modification has been modified.

.5 State all Addendum Numbers received, if different from what was indicated on originally submitted Bid Form.

.6 The Owner will assume no responsibility or liability for the content of modifications, or for modifications that are, for any reason, delayed, illegible, unclear as to intent, ambiguous, contrary to these instructions, or otherwise improperly received. The Owner may disregard improperly received modifications.

9.0 BID WITHDRAWAL AND ACCEPTANCE

.1 A bid may be withdrawn at any time before the bid closing time, provided the request is in the form of:

.1 email transmittal received and printed out in its entirety specified in Item 2.1, before the bid closing time, or

.2 letter received at the address specified in Item 2.1 before the bid closing time.

.2 Withdrawn bids may be resubmitted in accordance with these bidding requirements providing the resubmitted bid is received at the office indicated in Item 2.1, before the bid closing time.

.3 A bid may not be withdrawn at or after bid closing time and shall be open to acceptance by the Owner until:

.1 some other Bidder has entered into a contract with the Owner for performance of the Work, or

.2 45 days after the bid closing time,

whichever occurs first.

.4 The 45-day period referred to above shall commence at midnight of the date of bid closing and shall terminate at midnight of the 45th day thereafter. If the 60th day falls on a Saturday, Sunday or statutory holiday, such day(s) shall be omitted from the computation.

.5 The 45-day acceptance period referred to above may be extended at the Owner's request and subject to the Bidder's written agreement to the extension.

.6 The Contract shall be established upon issuance, by the Owner to the successful Bidder, of a letter accepting the bid without qualification or, if the letter accepting the bid contains one or more qualifications, upon written acceptance by the Bidder of all such qualifications.

.7 The lowest or any bid will not necessarily be accepted, and the Owner may reject any and all bids.

.8 The Owner may negotiate contract terms with the Bidder submitting the lowest valid bid, provided that the negotiated changes to the Bid Document results in either no change to the bid price or a reduced bid price. Such changes may be formalized in the form of a Post-Bid Addendum that, upon written acceptance by the Bidder, shall form part of the Contract Documents.

10.0 NOTIFICATION OF INTENT NOT TO SUBMIT A BID

.1 Prospective Bidders who have received Bid Documents at the site orientation, but do not intend to submit a bid, are requested, as a courtesy to subcontract bidders, to notify the office indicated in Item 2.1 by e-mail.

11.0 BID OPENING

.1 This is not a public opening.

12.0 IRREGULARITIES

.1 A bid that is informal, incomplete, qualified, non-compliant with the requirements of the Bid Documents, or otherwise irregular in any way, may be declared invalid and rejected.

.2 The Owner may accept or waive a minor and inconsequential irregularity, or where practicable to do so, the Owner may, as a condition of bid acceptance, request a Bidder to correct a minor and inconsequential irregularity with no change in bid price.

.3 The determination of what is, or is not, a minor and inconsequential irregularity, the determination of whether to accept, waive, or require correction of an irregularity, and the final determination of the validity of a bid, shall be at the Owner's sole discretion.

.4 Discrepancies between words and figures will be resolved in favor of words.

13.0 SAFETY PREQUALIFICATION

.1 Prime contract Bidders shall possess a valid Certificate of Recognition (COR) as issued by the Alberta Construction Safety Association (ACSA) or another certifying organization authorized by Alberta Human Resources and Employment to issue CORs.

.2 Bidders not in possession of a valid COR may pre-qualify if in possession of a valid Temporary Letter of Certification (TLC) issued by the ACSA.

.3 A bid from a Bidder who does not possess a valid COR or TLC will be declared invalid and will be rejected.

.4 Prospective Bidders who do not possess a COR, and wish to obtain information about obtaining a COR or TLC, are advised to contact:

The Alberta Construction Safety Association
10949 - 120 Street
Edmonton, Alberta T5H 3R2

Ph. (780) 453-3311 or 1-800-661-2272
Fx. (780) 455-1120

www.acsa-safety.org

14.0 AVAILABILITY OF BID DOCUMENTS

.1 Bid Documents are available to Prime contract bidders at the site orientation.

.2 The Owner will assume no responsibility or liability for the completeness of any Bid Documents obtained from a source other than the site orientation.

15.0 GST EXCLUDED

.1 Bidders shall not include the GST in their bid prices.

16.0 EXAMINATION OF BID DOCUMENTS AND SITE

.1 Bidder shall, before submitting a bid:

.1 examine and read the Bid Documents thoroughly,

.2 visit site and its surroundings and other locations to become familiar with local and other conditions affecting the Work,

.3 consider the effect of regulatory requirements applicable to the Work,

.4 study and correlate Bidder's observations with the Bid Documents,

.5 immediately notify Consultant of all perceived omissions and discovered conflicts, errors and discrepancies in the Bid Documents, and

.7 be satisfied that Bidder understands the Bid Documents and is competent to undertake and complete the Work.

.2 Before submitting a bid, each Bidder shall, at the Bidder's expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the conditions at, under or contiguous to the site, which may affect performance of the Work and which the Bidder deems necessary to determine its bid for performing the Work in accordance with the Bid Documents. Bidders shall obtain the Owner's prior approval for access to site for the purpose of carrying out any such activities. Bidders shall restore site to a condition acceptable to the Owner upon completion of such activities.

17.0 BID SECURITY

.1 Provide and submit the bid security specified in Section 00210 - Bid Security.

18.0 CONTRACT PERFORMANCE SECURITY AND SECURITY FOR PAYMENT OF CLAIMS

.1 Provide and include in bid price for security specified in Section 00 61 31 - Performances and Payment Security.

19.0 SUBCONTRACT SECURITY

.1 N/A

20.0 EVIDENCE OF ABILITY TO PROVIDE SECURITY

.1 The Owner may, after bid submission and before contract award, require a Bidder to submit evidence of Bidder's ability to provide security specified in the Bid Documents.

21.0 APPLICABLE LIEN LEGISLATION

.1 The Builders' Lien Act (Alberta) applies to this Project; the Public Works Act (Alberta) does not apply.

.2 Claims procedures shall be in accordance with the Builders' Lien Act (Alberta).

22.0 AGREEMENT

.1 The successful Bidder will be required to enter into a formal Agreement with the Owner / general contractor for performance of the Work.

23.0 DIVISION OF WORK

.1 Work specified in the Specifications is divided into Divisions and Sections for reference purposes only. Except as may be otherwise specified in the Bid Documents, division of work among Contractor, Subcontractors, Sub-subcontractors and suppliers is Bidders' responsibility.

24.0 INTERPRETATION AND MODIFICATION OF BID DOCUMENTS

.1 Submit questions about the meaning and intent of the Bid Documents to the Owner at the office identified under "Inquiries". Interpretations and modifications considered necessary by the Owner in response to such questions will be issued by the Owner in writing in the form of an Addendum.

.2 Addenda may also be issued by the Owner to modify the Bid Documents as deemed necessary by the Owner.

.3 Submit questions as early as possible in the bid period. The Owner may not respond to questions received too close to the bid closing time to permit issuance of an Addendum.

.4 Replies to questions, interpretations and modifications made in a manner other than by written Addendum shall not be binding.

25.0 ADDENDA

.1 During the bid period, addenda will be issued by the roofing consultant via email to all parties recorded by the roofing consultant as having received Bid Documents at the site orientation.

.2 Addenda shall become part of the Bid and Contract Documents.

.3 Each Bidder shall ascertain before bid submission that it has received all Addenda issued by the Owner.

END OF SECTION

BIDDER: _____

bidder name (print or type)

PROJECT NAME: **MacEwan Village**
616 – 636 McAllister Loop
Edmonton, AB

Asphalt Shingle Replacement

1. GENERAL

.1 This List of Subcontractors and Cost Breakdown forms a part of the Bid for the above project.

.2 The following conditions apply to the List of Subcontractors:

.1 Names of Subcontractors, Sub Subcontractors and suppliers which Bidder intends to use are entered for items of work listed. Items of work for which Bidder intends to use own forces are so indicated.

.2 Should bidder be awarded the Contract, parties named, including Bidder's own forces shall be used to perform the work they are scheduled to perform and shall not be changed without the Owner's written consent.

.3 The following conditions apply to the Cost Breakdown:

.1 Costs entered for items of work to be performed by prime Bidder's own forces are costs of doing work exclusive of general requirements costs.

.2 Costs entered for subcontract work are subcontract bid prices and do not include prime Bidder's general requirements costs.

.3 Costs entered for supply items are the supplier prices and do not include prime Bidder's general requirements or installation costs.

.4 Cost entered for 'Miscellaneous Items of Work':

.1 is a lump sum which includes costs for all items of work which are not itemized separately, such that the total of all costs entered in the Cost Breakdown may equal the stipulated bid price entered in the Bid and Contract Form, and

.2 does not include prime Bidder's general requirements costs.

.5 Cost entered for 'General Requirements' is a lump sum which includes prime bidder's profit, operating overhead, job overhead and other general requirements items.

2. COST BREAKDOWN

Item of Work	Name of Sub-contractor of Supplier	Cost
1. General Conditions		$
2. Warranty		$
3. Demolition / Carpentry		$
3. Roofing		$
4. Metal Flashings		$
5. Mechanical		$
6. Safety		$
7. Skylights		$
8. Electrical		$
Allowance for Contingency		$
Miscellaneous Item of Work	(All other items of work not listed above)	$
General requirements		$
Total Price		$

END OF SECTION

1. TYPE AND AMOUNT OF BID SECURITY

.1 Provide bid security in the amount of ten percent (10%) in the form of a bid bond.

.2 Submit bid security with Bid Form. Bids not accompanied by bid security will be rejected.

2. BID BONDS

.1 Bid bonds shall be in accordance with the Canadian Construction Documents Committee (CCDC) Standard Form of Bid Bond, CCDC Document No. 220.

.2 Consign Bid Bond to **Condominium Corporation No. 042 1647**.

.3 Bid bonds shall be issued by a duly incorporated surety company authorized to transact business of suretyship in the Province of Alberta.

.4 Bid bonds shall be properly executed by Bidder and surety.

3. CERTIFIED CHEQUES, BANK DRAFTS AND MONEY ORDERS

.1 N/A

4. DEFAULT BY BIDDER

.1 If a Bidder whose bid is accepted by the Owner in writing, without qualification, and within the acceptance period specified in the Bid Documents, refuses or fails, within 15 days after the date of issuance of the written acceptance of the bid:

.1 to sign a formal agreement with the Owner for the performance of the Work and

.2 to provide contract performance security as required by the Bid Documents,

the Bidder shall be liable to the Owner for the difference in money between the amount of his bid and the greater amount for which a contract for the Work is entered into with some other Bidder, up to the maximum amount of the bid security provided.

END OF SECTION

1. TYPE AND AMOUNT OF SECURITY

.1 Contractor shall provide security for performance of the Contract in the form of one of the following:

.1 Performance Bond for fifty percent (50%) of the Contract Price.

.2 Security in the form of a bank letter of credit is not acceptable.

.3 Submit security to the Owner within fifteen (15) days of the date after issuance of Letter of Acceptance of bid.

.2 SECURITY FOR PAYMENT OF CLAIMS

.1 Contractor shall provide security for payment to claimants for labour and material used or reasonably required for use in the performance of the Contract. Such security shall be in the form of one of the following:

.1 Labour and Material Payment Bond for 50% of the Contract Price

2. CERTIFIED CHEQUES

.1 Certified cheques shall be drawn on a financial institution authorized to conduct business in the Province of Alberta and shall be made payable to **Condominium Corporation No. 042 1647**.

.2 Contractor shall not be entitled to, or receive, accrued interest on a certified cheque provided as security.

3. GOVERNMENT BONDS

.1 Government bonds shall be unconditionally guaranteed as to principal and interest and shall be payable to bearer.

.2 Contractor shall be entitled to and shall receive accrued interest on government bonds provided as security.

4. SURETY BONDS

.1 Performance Bond shall be in accordance with the Canadian Construction Documents Committee (CCDC) Standard Form of Performance Bond, CCDC Document No. 221.

.2 Labour and Material Payment Bond shall be in accordance with the Canadian Construction Documents Committee (CCDC) Standard Form of Labour and Material Payment Bond, CCDC Document No. 222

.3 Consign bonds to **Condominium Corporation No. 042 1647.**

5. SUBMISSION OF SECURITY

.1 Submit security to the Owner within fifteen (15) days after bid is accepted.

6. RELEASE OF SECURITY

.1 Where security is in the form of a certified cheque or government bonds, such security will be released progressively as follows:

.1 Four (4) months after Substantial Performance of the Work, not more than one third of the amount of the security will be released to the Contractor.

.2 Eight (8) months after Substantial Performance of the Work a further amount not exceeding one third of the amount of security will be released.

.3 Twelve (12) months after Substantial Performance of the Work, the balance of the security will be released, subject to deficiencies in materials and workmanship arising during the warranty period having been corrected to the Owners satisfaction.

.2 Intermediate releases of security will be made only upon written request by the Contractor. In the case of security in the form of Government bonds, the Contractor may stipulate which bonds are to be released at each stage.

END OF SECTION

1. INTENT

.1 The following definitions shall apply to all Contract Documents. Terms used in the Contract Documents which are defined in this Section shall have the meanings designated in these definitions.

2. DEFINITIONS

.1 The "Consultant" is the architect, the engineer, or other person or entity identified as such in the Agreement. The term Consultant means the Consultant or the Consultant's authorized representative.

.2 The "Contract" is the undertaking by the Owner and the Contractor to perform their respective duties, responsibilities and obligations as prescribed in the Contract Documents and represents the entire agreement between the Owner and the Contractor. The Contract Documents form the Contract.

.3 The "Contract Documents" consist of: the Letter of Acceptance; the executed Agreement between the Owner and the Contractor; the Conditions of Contract, including Definitions, Payment Conditions, Security Conditions as applicable, Insurance Conditions, General Conditions, Supplementary Conditions when used, conditions related to Public Works Act claims, surety bonds when provided; those parts of the Bidding Requirements documents having application during performance of the Contract; other documents contained in Division 0 of the Specifications; Divisions 1 to 50 of the Specifications; the Drawings; Schedules; and such other documents as may be identified as Contract Documents. The Contract Documents shall include amendments thereto made before execution of the Agreement and subsequent amendments thereto made in accordance with provisions of the Contract.

.4 "Contract Deficiency" means a deficiency in the Work, or part thereof, for which the Contractor is responsible under the Contract Documents and includes a deficiency in any design for which the Contractor is responsible.

.5 "Contract Price" means the total amount payable by the Owner to the Contractor under the Contract Documents as stated in the Agreement, including authorized adjustments thereto. Contract Price excludes federal Goods and Services Tax.

.6 "Contract Time" means the period of time specified in the Contract Documents for attainment of Interim Acceptance of the Work, including authorized adjustments thereto.

.7 "Contract Unit Price" means the amount payable by the Owner to the Contractor under the Contract Documents for a single unit of each separately identified item of work for which a unit price arrangement is prescribed as the basis of payment, as stated in the Unit Price Schedule, including authorized adjustments thereto.

.8 "Contractor" means a person, firm or corporation contracting directly with the Owner to perform the Work in conformance with the Contract Documents.

.9 "Contractor Start-Up" means the sub-phase of Facility Start-Up ending with Interim Acceptance of the Work, during which the Contractor performs a pre-planned program of activities including starting, testing, inspecting, adjusting, balancing, correcting Contract Deficiencies, and other similar activities.

.10 "Day" means the calendar day.

.11 "Facility Start-Up" means the phase of the Work which includes the sub-phases of Contractor Start-Up, Performance Testing, and Fine Tuning and ends with Final Acceptance of the Work.

.12 "Final Acceptance of the Work" means when the entire Work, except those items arising from the warranty provisions of the Contract Documents, has been performed to the requirements of the Contract Documents and is so declared, in writing, by the Owner.

.13 "Fine Tuning" means the sub-phase of Facility Start-Up, commencing upon Practical Completion of the Work and ending with Final Acceptance of the Work, during which the Owner identifies Contract Deficiencies arising under normal operating conditions, after user occupancy, and Contractor corrects such Contract Deficiencies.

.14 "*FOIP Act*" means the *Freedom of Information and Protection of Privacy Act* (Alberta), as amended from time to time.

.15 "Interim Acceptance of the Work" means when the prerequisites to Interim Acceptance of the Work required by the Contract Documents are fulfilled and the Work is ready for use or is being used for the purpose intended and the state of the work is so declared, in writing, by the Owner.

.16 "Materials" means material, machinery, equipment, fixtures and other items forming the Work or part thereof but does not include machinery and equipment used for performance of the Work and normally referred to as construction machinery and equipment.

.17 "Other Contractor" means any person, firm or corporation employed by or having a separate contract with the Owner for work other than that required by the Contract Documents.

.18 "Performance Testing" means the sub-phase of Facility Start-Up commencing upon Interim Acceptance of the Work and ending with Practical Completion of the Work, during which the Owner performs a pre-planned program of testing and inspecting and the Contractor corrects Contract Deficiencies.

.19 “Personal Information” means “personal information” as defined in the *FOIP Act*.

.20 "Place of the Work" means the designated site or location of the Project of which the Work may be the whole or a part.

.21 "Practical Completion of the Work" means when Contract Deficiencies identified during Performance Testing and previously identified but outstanding Contract Deficiencies have been corrected by the Contractor, or addressed and a course of action established by the Owner, and the state of the Work is so declared, in writing, by the Owner.

.22 "Products" is synonymous with Materials.

.23 "Project" means the total construction of which the Work to be provided under the Contract Documents may be the whole or a part.

.24 "Regulatory Requirements" means laws, ordinances, rules, regulations, orders, codes, and other legally enforceable requirements in effect at the Place of the Work and applicable to the performance of the Work.

.25 "Stipulated Price Arrangement" means a contractual arrangement that prescribes a lump sum as payment for performance of the work to which it relates.

.26 "Subcontractor" means a person, firm or corporation having a direct contract with the Contractor for the performance of a part of the Work at the Place of the Work.

.27 "Sub-subcontractor" means a person, firm or corporation having a direct contract with a Subcontractor for the performance of a part of the Work at the Place of the Work.

.28 "Total Completion of the Work" means when all items arising from the one year warranty period required by the Contract Documents have been corrected by the Contractor and the state of the Work is so declared, in writing, by the Owner.

.29 "Unit Price Arrangement" means a contractual arrangement that prescribes the product of a Contract Unit Price multiplied by a number of units of measurement of a class as payment for performance of the work to which it relates.

.30 "Work" means the total construction and related services required by the Contract Documents.

.31 "Working Day" means days other than Saturdays, Sundays and holidays which are observed by the construction industry at the Place of the Work.

END OF SECTION

1. OWNERS REPRESENTATIVE

.1 Owner shall appoint, in writing, a representative who shall, unless Contractor is expressly advised otherwise by a duly authorized officer of the Owner, have full authority to act on behalf of and bind the Owner under the Contract.

2. CONTRACT DOCUMENTS

.1 The Contract Documents consist of Letter of Acceptance of Contractor's bid; executed Bid and Contract Form; these General Conditions, other documents, or parts thereof, contained in Division 0 of the Specifications which have application during performance of the Contract; Divisions 01 00 00 – 22 00 00 of the Specifications; Drawings; Schedules; and such other documents as may be identified as Contract Documents, and including amendments thereto made in accordance with provisions of the Contract.

.2 The Contract Documents are complementary, and what is required by anyone shall be as binding as if required by all.

.3 Owner, in the first instance, shall decide on questions arising under the Contract Documents, interpret requirements therein, and judge performance in accordance therewith.

.4 The Contractor shall be totally responsible as to which sub-contractor provides required materials or articles and work. This Contractor shall also be solely responsible for determining and providing those items that are not included by the sub-trades to ensure a complete and total project.

3. ASSIGNMENT

.1 Contractor shall not assign the Contract, in whole or in part, nor shall it sublet the Contract as a whole, without previous written consent of Owner, which consent shall be at Owner's sole discretion.

4. TERMINATION

.1 Owner may, by giving a written notice of termination to Contractor, terminate the Contract at any time.

5. SUBCONTRACTS

.1 Owner will recognize Contractor only. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the Owner.

.2 Contractor agrees to bind every Subcontractor by the terms of the Contract Documents, as far as applicable to work of the subcontract.

6. GST EXCLUDED

.1 Contract Price shall exclude federal Goods and Services Tax.

.2 Owner will pay all applicable Goods and Services taxes. These taxes are not to be included in charge out rates, disbursement, etc., but shown as a separate charge.

7. PROTECTION OF WORK AND PROPERTY

.1 Contractor shall take all reasonable precautions necessary to protect the Work and Owner's property from damage during performance of the Contract and shall make good any damage to the Work or to Owner's property caused by Contractor or any of its Subcontractors.

8. CLEANING

.1 Contractor shall keep site free from unsightly or hazardous accumulations of waste material and shall leave site in a neat and tidy condition at completion of Work.

.2 Tarps shall be employed at each building to ensure that the disposal site is cleaned on a daily basis.

.3 A minimum of five (5) business days' notice is required to be submitted prior to mobilizing onto any individual building.

.4 All tenant propriety such as patio furniture etc. is to be removed by the Owner prior to the roofing proceeding. Items that cannot be removed are to be protected by the roofing contractor.

9. HOLD HARMLESS AGREEMENT

.1 Contractor shall indemnify and hold harmless the Owner from any and all third-party claims, demands, actions or costs (including legal costs on a solicitor-client basis) for which Contractor is legally responsible, including those arising out of negligence or willful acts by Contractor or Contractor's employees or agents. This hold harmless provision shall survive the Contract.

10. INSURANCE

.1 Without limiting its liabilities under the Contract, Contractor shall provide, maintain and pay for following minimum insurance coverages, in forms acceptable to Owner:

.1 Comprehensive or Commercial General Liability Insurance with limits of not less than $5,000,000 inclusive per occurrence (annual general aggregate, if any, not less than $5,000,000) against bodily injury, personal injury, and property damage. Following endorsements shall be included: premises, property, and operations; Contractor's protective; blanket contractual; non-owned auto; employees as additional insureds; broad form property damage; cross liability; 30 days advance notice to Owner of cancellation or material change. The policy shall provide coverage of all claims occurring during the term of the policy notwithstanding the fact that the claim may be asserted subsequent to the expiration of the policy for a minimum of three (3) years.

.2 Automobile Liability Insurance on all vehicles owned, operated or licensed in Contractor's name, with limits of not less than $5,000,000.

.3 Where such risks exist, Property Insurance in the form of an All-Risks Builder's Risk Policy or an All-Risks Installation Floater insuring not less than the full insurable value of the Work plus an appropriate value for risk of loss to Owner's property, if any, in Contractor's care, custody and control.

.4 Identify the building owner as named insured on contractor's insurance certificates.

.2 The successful proponent shall indemnify and save harmless Owner from and against all losses and all claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against him and/or the Owner, by reason of any act or omission or alleged act or omission of the said successful proponent, its agents, employees, or subcontractors in the execution of the services.

.3 Contractor shall submit, prior to commencement of Work, in a form acceptable to Owner, proof that insurance coverages are in effect and meet specified conditions.

11. REGULATORY REQUIREMENTS

.1 Contractor shall comply with all laws, ordinances, rules, regulations, orders, codes and other legally enforceable requirements applicable to the performance of the Contract.

.2 Contractor shall apply and pay for necessary permits or licenced required for execution of Work, except obtaining permanent easements or rights of servitude.

.3 Contractor shall comply with the Occupational Health and Safety Act and regulations issued pursuant thereto and those employees are Workplace Hazardous Materials Information System (W.H.M.I.S.) trained and follow Alberta's Occupational Work and Safety Guidelines for job site safety and are COR certified. The Contractor shall, for the purposes of the Occupational Health and Safety Act (Alberta) and for the duration of the Work of this Contract:

.1 be the “prime contractor” for the “work site”, and

.2 Do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and its regulations, as required to ensure the health and safety of all persons at the "work site".

.4 The Contractor shall direct all subcontractors, sub-subcontractors, other contractors, employers, workers and any other persons at the work site on safety related matters, to the extent required to fulfill its "prime contractor" responsibilities pursuant to the Act, regardless of:

.1 whether or not any contractual relationship exists between the Contractor and any of these entities, and

,2 whether or not such entities have been specifically identified in this Contract.

.3 the Owner anticipates that other contractors will be engaged in work at the "work site" concurrently with the Work of this Contract. These may include, but are not necessarily limited to, the Owner’s own forces, other contractors, and suppliers performing the work under other contracts.

12. DEFECTIVE WORK

.1 Defective work is work that has been rejected by Owner as failing to conform to the Contract Documents. Contractor shall promptly correct defective work, as required to conform to the Contract Documents, with no change in Contract Price.

.2 If, in the Owner's opinion, it is not expedient to correct defective work, Owner may deduct from the Contract Price the difference in value between the work as performed and that required by the Contract Documents, the amount of which will be determined in the first instance by the Owner.

.3 Any interior damages resulting from the roof replacement will be scoped by others and tendered for repair. All costs associated with the repairs including scope may be deducted from the Contract Price the difference in value between the work as performed and that required by the Contract Documents.

13. CONTRACT TIME

.1 Time and all-time limits stated in the Contract Documents are of the essence of the Contract. Contractor shall perform work expeditiously and with adequate forces to complete Work of the Contract within time specified in the Contract. If specified in number of days, weeks, or months, time for completion shall commence running on date of issuance of Letter of Bid Acceptance.

14. MATERIALS AND EQUIPMENT

.1 Unless otherwise specified, Contractor shall provide, maintain, and pay for all materials, tools, machinery, equipment, temporary facilities, controls, and conveniences, necessary for execution of the Work. Unless otherwise specified, all materials shall be new of merchantable quality and suitable for the intended purpose.

15. PRODUCT OPTIONS AND SUBSTITUTIONS

.1 For products specified by non-proprietary specification, select any product which meets requirements of Contract Documents, by any manufacturer.

.2 For products specified by proprietary specification and accompanied by words indicating that substitutions will not be accepted, select any product or manufacturer named. Substitutions are not permitted.

.3 Except where substitutions are not permitted, when a product is specified by proprietary specification, other unnamed products will be accepted, subject to such substitutions being the same generic type as, being capable of performing the same functions as, and meeting or exceeding the standards of quality and performance of the named product. Substitutions shall not require revisions to Contract Documents.

.4 In making a substitution Contractor represents that:

.1 Contractor has investigated substitute product and/or manufacturer and has determined that it meets the criteria specified in 15.3,

.2 Contractor will make any changes to the Work necessitated by the substitution as required for the Work to be complete in all respects, and

.3 Contractor waives claims for additional costs and time caused by substitution which may subsequently become apparent.

16. WARRANTY

.1 Neither the final payment, nor any provision in the Contract Documents shall relieve Contractor from responsibility for faulty materials or workmanship which appear within a period of one year from the date of acceptance of the Work, or such other periods as may be specified for parts of the Work, and Contractor shall remedy any defects due thereto and pay for any damage to other work resulting therefrom which appear within such periods.

17. CHANGES IN THE WORK

.1 Owner may order changes in the Work. Changes shall be authorized by written order from Owner.

18. VALUATION OF CHANGES ON STIPULATED PRICE WORK

.1 On extra work authorized by Owner, allowance for overhead and profit shall be as follows:

.1 For work performed by Contractor's own forces, Contractor shall be entitled to 10% for overhead on actual cost of material and labour and an additional 10% for profit on above total.

.2 For work performed by Subcontractors:

.1 each Subcontractor shall be entitled to 10% for overhead on actual cost of material and labour and an additional 10% for profit on above total, and

.2 Contractor shall be entitled to 5% of Subcontractors' total.

.3 For work performed by Sub-subcontractors:

.1 each Sub-subcontractor shall be entitled to 10% for overhead on actual cost of material and labour and an additional 10% for profit on above total,

.2 Subcontractor shall be entitled to 5% of Subsubcontractors' total, and

.3 Contractor shall be entitled to 5% of above total. If a change results in a decrease in cost, amount of credit to be given to Owner shall be amount of actual decrease, without overhead and profit.

.4 If a change involves both extras and credits and results in an increase in cost, overhead and profit shall be allowed on increase only.

19. VALUATION OF CHANGES ON UNIT PRICEWORK

.1 On unit price work, a change shall mean work authorized by Owner in writing which is not required by the Contract Documents and which cannot be classified as coming under any of the contract units and for which no unit price, lump sum or other basis of payment has been agreed to.

.2 Changes shall be performed on the basis of unit prices agreed to by both Owner and Contractor, or if such agreement cannot be reached, or if deemed more appropriate by both parties, on the basis of cost plus a percentage for overhead and profit, such percentage not to exceed that specified in 18.1.

20. PAYMENT

The Commission's representative will review the application for payment in the context of percentage of completion of the project and will authorize payment. Such payment will be made to the successful proponent within thirty (30) days of such authorization.

.1 Amount claimed shall be for value of work performed and products Delivered to site, at that date.

.2 Amount payable shall be amount claimed, adjusted by Owner if necessary, less 10% holdback.

.3 Payment will be made on a monthly basis as the project proceeds. The successful proponent shall provide an invoice to the primary consultant (Krain Consulting Ltd.) and listing of the activities, level of involvement and deliverables completed in the month preceding the date of application for payment. Contractor shall submit with second and any subsequent applications, Statutory Declaration, CCDC 9A-2001.

All approved invoicing will be forwarded the Owner or Owner's representative for payment.

.4 The Commission's representative will review the application for payment in the context of percentage of completion of the project and will authorize payment. Such payment will be made to the successful proponent within thirty (30) days of such authorization.

.5 Unless the Owner is a listed tax-free Government of Alberta agency and is not subject to GST:

.1 the Contractor shall, on each application for payment, indicate as an amount separate from the Contract Price, the amount of GST payable by the Owner,

.2 and the Owner shall pay the Contractor the GST amount payable with each payment.

.6 Final payment and release of holdback monies shall be payable provided that:

.1 Work has been completed, deficiencies have been corrected, and Work has been accepted by Owner,

.2 Builders' Lien Act (Alberta) statutory period of 45 days from date of issuance of certificate of substantial performance, or date of completion of Contract, has expired,

.3 no lien claims have been registered which are then outstanding, and

.4 Statutory Declaration, CCDC 9A-2001 and letter of clearance from Workers' Compensation Board have been submitted.

21. CLAIMS

.1 If Contractor intends to claim any additional payment, Contractor shall give notice of its intention to Owner as soon as possible and not later than 7 days after the event giving rise to the claim first arises or Contractor first becomes aware of such event.

.2 The parties shall make bona fide efforts to resolve a claim as soon as possible after receipt thereof. When the Owner issues a final written position on the claim or fails to do so within a reasonable period of time, and the claim is not resolved to the satisfaction of both parties, the claim shall be considered a dispute and shall be settled in accordance with article 22.

22. DISPUTES

.1 If a dispute of any kind arises between Owner and Contractor in connection with the Contract, the matter in dispute shall be settled in accordance with the processes identified in the document entitled "Dispute Resolution Process for Government of Alberta Construction Contracts", Appendices A, B, C, D, and E.

23. FREEDOM OF INFORMATION & PROTECTION OF PRIVACY ACT

.1 Proponents are advised that parts or all of their RFPs may be subject to the provisions of Alberta's Freedom of Information and Protection of Privacy Act. Proponents who wish to ensure particular parts of their proposal are protected from disclosure

under this Act should specifically identify any information or records provided with their RFP that:

- constitute trade secrets;
- are supplied in confidence; and,
- the release of which could significantly harm their competitive position.

.2 Information which does not meet all three of the foregoing categories may be subject to disclosure to third parties.

.24 LAW

.1 This RFP, the proponent's submitted proposal and any resultant award shall be governed by and construed in accordance with the laws of the Province of Alberta, Canada, which shall be deemed the proper law hereof.

.25 CONFLICT OF INTEREST

.1 At no time during the proposal stage, evaluation stage, after award, or during the performance of the services shall an Owner employee or member be in any way connected with the proponent. Proponents shall include with their initial proposal, and at any subsequent time where requested to do so by the Owner, full details of any employee, person, firm or corporation that could be considered in a conflict of interest.

END OF SECTION

1. WORK OF THIS CONTRACT

.1 Work of this Contract comprises the following:

MacEwan Village
616 – 636 McAllister Loop
Edmonton, AB

Asphalt Shingle Replacement

.2 Physical Limits: Work of the Contract is not necessarily restricted to work within property lines of site, but includes all Work required by Contract Documents, both within and outside property lines.

2. CONTRACT TIME

.1 Complete the Work within the time specified in Section 00 41 14 - Stipulated Price Bid and Contract Form.

3. RESTRICTIONS ON CONTRACTOR'S USE OF PREMISES

.1 Contractor's use of premises will be restricted due to user occupancy and use of the facility.

.2 Cooperate and coordinate Work with the Owner and facility users to minimize conflict and facilitate usage.

4. COORDINATION

.1 Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule and coordinate construction activities in the sequence required to obtain the best results.

.2 Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

.3 Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

.4 Do the cutting and remedial work required to make the several parts of the Work come together properly.

5. PROJECT MEETINGS

.1 Prior to start of any work, a pre-construction meeting shall be held by the Owner and the Contractor to examine and discuss the Work of the Contract.

.2 Schedule regular construction progress meetings, at the site, every two weeks for the duration of the contract, or as otherwise directed by Owner.

6. WORK SITE SAFETY - THIS CONTRACTOR IS "PRIME CONTRACTOR"

.1 The Contractor shall, for the purposes of the current Occupational Health and Safety Act (Alberta), and for the duration of the Work of this Contract:

.1 be the "prime contractor" for the "work site", and

.2 do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and its regulations, as required to ensure the health and safety of all persons at the "work site".

.2 The Contractor shall direct all subcontractors, sub-subcontractors, other contractors, employers, workers and any other persons at the "work site" on safety related matters, to the extent required to fulfill its "prime contractor" responsibilities pursuant to the Act, regardless of:

.1 whether or not any contractual relationship exists between the Contractor and any of these entities, and

.2 whether or not such entities have been specifically identified in this Contract.

.3 The Owner does not anticipate that there will be any contractors, other than those performing the Work of this Contract, engaged in work at the "work site" during the performance of the Work of this Contract.

7. SUBMITTALS

.1 W.C.B. Submittals: Submit certificate of an account with Workers' Compensation Board prior to commencement of Work. Submit letter of clearance with application for payment of holdback, if applicable, and with application for final payment.

.2 Work Schedule: Prior to start of work, submit a schedule indicating scheduled start and completion dates for each construction activity.

.3 Shop Drawings and Product Data: Submit five copies of shop drawings and product data required by the Contract Documents and for such other items as the Owner may reasonably request. Do not proceed with work until related submission has been reviewed.

.4 Samples: Submit duplicate samples required by the Contract Documents and for such other items as the Owner may reasonably request.

8. SUPERINTENDENCE

.1 The Contractor shall, at all times during progress of the Work, keep on site, a competent superintendent who has authority to receive on behalf of the Contractor, any order, direction, or other communication, that may be given under the Contract.

9. QUALITY CONTROL

.1 The Owner may employ services of independent testing agencies to establish if work complies with Contract Documents. Owner will appoint and pay for services of such testing agency. **Do not include costs for inspection services in the bid price.**

.2 Where tests or inspections, by Owner appointed testing agency, indicate work is not in accordance with the Contract Documents, additional tests or inspections, as Owner may require, verifying acceptability of corrected work, shall be paid for by Contractor.

10. TEMPORARY FACILITIES

.1 Provide temporary construction security fencing at each laydown area as directed by the Owner. Protection of the grounds are the responsibility of the contractor. All existing damages / conditions are to be reported prior to setup. Repair and cost of any damages are to be the responsibility of the contractor.

.2 Provide temporary toilets on site for use by Contractor's personnel.

.3 Provide heated jobsite construction trailers for workers. Construction trailers shall be available for on-site construction meetings, if required.

11. ENVIRONMENTAL CONTROLS

.1 Dust and Water Control: Provide and maintain protection from accumulation of dust in the air, and damage by water, to all existing air intake vents. Due to safety requirements to the public, the successful contractor is required to supply and install new scaffolding access to all four sides of the building in addition to the safety railings and site fencing.

.2 Noise Control: Provide the Owner with twenty-four (24) hours advance notice for all excessive noise generating activities.

.3 Contractor shall provide all necessary dust and noise barriers within the building to adequately protect the existing facilities.

.4 Contractor shall provide all necessary protection within the facility, to protect the occupants from exhaust fumes and toxic odors.

12. RESPONSIBILITY FOR EXISTING PROPERTY

.1 Contractor shall assume responsibility for the care, custody and control of property which is assigned to him for performance of the Work.

.2 Contractor shall assume responsibility for and shall make good damage to existing property attributable to performance of Work of the Contract.

.3 Report any existing damage prior to commencement of Work.

13. OVERLOADING AND CLEANING OF STREETS

.1 Vehicles employed for cartage of fill material shall not be loaded beyond rated limits, nor in such manner as to cause spillage.

.2 Clean up immediately spillage or tire tracking occurring upon public or private property.

.3 Do not load, or permit to be loaded, any part of the building with a weight that will endanger its safety.

.4 Should any accident occur by violation of these requirements, the Contractor will be held responsible and liable.

14. CONTRACT CLOSE-OUT

.1 Record Drawings: Submit project record drawings indicating deviations from Contract Documents resulting from changed site conditions and changes ordered by Owner.

.2 Operation and Maintenance Data: Submit three (3) copies of operation and maintenance data required by the Contract Documents and for such other items as the Owner may reasonably request.

.3 Maintenance Materials: Leave maintenance materials required by the Contract Documents where directed by Owner. Clearly label all items.

END OF SECTION

1. INTENT

.1 This Section is to be read in conjunction with, and is subject to, General Condition 2.5 – Valuation of Changes of the General Conditions of Contract.

.2 The General Conditions of Contract provide for valuation of changes by three different methods: lump sum, unit price, and cost plus.

2. DEFINITIONS

.1 “Administrative Fee” means the fee permitted for the administration of all paperwork related to a change in the work and any other work not covered by Direct Cost and Overhead Cost. The Administrative Fee does not cover profit.

.2 "Construction Equipment Cost" means the cost of rented or owned equipment, including cost of loading, transportation, unloading, erection, maintenance, fuel, dismantling and removal. This excludes small tools customarily used to carry out the Work by workers and valued at less than $500.00.

.3 “Direct Cost" means actual costs of material and labour as used in the valuation of changes article in the General Conditions of Contract. Direct Cost is the sum of costs directly related to or necessarily and properly incurred by Contractor, Subcontractors and Sub-subcontractors in the performance of a change in the Work. Direct Cost shall exclude Overhead Cost and profit but shall include:

.1 Operation and maintenance of site offices,

.2 Administration at site offices,

.3 Material Cost,

.4 Total Labour Cost,

.5 Travel and Subsistence Cost,

.6 Temporary Work Cost,

.7 Construction Equipment Cost,

.8 additional bonding and insurance cost,

.9 salaries and other compensation of on-site superintendents and other supervisory personnel,

.10 planning, estimating, and scheduling of work costs,

.11 consumable and expendable materials for small tools, and

.12 Schedule Impact Cost, only where the change has an impact on critical path items,

.4 "Direct Labour Cost" means base wage costs of employees including overtime premium where applicable, but excludes Payroll Burden Cost.

.5 "Material Cost" means cost of all Materials, including transportation and storage thereof. All rebates, refunds, returns from sale of surplus Materials, and trade discounts other than prompt payment discounts, shall be credited to the Owner.

.6 "Overhead Cost" means Contractor's, Subcontractors' and Sub-subcontractors' costs related to:

.1 operation and maintenance of head offices and branch offices,

.2 administration at head offices and branch offices,

.3 general management, legal, audit, and accounting services,

.4 buying organization,

.5 corporate tax,

.6 financing and other bank charges,

.7 salaries and other compensation of off-site personnel,

.8 recruitment and training of on-site staff, and

.9 all other costs not defined as direct costs.

.7 "Payroll Burden Cost" means actual costs paid by the employer for statutory charges and benefit costs additional to Direct Labour Cost. It includes the employer's contributions to Canada Pension Plan, Employment Insurance, Workers' Compensation Board, vacation pay, statutory holiday pay, health and wellness plan, and pension plan. It also includes the actual employer paid incentives for expendable and non-expendable small tools with a value of less than $500.00, safety and protective equipment, education and training, and other payroll costs which are hourly wage dependent.

.8 "Schedule Impact Cost" means Contractor's, Subcontractors' and Sub-subcontractors' costs related to an increase in the Contract Time where the change has an impact on the Project's critical path.

.9 "Temporary Work Cost" means cost of temporary structures, facilities, services, controls, and other temporary items used in the performance of a Change in the Work, including maintenance, dismantling and removal, less any residual value after dismantling and removal.

.10 "Total Labour Cost" means sum of Direct Labour Cost and Payroll Burden Cost.

.11 "Travel and Subsistence Cost" means travel and subsistence costs incurred by employees when working beyond a reasonable commuting distance from their normal place of residence.

3. SCHEDULE OF LABOUR RATES

.1 Submit to the Owner for approval, within 21 days after date of commencement of Contract.

.2 Labour rates stated in Schedule shall be the hourly labour rates that will be applied when estimating increases and decreases in cost resulting from changes in the Work. Assume that work will be performed during regular working hours, not premium time.

.3 Approved Schedule of Labour Rates will be used solely for evaluating Contractor Proposals for changes in the Work. Nothing specified herein, nor the submission of a Schedule of Labour Rates by Contractor, shall be construed to mean that the Owner has established, or will establish, minimum wages or benefits applicable to the Work, other than those required by law.

.4 Include all trades that will be employed in the Work, including trades employed by Subcontractors and Sub-subcontractors.

.5 Provide a breakdown indicating hourly labour rates for Direct Labour Cost, Payroll Burden Cost, and the resulting total labour cost for journeymen, apprentices, foremen and other applicable classifications within each trade.

.6 Labour rates stated in Schedule shall be consistent with rates that will actually be paid in the normal performance of the Work, during regular working hours, and shall not exceed the following:

.1 Where collective agreements apply:

.1 rates for Direct Labour Cost shall not exceed rates established by collective agreements, and

.2 rates for Payroll Burden Cost shall not exceed rates established by collective agreements and statutory charges.

.2 Where collective agreements do not apply:

.1 rates for Direct Labour Cost shall not exceed rates prevailing in the locality of the Project, and

.2 rates for Payroll Burden Cost shall not exceed 45% of rates for Direct Labour Cost.

.7 The Owner's approval of rates provided in the Schedule of Labour Rates will be conditional upon compliance with the foregoing requirements. Approval will be based on most current information available to the Owner on Alberta construction industry wages and benefits.

.8 Contractor may request an amendment to an approved rate stated in the Schedule of Labour Rates, if and when required on account of a change in the rate that will actually be paid in the normal performance of the Work. If Contractor can prove to the Owner's satisfaction that a different rate will actually be paid, the Owner may, at its sole discretion, approve such a change in rate.

4. CHANGE ORDER PROCEDURES - LUMP SUM METHOD OF VALUATION

.1 The Owner will issue a Request for Proposal to Contractor.

.2 Contractor shall submit a Contractor Proposal stipulating:

.1 a lump sum increase, decrease, or no change in the Contract Price, and

.2 an increase, decrease, or no change in the Contract Time,

on account of the proposed change in the Work.

.3 Include in Contractor Proposal a detailed breakdown of lump sum increase or decrease, indicating Contractor's, and where applicable Subcontractors' and Sub-subcontractors':

.1 itemized direct costs applicable to the proposed change in the Work, and

.2 applicable amounts for overhead and profit, in accordance with percentages specified in the General Conditions of Contract.

Do not include costs that would otherwise be incurred in the normal performance of the Work.

.4 Include in detailed breakdown of Contractor Proposal a further breakdown of the total labour cost component indicating, for each applicable trade and trade classification, the labour rate(s) and the number of hours from which the total labour cost is derived.

.5 Include in detailed breakdown of Contractor Proposal only those labour rates included in Schedule of Labour Rates and previously approved by the Owner, in writing, unless the extra work cannot be performed during regular working hours and the Owner has given approval, in writing, for premium time labour rates.

.6 Upon the Owner's approval and acceptance of the Contractor Proposal, a "Change Order" will be issued to Contractor.

END OF SECTION

1. GENERAL COORDINATION

.1 Coordinate all construction activities as required to ensure efficient and orderly installation of each part of the Work.

.2 Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule and coordinate construction activities in the sequence required to obtain the best results.

.3 Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

.4 Make adequate provisions to accommodate items scheduled for later installation under separate contract or by the Owner's own forces.

2. ADMINISTRATIVE PROCEDURES

.1 Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities shall include, but not be limited to, the following:

.1 Preparation of schedules.
.2 Installation and removal of temporary facilities.
.3 Delivery and processing of submittals.
.4 Progress meetings.
.5 Contract acceptance procedures.

3. LEED COORDINATION

.1 Coordinate procedural and administrative requirements by Contractor or trade-contractor, associated with submission of LEED documentation for certification, if applicable.

.2 Refer to Sections 01 35 18, 01 33 00, and 01 74 19 for additional requirements, if applicable.

.3 Provide coordination for commissioning, if required.

4. GENERAL INSTALLATION PROVISIONS

.1 Require the installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

.2 Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

.3 Inspect Materials immediately upon delivery and again prior to installation. Reject damaged and defective items.

.4 Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

.5 Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Owner for final decision.

.6 Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

.7 Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

.8 Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Owner for final decision.

.9 Supervise construction activities to ensure that no part of the Work, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

5. CUTTING AND REMEDIAL WORK

.1 Do the cutting and remedial work required to make the several parts of the Work come together properly.

.2 Coordinate the Work to ensure that this requirement is kept to a minimum.

.3 Cutting and remedial work shall be performed by specialists familiar with Materials affected and shall be performed in a manner to neither damages nor endanger the Work.

END OF SECTION

1. RELATED SECTIONS

.1 Shop Drawings, Product Data and Samples — Section 01 33 23

2. CONSTRUCTION PROGRESS SCHEDULE

.1 Form of Schedule:

.1 Horizontal bar chart of sufficient size to clearly indicate all required information.

.2 Divide time into months, weeks and days. Identify first workday of each week.

.3 Allow space for revisions.

.2 Content of Schedule:

.1 List and provide a separate bar for each activity.

.2 Indicate start and completion dates for each activity and for milestones specified in Section 01 00 00.

.3 Indicate projected percentage of completion for each activity as of first day of each month.

.4 Provide a separate bar for each specified allowance except for allowances for unforeseen work. List each definable activity for each allowance. Include dates for receipt of documentation or information pertaining to work covered by.

3. SUBMITTALS SCHEDULE

.1 Prepare a schedule of shop drawings, product data and samples which are proposed to be submitted during the course of the Contract.

.2 Prepare a schedule of LEED submittals, if applicable.

.3 Submit Submittals Schedule for the Province's review within 15 days after date of commencement of Contract.

END OF SECTION

1. FORMAT

.1 Whenever possible and when an original copy is not required, all submittals with the exception of samples shall be submitted in a digital PDF format to the Consultant and/or the Owner.

2. BONDS

.1 Provide required bonds and as indicated in *Section 00 43 13 - Bid Security* and *Section 00 61 13 – Contract Performance and Security*.

3. INSURANCE

.1 Proof of Insurance: A Certificate of Public Liability and Property Damage Insurance prior to commencement of Work, submit proof that liability insurance coverage is in effect and meets specified conditions as specified in *Section 00 72 00 - General Conditions*.

4. WORKER'S COMPENSATION

.1 W.C.B. Submittals: Submit certificate of an account with Worker's Compensation Board prior to commencement of Work. Submit letter of clearance with application for payment of holdback, if applicable, and with application for final payment.

5. COR CERTIFICATION

.1 Prior to start of work, submit a letter of verification that the contractor has the Alberta OH&S C.O.R. certification.

6. WHMIS

.1 Prior to start of work, submit a letter of verification that all employees are Workplace Hazardous Materials Information System (W.H.M.I.S.) trained and follow Alberta's occupational work and safety guidelines for job site safety.

7. POLICE INFORMATION CHECK AND INTERVENTION RECORDS CHECK

.1 N/A

8. WORK SCHEDULE

.1 Work Schedule: Prior to start of work, submit a construction schedule indicating scheduled start and completion dates for each construction activity.

9. PROGRESS CLAIMS

.1 Prior to the submission of an invoice, submit a sample to the Owner and the Consultant for their review and approval. The information required on the invoice shall be: Original Contract Amount, Changes to Date, Revised Contract Amount, Work Completed to Date, Less Previous Payment(s), Amount of this Claim, less 10% Lien Hold Back, Amount Claimed on this Invoice, G.S.T. and Total Amount of Invoice. Submit a separate detailed worksheet outlining a breakdown of all trades, their subcontract values and list in detail any change orders. Refer to the appended sample forms included at the end of this section.

.2 Prior to the Owners review and payment of progress claims, all the above noted submittals and The City of Edmonton mechanical and electrical permits from their approved agent, where applicable, must be issued to the Owner's Project Manager.

10. SHOP DRAWINGS

.1 The term "shop drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by the Contractor to illustrate details of a portion of the Work.

.2 Contractor shall arrange for the preparation of clearly identified shop drawings as called for by the Contract Documents and for such other items as the Consultant may reasonably request.

.3 Shop drawings shall be prepared in accordance with the Manual on Metric Building Drawings published by the National Research Council of Canada.

.4 Shop drawing size preference is 11" x 17" or 8.5" x 11". Preferred format shall be a PDF file. Preferred delivery method shall be by e-mail.

.5 Prior to submission to the Consultant, the Contractor shall review all shop drawings. By this review, the Contractor certifies that he has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and similar date, and certifies that he has checked and coordinated each Shop Drawing with the requirements of the Work and of the Contract Documents. The Contractor's review of each shop drawing shall be indicated by stamp, date and signature of a responsible person.

.6 If PDF format is not possible, submit a minimum of two (2) copies of shop drawings and product data required by the Contract Documents and for such other items as the Owner/Consultant may reasonably request.

.7 Do not proceed with work until related submission has been reviewed by the Consultant and the Owner and that the shop drawings have been return to the Contractor, for distribution to all parties concerned.

.8 When submitting the shop drawings, the Contractor shall notify the Consultant in writing, on the shop drawing, of any changes that he has made from that which has been called for in the drawings and specifications. Failure of the Contractor to check or have corrected or indicate any changes and variation, in submitting shop drawings, will result in their return to the Contractor without consideration of checking by the Consultant.

.9 If the shop drawings are rejected by the consultant and/or the Owner, he will return, by e-mail the PDF file or one (1) hard copy, to the Contractor. The Consultant will retain one (1) copy and all other copies will be destroyed.

.10 The Contractor shall submit a PDF file or two (2) copies of the revised shop drawings.

.11 The Consultant's review of such drawings or of the revised drawings shall not relieve the Contractor from responsibility for errors or for changes made from the Consultant's drawings or specifications.

.12 Contractor shall retain copies of all shop drawings and these shall be properly filed within the project O&M manuals.

11. SAMPLES

.1 Submit for the Consultant's review, such standard manufacturer's samples as the Consultant and/or the Owner may reasonably require. Label samples as to origin and intended use in the work.

.2 Provide samples of special material, assemblies, or components when so specified.

12. PROJECT RECORD DRAWINGS

.1 The Consultant will provide and coordinate a set of digital and print of record drawings.

.2 Maintain project record drawings separate from construction drawings and record deviations from Contract Documents caused by site conditions and changes ordered by the Consultant/Owner.

.3 Record the following:

.1 Field changes of dimensions and detail.

.2 Changes made by Change and Field order.

.4 Submit project record drawings to the Consultant before or with application for Substantial Completion Inspection.

PROGRESS CLAIM #[ ]

From: [CONTRACTOR INFO]

INVOICE: [INVOICE NUMBER]
Job: [JOB NUMBER]

To: Condominium Corporation No. 042 1647
MacEwan Village Condominium Association
c/o Laidley Management Ltd.
10004 105 Street NW
Edmonton, AB
T5J 1C3

Attention: Nancy Ternowski - Broker

Date: [Current Date]

Project Name: **MacEwan Village**
616 – 636 McAllister Loop
Edmonton, AB

Asphalt Shingle Replacement

Project No. 24-1162

Progress No.: [NUMBER]

Contract Summary:

Original Contract	$ _____
Change Orders	$ _____
Total Contract to Date	$ _____

Invoice Summary:

Total Progress to date	$ _____
Less: Previously Invoiced	$ _____
Amount of This Progress Billing	$ _____
Less Holdback (10%)	$ _____
Total this Progress Claim:	$ _____

Amount Claim:	$ _____
GST (5%) [GST NUMBER]	$ _____
TOTAL INVOICE:	$ _____

WORKSHEET

[CONTRACTOR]				Date: [DATE]	
Project Name :	[PROJECT NAME]				
Scope of Work	**Contract Amount**	**To Date**	**Previous**	**Progress**	**Balance**
1.Site Work	$ _____	$ _____	$ _____	$ _____	$ _____
2. Asbestos Abatement	$ _____	$ _____	$ _____	$ _____	$ _____
3. Demolitions	$ _____	$ _____	$ _____	$ _____	$ _____
4. Concrete	$ _____	$ _____	$ _____	$ _____	$ _____
5. Masonry	$ _____	$ _____	$ _____	$ _____	$ _____
6. Structural Steel	$ _____	$ _____	$ _____	$ _____	$ _____
7. Carpentry	$ _____	$ _____	$ _____	$ _____	$ _____
8. Millwork	$ _____	$ _____	$ _____	$ _____	$ _____
9. Glazing / Skylights	$ _____	$ _____	$ _____	$ _____	$ _____
10. Doors & Hardware	$ _____	$ _____	$ _____	$ _____	$ _____
11. Gypsum Board	$ _____	$ _____	$ _____	$ _____	$ _____
12. Acoustic Ceiling System	$ _____	$ _____	$ _____	$ _____	$ _____
13. Floor Finishes	$ _____	$ _____	$ _____	$ _____	$ _____
14. Painting	$ _____	$ _____	$ _____	$ _____	$ _____
15. Specialties / Safety	$ _____	$ _____	$ _____	$ _____	$ _____
16. Conveying Equipment	$ _____	$ _____	$ _____	$ _____	$ _____
17. Mechanical	$ _____	$ _____	$ _____	$ _____	$ _____
18. Controls	$ _____	$ _____	$ _____	$ _____	$ _____
19. Electrical	$ _____	$ _____	$ _____	$ _____	$ _____
20. Electronics System	$ _____	$ _____	$ _____	$ _____	$ _____
21. General Conditions	$ _____	$ _____	$ _____	$ _____	$ _____
22. Warranty	$ _____	$ _____	$ _____	$ _____	$ _____
23. Cash Allowance	$ _____	$ _____	$ _____	$ _____	$ _____
Change Orders					
CO #[ ]	$ _____	$ _____	$ _____	$ _____	$ _____
CO #[ ]	$ _____	$ _____	$ _____	$ _____	$ _____
CO #[ ]	$ _____	$ _____	$ _____	$ _____	$ _____
Total Change Orders	$ _____	$ _____	$ _____	$ _____	$ _____
Sub-Total	$ _____	$ _____	$ _____	$ _____	$ _____
Less Holdback (10%)	$ _____	$ _____	$ _____	$ _____	$ _____
Total Holdback		$ _____			
Amount of Progress				$ _____	

END OF SECTION

1. INTENT

.1 Submit to the Owner, for review, shop drawings, product data and samples called for by the Contract Documents and for such other items as the Owner may reasonably request.

.2 Until submittal is reviewed, do not proceed with work involving the relevant product.

2. RELATED SECTIONS

.1 Submittals Schedule Section 01 32 16

3. SHOP DRAWINGS

.1 Shop drawings means technical data specially prepared for work of this Contract; including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form.

.2 Present shop drawings in a clear and thorough manner to appropriately illustrate the work.

.3 Identify field dimensions on drawings.

.4 Identify shop drawings by appropriate references to sheet, detail, schedule or room numbers.

.5 Maximum drawing size: 860 x 1120 mm.

.6 Leave a clear space of 100 mm x 75 mm on each sheet of shop drawings for placement of the Owner's review stamp.

.7 Submit one set of mylars for each required shop drawing.

.8 Electronic copies of shop drawings are acceptable.

4. PRODUCT DATA

.1 Product data means standard printed information describing materials, products, equipment and systems; not specially prepared for work of this Contract, other than the designation of selections.

.2 Clearly mark product data to identify products.

.3 Manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and descriptive data will be accepted in lieu of shop drawings provided that:

.1 information not applicable to work of this Contract is deleted, and

.2 standard information is supplemented with information specifically applicable to the work of this Contract.

.4 Submit clear reproducible information as follows:

.1 One copy when product data is submitted as:

.1 Data sheets larger than 216 mm x 355 mm. Submit mylars.
.2 Unbound data sheets 216 mm x 355 mm or smaller. Submit printed or photocopied sheets.

.2 Five (5) copies when product data is submitted as follows:

.1 Information which cannot be duplicated using a photocopier with an automatic document feeder, such as bound or multi-fold information.

.2 Information containing photographs or other information that does not reproduce well on a commercial photocopier.

5. SAMPLES

.1 Samples means cuts or containers of materials or partial sections of manufactured or fabricated components which are physically identical to products proposed for use and which establish minimum standards by which the work will be judged.

.2 Label samples as to origin and intended use in the Work.

6. SUBMITTAL PREPARATION

.1 Review, date and sign, shop drawings, product data and samples, prior to submission.

.2 Determine and verify:

.1 Field measurements.
.2 Field construction criteria.
.3 Catalogue numbers and similar data.
.4 Conformance with Contract Documents.

.3 Coordinate each submittal with requirements of work and Contract documents. Individual drawings will not be reviewed until all related shop drawing and product data are available.

.4 Notify the Owner, in writing, on the submittal and at the time of submission, of deviations from requirements of Contract Documents.

7. SUBMISSION REQUIREMENTS

.1 Make submittals sufficiently in advance of date that reviewed submittals will be required and, in such sequence, as to cause no delay in the Work.

.2 Accompany submittals with transmittal letter, containing:

.1 Date.
.2 Project title and number.
.3 Contractor's name and address.
.4 Number of each shop drawing, product data and sample submitted.
.5 Other pertinent data.

.3 Submittals shall include:

.1 Date and revision dates.
.2 Project title and number.
.3 Name of:

.1 Contractor.
.2 Subcontractor.
.3 Supplier.
.4 Manufacturer.
.5 Name of detailer when details not prepared by Contractor, sub-contractor, or supplier.

.4 Contractor's stamp, initialed or signed, certifying review of submittal, verification of field measurements, and compliance with Contract Documents.

.4 Make corrections or changes to rejected submittals and resubmit, as specified for initial submission.

8. RESPONSIBILITY FOR ERRORS, OMISSIONS AND DEVIATIONS

.1 The Owner's review of submittals does not relieve Contractor from responsibility for errors and omissions, nor deviations from requirements of the Contract Documents.

9. REPRODUCTION OF SUBMITTALS

.1 After final review, the Owner will reproduce at his expense, the number of copies he requires, and return reviewed reproducible documents. Contractor shall reproduce at his expense the number of copies required for performance of the Work.

END OF SECTION

1. General

1.1 RELATED REQUIREMENTS

.1	Submittals	Section 01 33 00
.2	Contract Acceptance Procedures	Section 01 77 20

1.2 REFERENCE DOCUMENTS

.1 Environment Protection and Enhancement Act:

.1 Alberta Environment (EVPA), Government of Alberta

.2 Canadian Environment Protect Act (CEPA):

.1 1999 (CEPA 1999), Government of Canada

.3 American Society of Heating Refrigeration and Air-Conditioning (ASHRAE):
Website: www.ashrae.org:

.1	ASHRAE 52.2-99	Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size (ANSI approved)

.4 Green Seal Environmental Standards, Website: www.greenseal.org:

.1	Standard GC-03-97	Anti-Corrosive Paints
.2	Standard GS-11-93	Architectural Paints

.5 Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
Website: www.smacna.org

.1 IAQ Guideline for Occupied Buildings Under Construction

1.3 DEFINITIONS

.1 Definitions as written below are supplementary to all laws, statutes, and regulations effective in Alberta. Where definitions conflict, laws, statutes, and regulations take precedent over the definitions below.

.2 Environmental Pollution and Damage: Presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.

.3 Environmental Protection: Prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.4 SUBMITTALS – ENVIRONMENTAL PLANS

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

.2 Submit Environmental Protection Plan for review and approval by the Owner.

.1 Plan is to be a comprehensive overview of known or potential environmental issues to be addressed during construction.

.2 Submit prior to commencing construction activities or delivery of materials to site,

.3 Topics level of detail shall be equal with environmental issue and required construction task[s].

.3 Environmental Protection Plan: Plan to include the following:

.1 Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.

.2 Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from site.

.3 Name[s] and qualifications of person[s] responsible for training site personnel.

.4 Descriptions of environmental protection personnel training program.

.5 Work Area Plan show proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features to be preserved within authorized work areas.

.6 Spill Control Plan: Plan includes procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.

.7 Non-Hazardous Solid Waste Disposal Plan: Plan identifies methods and locations for solid waste disposal including clearing debris.

.8 Air Pollution Control Plan: Plan details provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project site.

.9 Contaminant Prevention Plan: Plan identifies potentially hazardous substances to be used on job site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.

2. Products

.1 Not Used.

3. Execution

3.1 ENVIRONMENTAL CONTROLS

.1 Obtain Federal, Provincial and Local Municipality regulations pertaining to waste, air, solid waste, chemical waste, sanitary waste, sediment and noise pollution.

.2 Land resources:

.1 Prior to construction, identify all land resources to be preserved within the work area, with the Owner.

.2 Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without written permission from the Owner.

3.2 POLLUTION CONTROL

.1 Maintain temporary erosion and pollution control features installed under this contract.

.2 Control emissions from equipment and plant to local authorities' emission requirements.

.3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

3.3 DELIVERY, STORAGE AND HANDLING

.1 Take special care to prevent accumulation of moisture on materials and within packaging during delivery, storage and handling to prevent development of mould and mildew on packaging and on products.

.2 Request that suppliers give special attention to minimizing the packaging of materials and equipment:

1. Deliver materials in recyclable, or in reusable packaging, such as cardboard, wood paper, or reusable blankets which will be reclaimed by supplier or manufacturer for recycling.

.1 Minimize packaging materials to maximum extent possible while still ensuring protection of materials during delivery, storage and handling.

.2 Minimize the use of the following packaging materials: Polyurethane, polyisocyanurate, polyethylene, and similar plastic materials such as “foam” plastics and “shrink-fit” plastics.

.3 Reusable blankets: Deliver and store materials in reusable blankets and mats reclaimed by manufacturers or suppliers for reuse where program exists or where program can be developed for such reuse.

.4 Pallets: Ensure pallets are removed from site for reuse or for recycling.

3.4 PROJECT CONDITIONS

.1 Construction ventilation and preconditioning:

.1 Ventilation:

.1 Temporary Construction Ventilation: Maintain sufficient temporary ventilation in areas where materials that emit VOC’s are used. Maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible with building’s HVAC system(s), then ventilate spaces with open windows and temporary fans, sufficient to provide no less than three air changes per hour.

.2 The period after installation shall be sufficient to dissipate odours from elevated concentrations of VOC’s. Where no specific periods are stated in these Specifications, a time period of 72 hours shall be used.

.3 Ventilate areas directly to outside; ventilation to other enclosed areas is not acceptable.

.4 During dust producing activities (e.g. drywall installation and finishing) turn ventilation system off and protect openings in supply and return HVAC system from dust infiltration. Provide temporary ventilation as required.

.5 Develop and follow a construction Indoor Air Quality Plan that complies with the SMACNA Guidelines, Chapter 3 - Mechanical.

.2 Preconditioning:

.1 Store products, which have odours and which have significant VOC emissions to off-gas, in dry, well ventilated space for sufficient period to allow for reasonable dissipation of odours and emissions prior to delivery to Project.

.2 Condition products without containers and packaging to maximize off gassing of VOC’s.

.3 Condition products in a ventilated warehouse or other building.

3.5 SEQUENCING

.1 Where odorous and/or high VOC emitting products are applied on-site, apply prior to installation of porous and fibrous materials. Where this is not possible, protect porous materials with polyethylene vapour retarders.

3.6 PROTECTION

.1 Protect interior materials from water intrusion or penetration.

.2 Where interior products are not intended for wet applications but are exposed to moisture, immediately remove from site and dispose of properly.

.3 Protect installed products using methods that do not support growth of moulds and mildews.

3.7 FIRES

.1 Fires and burning of rubbish on site is not permitted.

3.8 DISPOSAL OF WASTES

.1 Do not bury rubbish and waste materials on site unless approved by the Owner.

.2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

3.9 HISTORICAL / ARCHAEOLOGICAL CONTROL

.1 Perform historical, archaeological, cultural resources biological resources and wetlands control Work to Plan submitted.

.2 Provide monitoring and reporting to assure that control measures are in compliance with Plan and authority (Federal, Provincial, and Municipal) laws and regulations.

.3 Make correction to errors or omissions identified in reporting to the satisfaction of the Owner.

3.10 NOTIFICATION

.1 The Owner will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.

.2 Contractor: after receipt of such notice, inform the Owner of proposed corrective action and take such action for approval by the Owner.

.3 The Owner will issue stop order of work until satisfactory corrective action has been taken.

.4 No time extensions granted, or equitable adjustments allowed to Contractor for such suspensions.

END OF SECTION

1. WORK SITE SAFETY - THIS CONTRACTOR IS "PRIME CONTRACTOR"

.1 The Contractor shall, for the purposes of the *Occupational Health and Safety Act* (Alberta), and for the duration of the Work of this Contract:

.1 be the "prime contractor" for the "work site", and

.2 do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Act and its regulations, as required to ensure the health and safety of all persons at the "work site".

.2 The Contractor shall direct all Subcontractors, Sub-subcontractors, Other Contractors, employers, workers and any other persons at the "work site" on safety related matters, to the extent required to fulfill its "prime contractor" responsibilities pursuant to the Act, regardless of:

.1 whether or not any contractual relationship exists between the Contractor and any of these entities, and

.2 whether or not such entities have been specifically identified in this Contract.

.3 The Owner anticipates that Other Contractors will be engaged in work at the "work site" concurrently with the Work of this Contract. These may include, but are not necessarily limited to, contractors performing work under the following other contracts:

2. CERTIFICATE OF RECOGNITION (COR)

.1 Safety certification, as specified in Section 00 21 13 - Instructions to Bidders, is a condition of contract award.

.2 The Contractor shall maintain a valid standard COR, COREL, or TLC for the duration of the Work of this Contract.

3. SAFETY REQUIREMENTS

.1 Follow all regulations and acts for the project.

END OF SECTION

1. DEFINITIONS

.1 Regulatory requirements means laws, by-laws, ordinances, rules, regulations, codes, orders of authorities having jurisdiction, and other legally enforceable requirements applicable to the Work and which are or become in force during the performance of the Work.

2. GENERAL

.1 Comply with regulatory requirements.

.2 Except as otherwise specified, apply for, obtain, and pay all fees associated with, permits, licenses, certificates, and approvals required by regulatory requirements and the Contract Documents, based on:

.1 regulatory requirements and fees in force on date of tender submission, and

.2 any change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given prior to date of tender submission.

.3 The Owner will obtain permanent easements and rights of servitude which may be required for performance of the work.

.4 Contractor shall give all notices required by regulatory requirements.

3. CONTRACT DOCUMENTS

.1 Contractor shall not be responsible for verifying that Contract Documents comply with regulatory requirements. If Contract Documents are at variance therewith, or changes which require modification to Contract Documents are made to regulatory requirements, by authorities having jurisdiction, subsequent to date of tender closing, Contractor shall notify The Owner in writing, requesting direction, immediately such variance or change becomes known to him. The Owner may make changes required to Contract Documents, and any resulting change in Contract Price or Contract Time will be made in accordance with the General Conditions of Contract.

.2 If Contractor fails to notify the Owner in writing and obtain the Owner's direction as required in paragraph 3.1 and performs work knowing it to be contrary to regulatory requirements, Contractor shall be responsible for and shall correct violations thereof and shall bear costs, expenses and damages attributable to his failure to comply with provisions of such regulatory requirements.

4. ALBERTA BUILDING CODE

.1 Conform to and perform work in accordance with the National Building Code – 2019 Alberta Edition (AE), except as otherwise indicated in Contract Documents. Comply with applicable requirements of.

5. PERMITS

.1 Building Permit:

.1 Contractor shall apply for, obtain and pay for building permit and other permits required for the Work and its various parts.

.2 Contractor shall display the building permit and such other permits in a conspicuous location at the Place of the Work.

END OF SECTION

1. INTENT

.1 Provide temporary facilities and controls specified in this Section and as otherwise required for performance of work of the Contract.

2. SUBMITTALS

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

3. DESIGN OF TEMPORARY FACILITIES

.1 Contractor shall be responsible for design and safety of temporary facilities. Temporary facilities of such nature that engineering proficiency is required for their design to ensure safety during construction shall be designed by a Professional Engineer in the employ of the Contractor. Before the temporary structure is used, the person responsible for the design or his representative, shall inspect the structure and issue a certificate stating that it has been constructed according to his design.

4. FIELD OFFICES AND SHEDS

.1 Contractor's Office: Provide and maintain, during the entire progress of the work, a suitable office on the site, for own use, with suitable tables or benches for the examination of drawings, specifications, etc., and where all notices and instructions from the Owner may be received and acknowledged.

.3 Materials Storage: Provide suitable weather and waterproof storage buildings for the storage and protection of materials. These buildings shall be under lock and key maintained in good condition until the completion of the building.

5. UTILITIES

.1 Sanitary Facilities: Provide and maintain during the work, temporary toilets for the use of all workmen employed on the work. Toilets in the finished portion of the building shall not be used by workmen. Comply with the Provincial Board of Health Regulations under the Public Health Act. Provide separate facilities for both sexes as required.

.2 Water Supply: Contractor will be permitted use of existing water supply, for construction purposes, at no cost to the Contractor. Contractor shall be responsible for all service lines and removal of same upon completion of the Work.

.3 Temporary Light and Power: Contractor will be permitted use of existing light and power for construction purposes at no cost to the Contractor. Contractor will be responsible for all connections, disconnections, switches, service lines, etc., and removal of same upon completion of the Work.

.4 Telephone: Arrange and pay for telephone service to the above-mentioned offices for the duration of the Contract. Long distance calls made by the Owner will be recoverable.

6. BARRIERS

.1 Temporary Fencing: Supply and erect portable chain link fencing, 2400 mm high at locations indicated by the Owner.

.2 Supply, erect and maintain barricades, sidewalk sheds, catch platforms, and accessories as required by authorities having jurisdiction. When no longer required, remove from the site. Demolished material shall become property of Contractor.

7. CONSTRUCTION AIDS

.1 Appliances and Scaffolding: Furnish all necessary transportation, scaffolding, forms, labour, tools and mechanical appliances, machinery, services and material required for executing the work.

8. TEMPORARY ENCLOSURES

.1 Requirements specified herein are additional to and are intended to supplement requirements pertaining to temporary enclosures specified elsewhere in the Contract Documents.

.2 Provide temporary barriers and enclosures as required to ensure that construction work and activities continue uninterrupted and unhampered by adverse weather conditions for duration of construction period.

.3 Protect all wall surfaces to ensure no damages to the wall surfaces during construction. All noted deficient item prior to construction are to be document and sent to the Owner for conformation.

.3 Cold Weather Conditions:

.1 In advance of expected cold weather and freezing temperatures, take necessary action to protect construction from adverse effects of weather and to able to maintain interior building temperatures at specified levels. Temporary heating and / or cooling is to be included in the bid.

.2 During storage, handling and installation, maintain materials at specified temperatures. Do not allow materials to freeze or become coated with ice and snow.

.3 Provide enclosures for each phase of construction so that work may be carried out under temperature-controlled conditions.

9. PROTECTION OF THE PUBLIC AND FIRE SAFETY

.1 Comply with requirements of the Alberta Building Code, Part 8, except as specified otherwise.

.2 Provide and maintain temporary fire protection equipment during performance of Work required by the Owner in accordance with governing codes, regulations, and bylaws.

.3 Burning rubbish and construction waste materials is not permitted on site.

10. SECURITY

.1 Provide and pay for responsible security personnel, acceptable to the Owner, to guard site and contents of site after working hours and during holidays.

.2 Equip exterior temporary doors with hardware and locks.

.3 Secure building against illegal entry at end of each workday.

11. ACTIVITIES GENERATING VIBRATION, NOISE OR SAFETY CONCERNS

.1 Operations considered by the Owner to generate vibration, noise or safety concerns include, but are not limited to, the following:

.1 Cutting of existing roof material
.2 Use of powder actuated fasteners
.3 Removal of Existing material from roof

.2 Do the following when work generating vibration, noise or safety concerns may affect user or user operations.

.1 Coordinate with the Owner and user representative

.2 Schedule and coordinate hours of work with user representative

.3 Stop operations generating vibration, noise or safety concerns when instructed verbally or in writing by the Owner. Do not resume such operations until authorized by the Owner.

12. CLEANING DURING CONSTRUCTION

.1 Do not allow waste material, rubbish, and debris to accumulate and become an unsightly or hazardous condition. Maintain site in a clean and orderly condition.

.2 Do not allow waste material, rubbish, and windblown debris to reach and contaminate adjacent properties.

.3 Lower waste material in a controlled manner; do not drop or throw materials from heights without chute and tarp containment.

.4 Ensure that each Subcontractor engaged on the Work bears his full responsibility for cleaning up during and upon completion of his work in accordance with provisions of this article.

13. WASTE DISPOSAL REQUIREMENTS

.1 Comply with Construction Waste Management Plan for Materials and Resources Credit.

.2 Comply with Provincial and Municipal laws, rules and regulations pertaining to disposal operations.

.3 Provide on-site metal containers with lids, for collection and temporary storage of waste material, rubbish, and debris.

.4 Dispose of waste material, rubbish, and debris at disposal areas away from site.

.5 Do not burn or bury waste material, rubbish and debris on site.

.6 Do not dispose of wastes into brooks, streams, rivers, waterways, lakes or ponds.

.7 Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.

.8 Protection of the grounds are the responsibility of the contractor. All existing damages / conditions are to be reported prior to setup. Repair and cost of any damages are to be the responsibility of the contractor.

14. REMOVAL AND RESTORATION

.1 Remove temporary facilities specified in this Section, prior to request for inspection for Final Acceptance.

.2 Clean and repair damage caused by installation or use of temporary facilities. Restore existing facilities used during construction to their original condition.

END OF SECTION

1. RELATED REQUIREMENTS

.1 Substitutions during bidding period: Instructions to Bidders.

2. DEFINITIONS

.1 Proprietary specification means a specification which includes one or more proprietary names of products or manufacturers, or both, and may also include descriptive, reference standard, or performance requirements, or any combination thereof.

.2 Non-proprietary specification means a specification which includes descriptive, reference standard or performance requirements, or any combination thereof, but does **not** include proprietary names of products or manufacturers.

.3 Substitution means a product or manufacturer not specified by proprietary name which may be acceptable in place of a product or manufacturer which is specified by proprietary name.

3. PRODUCT OPTIONS

.1 For products specified by non-proprietary specification:

.1 select any product by any manufacturer, which meets requirements of Contract Documents.

.2 For products specified by proprietary specification:

.1 select any product or manufacturer named, or

.2 substitute an unnamed product or manufacturer in accordance with Article 4. of this Section.

.3 For products specified by proprietary specification and accompanied by words indicating that substitutions will not be accepted:

.1 select any product or manufacturer named; substitutions are not permitted.

4. SUBSTITUTIONS

.1 Substitute Products: Where substitute products are permitted, unnamed products will be accepted by the Owner, subject to the following:

.1 Substitute products shall be the same type as, be capable of performing the same functions as, and meet or exceed the standards of quality and performance of the named product(s). Substitutions shall not require revisions to Contract Documents nor to work of Other Contractors.

.2 Substitute Manufacturers: Where substitute manufacturers are permitted, unnamed manufacturers will be accepted by the Owner, subject to the following:

.1 Substitute manufacturers shall have capabilities comparable to those of the named manufacturer(s). Substitutions shall not require revisions to Contract Documents nor to work of other Contractors.

.3 In making a substitution Contractor represents that:

.1 they have investigated substitute product or manufacturer, or both, and has determined that it meets the criteria specified in 4.1 or 4.2, or both, and

.2 they will make any changes to the Work necessitated by the substitution as required for the Work to be complete in all respects, and

.3 they waive claims for additional costs and time caused by substitution which may subsequently become apparent.

.4 Substitutions shall not be ordered nor installed without The Owner's acceptance.

.5 If in the Owner's opinion, a substitution does not meet requirements of Contract Documents, Contractor shall, at no extra cost to the Owner, provide a product which, in the Owner's opinion, does meet requirements of Contract Documents.

5. PROPRIETARY SPECIFICATIONS

.1 Notwithstanding specified proprietary names of either or both products and / or manufacturers, products provided shall meet other applicable requirements of Contract Documents. Modify products, if necessary, to ensure compliance with all requirements of Contract Documents.

6. CHANGES TO ACCEPTED PRODUCTS AND MANUFACTURERS

.1 Products and manufacturers accepted by the Owner for use in performance of Work of Contract shall not be changed without The Owner's written consent.

.2 Submit requests to change accepted products and manufacturers to the Owner in writing, including product data indicated in article 7.

7. PRODUCT DATA

.1 When requested by the Owner, submit complete data substantiating compliance of a product with requirements of Contract Documents. Include the following:

.1 Product identification, including manufacturer's name and address.

.2 Manufacturer's literature providing product description, applicable reference standards, and performance and test data.

.2 Samples, as applicable.

.3 Name and address of projects on which product has been used and date of each installation.

.4 For substitutions and requests for changes to accepted products, include in addition to the above, the following:

.1 Itemized comparison of substitution with named product(s). List significant variations.

.2 Designation of availability of maintenance services and sources of replacement materials.

END OF SECTION

1. RELATED SECTIONS

.1	Submittals	Section 01 33 00
.2	Environmental Procedures	Section 01 35 20
.3	Contract Acceptance Procedures	Section 01 77 20

2. SUBMITTALS

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

3. DELIVERY, STORAGE AND HANDLING

.1 Protect packaging during delivery, storage and handling to prevent development of mould and mildew on packaging and on products.

.2 Request that suppliers provide cleaning materials to minimize packaging and equipment.

.3 Deliver materials in recyclable, or in reusable packaging, such as cardboard, wood paper, or reusable blankets which will be reclaimed by supplier or manufacturer for recycling.

4. CLEANING MATERIALS

.1 Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

5. FINAL CLEANING

.1 Perform final cleaning operations specified herein prior to request for inspection for Interim Acceptance of the Work.

.2 Use experienced workers or professional cleaners for final cleaning.

.3 Remove grease, paint spots, dirt, dust, stains, labels, fingerprints and other foreign matter from interior and exterior surfaces; vacuum and dust behind grilles, louvres and screens; wash floor surfaces not otherwise finished; clean metal doors and frames; clean metal work; clean equipment; clean hardware; clean and polish glass on both sides; clean and polish mirrors.

.4 Repair, patch and touch-up marred surfaces to match adjacent finishes.

.5 Replace cracked and broken glass.

.6 Ensure that cleaning agents and methods do not remove finishes and permanent protective coatings on surfaces being cleaned. Follow manufacturer's printed maintenance requirements for cleaning.

.7 Broom clean or remove snow and ice from all exterior paved areas designed for pedestrian or vehicular traffic, including parking areas.

.8 Leave all surfaces in perfectly clean and unsoiled condition to the Owner's satisfaction.

6. WASTE DISPOSAL REQUIREMENTS

.1 Remove all waste generated during cleaning operations from site.

END OF SECTION

1. CONTRACT ACCEPTANCE PROCEDURES

.1 Prior to requesting the Owner's inspection for Interim Acceptance, Contractor shall do the following:

.1 Ensure that the Work is ready for use for the purpose intended.

.2 Review Contract Documents and inspect Work to confirm that prerequisites to Interim Acceptance of Work have been fulfilled and that Work is ready for inspection for Interim Acceptance.

.2 Submit written request to the Owner for inspection for Interim Acceptance of the Work, certifying that prerequisites have been fulfilled and specifying known exceptions in the form of a list of items to be completed, corrected or submitted.

.3 Results of the Owner's inspection for Interim Acceptance will form initial Contract Deficiency list.

.4 Following inspection, the Owner will:

.1 issue a Letter of Interim Acceptance stating effective date of Interim Acceptance of the Work, with a copy of the Contract Deficiency list attached thereto, or

.2 advise Contractor those prerequisites to Interim Acceptance are not fulfilled and repeat inspection for Interim Acceptance as necessary.

.5 Upon issuance of Letter of Interim Acceptance, the Owner will assume responsibility for care, custody and control of the Work, including responsibility for:

.1 Facility operation, including all systems and equipment.
.2 Maintenance
.3 Security
.4 Property insurance
.5 Utility costs

.6 Prior to requesting the Owner's inspection for Final Acceptance, Contractor shall do the following:

.1 Ensure that the entire Work, except those items arising from the warranty provisions of the Contract Documents, has been performed to the requirements of the Contract Documents.

.2 Review Contract Documents and inspect Work to confirm that prerequisites for Final Acceptance of Work have been met and that Work is ready for inspection for Final Acceptance.

.7 Submit written request to the Owner for inspection for Final Acceptance of Work, including copy of the Owner's most recent Contract Deficiency list, and certifying that each Contract Deficiency has been corrected or otherwise resolved in a manner agreed to between the Owner and Contractor. List known exceptions, if any, in request.

.8 Following inspection, the Owner will:

.1 issue a Letter of Final Acceptance, stating effective date of Final Acceptance of Work, or

.2 advise Contractor of Contract Deficiencies which must be corrected prior to issuance of Letter of Final Acceptance.

2. FINAL CLEANING

.1 Perform final cleaning prior to request for inspection for Interim Acceptance of the Work

.2 Use experienced workers or professional cleaners for final cleaning.

.3 Remove grease, paint spots, dirt, dust, stains, labels, fingerprints and other foreign matter from interior and exterior surfaces.

3. PROJECT RECORD DOCUMENTS

.1 The Owner will provide a set of ozalid prints for record drawing purposes.

.2 Record the following:

.1 Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure

.2 Field changes of dimensions and detail

.3 Changes made by change and field order

.3 Submit project record drawings to Minister before or with request for inspection for Interim Acceptance.

4. OPERATION AND MAINTENANCE DATA

.1 Provide Minister with 3 copies of operation and maintenance data, as called for in the Contract Documents, made up as follows:

.1 Bind data in vinyl hard cover, variable capacity, expanding binder with full metal hinge and slide lock mechanism for 215 x 280 mm size paper.

.2 Enclose title sheet, labeled "Operating and Maintenance Data Manual", project name, date and list of contents.

.2 Include the following information plus data specified.

.1 Maintenance instructions for finished surfaces and materials.

.2 Copy of hardware and paint schedules.

.3 Names, addresses and phone numbers of subcontractors and suppliers.

.4 Guarantees, warranties and bonds indicating:

.1 Name and address of project

.2 Warranty/Guarantee/Bond commencement date and duration

.3 Clear indication of what is being guaranteed and what remedial action will be taken under guarantee

.4 Signature and seal of Contractor

.3 Neatly type lists and notes. Use clear drawings, diagrams or manufacturers' literature.

.4 Include one complete set of reviewed shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.

END OF SECTION

1. SUMMARY OF PROCESS

.1 A Contract acceptance process shall be used to facilitate the Owner's acceptance of the Work. The process can be summarized as follows:

.1 Interim Acceptance of the Work:

.1 Fulfillment of prerequisites to Interim Acceptance
.2 Inspection for Interim Acceptance
.3 Issuance of Letter of Interim Acceptance

.2 Final Acceptance of the Work:

.1 Fulfillment of prerequisites to Final Acceptance
.2 Inspection for Final Acceptance
.3 Issuance of Letter of Final Acceptance

.3 Total Completion of the Work:

.1 Fulfillment of prerequisites to Total Completion
.2 Inspection for Total Completion
.3 Issuance of Letter of Total Completion

2. RELATED SECTIONS

.1	Regulatory Requirements	Section 01 41 00
.2	Temporary Facilities and Controls	Section 01 50 00
.3	Final Cleaning	Section 01 74 23
.4	Closeout Procedures	Section 01 77 00

3. PARTIAL ACCEPTANCE OF WORK

.1 When partial utilization of the Work is required and Interim Acceptance, Final Acceptance or Total Completion of part(s) of the Work is a condition of such partial utilization, the applicable requirements specified in this Section shall apply to the part(s) of the Work to be utilized.

4. PREREQUISITES TO INTERIM ACCEPTANCE

.1 Prior to requesting the Owner's inspection for Interim Acceptance, Contractor shall do the following, not necessarily in order listed:

.1 Obtain and submit evidence of compliance with regulatory requirements as specified in Section 01 41 00, including the following:

.1 Occupancy permit(s)

.2 Inspection/operating certificates.

.2 Remove from project site temporary facilities as specified in Section 01 50 00, along with construction tools, equipment, mock-ups and similar items.

.3 Complete final cleaning as specified in Section 01 74 23.

.4 Complete installation of architectural finish items, including all mechanical and electrical covers and trims.

.5 Ensure that all Contract Deficiencies which may affect operation of systems have been corrected.

.6 Ensure that the Work is complete and ready for use for the purpose intended.

.7 Review Contract Documents and inspect Work to confirm that prerequisites to Interim Acceptance of Work have been fulfilled and that Work is ready for inspection for Interim Acceptance.

5. INSPECTION FOR INTERIM ACCEPTANCE

.1 Submit written request to the Owner for inspection for Interim Acceptance of the Work, certifying that prerequisites specified in Article 4. above have been fulfilled and specifying known exceptions in the form of a list of items to be completed, corrected or submitted.

.2 The Owner will within a reasonable time after receipt of Contractor's request:

.1 proceed with inspection, or

.2 advise Contractor that those prerequisites are not adequately fulfilled.

.3 Results of the Owner's inspection for Interim Acceptance will form an initial Contract Deficiency list.

6. INTERIM ACCEPTANCE OF THE WORK

.1 Following inspection, the Owner will:

.1 issue a Letter of Interim Acceptance stating effective date of Interim Acceptance of the Work, with a copy of the Contract Deficiency list attached thereto, or

.2 advise Contractor that prerequisite to Interim Acceptance is not fulfilled and repeat inspection for Interim Acceptance as necessary.

.2 Upon issuance of Letter of Interim Acceptance, the Owner will assume responsibility for care, custody and control of the Work, including responsibility for:

.1 Facility operation, including all systems and equipment.
.2 Maintenance
.3 Security
.4 Property insurance
.5 Utility costs

7. PREREQUISITES TO FINAL ACCEPTANCE

.1 Prior to requesting the Owner's inspection for Final Acceptance, Contractor shall do the following:

.1 Ensure that the entire Work, including the correction of all Contract Deficiencies, except those items arising from the warranty provisions of the Contract Documents, has been performed to the requirements of the Contract Documents.

.2 Review Contract Documents and inspect Work to confirm that prerequisites for Final Acceptance of Work have been met and that Work is ready for inspection for Final Acceptance.

8. REVIEW FOR FINAL ACCEPTANCE

.1 Submit written request to the Owner for inspection for Final Acceptance of the Work, including copy of the Owner's most recent Contract Deficiency list, and certifying that each Contract Deficiency has been corrected or otherwise resolved in a manner agreed to between the Owner and Contractor. List known exceptions, if any, in request.

.2 The Owner will within a reasonable time after receipt of Contractor's request:

.1 proceed with review, or

.2 advise Contractor those prerequisites are not adequately fulfilled

9. FINAL ACCEPTANCE OF THE WORK

.1 Following inspection, the Owner will:

.1 issue a Letter of Final Acceptance, stating effective date of Final Acceptance of Work, or

.2 advise Contractor of Contract Deficiencies which must be corrected prior to issuance of Letter of Final Acceptance

10. PREREQUISITES TO TOTAL COMPLETION

.1 The prerequisites to Total Completion of the Work are:

.1 Final Acceptance of the Work.

.2 Expiry of one-year warranty period, excluding extended warranties, if any.

.3 Items arising from the one-year warranty period required by the Contract Documents shall have been corrected by the Contractor.

11. REVIEW FOR TOTAL COMPLETION

.1 Just prior to the end of one-year warranty period, the Owner will conduct a review for Total Completion.

12. TOTAL COMPLETION OF THE WORK

.1 Following inspection, the Owner will:

.1 issue a Letter of Total Completion, or

.2 advise Contractor of items which must be corrected prior to issuance of Letter of Total Completion.

END OF SECTION

1. General

1.1 RELATED SECTIONS

Table of Contents	Section 00 01 10
List of Drawing Sheets	Section 00 01 15
Asphalt Shingle Roofing on Uninsulated Wood Deck	Section 07 31 13
Modified Bituminous Membrane Roofing	Section 07 52 00

1.2 REFERENCE STANDARDS

.1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.

1.3 EXISTING CONDITIONS

.1 Visit and examine the site and note all characteristics and irregularities affecting the work of this Section.

1.4 SUBMITTALS

.1 Provide the Consultant with the proposed demolition plan for review and approval a minimum of seven days prior to the scheduled commencement of the Work. The demolition plan shall include drawings, diagrams, details and supporting data clearly showing sequence of demolition, removal work of buildings, supporting structures and underpinning.

.2 Drawings for structural elements shall be designed by and bear signature and stamp of qualified professional engineer registered in the Owner of Alberta.

.3 Submit Waste reduction progress reports and Demolition Waste Audit in accordance with 01 74 21 - Construction/Demolition Waste Management and Disposal, if applicable.

1.5 PROTECTION

.1 Prevent movement or settlement of adjacent work. Provide and place bracing or shoring and be responsible for safety and support of such work. Be liable for any such movement or settlement, and any damage or injury caused.

.2 Cease operations and notify Owner if safety of any adjacent work or structure appears to be endangered. Take all precautions to support the structure. Do not resume operations until reviewed with the Owner.

.3 Ensure safe passage of building occupants around area of demolition.

.4 Cease operations and notify the Owner immediately for special protective and disposal instructions when asbestos materials or other hazardous materials, other than those identified, are uncovered during the work of this project.

.5 Prevailing weather conditions and weather forecasts shall be considered. Demolition work shall not proceed when weather conditions constitute a hazard to the workers and site.

.6 Prevent debris from blocking surface drainage inlets and mechanical and electrical systems which remain in operation.

.7 Temporarily suspended work that is without continuous supervision, shall be closed to prevent entrance of unauthorized persons.

1.6 TEMPORARY PARTITIONS

.1 Erect and maintain dustproof partitions, seal off ducts as required to prevent spread of dust and fumes to other parts of the building. On completion, remove partitions and make good surfaces to match adjacent surfaces.

1.7 SALVAGEABLE AND RECYCLABLE MATERIALS

.1 Except where otherwise specified, all materials indicated or specified to be permanently removed from the Place of the Work shall become Contractor's property. Maximize to the fullest extent possible, salvage and recycling of such materials, consistent with proper economy and expeditious performance of the Work.

.2 To reduce the quantity of material otherwise destined for disposal at a landfill, the Contractor is encouraged to consider utilizing the services of businesses and non-profit organizations that specialize in salvage and recycling of used building materials but does so at his own option and risk.

.3 A current listing of recyclers specializing in specific categories of materials may be obtained during normal office hours from:

Alberta Environment
Recycling Branch
Recycle Info Line
Phone: (780) 427-6982 or 1-800-463-6326

2. Products

2.1 MATERIALS AND EQUIPMENT

.1 Provide materials and equipment as required to perform work of this section.

3. Execution

3.1 DEMOLITION – GENERAL

.1 Carefully remove the following items as required on the various roof areas:

Location	Description
ER1 ER2	Remove and dispose of the existing asphalt shingles along with underlayment (where applicable), related rake and eave metal drip edge flashings as required to expose the surface of the existing roof decking.

.2 Carry out demolition work in accordance with CSA S350, unless otherwise specified.

.3 Remove from the site all materials indicated in Section 07 52 00.

.4 Carry out demolition in a manner to minimize inconvenience to adjacent occupied space.

.5 Carry out demolition in an orderly and careful manner.

.6 Lower waste materials in a controlled manner; do not drop or throw materials from heights exceeding 3000 mm.

.7 Burning of materials on site is not permitted.

3.2 RESTORATION

.1 Restore to its original condition any portion of the building demolished unnecessarily, at no expense to the Owner.

.2 Immediately as the work progresses, repair all vibration and excavation damage to existing adjacent properties and active underground services.

3.3 CLEAN-UP

.1 For clean-up during demolition and for final cleaning, comply with requirements of Division 01, if applicable.

END OF SECTION

1. General

1.1 RELATED SECTIONS

.1 Selective Building Demolition — Section 02 41 19
Asphalt Shingle Roofing on Uninsulated Wood Deck — Section 07 31 13
Modified Bituminous Membrane Roofing — Section 07 52 00

.2 The contractor shall review the project drawings and specifications prior to commencement of the Work.

1.2 REFERENCE DOCUMENTS

.1 Alberta Roofing Contractors' Association, (ARCA):

.1 Manual on Good Roofing Practice and Accepted Roofing Systems.

.2 American Society for Testing and Materials (ASTM):

.1 ASTM A307-10, Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength

.2 ASTM C954-11, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness

.3 American Wood Preservers Association (AWPA):

.1 AWPA Book of Standards, 2002

.5 Canadian General Standards Board (CGSB):

.1	CAN/CGSB-51.34-M86	Vapour Barrier, Polyethylene Sheet for Use in Building Construction
.2	CAN/CGSB-51-GP-51M	Polyethylene Sheet for Use in Building Construction
.3	CAN/CGSB-71.26-M88	Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems

.6 Canadian Standards Association (CSA):

.1	CSA B111-74(R2003)	Wire Nails, Spikes and Staples
.2	CSA G164-M92(R2003)	Hot Dip Galvanized of Irregularly Shaped Articles
.3	CSA O80 Series-08	Wood Preservation
.4	CSA O112 Series-M1977 (R2006)	Adhesives for Wood
.5	CSA O121-08	Douglas Fir Plywood
.6	CAN/CSA O141-05(R2009)	Softwood Lumber
.7	CSA O151-09	Canadian Softwood Plywood
.8	CSA O153–M1980(R2008)	Poplar Plywood
.9	CSA O325.0-92 (R2003)	Construction Sheathing
.10	CSA O437 Series – 93(R2006)	Standards on OSB and Waferboard
.11	CSA O452 Series – 94(R2001)	Design Rated OSB

.7 National Lumber Grading Authority (NGLA), Standard Grading Rules for Canadian Lumber, Latest edition.

1.3 SUBMITTALS

.1 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures, if applicable.

.2 Submit manufacturer's printed product literature, specifications and datasheet.

1.4 QUALITY ASSURANCE

.1 Regulatory Agency Approvals:

.1 Comply with applicable requirements of National Building Code – 2019 Alberta Edition (AE).
.2 Lumber shall be graded and stamped by an agency certified by Canadian Lumber Standards Administrative Board.
.3 Plywood shall be graded and stamped in accordance with applicable CSA standards.
.4 Panel products shall be marked with a recognized, visible grade stamp.

1.5 PRODUCT DELIVERY AND STORAGE

.1 Delivery and Acceptance Requirements:

.1 Protect materials from weather in transit and on job site.

.2 Storage and Handling Requirements:

.1 Store materials a minimum of 150 mm off the ground on raised supports. Cover materials with waterproof covering. Provide adequate air circulation and ventilation under covering.

.2 Do not store seasoned materials in wet or damp areas.

.3 Protect edges and corners of sheet materials from damage during handling and storage.

.3 Waste Management and Disposal:

.1 Separate waste materials for recycling in accordance with Section 01 74 19 – Waste Management and Disposal, if applicable.

1.6 CERTIFICATES

.1 For products treated with preservative by pressure impregnation submit following information certified by authorized signing officer of treatment plant:

.2 Information listed in AWPA M2 applicable to specified treatment.

.3 Moisture content after drying following treatment with water-borne preservative.

.4 Indicate acceptable types of paint, stain, and clear finishes that may be used over treated materials to be finished after treatment.

2. Products

2.1 DESCRIPTION

.1 Sustainability Characteristics:

.1 Provide materials that have been extracted, harvested, recovered and processed within the minimum distances required to the final point of manufacture. Provide materials from a manufacturing facility within minimum distance required from Project site and delivered to Project site by acceptable transportation method.

2.2 LUMBER

.1 Grades: Use CLS grade-marked lumber conforming to the Standard Grading Rules for Canadian Lumber published by the National Lumber Grades Authority.

.2 Lumber: to CAN/CSA 0141, softwood, S-P-F, S4S, surface-dry, graded and stamped in accordance with current National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber.

.1 Moisture Content: maximum 19% at time of installation.
.2 Finger jointed lumber is not acceptable.
.3 Co-ordinate with Section 01 35 18 - LEED Requirements.
.4 Materials and Resources, Regional Materials Credit [5.1 & 5.2] - Regional Materials: [10% & 20%] Extracted and Manufactured Regionally.
.5 Material and Resources Credit MR - 7 Certified Wood.

.3 Framing and Board Lumber: in accordance with ABC and as specified in schedules.

.4 Furring, Blocking, Nailing Strips, Grounds, Rough Bucks, Cants, Curbs Fascia Backing and Sleepers: S4S, “Standard” or better grade for board, post and timber sizes, “Standard” light framing or better for dimension sizes.

2.3 ENGINEERED WOOD PRODUCTS

N/A

2.4 PANEL PRODUCTS

.1 Provide panel products manufactured with phenol-formaldehyde or formaldehyde-free adhesives.

.2 Douglas Fir Plywood: to CSA 0121, thickness as indicated on Drawings.

.3 Poplar Plywood: to CSA 0153, standard construction, thickness as indicated on Drawings.

2.5 FASTENING DEVICES AND HARDWARE

.1 Nails, spikes, and staples in accordance with comply with National Building Code – 2019 Alberta Edition (AE) as follows:

.1 Use common spiral nails and spiral spikes except where indicated otherwise.

.2 Use hot dip galvanized finished steel for exposed exterior work, highly humid interior areas, pressure preservative, and fire-retardant treated lumber.

.2 Bolt, nut, washer, screw and pin type fasteners: hot dip galvanized finish to CSA G164-M 92.

.3 Use surface fastenings of followings types, except where specific type is indicated.

.1 To hollow masonry, plaster, and panel surfaces, use toggle bolt.

.2 To solid masonry and concrete, use expansion shield with lag screw, or pinbolt anchors.

.3 To structural steel, use bolts through drilled hole or welded stud bolts or power drive self-drilling screws or welded stud bolts.

2.6 ANCILLARY MATERIALS

.1 Surface applied wood preservative: copper napthanate base or pentachlorophene, prepared in accordance with CSA O80.15, coloured green.

2.7 PRESSURE PRESERVATIVE TREATED WOOD

.1 Pressure Preservative Treated Plywood: Treated in accordance with CAN/CSA O80.9M using water-borne preservative to obtain minimum net retention of 4 kg/m³ of wood. Plywood or laminated materials shall be manufactured with exterior grade adhesives. After treatment, plywood shall be kiln dried to moisture content of 8% or less.

.2 Water-borne preservative treated wood shall have maximum moisture content of 19% after treatment.

.3 Ensure to properly protect any roof / floor surfaces to minimize effects of accidental spillage.

3. Execution

3.1 ROUGH CARPENTRY WORK

.1 Accurately frame and properly assemble rough carpentry work. Include necessary nails or other connectors.

3.2 APPLICATION OF SURFACE APPLIED WOOD PRESERVATIVE

.1 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of surface applied wood preservative before installation.

.2 Application Preservative:

.1 Following water-borne preservative treatment, dry material to maximum moisture content of 19%.

3.3 ERECTION OF FRAMING MEMBERS

.1 Install members true to line, levels and elevations. Space uniformly.

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

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

.4 Install blocking to facilitate installation of finishing materials, fixtures, specialty items and trim.

3.4 WOOD FURRING AND BLOCKING - REPLACEMENT

.1 Install roof and wall sheathing in accordance with requirements and comply with National Building Code – 2019 Alberta Edition (AE) as follows:

.1 Install roof and wall sheathing with panel end-joints located on solid bearing, staggered at least 800 mm.

3.5 CARPENTRY IN CONNECTION WITH ROOFING AND WALLS

.1 Construct wood curbs for roof mounted equipment, anchors and for roof penetrations, except drains.

.1 Curb heights measured from finished roof membrane.

.1 200 mm for curbed plumbing vents, if applicable.
.2 200 mm for other curbs.

.2 **Mechanically fasten replacement plywood shall be with a minimum of wood screws. <u>Pneumatic nailing is not acceptable.</u>**

.3 Screw top 38 x 89 mm plates of building control joint box to plywood sides. Leave 25 mm gap between top plate ends every 2400 mm.

.4 Attach curbs, control joint boxes, blocking and framing directly to structure.

3.6 SCHEDULE OF DIMENSION LUMBER

Description	Species	Grade
Non-structural wall components	Spruce-Pine-Fir	Construction

3.7 SCHEDULE OF PANEL PRODUCTS

Location/Panel Type	Thickness	Grade	Type	Edge
Vertical curb / parapet / wall covering / roof sheathing (replacement)				
Douglas Fir / Spruce Plywood	12.7 mm	Sheathing	G1S	Square

3.8 SCHEDULE OF PRESSURE PRESERVATIVE TREATED WOOD

.1 Use pressure preservative treated wood for following components:

.1 Sleepers on roof deck
.2 Wood in direct contact with concrete or masonry
.3 As noted on drawings

.2 Before installation, provide liberal brush application of surface applied wood preservative to surfaces of pressure preservative treated wood exposed by cutting, trimming or boring.

END OF SECTION

1. General

1.1 RELATED SECTIONS

.1	Selective Building Demolition	Section 02 41 19
.2	Exterior Rough Carpentry	Section 06 10 63
.3	Modified Bituminous Membrane Roofing	Section 07 52 00
.4	Flashings and Rainwater Goods for Steep Roofing	Section 07 62 10

1.2 REFERENCE DOCUMENTS

.1 American Society for Testing and Materials (ASTM):

.1	ASTM D228/ D228M-09	Standard Test Methods for Sampling, Testing, and Analysis of Asphalt Roll Roofing, Cap Sheets, and Shingles Used in Roofing and Waterproofing
.2	ASTM D1922-09	Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method
.3	ASTM D3018/ D3018M-09	Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules
.4	ASTM D4977-03 (2009)	Standard Test Method for Granule Adhesion to Mineral Surfaced Roofing by Abrasion
.5	ASTM E108-07a	Standard Test Methods for Fire Tests of Roof Coverings
.6	ASTM D3462/ D3462M-09a	Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
.7	ASTM D3161-09	Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method)

.2 Canadian Standards Association (CSA):

.1	CSA A123.1-05/ A123.5-05	Asphalt Shingles Made From Organic Felt and Surfaced With Mineral Granules / Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules

1.3 DETAIL DRAWINGS

.1 Refer to Section 00 01 15 for detail pages.

1.4 REVIEW BY OWNER

.1 Owner will perform and pay for inspection of completed roofing and related work.

.2 Notify Owner of commencement of work of this Section and provide a schedule for the Work of this Section.

.3 Contractor shall accompany Owner during inspection.

1.5 SUBMITTALS

.1 Comply with requirements of Division 01, if applicable.

.2 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures, if applicable.

.2 Provide two copies of most recent data sheets describing materials' physical properties and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Provide two copies of MSDS for all products and indicate VOC content.

1.6 CLOSEOUT SUBMITTALS

.1 Warranty Documentation:

.1 Submit Warranty Certificate or Maintenance Bond prior to Interim Acceptance of the Work.

1.7 QUALITY CONTROL REVIEWS

.1 Owner will pay for review of roofing progress and related ventilation work. Provide necessary facilities and co-operate with an independent Alberta Roofing Contractor Association (ARCA) Accepted Roofing consultant (Krain Consulting Ltd.) engaged and paid for by the Owner.

.2 Notify Owner of commencement of work of this Section and provide a schedule for the Work of this Section.

.3 Contractor shall accompany the Consultant during reviews.

1.8 DELIVERY, STORAGE AND HANDLING

.1 Delivery and Acceptance Requirements:

.1 Deliver materials to job site, handle and store in original packages and containers with manufacturer's seals and labels intact. Manufacturer's name, brand, mass, specification number, and lot number shall be shown on labels.

.2 Storage and Handling Requirements:

.1 Store materials in weatherproof shelters having floors which will protect materials from moisture. Store roll materials on end. Avoid prolonged exposure of light or heat sensitive materials to sunlight.

.2 In the event of materials damage by the elements, improper handling or other causes, such materials will be rejected, and shall be replaced with no change in Contract Price. Remove rejected materials promptly from the site.

.3 Waste Management and Disposal:

.1 Separate waste materials for recycling in accordance with Section 01 74 19 - Management and Disposal.

1.9 REFERENCE DOCUMENTS

.1 Except where specified otherwise, meet or exceed the Alberta Roofing Contractors Association Ltd. (ARCA) requirements for the Five (5) Year ARCA Warranty Certificate. These requirements are published in the ARCA "Manual on Good Roofing Practice and Accepted Roofing Systems", current edition. This is notwithstanding that not more than a two-year extended warranty is specified in this Section.

.2 For definitions of roofing related terms used in these specifications, refer to Glossary of Roofing Terms contained in the ARCA manual.

1.10 DESCRIPTION OF SYSTEMS

.1 Existing Roof Assemblies

a. Refer to SK-A for Existing Roof Assembly Descriptions

.2 New Roof Assemblies:

a. Refer to SK-A for New Roof Assembly Descriptions

1.11 INSTALLER QUALIFICATIONS

.1 The foreman or at least one other roofer / supervisor shall hold a three-year Apprenticeship Certificate or a Journeyman Certificate.

.2 The rest of the roofing crew shall have at least partly completed the roofer apprenticeship program and shall have submitted application to the appropriate provincial authority for certification as "Roofer" **or** acceptable written acceptance from the shingle manufacturer as an approved installer.

1.12 TESTING AND INSPECTION BY OWNER

.1 Review of work of this Section will be performed and paid for by Owner.

.2 Notify Owner of commencement of the work and provide a schedule of roofing work.

.3 Accompany Owner during reviews.

1.13 DELIVERY, STORAGE AND HANDLING

.1 Deliver materials, handle and store in original packages and containers with manufacturer's seals and labels intact. The manufacturer's name, brand, mass, specification number and lot number shall be shown on the labels.

.2 Do not store materials on roof in concentrations which exceed design live loads.

.3 Mix the shingle bundles to evenly distribute mineral surfacing colour variations.

1.14 COORDINATION

.1 Coordinate work of this Section with the following:

.1 Membranes connecting to roofing membranes.
.2 Construction at roof perimeters and penetrations.
.3 Plumbing vents and drains.
.4 Metal cladding matching colour of roof flashing.

1.15 EXTENDED WARRANTY

.1 Provide an extended warranty stating:

.1 that the roofing system has been constructed in accordance with the Contract Documents, and

.2 that the Contractor shall, at no additional expense to the Province, repair any actual leaks or deficiencies in the roofing system, occurring within two years after the date of Interim Acceptance of the Work, and which have resulted from faulty or improper workmanship.

.2 For the purpose of this extended warranty, the roofing system includes the roofing assembly and related sheet metal work.

.3 Owner will inspect the roofing system in the last three months of extended warranty period and will promptly inform Contractor of deficiencies.

.4 Stop leaks which have resulted from a deficiency, within a time reasonably determined by the Owner.

.5 Correct deficiencies within 15 working days of notification by Owner, or as otherwise determined by the Owner.

1.16 WARRANTY

.1 The roofing system constructed by a member of the ARCA, on behalf of the Owner, shall supply the ARCA Five (5) Year Warranty Certificate for the performance of Contractor's obligations under the extended warranty. The Owner will not accept other roofing certificates.

.2 Submit Maintenance Bond prior to Interim Acceptance of the Work. Maintenance bond shall be:

.1 in the amount of 100% of the cost of materials and labour associated with the roofing and roofing related work performed under this Contract.

.3 Ensure that the Contractor obtains the Warranty Certificate for the specified warranty period, on behalf of the Owner, for the performance of the Contractor's obligations under the extended warranty starting at Interim Acceptance of the work.

.4 Supply to the Owner, a written and signed document provided by the Shingle Manufacturer, and issued in the name of the Owner, certifying all system materials and their performance for a period of twenty-five (25) years, prorated, from the date of final acceptance.

2. PRODUCTS

2.1 PRODUCTS, GENERALLY

.1 Materials shall meet or exceed requirements and recommendations of the following:

.1 CSA-A123.51-2014 (R 2018), *Asphalt Shingle Application on Roof Slopes 1:6 and Steeper.*

2.2 ASPHALT SHINGLES

.1 **Field and Starter Shingles:** Type: Architectural Laminate (inorganic – Fiberglass) 30 Year Warranty to CSA 123.5-98, *Asphalt Shingles Made from Glass Mat and Surfaced with Mineral Granules*. Pre-manufactured eave / rake edge starter and shingle units are to be included.

.2 **Ridge Cap Shingles:** Type: Three-Tab (25 Year Warranty) (25 Year Warranty – IKO Marathon or approved alternate) to CSA 123.5-98, *Asphalt Shingles Made from Glass Mat and Surfaced with Mineral Granules*. Colour to match field shingles.

.3 Colour: Shingle colour by Owner.

.4 Accepted Shingle Manufacturers

.1 MALARKEY ROOF PRODUCTS – HIGHLANDER CS LAMAINATE

.2 IKO – CAMBRIDGE

.3 OWNENS CORNING – TRUDEFINITION -DURATION

.4 BUILDING PRODUCTS OF CANADA (BP) – MYSTIQUE 42

2.3 CEMENT

.1 Rubberized Mastic: cutback asphalt, fibrated, to CAN/CGSB-37.4-M89.

2.4 FELTS

.1 CSA Standard A123.3-M, Asphalt saturated #15 non-perforated felt.

2.5 ACCESSIORIES

.1 Shingle Nail: to CSA B111-1974; hot dipped galvanized coated; flat head; diamond point; minimum penetration into deck 11 mm, minimum length 32 mm

.2 Low Profile Attic Vents: 75 Square inch – Duraflow (Colour to match shingles)
.3 Replacement Chimney Pipe Flashing: 0.50 mm galvanized roof jack matching the existing profile
.4 Plumbing Vents: Plastic Oatey c/w neoprene collar
.5 Water Diverters: Galvanized step flashing modified to re-direct water flow into the existing / new eavestroughing
.6 Ice Dam / Roof Penetration Membrane: IKO Stromshield, 1100 mm wide peel and stick, self-adhesive
.7 Fasteners: #10 Hex head, Neoprene-backed c/w metal washer (Colour-matching)
.8 Wall Underlayment: Tyvek
.9 Shingle Underlayment: RhinoRoof Synthetic Underlayment to CAN/CSA A123.3 / ASTM D226 / D4869 or approved equivalent
.10 Self-adhesive Membrane Primer: Manufactures SBS compatible Primer
.11 High-Profile Attic Vents: Ventilation Maximum VMAX-301 Series (Colour to match the field shingles)
.12 Single Gooseneck Vents: 300 mm high, galvanized metal / Soldered base
.13 Liquid Applied Membrane: Soprema Alsan Flashings
.14 Electrical Conduit Flashings: Deks Retrofit Pipe Flashing, two (2) piece gray EPDM pipe flashing, square base
.15 New Ridge Vent: WeatherPro Series Proridge (DuraFlow) shingle over ridge vent

3. EXECUTION

3.1 INSTALLATION, GENERALLY

.1 Installation shall meet or exceed requirements and recommendations of the following:

.1 CSA-A123.51-2014 (R 2018), *Asphalt Shingle Application on Roof Slopes 1:6 and Steeper.*

3.2 VERIFICATION OF CONDITIONS

.1 Examine all existing surfaces to receive roofing.

.2 Verify that deck surface is firm and dry, without ridges, warps or voids, and properly fastened to the supporting structure.

.3 Notify Owner or Consultant of surfaces unacceptable to receive the work of this Section.

3.3 SUBSTRATE PREPARATION

.1 On existing decks, remove loose nails and re-nail deck where required. Report any deteriorated locations prior to application.

3.4 APPLICATION OF EAVE AND ANGLE PROTECTION

.1 Apply eave and angle protection as follows:

.1 Roof Curbs (Chimney Chases / Exhaust Fans / Skylights):

.1 Install 550 mm wide strips of membrane under all base and step flashing locations.

.2 Apply membrane up all vertical surfaces of the roof curbs. Refer to Notes-to-Drawings for further information.

.3 Install a fully 1100 mm wide piece of membrane at all backpan / chimney saddle flashing locations.

.2 Plumbing and Gooseneck Vent Penetrations:

.1 Install new asphalt shingles up to within two (2) courses of the bottom of the roof deck opening or pipe penetration.

.2 Apply a new 1100 mm wide piece of eave membrane over each penetration two-thirds of the membrane extending onto the roof slope below the penetration. Membrane to be applied over the felid felt underlayment.

.3 Adhered the new membrane onto the lower shingle courses.

.4 Continue to apply the new asphalt shingles around these penetrations as per manufacturer's recommendation. Refer to project details for further instruction.

.3 Valleys: from eave up to ridge, 1100 mm wide, centred on valleys. Apply additional 550 mm wide cover strips centred over the outer edges of the valley iron prior to the application of the new field underlayment.

.4 High / Low Walls

.1 Install 550 mm wide strips of membrane under all existing / new base and step flashing locations.

.5 Eaves: 1100 mm wide rolls minimum width at all locations.

On low-slope roof slopes, eave membrane is to extend a minimum of 600 mm past the interior wall elevations. On slopes equal to 4:12 slope and greater, eave membrane is to extend a minimum of 300 mm past the interior wall elevations.

All roof slopes above soffit overhangs are to be covered with eave protection membrane and shingle underlayment.

.2 Application of eave protection:

.1 Apply to manufacturer's recommendations.
.2 Side Laps: 100 mm
.3 End Laps: 150 mm

3.5 REPLACEMENT AUXILLARY LEVELING SURFACE

.1 Wood Sheathing: to CSA 0121 standard surfacing shall be minimum 12.7 mm thick as per Section 06 10 63. Position the replacement sheathing and mechanically fasten to the existing wood support trusses with a minimum of twenty (20) wood screws per 1200 mm x 2400 mm sheet including the use of H-clips. All fasteners shall penetrate the wood trusses a minimum of 38 mm.

.2 All board joints are to be gaped 6 mm and offset a minimum of 600 mm from adjacent plywood courses. **Allow for the replacement of 64 sqft. of deck replacement on each building. Refer to Section 06 10 63.**

3.6 NEW SHINGLE UNDERLAYMENT

.1 One (1) ply of synthetic underlayment shall be installed throughout the field of all roof slopes including over locations in which peel and stick membrane is present on roof slopes measuring equal to or greater than 4 on 12 slope.

.2 Two (2) plies of #15 non-perforated felt along with a top single ply of synthetic underlayment shall be installed throughout the field of all roof surfaces on roof slopes measuring equal to or greater than 2 on 12 but less than 4 on 12 slope. Underlayment is to be included over locations in which peel and stick eave and wall transition membrane is present.

.3 Underlayment shall be installed parallel to the eaves with head and end laps of not less than 100 mm.

.4 The top edge of the rolls shall be sufficiently **nailed** in place as per manufacturers instruction, so the underlayment is lying flat prior to the installation of the asphalt shingles. **Use of staples is not acceptable.**

3.7 SHINGLE APPLICATION

.1 All shingle units are to be applied in a “step” fashion as per Manufacturer’s recommendation. **Allow to leave ten (10) bundles of shingles for repair and maintenance purposes.**

.2 All roof valleys shall have an open shingle valley as per ARCA application standard. All cut shingles within the valley are to be tabbed as per manufacturer’s requirements. Refer to Construction Notes and project details for further information.

.3 All ridge capping shall be tapered cut and a straight-line set prior to application. Installation shall be such that all ridge cap units are installed with the west and north primary winds in consideration to allow these winds to flow over the edges of the ridge capping.

.4 Use roofing nails only with six (6) fasteners per unit. Do not use staples.

.5 On roof slopes steeper than 12 on 12, seal down each shingle at time of application with three (3), 25 mm diameter spots of approved mastic placed under the shingle 50 mm above the bottom edge and equally spaced along the shingle.

.6 Project shingles 25 mm to 30 mm beyond face of eave edge flashing and 12.7 mm to 16 mm beyond face of rake edge flashing. Make projections even and consistent.

.7 All new roof penetrations flashings including base flashings shall be anchored with fasteners as per Item 2.5.7 at 600 mm on centre or as per construction notes.

3.8 PROTECTION OF COMPLETED WORK

.1 Protect installed work and materials.

.2 Place protection to the requirements and satisfaction of this Section before performing the work of other Sections that may damage work of this Section.

3.9 MISCELLANEOUS ITEMS

.1 Refer to Construction Notes, details and attached Roof Plans for further information.

END OF SECTION

1. General

1.1 RELATED WORK SPECIFIED IN OTHER SECTIONS

.1	Selective Building Demolition	Section 02 41 19
.2	Exterior Rough Carpentry	Section 06 10 63
.3	Asphalt Shingle Roofing on Un-insulated wood Deck	Section 07 31 13
.4	Sheet Metal Flashings and Trim	Section 07 62 00
.5	Flashings and Rainwater Goods for Steep Roofs	Section 07 62 10

1.2 REFERENCE DOCUMENTS

.1 Alberta Roofing Contractors Association (ARCA):

.1 Roofing Application Standards Manual:
www.arcaonline.ca/manual/division-2-sbs-modified-bitumen-roofing
excluding the following sections:

Part 2: Low-Slope Roofing – following sections only:

Division 2 – SBS Modified Bituminous Roofing

.2 Accepted Products Listing (December 2022):

"S.B.S. Modified Bituminous Membrane Systems 15 Year",
www.arcaonline.ca/content/accepted-products-listing

.3 Roofing Membrane Manufacturer

.2 American Society for Testing and Materials (ASTM):

.1	ASTM D41 / D41M	Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing
.2	ASTM D2178/ D2178M	Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing
.3	ASTM D6162/ D6162M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fibre Reinforcements
.4	ASTM D6163/ D6163M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fibre Reinforcements
.5	ASTM D6164/ D6164M	Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements
.6	ASTM F1667-13	Driven Fasteners: Nails, Spikes and Staples

.3 Canada Green Building Council (CaGBC):

.1	LEED v4 Rating System	LEED v 4 Building Design + Construction

.4 Canadian General Standards Board (CGSB):

.1	CGSB 37-GP-9Ma	Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing
.2	CAN/CGSB 51.33-M89	Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction

.3	CGSB 19-GP-14M	Sealing Compound, One component, Butyl-Polyisobutylene, polymer, base, solvent curing

.5 Canadian Roofing Contractors Association (CRCA)

.1 CRCA Roofing Specifications Manual, 2011

.6 Canadian Standards Association

.1	CSA-A123.21-14	Standard Test method for the Dynamic Wind Uplift Resistance of Membrane Roofing Systems
.2	CAN/CSA-A123.4-04 (R2013)	Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Systems
.3	CSA-A123.23-15	Product Specification for Polymer-Modified Bitumen Sheet, Prefabricated and Reinforced

.7 International Institute of Building Enclosure Consultants (IIBEC)

.1 IIBEC Manual of Practice – Roof, Exterior Wall, and Waterproofing Consulting, and Quality Assurance Observation, 2020

.2 Registered Roof Observers – RRO®

.8 Underwriters Laboratories of Canada

.1	CAN/ULC S706-09	Standard for Wood Fibre Insulating Boards for Buildings
.2	CAN/ULC S704	Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced

1.3 DEFINITIONS

.1 "Roofing System" means: all materials contained within the roof assemblies installed by the Contractor, including all materials above the deck including membrane flashing up to and including 1067 mm above the surface of the primary membrane, and related sheet metal work.

.2 "Third Party Roofing Inspector" means: an individual engaged in commercial roofing inspections as a primary business, has a minimum of 5 years' experience as a roofer, has obtained a recognized Inspector Credential from either ARCA or IIBEC, can provide current Commercial General Liability Insurance coverage, annually inspects a minimum of 5,000 square metres of roofing systems, and is independent from roofing contractors, manufacturers, suppliers & distributors.

.3 "Roofing Workmanship Warranty" means: a written guarantee of the integrity of the Roofing System installation and provides for the repair or replacement of defects or deficiencies including all associated workmanship.

.4 "Roofing Manufacturer's Warranty" means: a written guarantee of the integrity of the Roofing System materials and provides for the repair or replacement of material defects or deficiencies including installation.

.5 "Roofing Warranty Period" means: a Fifteen (15) year period of time starting on the date of Interim Acceptance of the Work.

.6 "Roofing Maintenance Bond" means: a "Roofing System" specific bond supplied by a 3rd party, federally regulated, Surety Company.

.7 "Warrantor" means:

.1 The 3rd party, legal entity that provides the Workmanship Warranty certificate.

.2 The manufacturer that provides the Manufacturer's Warranty certificate.

1.4 DETAIL DRAWINGS

.1 Refer to project drawings for details.

1.5 DELIVERY, STORAGE, AND HANDLING

.1 Delivery and Acceptance Requirements:

.1 Deliver materials handle and store according to manufacturers requirements with manufacturer's seals and labels intact. The manufacturer's name, brand, mass, specification number and lot number shall be shown on the labels.

.2 Storage and Handling Requirements:

.1 Do not store materials on roof in concentrations, which exceed design live loads.

.2 Do not store gravel ballast on roofs. Haul gravel ballast to roof at rate of application.

.3 Waste Management and Disposal:

.1 Separate waste materials for recycling in accordance with Section 01 74 19 - Management and Disposal.

1.6 QUALITY ASSURANCE

.1 Qualifications: Engage a roofing company having documented experience with installation of specified roofing system having areas of 30,000 m² or greater, and that employ “Qualified Roofing Trades-people” that are skilled with installation of specified Products within Climate Zone 7a or colder as defined by the National Energy Code of Canada for Buildings, 2011 as follows:

.2 “Qualified Roofing Trades-people” are defined as follows:

.1 The onsite roofing foreman to hold documented evidence of supervising previous successful roofing projects, from start to completion, of similar size and complexity for public institutional buildings (with a minimum of 30,000 m^2) of modified bituminous membrane roof type where construction was completed within the last eight (8) years.

.2 Minimum of one member of the onsite roofing crew to hold an Alberta Journeyman Certificate, or Red Seal Journeyman Certificate, with documented evidence of the journeyman roofer completing previous successful roofing projects, from start to completion, of similar size and complexity for a public building (with a minimum of 10,000 m^2) of modified bituminous membrane roof type where construction was completed within the last eight (8) years.

.3 Minimum of fifty percent (50%) of the onsite roofing persons to have completed some portion of a roofing apprenticeship program and shall have either: requested from Alberta’s Apprenticeship and Industry Training Board certification as "Roofer", or equivalent after obtaining prior written authorization from the Owner.

.4 All roofing staff operating torch equipment shall hold a valid Torch Safety certification provided by an agency acceptable to the Owner.

.5 All onsite roofing staff shall hold a valid Fire Extinguisher training certification provided by an agency acceptable to the Owner.

.6 Qualifications and certifications from other jurisdictions may be acceptable provided that written authorization is granted from the Owner prior to start of roofing activities.

.7 Submit proof of qualifications when requested by the Owner.

.3 All roofing work shall be performed by direct / payroll employees of the roofing contractor. No sub-contracting is permitted.

.4 Listing of ten (10) successfully completed low-slope roofing projects, within climate zone 7a or colder per National Energy Code of Canada 2011

.5 Valid Alberta Certification of Recognition (COR)

.6 Valid Alberta Worker's Compensation Board (WCB) coverage for contractors and subcontractors

.7 Valid Alberta Business License

.8 In force General Liability insurance coverage for the work, for minimum $5,000,000.00 and endorsed for Hot Works.

1.7 WARRANTY

.1 Warranty:

.1 The Contractor shall provide a Roofing Warranty certificate with a Five (5) year Roofing Warranty Period, signed by both the Contractor and the Warrantor stating:

.1 The Roofing System has been constructed in accordance with the Contract Documents;

.2 The Roofing Warranty Period;

.3 Moisture leaks to be corrected within a time-frame determined by the Owner.

.4 The Owner the warrantee, and stating that roofing work will remain in place and be free of any defects in materials and workmanship for the stated Roofing Warranty Period; and either:

.1 Warrantor shall, at no additional expense to the Owner, repair any roofing failures (of the Roofing System including: moisture penetration, installation errors, manufacturers defects) which includes the replacement of all affected components of the Roofing System, occurring between the date of Interim Acceptance of the Work and the end of the Roofing Warranty Period.

.2 In addition to other Contractual requirements, the Contractor shall provide documents ensuring the performance of the Contractor's obligations under the Roofing Warranty in a form acceptable to the Owner:

.1 Ensure that the following is in place:

.1 Manufacturers Warranty certificate(s), signed by the Contractor and the Roofing System manufacturer includes all roofing materials and assemblies installed by the Contractor. The Roofing System Manufacturer's Warranty must be for a minimum Roofing Warranty Period of Ten years, starting on Interim Acceptance of the Work; and

.2 Ensure that the Contractor obtains an ARCA Warranty Certificate for the specified warranty period, on behalf of the Owner, for the performance of the Contractor's obligations under the extended warranty starting at Interim Acceptance of the work in conjunction with the new asphalt shingle application.

1.8 THIRD PARTY ROOFING REVIEWS

.1 The Owner will engage Krain Consulting Ltd. as the third-party roofing consultant. The consultant will provide the required reviews to the Owner during the progress of the roofing work, in accordance with the membrane manufacturers requirements in addition to referencing the ARCA Roofing Applications Standards, to help ensure the roofing work is provided as set out in this Contract. Upon notice from the Owner, the Contractor shall expediently perform all steps and make changes as identified by the roofing consultant, at no cost to the Owner. The involvement of the roofing consultant does not relieve the Contractor of the responsibility to supervise, inspect and provide the roofing work as set out in this Contract.

.2 The Construction schedule shall include roofing reviews. The Owner, roofing consultant and Roofing System manufacturer, at reasonable times, shall have proper and safe access to the Work, including parts of the Work in preparation at locations other than the Place of the Work, for the purposes of observation, review and testing.

.3 Provide copies of the manufacturer's site reports to the Owner and roofing consultant prior to Interim Acceptance of the Work.

2. Products

2.1 PRODUCTS, GENERALLY

.1 Basis-of-Design: Materials and colours listed below form the Basis-of-Design materials for this project.

.2 Acceptable Membrane Manufacturers: Subject to compliance with requirements specified in this section and as established by the Basis-of-Design materials, manufacturers offering similar products that may be incorporated into the Work include the following:

.3 Basis of Design: Soprema

.1 Accepted Alternatives Manufacturers

IKO Industries Ltd.
Siplast

Alternate manufactures selection shall be submitted in writing by the bidder and approved prior to bid closing. Alternate manufacturer submission will not be accepted for approval after bid closing.

.4 Use only materials from one manufacturer for non-ARCA warranties.

.5 Except as specified otherwise, provide products from the Alberta Roofing Contractors Association ("ARCA") "Accepted Products Listing for S.B.S. Modified Bituminous Membrane Systems" or equivalent / membrane manufacturer with prior written authorization from the prime consultant.

2.2 REPLACEMENT OF PLYWOOD ROOF DECKING OVER WOOD STRUCTURE

.1 Wood Sheathing: to CSA 0121 standard surfacing shall be minimum 16 mm thick. Position the new sheathing and mechanically fasten to the existing wood support trusses with a minimum of twenty (20) wood screws per 1200 mm x 2400 mm sheet. The use of eight (8) Dekfast plates and screws per 1200 mm x 2400 mm sheet is also acceptable. **Allow a total of 32 square feet of existing deteriorated plywood decking.**

2.3 VAPOUR RETARDER TRANSITIONS

.1 Provide a SBS modified bitumen pre-manufactured sheet, with manufacturer's standard internal reinforcement, compatible with substrates and adjoining membranes.

2.4 INSULATION

.1 N/A

2.5 INSULATION COVER SHEATHING

.1 N/A

2.6 PRIMARY MEMBRANE AND MEMBRANE FLASHING

.1 Provide 2-ply SBS modified bitumen membrane, including SBS modified bitumen flashings, to manufacturer's recommendations conforming with ARCA accepted specifications, and as specified in this Section.

.2 For membrane component types and reinforcement, refer to Primary Membrane Schedule, Item 3.10 in this section.

.3 Cap Sheet Finish: granules in colour selected by the Owner from manufacturer's standard range to match the new asphalt shingle colour (Black).

.4 Membrane Flashing Finish: granules in colour selected by the Owner from manufacturer's standard range.

2.7 ACCESSORIES

.1 Roofing Nails: #10, hot dipped zinc galvanized, with 12 mm diameter heads
.2 DekFast Fasteners: to Factory Mutual 4470, 1989 edition. Fasteners through insulation or roof decking shall meet requirements of Factory Mutual 4450, Appendix E
.3 DekFast Insulation Plates: Galvalume Hex, minimum 75 mm diameter
.4 Fire Prevention Joint Sealer Tape: Sopraguard / Fireguard Tape or Roofguard SA Tape
.5 Torch-Applied Membrane Primer: Manufactures SBS compatible Asphalt Primer
.6 Self-adhesive Membrane Primer: Manufactures SBS compatible Primer
.7 Caulking: elastomeric, chemical curing, CAN/CGSB-19.13-M87, clear in colour (SupraExpert)
.8 Liquid Applied Membrane: Soprema Alsan Flashings or approved equivalent.

3. Application

3.1 FIRE SAFETY

.1 Inform the Owner of unforeseen fire hazards and obtain instructions before proceeding or continuing with torch application.

.2 An on-site safety person shall be employed by the Contractor and be on site at all times during the re-roofing process and shall remain on site two (2) hours after work has ceased or after torching has stopped. **During this period, the safety person shall scan the work area(s) with a hand-held infrared gun and / or infrared camera. All readings and / or photographs (digital and infrared) shall be documented and supplied to the project manager on a weekly basis. Localized hot spots to be investigated for potential fire hazards by cut tests. All fire watch requirements shall meet the recent Alberta Fire Code standards.**

.3 The safety person shall ensure and enforce all safety requirements of the site, as required by Workers' Compensation safety department. Before proceeding with the work, advise the local fire authority of the nature of the work to be undertaken and dates of construction.

.4 There shall be one fire extinguisher per torch used on the roof. Failure to provide or not having one available, will result in immediate job shutdown.

.5 Keep suitable fire extinguisher within ten (10) meters of each torch in uses.

.6 Do not use torches near roof-mounted air intakes, wall cladding, combustible building paper and combustible finishes.

.7 **Take additional precautions against fire as needed to provide adequate fire safety.**

.8 Install fire protection tape over cracks, voids and openings in substrate where a torch applied membrane will be installed.

3.2 SITE SAFETY

.1 Temporary roof perimeter guardrails shall be installed as required meeting the current provincial Occupational Health and Safety requirements during the removal and installation of the roofing.

.2 All damages incurred during construction are to be reported immediately to the general contractor or the Owner who will inspect the damages to determine fault or consequence. Should the damages extend from the roofing contractor's actions, replacement costs shall be borne by the roofing contractor. All repairs shall be completed as soon as possible.

.3 Any damages to the structure or other areas used to access the work site by the contractor will be repaired back to its original state at the contractor's expense. Repairs deemed immediate by the general contractor, or the Owner shall be completed as soon as possible.

3.3 INSTALLERS

.1 Ensure a roofing foreman is onsite and supervising the roofing work at all times when roofing work is undertaken. Ensure that at least one Journeyman or Red Seal Journeyman Roofer shall be on site when roofing work is undertaken.

.2 Roofing System application shall meet the following standards:

.1 The "Technical Design Requirements for Alberta Infrastructure Facilities", current version, as amended from time to time; and

.2 The "ARCA Roofing Application Standards Manual", Alberta Roofing Contractors Association, current version, as amended from time to time.

.3 Roof membrane manufacturers standards for application.

.4 Project documents and drawings.

.3 Qualified Roofing Trades-persons necessary to receive the manufacturer warranties are appropriately trained by the manufacturer and are onsite at all relevant times.

.4 Sub-Contracting

.1 Roofing Contractor shall not sub-contract the roofing work and related sheet metal flashings. Sub-contracting of sheet metal fabrication is permitted.

3.4 INSTALLATION OF WATER CUT-OFFS

.1 Install temporary water cut-offs to all insulation edges exposed at the end of each day's work.

.2 Provide permanent water cut-offs at roof area perimeters and at curbs.

3.5 APPLICATION OF PRIMARY MEMBRANE

.1 Install membrane components in accordance with requirements of ARCA Five (5) Year Warranty Certificate.

.2 Use installation method as indicated on Primary Membrane Schedule at end of this Section.

.3 Torch apply sheet materials for continuous fusion of sheets and adhesion to suitable substrates.

.4 Seal seams of field base sheet laps with a combination of fire tape protection and torch heat application.

.5 Limit cap sheet bleed-out at seams to 12 mm. Cover excessive bleed-out and replace missing mineral surfacing by embedding matching colour granules.

.6 Torch-apply cap sheet and cap sheet flashing indicated on the reviewed shop drawings, if applicable, and MBM Primary Membrane Schedule.

.7 Primary membrane deficiencies may include, but not be limited to, ridges, tenting, buckles, wrinkles and voids.

.8 **All new laminate base sheet surfaces are to be covered with the new granular cap sheet application within thirty (30) calendar days of installation. Remedial repairs and / or replacement are at the discretion of the Consultant.**

3.6 MBM PRIMARY MEMBRANE SCHEDULE

Substrate	Installation Method	Reinforcement, Min. g/m^2
Field Base Sheets on Wood Decking		
*All combustible substrates	Self-adhered	composite
Base Sheet Flashing (Curbs / Parapet / Chimney Chase)		
*All combustible substrates	Self-adhered	composite
Field Cap Sheet		
Base sheet (SopraPly Traffic Cap or approved equivalent)	Torch	composite
Cap Sheet Flashing (Curbs / Parapet / Chimney Chase)		
Base sheet flashing (SopraPly Traffic Cap or approved equivalent)	Torch	composite

***NOTE:** Base membrane flashings at all parapet wall and roof penetration locations shall be a **self-adhering base sheet** as per membrane manufacturers recommendations. Should site surfaces be suitable for safe torch application, **torchable base sheet** membrane flashings may be applied. Should torch applications be selected, proper protection to all surfaces (visual and hidden) in locations such as walls and curbs which may be a source of ignition is required.

3.7 SADLLE / BACKPAN MEMBRANE APPLICAITON

.1 Apply the new self-adhering membrane flashings primer to the new plywood surfaces at the membrane manufacturers recommended rate. Allow primer to flash as required prior to the base sheet flashing application.

.2 Apply the new self-adhering base sheet membrane within the field of the roof saddle / backpan areas. Extend the new field base sheet membranes a minimum of 900 mm upslope from the roof valley lines. All field side laps shall be a minimum of 75 mm and 150 mm on all end laps.

.3 All new base sheet flashing side laps shall overlap a minimum 75 mm and offset approximately 225 mm from the field base sheet side laps. The base sheet flashings shall extend a minimum of 100 mm onto the horizontal field base sheet surfaces. All side and end laps must be heated and sealed by days end.

.4 Apply new 25 mm diameter tin-capped nails fastened through the vertical side laps and at the centre of each roll width section. The fasteners shall be located no lower than 75 mm above the new roof surfaces. Above the initial fastener course of fasteners, additional courses of fasteners are required at 100 mm intervals. Fasteners shall be installed on the same day as base sheet flashing installation.

.5 Torch apply the new field granular cap sheet extending a minimum of 600 mm upslope from the roof valley lines. All field side laps shall be a minimum of 75 mm and 150 mm on all end laps.

.6 All field granular cap sheet surfaces requiring granular cap sheet flashings are to be degranulated a minimum of 100 mm wide measured from the base of the vertical upstand.

.7 All new granular cap sheet flashing side laps shall overlap a minimum 75 mm and offset approximately 450 mm from the side laps of the underlying base sheet flashings. The granular cap sheet flashings shall extend a minimum of 150 mm onto the horizontal surface of the field cap sheet membrane. All flashing edges shall have a sufficient amount of bitumen bleedout visible.

.8 Initial course of asphalt shingles are to overlap the top edge of the granular cap sheet no lower than 75 mm. Apply a liberal bead of mastic to ensure that the initial course of asphalt shingles will be adhered to the granular cap sheet surfaces. No shingle nails shall penetrate any granular cap sheet surfaces.

.9 Refer to Notes-to-Drawings notation and related details for additional information.

END OF SECTION

1. General

1.1 RELATED SECTIONS

.1	Asphalt Shingle Roofing on Un-insulated wood Deck	Section 07 31 13
.2	Modified Bituminous Membrane Roofing	Section 07 52 00

1.2 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Division 01.

.2 Clearly indicate bending, folding, jointing, fastening installation details.

1.3 SAMPLES

.1 Comply with requirements of Division 01.

.2 **Submit full size samples and / or a detailed proposed drawing of each parapet wall, vertical and drip edge flashing profile prior to fabrication for approval from the architect or roofing consultant. Sample shall be available for viewing within thirty (30) days of roof completion and demobilization.**

1.4 DELIVERY, STORAGE AND HANDLING

.1 Store materials off ground and under cover in a dry, well-ventilated enclosure.

.2 Stack preformed material in manner to prevent twisting, bending and rubbing.

.3 Provide protection for galvanized and pre-painted surfaces.

.4 Prevent contact of dissimilar metals during storage and protect from acids, flux, and other corrosive materials and elements.

2. Products

2.1 MATERIALS

.1 Galvanized Steel Sheet: commercial quality sheet to ASTM A653-M96, with Z275 designation zinc coating.

.2 Pre-finished Galvanized Steel: 0.70 mm (24 Ga.) commercial quality to ASTM A653-M96 with Z275 zinc coating pre-finished with baked on enamel with colors of proven durability for exterior exposure, to CSSBI Technical Bulletin No. 7, 8000 series. Colour selection by Owner.

All pre-finished metal base and cap flashings are to match outer parapet wall colours unless otherwise indicated on the drawings. Pre-finished metal flashings to be applied to all expansion joints, roof area dividers, trims, counter-flashings.

.3 Solder: 50% pig lead and 50% block tin

.4 Flux: commercial quality as recommended by sheet metal manufacturer

.5 Flashing (membrane) Nails: #12 hot dipped zinc coated, annular ringed (tin-capped)

.6 Sheet Metal Screws: Cadmium plated, self-tapping, pan head

.7 Bituminous Paint: solvent type, to CAN/CGSB-1.108-M89, type II.

.8 Plastic Cement: cutback asphalt type, to CAN/CGSB-37.5-M89.

.9 Sealing Compound: to Section 07510.

.10 Sealant: one component, elastomeric, chemical curing, CAN/CGSB-19.13-M87.

.11 Recessed Reglet: preformed 0.70 mm thick galvanized steel channel with face and ends covered with plastic tape.

.12 Flashing Anchor Clips: 0.80 mm thick galvanized steel.

2.2 FABRICATION, GENERALLY

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

.2 Backpaint sheet metal with bituminous paint on surface in contact with concrete, masonry, cementitious materials or dissimilar metal.

2.3 FABRICATION, FLASHING

.1 Maximum Joint Spacing:

.1	Parapet / Fascia Flashings:	1200 mm
.2	Cap Flashings:	1200 mm
.3	All Other Flashings:	2400 mm

.2 Construct flashing joints to allow for flashing movement, using flat "S" lock seams.

.3 Maintain minimum of 22 mm lap at all joints. Provide 25 mm anchor projection of "S" locks.

.4 At inside and outside corners, mitre the joint, and use upstanding seams, 25 mm minimum height and 22 mm minimum lap.

.5 Maintain minimum 1:5 slope on horizontal surfaces of flashings, parapets and control joints.

.6 Hem exposed edges on underside of all flashings.

.7 Fabricate cap flashing to have a drip leg minimum 110 mm high.

.8 Fabricate cap and counter flashings to lap over outer parapet wall surfaces 100 mm maximum or as per details.

2.4 FABRICATION, ROOF ACCESSORIES

.1 Form sheet steel roof drain sleeves, air-stops etc. from 0.70 mm galvanized steel.

.2 All pipe penetrations passing through the new roof assembly are to be curbed and flashed with pre-finished galvanized sheet steel (doghouse detail). Refer to Note-to-Drawings for specified locations.

.3 Fabricate roof scuppers from 0.70 mm, pre-finished galvanized sheet steel with one-piece deck flange, minimum 150 mm. Contour scuppers to cant strips.

.4 Fabricate splash pans and z-bars from 0.70 mm galvanized steel.

.5 Fabricate air/firestop below control joint box from 0.70 mm galvanized steel.

.6 Fabricate roof drain sleeves as detailed on drawings, from 0.70 mm galvanized steel.

.7 Form gum boxes from 0.70 mm galvanized steel, with 75 mm minimum upstand and 100 mm one-piece flanges. Solder joints. Make pans wider than piping passing through roof membrane by 50 mm minimum all sides and pipe penetrations. Minimum single gumbox size shall be 150 mm x 150 mm. Refer to Note-to-Drawings for specified locations.

3. Execution

3.1 EXAMINATION OF SURFACES

.1 Examine surfaces to receive flashings. Notify the Owner of surfaces which are considered unacceptable to receive the work of this Section.

.2 The commencement of flashing work will imply unconditional acceptance of the surfaces and substrates to which the flashing is to be fastened.

.3 Verify that the following are located and installed as detailed on drawings:

.1 Plywood and lumber nailer plates to walls and parapets

.2 Control joints

3.2 PROTECTION OF EXISTING WORK

.1 Protect the work of other Sections from damage by the work of this Section.

.2 Place protection to the requirements and satisfaction of this Section before performing the work of other Sections.

3.3 FLASHING INSTALLATION, GENERALLY

.1 Install flashings not later than ninety (90) days after installation of the membrane and demobilization from site.

.2 Use 0.80 mm (22 Ga.) continuous anchor clips on fascia face and fasteners on the opposite face.

.3 Use exposed fastenings in approved locations. Install anchors using screws.

.4 Ensure all cap flashing and / or fascia drip edges are folded together. All s-locks are to be fastened with wafer fasteners. Installation of roofing nails is not acceptable.

.5 Z-girts: 1.30 mm (18 Ga.) steel, galvanized to ASTM A653M-96, Z275 coating designation, profiled to accept insulation assembly as per Details. All z-girts, hat and c-channels shall be fabricated with a minimum of 50 mm returns.

3.4 INSTALLATION OF FLASHING JOINTS

.1 Fit flashings together so that one end of each section is free to move in the joint. Do not use sealant at joints.

.2 Wipe and wash clean, soldered joints to remove traces of flux, immediately after soldering.

3.5 INSTALLATION AT REGLETS

.1 Assist in locating and installing recessed reglets, as required.

.2 Confirm reglet installation and report defects to the Owner.

.3 Insert metal flashing into reglets to form tight fit.

.4 Seal flashing into reglet with sealant.

END OF SECTION

1. General

1.1 RELATED SECTIONS

.1	Asphalt Shingle Roofing on Uninsulated Wood Deck	Section 07 31 13
.2	Modified Bituminous Membrane Roofing	Section 07 52 00

NOTE: All existing eavestroughing, downspouts and related hardware are to remain in in place Reference to new / replacement eavestroughing, downspouts and related hardware are directed for damaged sections sustained during the roof replacement in addition to the Details and Construction Notes.

1.2 REFERENCE DOCUMENTS

.1 Alberta Roofing Contractors Association (ARCA):

.1 Roofing Applications Standard Manual

.2 American Society for Testing and Materials (ASTM):

.1	ASTM A653/ A653M-08	Steel Sheet, Zinc Coated (Galvanized) or Zinc Iron Alloy Coated (Galvannealed) by the Hot Dip Process
.2	ASTM D2822-05	Asphalt Roof Cement
.3	ASTM D3019-08	Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered

1.3 DETAIL DRAWINGS

.1 The following detail drawing is appended and forms part of this Section:

.1 Refer to project drawings for details.

1.4 SUBMITTALS

.1 Submit duplicate samples in accordance with Division 01, if applicable.

.2 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit two copies of WHMIS MSDS Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's for sealants.

.3 Shop Drawings

.1 Submit shop drawings in accordance with Division 01, if applicable.

.2 Clearly indicate bending, folding, jointing, fastening installation details.

.4 Samples

.1 Submit duplicate samples in accordance with Division 01, if applicable.

.2 Submit full size samples of each joint and profile.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Store materials off ground and under cover in a dry, well-ventilated enclosure.

.2 Stack preformed material in manner to prevent twisting, bending and rubbing.

.3 Provide protection for galvanized and pre-finished surfaces.

.4 Prevent contact of dissimilar metals during storage and protect from acids, flux, and other corrosive materials and elements.

2.0 Products

2.1 MATERIALS

.1 Sheet Steel: Commercial or Forming Steel to ASTM A653M with Z275 hot dip galvanized zinc coating, in thickness and finish specified in this Section.

.2 Sheet Steel Finish: factory painted, baked-on enamel of proven durability for exterior exposure, to CSSBI Technical Bulletin No. 7, 8000 series. Colour will be selected by the Minister from paint manufacturer's standard range.

.3 Soffit / Fascia: CAN/CGSB-93.2M91, Canadian Norms for Prefinished Aluminum Siding, Soffits and Fascia, for Residential use.

2.2 ACCESSORIES

.1 Flashing Nails: #12 hot dipped zinc coated, annular ringed.

.2 Sheet Metal Fasteners: cadmium plated, self-tapping, pan head.

.3 Bituminous Paint: to CAN/CGSB-1.108-M89, type II.

.4 Plastic Cement: to CAN/CGSB-37.5-M89.

.5 Lap Cement: to CAN/CGSB-37.4-M89.

.6 Silicone Sealant and Polysulphide Sealant: to CAN/CGSB-19.13-M87, Sealing Compound, One-Component, Elastomeric, Chemical Curing.

.7 Eavestrough Supports: 150 mm x 44 mm x .60 mm complete with 25 mm high backing support, Galvanized steel, 0.70 mm Thick (24 Ga.) installed at 400 mm on centre.

.8 Eavestrough Support Anchors: Stainless steel, #10 Hex head, neoprene-backed c/w metal washer. All fasteners to penetrate wood blocking a minimum of 50 mm.

.9 Metal Eavestrough Downspout Strapping: 50 mm wide, all raw edges are to be folded with a minimum of 6 mm hem.

.10 Metal Eavestrough Overlap / End Cap Waterproofing: Alsan (Soprema) or IKO (MS)

.11 Attic Air Chutes: Hydroguard insulation chutes. Six (6) staples per unit.
(Can-cell Industries or approved equivalent)

.12 Aluminum Soffits: 0.38 mm gauge matching existing colour, 400 mm wide, four (4) panel vented complete with channel and J-trims and related fasteners. Standard Gauge

.13 Aluminum fascia: 0.38 mm gauge matching existing colour, 200 mm wide, plain profile.

2.3 FABRICATION, GENERALLY

.1 Form sections square, true and accurate as per drawings to size, free from distortion and other defects detrimental to appearance or performance.

.2 Provide sheet steel for flashing in thickness as per the following:

Flashing Type	Sheet Steel Thickness (mm)
Metal rake & drip edge flashing	0.70
Curb flashing	0.70
Valley flashing	0.70
Penetration flashings	0.70
Backpan	0.70

.1 New Pre-finished Drip Edge / Counter-Flashings – All raw edges c/w drip edge folds. Lock all drip return edges.

.2 New Open Valley Flashings - 1200 mm wide x 2400 mm length max. c/w centre v-break. Overlap a minimum of 150 mm.

.3 New Pre-finished Fascia Flashings: 1200 mm length max. c/w drip edge folds and s-locks. Lock all drip return edges. **Damaged replacement only**

.4 Step, Base and Backpan flashings: Refer to Construction Notes

.3 Fabricate flashing in maximum lengths of 2400 mm.

.4 Overbrake rake and eave flashings slightly so that when installed, fascia flashings are sprung tightly to fascia boards or wall fascia panels.

.5 Form new eavestrough of 125 mm widths using continuous rolling process. Form eavestroughs, downspouts and ground level extensions from thickness in accordance with the following table:

Profile	Nominal Width	Sheet Thickness
Ogee	125 mm	0.70 mm (24 Ga.)

3.0 Execution

3.1 EXAMINATION

.1 Examine surfaces to receive work of this Section.

.2 Notify Owner of surfaces which are considered unacceptable to receive work of this Section.

3.2 INSTALLATION, ROOF FLASHINGS

.1 Lap flashing joints 50 mm, and seal both sections along lap with sealant. Nail joints securely.

.2 Backpaint sheet steel with bituminous paint on surfaces in contact with concrete, masonry, other cementitious materials, and dissimilar metal.

.3 Where reglet detail is required, insert metal flashing into reglet to form tight fit. Seal flashing into reglet with sealant.

.4 Set edge flashing on deck along rake and eave edges.

.5 Nail deck flange to deck with two rows of annular ringed nails. Set one row 25 mm from fascia board, with nails at 400 mm centres. Set second row 25 mm from cut edge of metal, with nails at 400 mm centres, staggered with first row.

3.3 INSTALLATION, RAINWATER GOODS (DAMAGE REPLACEMENT)

.1 Join sheet steel components with sealant as per Item 2.2.10 and fasteners as per Item 2.2.8.

.2 Secure 125 mm wide eavestroughs to the fascia with fasteners and supports as per detail drawings.

.3 Supply and install new eavestroughing in a continuous length. Eavestrough is to be sloped to provide drainage. Provide new downspouts at previous or as indicated new locations as per elevations.

.4 Install elbows, tees and end cap along with sealant as per Item 2.2.10 as required.

.5 Secure downspouts (75 mm x 100 mm), custom outlets and wall straps fastened with compression fasteners at 2400 mm centres with a minimum two (2) straps per downspout. Terminate all downspouts 600 mm from the ground or splash pad. Downspout locations may be required to be modified to accommodate ground level conditions.

.6 Extend all downspouts draining from upper roof areas onto lower roof areas directly into either lower eavestroughing.

END OF SECTION