REGIONAL DISTRICT
of Fraser-Fort George

# INVITATION TO QUOTE (ITQ) CS-26-01

**Regional District of Fraser-Fort George (RDFFG)**

**Project:** Robson Valley Recreation Centre – Entrance Canopies Re-Roofing and Update

**Date Issued**: February 20, 2026

## 1. Introduction

The Regional District of Fraser-Fort George (the **"Regional District**") is seeking written quotes from qualified suppliers for the following work:

Project Description:

The Regional District is seeking a supplier to undertake the Entrance Canopies Re-Roofing and Update Project on two (2) entrances located at the Robson Valley Recreation Centre, 461 Columbia Street, McBride, BC V0J 2E0.

The exterior repairs to the entrance canopy at RVRC, including removal of aged material and installation of new materials as shown on the drawings provided.

This ITQ is intended for to multiple suppliers to obtain competitive pricing.

## 2. Scope of Work

The successful supplier will be responsible for providing all necessary labour, transportation, equipment, materials, supervision and services necessary to complete the work described, including, but not limited to, disposal and replacement of the flat roofing material, roof drain, soffits, facia, flashings, electrical, plumbing and all other items listed in the attached Architects sealed Project Manual and Drawings.

All work to meet applicable codes and manufacturer specifications.

**3. Schedule**

Site visit (optional): upon request –Call Wes Keim, Manager of Facilities at 250-349-3576

Questions Deadline: February 27, 2026

Quote Submission Deadline: March 27, 2026

Expected Start: To be negotiated

Completion Deadline: June 15, 2026

**4. Quote Submission Requirements**

Suppliers are asked to submit a simple written quote that includes:

- Company name and contact information ☐
- Proof of membership in the Roofing Contractors Association of BC ☐
- Confirmation of WorkSafeBC compliance ☐
- Proof of public liability insurance (minimum $2,000,000 coverage) ☐
- Total price, itemizing subtotal (before GST) and final total (including GST)) ☐
- List of any assumptions or exclusions ☐
- Warranty details (materials and workmanship) ☐
- Details of experience in similar projects ☐
- Proposed schedule ☐

Quotes must be sent by email to:

Attention: Blaine Harasimiuk

Email: bharasimiuk@rdffg.bc.ca

Subject Line: ITQ – RVRC Entrance Canopies Re-Roofing and Update – [Supplier Name]

## 5. Evaluation

The Regional District will evaluate quotes based on:

- Total price
- Ability to meet schedule
- Relevant experience and capacity
- Safety and insurance compliance
- Warranty

Lowest price will not necessarily be accepted.

## 6. Terms

This ITQ does not create any contractual obligation for the Regional District.

The Regional District reserves the right to accept or reject any quote.

Work shall not begin until a signed agreement is executed and an email confirmation is issued by the Regional District where a written form of purchase order and work terms and conditions will be attached

Payment will be made upon satisfactory completion of the work.

## 7. Contact

All inquiries related to this ITQ must be directed to:

Blaine Harasimiuk

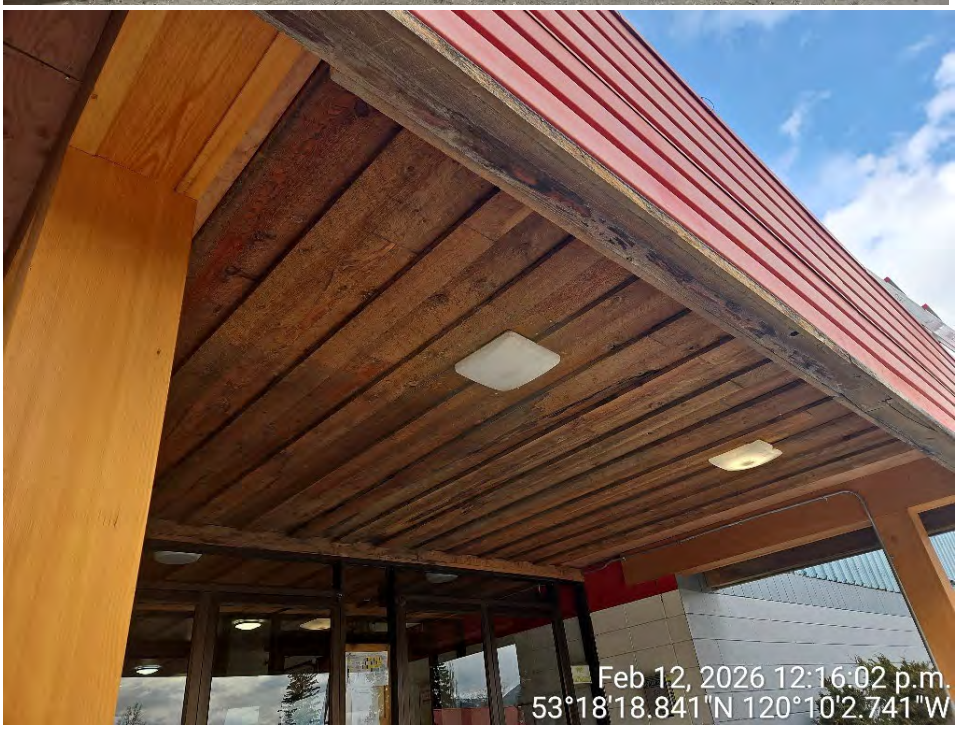
Regional District of Fraser-Fort George

Email: bharasimiuk@rdffg.bc.ca

Phone: 250-960-4400

## 8. Photos

Main (northwest) entry:


Feb 12, 2026 12:18:49 p.m.
53°18'18.913"N 120°10'2.668"W


Feb 12, 2026 12:18:53 p.m.
53°18'18.915"N 120°10'2.675"W


Feb 12, 2026 12:19:09 p.m.
53°18'18.863"N 120°10'2.809"W


Feb 12, 2026 12:18:57 p.m.
53°18'18.926"N 120°10'2.739"W


Feb 12, 2026 12:19:23 p.m.
53°18'18.79"N 120°10'2.759"W


Feb 12, 2026 12:19:32 p.m.
53°18'18.724"N 120°10'2.615"W

Curling Rink (southwest) entry:



Feb 12, 2026 12:15:24 p.m.
53°18'18.562"N 120°10'3.554"W


Feb 12, 2026 12:15:32 p.m.
53°18'18.547"N 120°10'3.664"W


Feb 12, 2026 12:20:53 p.m.
53°18'18.72"N 120°10'3.674"W


Feb 12, 2026 12:20:58 p.m.
53°18'18.716"N 120°10'3.683"W


Feb 12, 2026 12:21:16 p.m.
53°18'18.596"N 120°10'3.717"W

# 9. Sample Agreement Terms

**WORK & SERVICES – GENERAL TERMS AND CONDITIONS**

**1. Scope of Work**

The Contractor shall furnish all labour, materials, tools, equipment, services, and (unless expressly stated otherwise in the Purchase Order) obtain all permits necessary for the **complete performance of the Work** described in the Purchase Order.

**2. Independent Contractor**

The Contractor is an **independent contractor**. All persons employed or engaged by the Contractor in connection with the Work are employees or agents of the Contractor and **not** of the Regional District of Fraser-Fort George ("RDFFG").

**3. Safety and Legal Compliance**

While on RDFFG property, the Contractor shall comply with all **applicable laws, regulations, codes, and WorkSafeBC requirements**, and observe all RDFFG **safety rules and training requirements**. Smoking and open flame are permitted **only** in locations designated by RDFFG.

**4. WorkSafeBC, Business Licence, and Insurance**

The Contractor shall maintain:

- **WorkSafeBC coverage**,
- a **valid RDFFG business licence**, and
- insurance coverage **as specified in the Insurance Requirements** below.

**Prior to commencing any Work,** the Contractor must submit **proof** of all required insurance, licensing, and WorkSafeBC coverage to the contact identified in the solicitation document or Purchase Order.

The contractor shall be considered the **Prime Contractor** as defined in the WorkSafeBC Regulations.

**5. Workmanship and Standards**

All workmanship and materials shall be **acceptable to RDFFG** and comply fully with the Contract. The Work is subject to **inspection** by RDFFG. Neither acceptance nor payment relieves the Contractor of liability under:

- the **indemnity clause**, or
- **any warranties or guarantees**, expressed or implied.

All goods, materials, equipment, labour, and workmanship must conform to applicable **Canadian and British Columbia standards**, including but not limited to: **CSA, ULC, ETL, WorkSafeBC, Canadian Electrical Code, Canadian Weights and Measures**, etc.

**6. Local Conditions**

By submitting a quote or performing the Work, the Contractor confirms it has satisfied itself—by **inspection, examination, measurement, testing, or other means**—with respect to local conditions and the practicability of performing the Work.

No verbal agreement or representation by any RDFFG officer, agent, or employee alters the Contract.

**7. Protection of RDFFG Property**

If RDFFG property is damaged due to the Contractor's actions:

1. The Contractor must immediately notify RDFFG.
2. RDFFG will advise the Contractor of the required repairs.
3. If the Contractor does not respond within **72 hours**, RDFFG may complete the repairs and deduct the costs from monies payable to the Contractor.

**8. Liens**

The Contractor shall take all necessary steps to prevent liens or lien claims against RDFFG property. The Contractor shall, **at its own expense**, promptly have any lien or claim **released and discharged**.

**9. Invoicing and Payment**

**a) Invoicing Requirements**

Upon completion of the Work (or as otherwise permitted), the Contractor shall submit invoices **referencing the RDFFG Purchase Order** and including the **GST registration number**. For time-and-materials or reimbursable Work, supporting **timesheets, receipts, and vouchers** must be attached.

**b) Payment Terms**

Unless stated otherwise:

- Payment terms are **Net 30 days**
- Terms begin upon **receipt of a proper invoice** by Accounts Payable
- Prices are **all-inclusive** (packing, handling, duties, taxes, etc.)
- Payment is made only after **final acceptance** of the Work by RDFFG

**10. Termination for Convenience**

RDFFG may, at any time and in its sole discretion, **stop the Work and terminate the Contract**.
If the Contractor is **not in default**, RDFFG shall pay for Work **properly performed** up to the termination date, including a reasonable allowance for **profit** on such Work.

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**11. Assignment and Subcontracting**

The Contractor shall not assign, transfer, or subcontract the Contract, in whole or in part, without **prior written consent** from RDFFG.

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**12. Indemnification**

The Contractor shall **indemnify and save harmless** RDFFG, its elected officials, officers, employees, and agents from all claims, demands, losses, damages, and expenses (including legal fees) arising from or connected to:

- the Contractor's **negligent acts or omissions**, or
- **breach of the Contract**.

This obligation **survives** completion or termination of the Contract.

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**13. Applicable Law**

This Contract is governed by the laws of the **Province of British Columbia**, and the parties agree to the jurisdiction of the **courts of British Columbia**.

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**14. Freedom of Information and Protection of Privacy**

The Contractor acknowledges that RDFFG is subject to the **Freedom of Information and Protection of Privacy Act (British Columbia)**.
The Contract and records supplied to RDFFG may be subject to **public disclosure** under this Act.

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**INSURANCE REQUIREMENTS – CONTRACTORS**

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**A. Public Liability & Property Damage Insurance (Commercial General Liability)**

The Contractor shall maintain **Commercial General Liability (CGL)** insurance including **public liability and property damage** coverage, in an amount **not less than $2,000,000 per occurrence**, covering:

- Bodily Injury
- Property Damage
- Personal Injury
- Contractual Liability
- Contingent Employer's Liability
- Products & Completed Operations
- Broad Form Property Damage
- **Cross Liability clause**

**Additional Insured**

The **Regional District of Fraser-Fort George** shall be added as an **Additional Insured**.

**Cross Liability Clause**

"The insurance afforded by this policy shall apply as if separate policies had been issued to each insured party."

**Notice of Cancellation/Change**

Policies must provide **30 days' prior written notice** to RDFFG of cancellation or material change.

**Proof of Insurance**

The Contractor must file certificates of insurance **before starting the Work** and upon RDFFG request.

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**B. Automobile Insurance**

The Contractor shall maintain:

- **Owned Automobile Liability** – minimum **$2,000,000**
- **Non-Owned Automobile Liability** – minimum **$2,000,000**

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**C. Contractor's Equipment Insurance**

RDFFG is **not responsible** for loss or damage to the Contractor's equipment.
Contractor equipment policies shall include a **waiver of subrogation** against RDFFG and its officers, employees, and agents.

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**D. General Insurance Provisions**

- Insurance must comply with the **Contract Documents**.
- Coverage territory must include **Canada**.
- RDFFG may, but is not obligated to, pay insurance premiums on behalf of the Contractor if the Contractor fails to do so and deduct the cost from monies owed.
- Contractor insurance shall be **primary and non-contributory** to RDFFG insurance.

**10. Construction Drawings and Project Manual**

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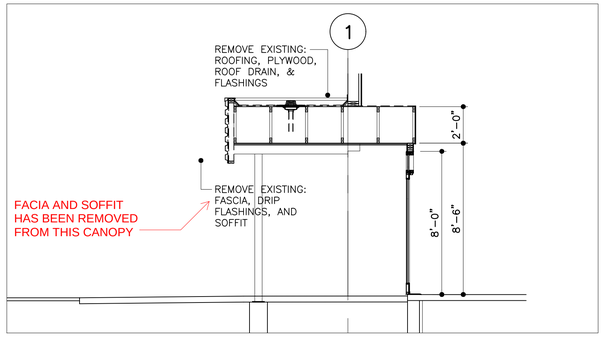


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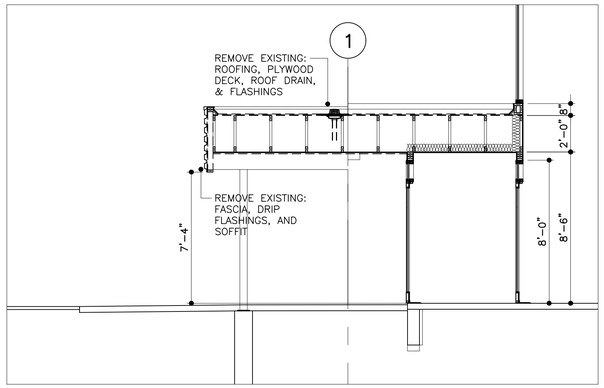
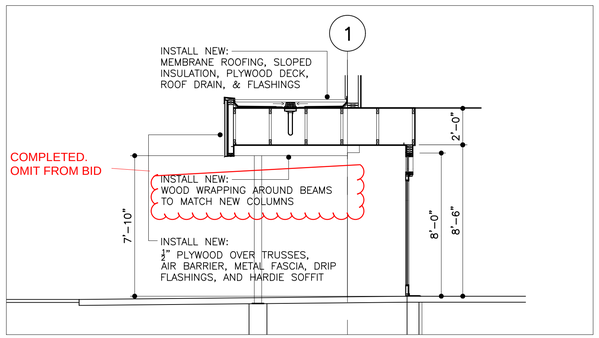



A – A

DEMOLITION SECTIONS

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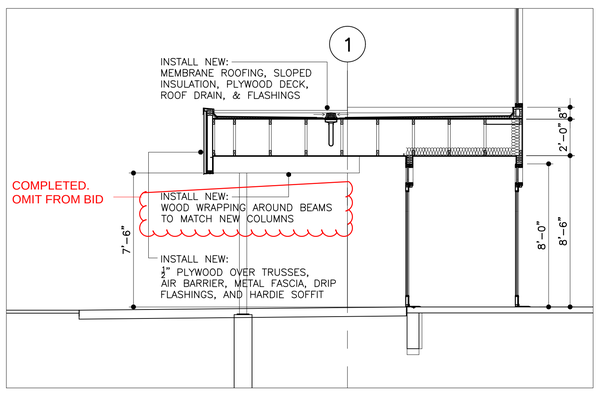
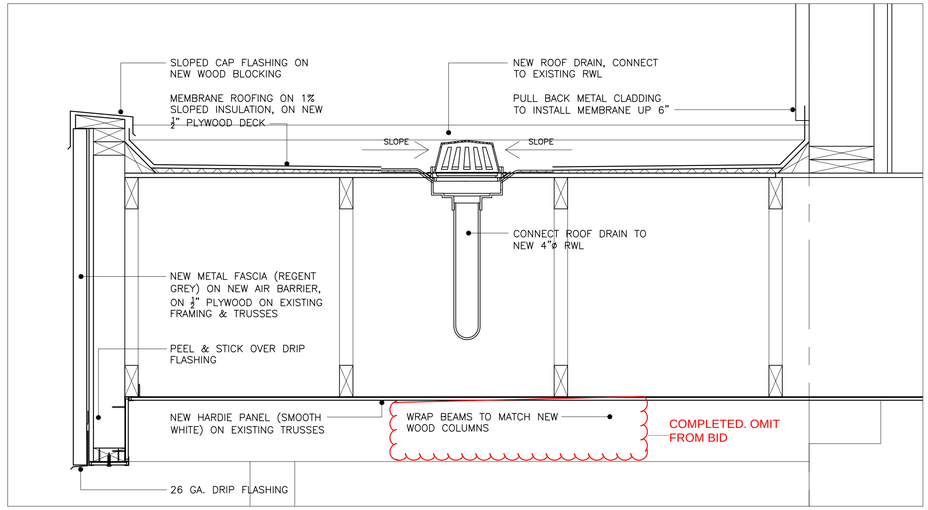
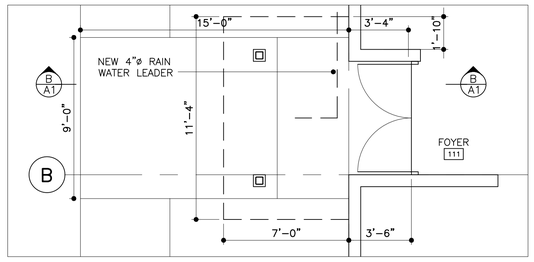



A – A

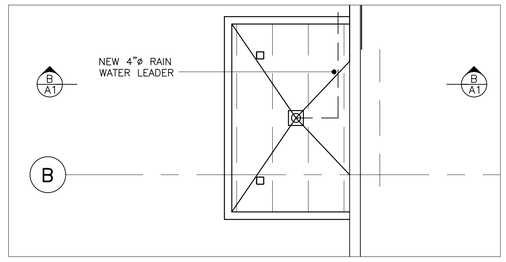
NEW CONSTRUCTION SECTIONS




1 DETAIL AT SOUTHWEST CANOPY

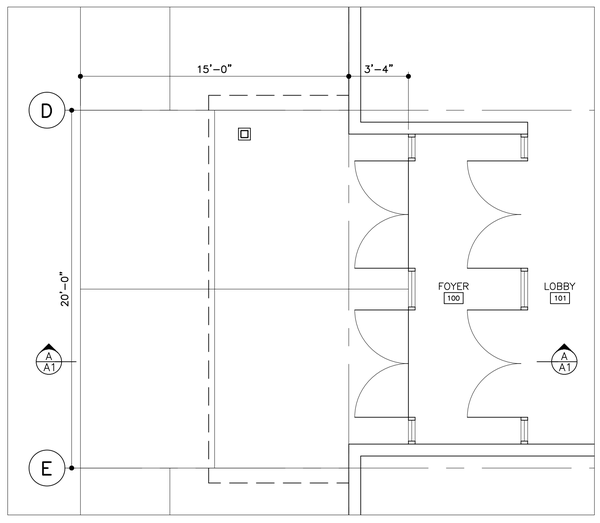



MAIN FLOOR



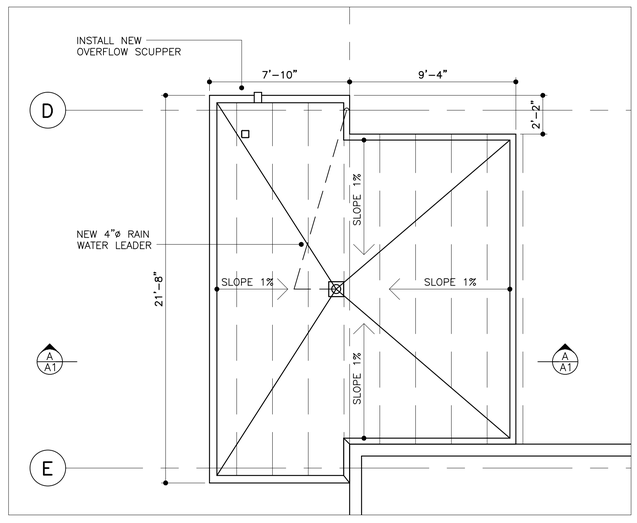

ROOF

NOTE INSTALL NEW SOFFIT LIGHTS (REPLACING EXISTING): LITELINE SLM6 (12 WATT)–30 (3000K)–6 (120–347V) – BK (BLACK).




MAIN FLOOR

PART PLANS




ROOF

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CHERNOFF THOMPSON ARCHITECTS NORTH
100 – 177 VICTORIA ST., PRINCE GEORGE, BC V2L 5R8
PHONE (250) 564–7285 FAX (250) 564–7286
E–MAIL admin@architectsnorth.ca

| No. | DATE | REVISION |
|---|---|---|
| 6 | 19.02.26 | ISSUED FOR RE–TENDER |
| 5 | 02.10.25 | ISSUED FOR CONSTRUCTION |
| 4 | 08.07.25 | ISSUED FOR TENDER |
| 3 | 07.07.25 | ISSUED FOR REVIEW |
| 2 | 03.07.25 | ISSUED FOR REVIEW |
| 1 | 06.06.25 | ISSUED FOR REVIEW |

**PROJECT TITLE**
RDFFG
ROBSON VALLEY
REC CENTRE
REPAIRS
McBRIDE, B.C.

**NOTES**



All dimensions on the project must be checked by the contractor.

This drawing must not be used for construction purposes until here countersigned.

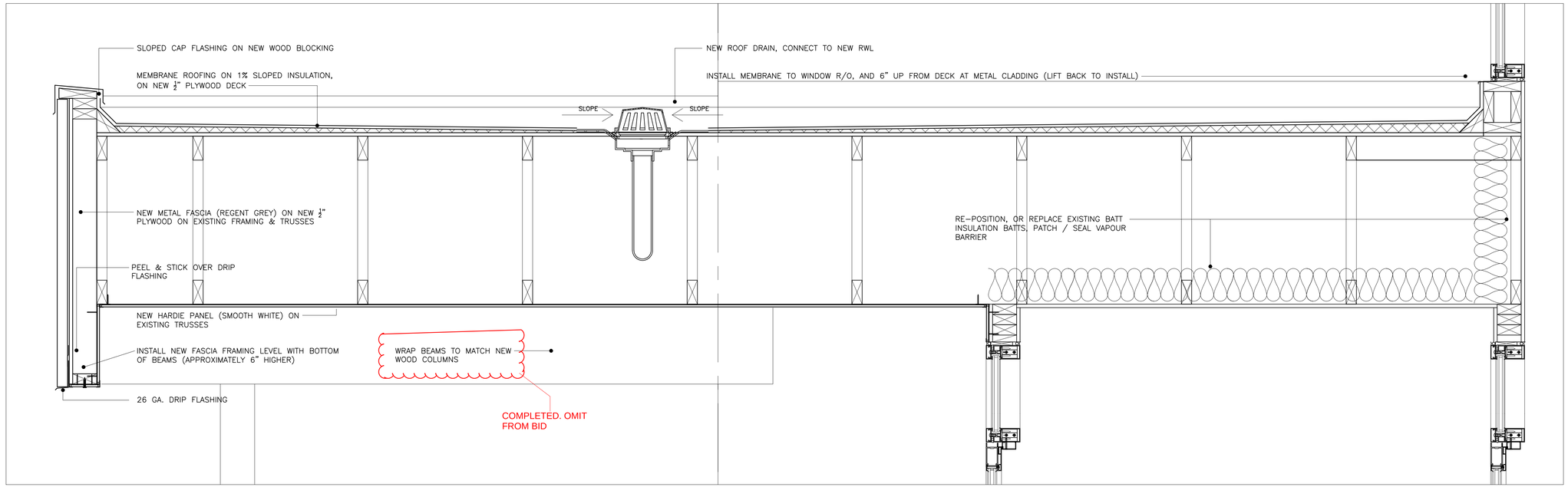
bcta: date:

**SHEET TITLE**
PART PLANS
SECTIONS

| | |
|---|---|
| PROJECT No. | 687–24 |
| DRAWN | L.S., M.S. |
| CHECKED | L.L |
| SCALE | 1/4" = 1'–0" |
| DATE | 19 FEB 2026 |
| PRINTED | 19 FEB 2026 |

REVISION No.
DRAWING No.

A–1

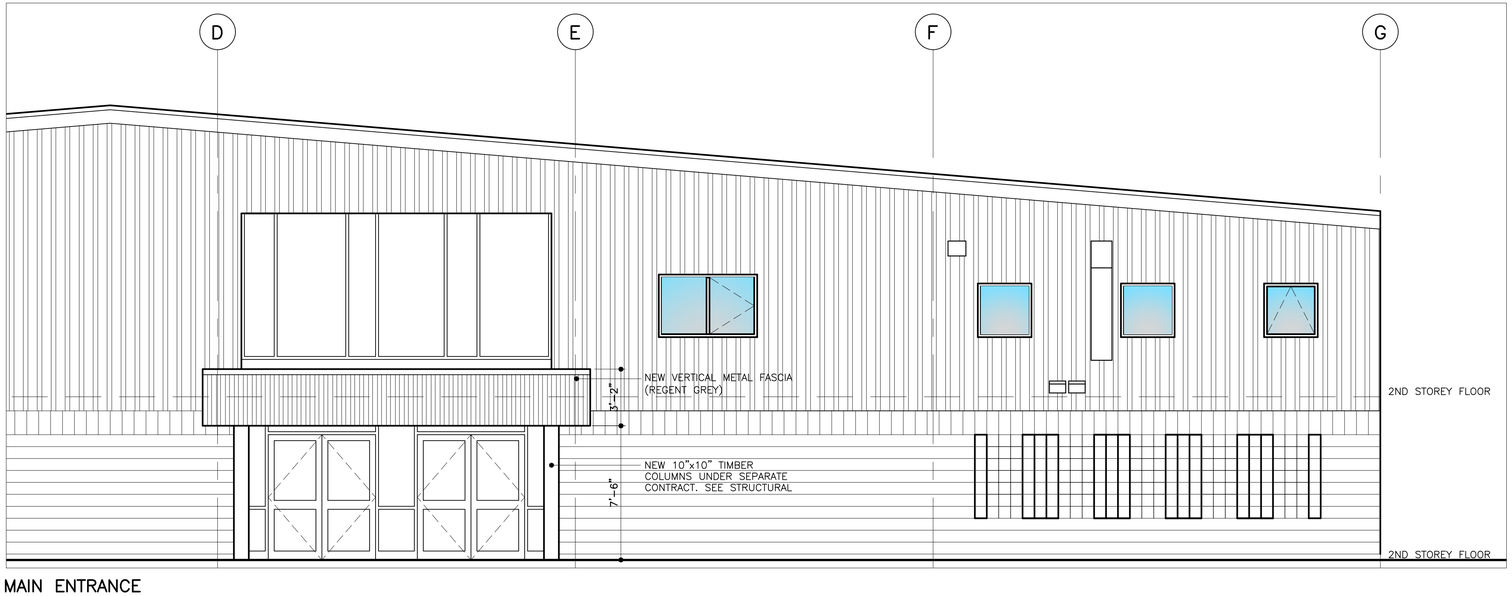



2 DETAIL AT MAIN ENTRANCE CANOPY

## UPPER CLADDING NOTES

1. REPLACE ALL LOOSE FASTENERS AT LAPPED JOINTS (AT DEEPER CLADDING CORRUGATION).
2. REMOVE & REPLACE CLADDING FASTENERS AT CANOPIES AND LIFT CLADDING, TO ALLOW BASE FLASHINGS TO BE TUCKED UNDER.


SOUTHWEST ENTRANCE




MAIN ENTRANCE

CHERNOFF THOMPSON ARCHITECTS NORTH
100 – 177 VICTORIA ST., PRINCE GEORGE, BC V2L 5R8
PHONE (250) 564-7285 FAX (250) 564-7286
E-MAIL admin@architectsnorth.ca

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**PROJECT TITLE**
RDFFG
ROBSON VALLEY REC CENTRE
REPAIRS
McBRIDE, B.C.

**NOTES**



All dimensions on the project must be checked by the contractor.

This drawing must not be used for construction purposes until here countersigned.

bcta: date:

**SHEET TITLE**
ELEVATIONS
SECTIONS

| | |
|---|---|
| PROJECT No. | 687-24 |
| DRAWN | L.S., M.S. |
| CHECKED | L.L. |
| SCALE | 1/4" = 1'-0" |
| DATE | 19 FEB 2026 |
| PRINTED | 19 FEB 2026 |

REVISION No.
DRAWING No.
A-2

# REGIONAL DISTRICT OF FRASER FORT GEORGE
## RVRC – ENTRANCE CANOPY UPGRADE
## ROBSON VALLEY, BRITISH COLUMBIA

**PROJECT MANUAL**

***for***

**REGIONAL DISTRICT OF FRASER FORT GEORGE**
**RVRC – ENTRANCE CANOPY UPGRADE**
**ROBSON VALLEY, BRITISH COLUMBIA**


**OWNER:** **REGIONAL DISTRICT OF FRASER FORT GEORGE** D 778 763 1003
C/o McElhanney T 250 561 2229
12 – 556 North Nechako Road C 250 981 3225
Prince George, BC V2K 1A1
*Contact: Ethan Hoffman, AScT, BCME* ehoffman@mcelhanney.com

**ARCHITECT:** **CHERNOFF THOMPSON ARCHITECTS NORTH** Tel: (250)-564-7285
100 – 177 Victoria Street Fax: (250)-564-7286
Prince George, BC
V2L 5R8
*Contact: Lars Lindstrom* lars@architectsnorth.ca


| CHERNOFF THOMPSON ARCHITECTS NORTH | File: 687-24<br>Date: Feb/26 |
|---|---|

SET NO.
____

**SPECIFICATIONS**

**COVER SHEET**

**ARCHITECTURAL**

A-1 PART PLANS SECTIONS

A-2 ELEVATIONS SECTION

## 1.0 GENERAL

### 1.1 GENERAL CONDITIONS

.1 All clauses set forth in the Bidding Requirements, General and Supplementary General Conditions and Division 1 - General Requirements, apply to and govern this Section.

### 1.2 CODES AND STANDARDS

.1 All construction shall meet all requirements of the BC Building Code, latest edition including all amendments.

.2 Work and materials shall meet the requirement of the latest edition of the applicable standards of the following authorities.

Canadian Government Specification Board
Canadian Standards Association
Work Safe BC
Canadian Roofing Contractors Association
American Water Works Association
Millwork Contractors' Association of BC

### 1.3 CARE OF THE WORKS, ETC.

.1 The Contractor is to keep all persons (including those employed by Sub-contractors) under his control and within the boundaries of the site, and he will be held responsible for the care of the works general until their completion including all work executed and materials deposited on the site by himself or sub-contractors and suppliers, together with all risks arising from weather, carelessness of operatives, damage or loss and is to allow for all necessary watching and protective lighting.

### 1.4 TEMPORARY SERVICES AND FACILITIES

.1 This Contractor shall arrange with the Owner to utilize existing electrical services at no charge. The Contractor will be responsible for making all temporary connections.

### 1.5 PLACE OF BUSINESS

.1 The Contractors shall ensure that the Owner functions are not interrupted.

### 1.6 TRAFFIC MAINTENANCE

.1 Roadways and walks leading to and adjacent to the building site shall be made, and maintained, in a fit and useable condition by the contractors for the use of all concerned.

### 1.7 VENTILATION

.1 Provide good ventilation particularly during painting and drywall work.

### 1.8 LIGHTING

.1 The General Contractor shall provide good illumination for all phases of the work, particularly for finishing work.

### 1.9 FIRE PROTECTION

.1 Fire protection requirements during construction shall be in accordance with the a Fire Safety Plan is to be prepared by the General Contractor and approved by the local Fire Chief and Owner.

### 1.10 STORAGE

.1 Provide adequate storage facilities as required to protect all materials including those of sub-contractors and as specified as follows:

.2 Store cement plaster materials in water-proof building with solid floor raised above grade level.

.3 All paint materials are to be stored in a single, ventilated room which shall be kept clean and neat, and all oily rags, waste, etc. removed each night and other precautions against fire be taken.

1.11 PROTECTION

.1 The contractor shall erect and maintain all guards, rails, night lights, etc., in accordance with the requirements of the governing authorities governing the protection of the public and property.

.2 This Contractor and all sub-contractors shall protect the work of other trades against damage or soiling and shall repair or replace at their own expense any work so damaged or spoiled.

.3 Take particular care not to overload any parts of the structure during construction.

1.12 CUTTING AND BORING

.1 No cutting and boring of any structural members shall be done without the permission of the Architect.

1.13 CLEAN UP

.1 The General Contractor shall be responsible for the clean up, removal of debris, etc., of his own tradesmen as the work progresses and on completion and shall ensure that the job is kept neat and tidy at all times. Each subtrade shall be responsible for the cleaning up and removal of his own debris, etc., as the work progresses.

1.14 DAMAGE TO STREET AND PUBLIC PROPERTY

.1 Street, lanes and sidewalks or other public property damaged during the course of this construction shall be made good to the satisfaction of the governing authorities. The Contractor shall also be responsible for any adjoining property which is damaged by workmen or material engaged under this contract. Any such damaged work shall be replaced by this Contractor to the satisfaction of the Architect.

1.15 EXAMINATION

.1 It shall be the responsibility of each sub-contractor or tradesmen to make a thorough examination of all surfaces that are to receive his work and to notify the General Contractor and the Architect in writing of any defect that would prevent him from making a first class installation. Commencement of work shall indicate acceptance of surface.

1.16 PHASING

.1 A construction schedule is to be agreed upon with Owner.

1.17 RELATED WORK

.1 The General Contractor shall co-ordinate the installation of all items shown on the drawings to be supplied and installed by others.

1.18 FINAL CLEAN UP

.1 This Contractor shall complete all 'housekeeping' work to both interior and exterior of building.

.2 Remove all dust from surfaces.
Remove all grease and paint spots from all surfaces.
Clean inside of windows.
Wash all resilient flooring and bases.
Clean all plastic laminate with mild detergent
Wipe clean all fluorescent tubes, both sides of lens to light fixtures.

1.19 REPAIRS AND/OR REPLACEMENTS

.1 The contractor shall make arrangements satisfactory to the Architect for the repair and/or replacement of all defective materials and workmanship which becomes apparent during the twelve month period of the maintenance guarantee. In addition the Contractor shall include for the following work at the middle and end of this project.

- resetting base where necessary.
- easing doors.
- touch up decoration where adjustments and repairs have spoiled finishes.
- painting of cracks due to shrinkage of materials.

1.20 AS-BUILT DRAWINGS

.1 The Contractor shall be responsible for and keep one complete set of prints of drawings on the job site, maintained in a clean, updated condition, with all variations noted in red crayon or ink.

.2 At completion of project neatly transfer all information showing revisions onto a set of prints provided by the Architect.

1.21 MAINTENANCE MANUALS

.1 The Contractor shall furnish one (1) hard copy and one (1) digital of manufacturer's parts lists and instructions for maintenance and use of all architectural finishing materials, mechanical and electrical equipment selected for installation (please catalogue into divisions as per specifications).

.2 The Contractor shall furnish one (1) hard copy and one (1) digital of Engineer approved instructions covering operation, management and care of the installation. All instructions shall be submitted in draft for approval, prior to final issue.

.3 The final selection of maintenance manuals shall include the maintenance schedule for each piece of equipment furnished under this contract, requiring regular maintenance.

.4 The Contractor shall bind each maintenance manual, composed as above, in suitable neatly titled hardback covers and deliver them to the Engineer before final acceptance of the system.

1.22 NON-COMPLIANCE, WCB ACT OR OCCUPATIONAL HEALTH & SAFETY REGULATIONS

.1 The Owner may terminate the contract without liability to the Owner where the Contractor, in the opinion of the Owner, refuses to comply with a requirement under the Workers' Compensation Act or Occupational Health and Safety Regulation where such compliance is required by the Act or Regulation. It is the Contractor's responsibility to ensure that all workers are qualified and certified to perform the work, as required by the Act or Regulation.

1.23 NON-COMPLIANCE, WCB ACT OR OCCUPATIONAL HEALTH & SAFETY REGULATIONS

.1 The Contractor shall, as part of the Site Safety Plan, for the duration of the Work of this Contract shall be considered "prime contractor" as under Section 118 and 119 of Part of the Workers Compensation Act of BC and regulation 20.3 of WorkSafe BC and as such will:

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

.2 Direct all workers and subcontractors and any other persons at the "work site" on safety related matters 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 All safety concerns of the owner will be immediately addressed by the contractor.

1.24 WORK AREA

.1 Provide, maintain, and remove upon completion, hoardings, barriers, warning signs and way finding signs for the protection of workmen and the public as required and approved by the Owner or the Authority having jurisdiction. All the necessary precautions shall be taken to protect the public at all times. No hoisting or lowering of roofing materials will be permitted in areas accessible to the public or the Owners employees. All of this work will be executed in a safe manner inside of a barrier set up prior to work commencing as agreed upon with the owner and contractor. Conform to all WorkSafe BC regulations.

## 1.0 GENERAL

### 1.1 GENERAL INSTRUCTIONS

.1 The Instructions to Bidders, Bid Form, General Conditions, Supplementary Conditions, Scope of Work and Division 1 – General Requirements, shall be deemed as part of all sections of the specifications and shall be read in conjunction therewith.

.2 In addition to general responsibility for the complete Work, the Contractor shall be specifically responsible for items contained in each of the sections of this specification.

.3 The arrangement and division of these specifications is not to be construed as establishing the limits and responsibility of subtrades. The Contractor shall be responsible for delineating the scope of subcontractors and for coordinating all of the work.

### 1.2 WORK INCLUDED

The Work comprises the furnishing of all labour, materials and equipment necessary to complete all the work shown in the drawings and specifications, and construction of new:

.1 Architectural, mechanical and electrical for the building.

.2 Co-ordinate Work of all trades with efficiency and continuous supervision.

.3 Provide and maintain site security and safety storage of materials and temporary hoarding.

.4 Co-operate fully with all other contractors and subcontractors working on the project.

.5 Lay out and construct all Work.

.6 Tender all subtrade work covered by allowances in this specification.

### 1.3 CONSTRUCTION FORCE

.1 Contractor shall provide and maintain, in full operation at all times during the performance of the contract, a sufficient crew of labourers, mechanics and foremen to prosecute the work with dispatch. Contractor shall provide a full-time on-site superintendent who shall be on the job during all working periods.

### 1.4 WORKMANSHIP

.1 All work shall be performed by certified trades people, experienced in their trade; according to rules and customs of best trade practices for first class work and to the various standards recommended and specified.

.2 Tenders are from acceptable Roofing Contractors who are members of RCABC in good standing and are authorized to carry on business in the Province of British Columbia and who have qualified Roofing Tradesmen.

### 1.5 OWNER'S EXISTING EQUIPMENT

.1 Remove existing Owner's equipment, fixtures and devices, where indicated on the drawings and in specifications, and hand over to the Owner. All other equipment and material will become the property of the Contractor. The decisions as to the disposal method; i.e. salvage, recycle, or landfill, will be that of the Contractor.

### 1.6 HAZARDOUS MATERIALS

.1 The site must be left in a state that will meet environmental requirements.

.2 For the purpose of the Occupational Health and Safety regulations in general, and specific to Sections 3.3 (1 & 2) and 22.10 (a, b, & c) the Contractor will be designated as the Principal Contractor for work to be conducted by their subcontractors.

3. Contractor to supply MSDS information for all materials.

### 1.7 SCHEDULE

.1 On award of the Contract, the Contractor will mobilize the Work in accordance with the Bid documents, subject to any adjustments agreed by the Owner between the time of Bid submission and award of the Contract.

.2 Format:

.1 Prepare schedule in Gantt chart with the estimated number of man days required to complete each activity noted at the end of each bar.

.3 Supply weekly look ahead including cranes, hot work, % work (including two part spray foam) complete and number of people.

.4 Daily notice of cranes, welding, torching.

.5 Submission:

.1 Submit initial schedules within 2 days after award of Contract.

.2 Submit one opaque reproduction and two (2) copies.

.3 If the Contractor's schedule indicates a change to the conditions of the Contract, the change(s) will be accepted only after it has been authorized by the Owner in accordance with the General Conditions of the Contract.

.4 Resubmit finalized schedule within seven days after return of reviewed copy.

.6 Schedule:

.1 Include complete sequence of construction activities.

.2 Include dates for commencement and completion of each major element of construction.

.7 Number of Workmen: Upon request, the Contractor shall supply information of the number of workmen, for each trade, that are on the site on a given day. Such information shall be supplied by the end of the day upon which it is requested.

.8 Ordering: The Contractor shall submit to the Consultant as may be required or requested, proof of ordering materials and equipment including those of his Subcontractors.

.9 Time: Time shall be of the essence and the Contractor shall schedule the Work as to provide the owner with completed work as soon as possible in one continuous operation.

.10 Contractor may commence work on facilities roof project as soon as possible after signing contract and coordination with the owner.

1.8 SITE MEETINGS

.1 The Contractor shall attend regular Site Meetings at such intervals as may be deemed necessary for the purpose of expediting the progress of the Work and coordinating the Work of the various Subcontractors. These meetings will be attended by the Consultant, Subconsultants, WSI, and the Contractor's personnel.

.2 First Project Meeting:

.1 As soon as possible following the acceptance of the Contractor's Tender a first meeting will be set up in order to review the project requirements with all concerned and to turn over the site to the Contractor. Architect will chair the first meeting and issue minutes.

The following are required to attend the first meeting as appropriate for the size, location, and type of project:

a. Owner's Representative
b. Consultant and Subconsultants
c. Contractor and major sub-trades

.3 Regular Site Meetings:

.1 Regular site meetings will be arranged. Frequency, location and date of the first of the regular site meeting is to be established at the first meeting. The Contractor will be responsible for taking and distributing minutes of site meetings.

.4 The Consultants will arrange other site meetings as deemed necessary and assume responsibility for setting times and arranging minutes.

1.9 COST BREAKDOWN

.1 In accordance with the General Conditions the Contractor shall submit a complete cost breakdown of the project (schedule of values), showing the budget costs and, when available, the actual construction costs. This cost breakdown will initially be submitted within ten (10) working days after award of the contract, and thereafter on a monthly basis, showing the percentage completion of each unit of cost and to accompany the Contractor's application for payment for Work completed to date.

1.10 DOCUMENTS REQUIRED

.1 Maintain at job site one copy of each of the following:

- Contract drawings
- Project Manual
- Addenda
- Reviewed shop drawings
- Change orders
- Other modifications to Contract; as-built drawings
- Field test reports
- Copy of approved construction schedule
- Manufacturer's installation and application instructions
- MSDS Documents

1.11 CODES AND STANDARDS

.1 The construction shall meet all the requirements of the 2024 British Columbia Building Code (BCBC), and all other authorities having jurisdiction over the work.

1.12 HOLIDAYS AND HOURS OF WORK

.1 The Contractor may work on Sundays or on days normally observed as a holiday in a local area with written approval.

.2 Contractor to supply weekly look ahead.

1.13 SECURITY CLEARANCES

.1 General contractor to supply Criminal Records Checks for all site personnel including sub-trades, for all location which include educational facilities, societies, volunteer groups which serve minors or vulnerable members of the public, and other facilities confirmed by the owner.

END OF SECTION 01010

## 1.0 GENERAL

### 1.1 GENERAL CONDITIONS

.1 All clauses set forth in the Bidding Requirements, General and Supplementary General Conditions and Division 1 – General Requirements, apply to and govern this Section.

### 1.2 CASH ALLOWANCES

.1 Refer to CCDC2E Contract Document GC 4.1.

.2 The Contractor shall include in the Contract price all cash allowances stated herein.

.3 Cash allowances as specified in Instructions to Bidders, and in other sections herein, shall be administered by the Contractor.

.4 The Contract price, not the cash allowances, includes the Contractor's, Subcontractor's and/or supplier's markup of overhead and profit in connection with such cash allowance.

.5 Include in each expenditure from cash allowances applicable taxes in accordance with the General Conditions and the Supplementary General Conditions of the Contract Documents.

.6 Where cash allowances are specified elsewhere to be included and performed by a Subcontractor, the Subcontractor shall bid the Work involved when authorized by the Consultant. The Subcontractor shall submit with bids recommendations and itemized breakdown to the Contractor for change order processing to the Consultant's review and approval.

.7 A schedule shall be prepared by the Contractor to identify when items called for under cash allowances must be authorized by the Consultant for bidding or ordering purposes so that the progress of the Work will not be delayed.

.8 The Contract price will be adjusted by written change order to provide for an excess or deficit to each cash allowance. Where actual expenditures of individual cash allowances exceed the cash allowance, the Contractor and/or Subcontractor shall be permitted to mark up any expenditure in excess of individual cash allowances. In the case of expenditures, which are less than the cash allowances, the Contractor and/or Subcontractor shall provide a credit for overhead and fee based on the amount of deficit of the individual cash allowances.

.9 Unless otherwise specified, all cash allowances include complete supply and installation of the Work itemized.

.10 Expend cash allowances only on the Consultant's written instructions. Inform the Consultant of the last possible date by which direction or authorization on the expenditure of the cash allowance must be received.

.11 Progress payments on account for Work authorized under cash allowances will be included in monthly certificate for payment under appropriate change order number assigned by the Consultant.

.12 The Contractor shall submit, before application for final payment, copies of all invoices and statements from suppliers and Subcontractors for Work which has been paid for and which is to be applied against the appropriate cash allowance itemized hereunder and/or to the contract administrative approved change order number assigned by the Consultant.

### 1.3 SCHEDULE OF CASH ALLOWANCES

.1 Other cash allowances may be identified, or the above items adjusted, at a later date during the bidding period of the Project and will be appropriately described, instructed and requested under bidding Addenda.

END OF SECTION 01020

## 1.0 GRADES, LINES, LEVELS & SURVEYS

.1 The Contractor shall be solely responsible for setting out the Work, shall locate all general reference points and take necessary action to prevent their destruction. He shall be responsible for all lines, elevations, and measurements of work executed by him under this contract. He must verify figures shown on drawings and will be held responsible for any error resulting from his failure to exercise such precaution.

END OF SECTION 01050

## 1.0 FEES, PERMITS AND CERTIFICATES

.1 Pay all fees and obtain all permits as required to carry out the Work, including the Building Permit. Provide the inspection authorities with such plans and information as may be required for issue of acceptance certificates. Furnish inspection certificates as evidence that the works installed conform with the requirements of the authority having jurisdiction.

END OF SECTION 01060

## 1.0 SPILLS AND CLEANUP

.1 The Contractor, sub-contractors and suppliers must comply with the BC Ministry of the Environment Regulations involving the required response to spills of hazardous materials that could result in contamination of the environment (air, water, ground).

.2 The Contractor, sub-contractors and suppliers must be able to respond to spills of a hazardous or unknown material. Procedures would include insolating the area to prevent further exposure to the material and immediately informing the on-site superintendent and the Project Representative, or the Fire Department at 911.

.3 The Contractor, sub-contractors and suppliers must have available the material, procedures, and trained personnel required to clean up spills of any material they use in the work.

END OF SECTION 01120

## 1.0 ENVIRONMENTAL CONTROLS

.1 Comply with Federal, Provincial, and WCB regulations pertaining to waste, air, solid waste, chemical waste, sanitary waste, sediment and noise pollution.

.2 Protection of natural resources: Preserve the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract in their existing condition or restore to an equivalent or improved condition upon completion of the Work.

.1 Confine demolition and construction activities to areas defined by public roads, easements, and work area limits indicated on the drawings.

i) Temporary construction: Remove indications of temporary construction facilities, such as work areas, structures, stockpiles of excess or water materials, and other vestiges of construction as directed by the Owner.

.2 Water resources: Comply with applicable regulations concerning the direct or indirect discharge of pollutants to the underground and natural waters.

i) Oily substances: Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water in such quantities as to affect normal use, aesthetics, or produce a measurable ecological impact on the area. Store and service construction equipment at areas designated for collection of oil wastes.

.3 Land resources: Prior to construction, identify all land resources to be preserved within the work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without permission from the Owner.

.4 Dust control, air pollution, and odor control: Prevent creation of dust, air pollution and odors.

i) Use water sprinkling, temporary enclosures, and other appropriate methods to limit dust and dirt rising and scattering in the air to the lowest practical level. Do not use water when it may create hazardous or other adverse conditions such as flooding and pollution.

ii) Store volatile liquids, including fuels and solvents, in closed containers.

iii) Properly maintain equipment to reduce gaseous pollutant emissions.

.5 Noise Control: Perform demolition and construction operations to minimize noise. Noise levels must be kept to acceptable levels during business hours.

.6 Disposal operations:

i) Promptly and legally transport and dispose of removed and demolished items and waste materials that are not identified to be recycled or reused.

ii) Do not burn, bury or otherwise dispose of rubbish and waste materials on project site unless otherwise permitted in the Contract Documents.

## 1.2 WASTE HANDLING

.1 Follow the recommendations of the Stikine Regional District for waste handling, including recycling procedures for paper and disposal of construction waste.

.2 Contractor to supply waste bins.

END OF SECTION 01140

## 1.0 CONTRACTOR'S USE OF PREMISES

.1 Refer to General Conditions in CCDC2E Contract Document GC 3.12.

.2 Exercise extreme caution whilst on site to prevent injury and incident.

.3 Refer to Cover Sheet Building Key Plan for construction limits. Confine activities / storage to within these limits.

.4 Contractor cannot use site washrooms, and supply their own.

## 2.0 DOCUMENTS REQUIRED ON SITE

.1 Maintain at job site, one copy of the following:

.1 Contract drawings

.2 Specifications

.3 Addenda

.4 Change Orders

.5 Other modifications to Contract.

.6 MSDS documents

## 3.0 CODES & STANDARDS

.1 Perform Work in accordance with the British Columbia Building Code (BCBC) 2024, and any other code of provincial or local application.

END OF SECTION 01150

## 1.0 CONSTRUCTION SAFETY

.1 The Contractor shall comply with all applicable laws and regulations of Federal and Provincial authorities, concerning construction safety.

.2 Contractor shall comply with the Workers' Compensation Act of British Columbia Accident Prevention Regulations (latest edition) and shall provide all necessary safety requirements as prescribed by the Act for his work.

.3 Precautions shall be taken to prevent the overloading of any part of the structure, false work, formwork or scaffolding during the progress of the work, and any damage resulting from such overloading shall be made good at the expense of the Contractor.

## 2.0 STORAGE

.1 Contractor shall assign certain areas of the site in which Subcontractors may temporarily store construction materials. Areas other than those assigned shall not be used for storage. All such assigned areas shall be subject to approval of the Consultant. The Contractor shall supply containers on site, at the completion of the demolition work, for storage of subcontractors' material. Materials are to be ordered and delivered to the site at the earliest possible date.

## 3.0 ALTERNATIVES AND QUALITY CONTROL

.1 Unless reference is made in the specifications to the appropriate trade association standards, all materials specified shall be the best of their respective kinds and all work shall be executed in accordance with the best practice and to the satisfaction of the Owner.

.2 Any materials or workmanship which, in the Consultant's opinion, may be defective or deficient shall be replaced or made good by the Contractor at his own expense.

.3 Requests for substitutions of products other than those specified will be entertained by the Consultant provided the requests contain complete data describing the product so that it can be shown that the alternate satisfies the requirements of the original specified product in every way.

.4 Should the substitution of any product be approved, the costs of modifying all items affected by the substituted item shall be the responsibility of the party requesting the approval.

## 4.0 PROCEEDURE

.1 All roof areas to be made water-tight as soon as possible before proceeding. No roof membrane area is to be removed which is greater in area than can be made water- tight by end of same working day, under climatic conditions existing at the time.

END OF SECTION 01200

## 1.0 SHOP DRAWINGS, PRODUCT DATA & SAMPLES

.1 Submittal Check List:

.1 Prior to commencement of construction provide:

.1 Labour and Material Payment Bond

.2 Performance and Material Payment Bonds

.2 Prior to making application for first payment provide:

.1 Clearance letter from the Contractor and his Subcontractors stating that they are in good standing with the Workers' Compensation Board.

.2 Sample of proposed Statutory Declaration and list of approved signing officers.

.3 A budget breakdown of the building (Schedule of Values) for Progress Claim purposes.

.4 A detailed schedule and manpower chart as called for in Summary of Work Section 01010 – Clause 1.7 – Schedule.

.3 Submit to Consultant for review, shop drawings, product data, colour charts and samples specified, through the Contractor's office in accordance with General Conditions.

.4 Until submittal is reviewed; work involving relevant product may not proceed.

.5 Shop Drawings:

.1 Drawings to be prepared by Contractor, Subcontractor, Supplier or Distributor, which illustrate appropriate portion of work; showing fabrication, layout, setting or erection details as specified in appropriate sections.

.2 Within fourteen (14) days of the award of this contract, the Contractor shall submit a detailed list of all shop drawings which he intends to submit for approval. This list shall reflect each individual item, the date shop drawings will be submitted and the date upon which approval will be required in order to comply with the Schedule.

.6 Product Data:

.1 Certain specification sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and other standard description data will be accepted in lieu of shop drawings, provided the product concerned is clearly identified. Submit in sets, not as individual submissions.

.7 Samples:

.1 Submit samples in sizes and quantities specified.

.2 Where colour is criterion, submit full range of colours.

.3 Submit all samples as soon as possible after the contract is awarded, to facilitate production of complete colour scheme by Consultant.

.8 Submission Requirements:

.1 Submit number of copies of product data, shop drawings which Contractor requires for distribution plus designated copies, which will be retained by Consultant.

.2 Accompany submissions with transmittal letter in duplicate.

.3 The Contractor shall be responsible for submitting and for instructing all Subcontractors and suppliers to submit, through his office to the Consultant, seven (7) copies of ALL shop and setting drawings or diagrams. Any comments, adjustments or revisions to be drawn to the Contractor's or Supplier's attention shall be made on the prints by the Consultant and returned to the Contractor for distribution.

.9 Coordination of Submissions:

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

.2 Field construction criteria.

.3 Catalogue numbers and similar data.

.4 Coordinate each submittal with requirements of the work of all trades and contract documents.

.5 Notify Consultant, in writing at time of submission, of deviations in submittals from requirements of Contract documents.

.6 After Consultant review, distribute copies.

.10 Contractor's Submission Procedures:

.1 Proposed Changes:

.1 All Proposed Change prices shall be supplied in an excel spreadsheet format, with back-up upon request.

.2 Cash Allowances:

.1 All Cash Allowance prices shall be supplied with complete back-up (sub-trades and material invoices).

.3 Change Directives:

.1 All Change Directives prices shall be supplied with complete back-up (sub-trades and material invoices).

END OF SECTION 01300

## 1.0 TEMPORARY HEAT, POWER, WATER

.1 The Contractor may use existing heating and power, and will protect equipment from damage and dust during demolition.

.2 Contractor to connect to site services.

.3 Contractor will provide electrical panel for construction temporary power.

.4 Contractor to provide maximum power supply required (amperage).

## 2.0 COMMUNICATIONS & INTERNET

.1 Contractor to provide communication and internet connection if required.

## 3.0 UTILITIES

.1 Contractor shall cap, plug, disconnect, relocate or divert all utilities interfering with demolition or construction operations and report unidentified utilities discovered in course of operations to Consultant. Take such action as is necessary or as ordered to prevent damage.

.2 The Contractor shall make provisions for sanitary facilities, telephone, and domestic power. Access to one or more of these requirements can be given by the owner, but must be agreed upon prior to commencement of work.

## 4.0 DISPOSAL OF WASTES

.1 Fires, burning or burying of rubbish and waste materials on site is not permitted.

.2 Disposal of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers is prohibited.

## 5.0 CONSTRUCTION PARKING

.1 The Contractors' parking area is limited to that shown on the site plan. (to be determined at site review)

## 6.0 SECURITY

.1 The construction / demolition area is to remain secure at all times during the work.

.2 Temporary hoarding (plywood) is required for any openings more than 1-2 hours below 15C.

END OF SECTION 01500

## 1.0 HOISTS, RAMPS, ETC.

.1 The Contractor shall be responsible for and provide and maintain temporary stairs, ladders, ramps, hoists, cranes, etc. required for the proper demolition and removal of materials and equipment.

## 2.0 SCAFFOLDS

.1 The Contractor shall ensure that each sub-contractor shall provide all scaffolding necessary for execution of work in his particular trade section.

## 3.0 BARRICADES

.1 The Contractor shall provide barricades, warning signs and lights as necessary for the protection of people and property on an adjacent to the site. Alter, adapt, maintain, relocate and remove as required.

.2 Conduct demolition operation with minimum interference to adjacent public or private roadways, sidewalks and access facilities in general. Keep such areas free of material, debris and equipment at all times. Provide adequate sidewalks and walkways alongside demolition site in order to prevent pedestrians from walking on roadways.

.3 Provide and maintain flag persons, traffic signals, barricades and flares, lights / lanterns as required to perform the work and protect the public.

END OF SECTION 01520

## 1.0 DUST & EROSION CONTROL

.1 The Contractor shall provide suitable dust control measures to restrict dust contamination of building areas and mechanical systems.

.2 The Contractor shall provide preventative measures to minimize erosion and wear and tear both on and off site; restore adjacent public or private property affected by general demolition operations to it's former state.

END OF SECTION 01560

## 1.0 TRAFFIC

.1 The Contractor shall conduct construction operations with minimum interference to adjacent roadways, sidewalks and access facilities in general. Keep such areas free from materials, debris and equipment at all times. Confine operations to areas designated by the Consultant.

.2 Access to building roofs and the exact means of access, are to be confirmed by the Owner or his representative at the required site visit. Contractor shall ensure that the work is carried out such that there is minimal interference with the proper functioning of the facility.

END OF SECTION 01570

## 1.0 GENERAL

1.1 RELATED SECTIONS

.1 Section 00 20 00 – Instructions to Bidders: Requests for substitutions during bidding period.

1.2 PRODUCT OPTIONS

.1 For products specified only by referenced standards and performance criteria, select any product that meets or exceeds the standard.

.2 For products specified by naming “Acceptable Materials”, select any product named.

.1 The term “Acceptable Materials” is used to specify products by trade name, manufacturer, catalogue number, model number, or similar reference.

.2 The term “Acceptable Materials” shall be deemed to establish the standard of acceptance that the Consultant will consider appropriate for the Work.

.3 Where a list of “Acceptable Materials” exists in the technical specification sections, any one of the specified products may be used to establish the Bid Price.

.3 Where the specification provides for selection of an option that is not consistent with the drawings and schedules (as in the case of a piece of equipment which differs from the equipment detailed in dimensions, service requirements, loads imposed on structures, etc.), and the Contractor elects to use that option, they then agree to coordinate the installation of the selected option into the Work, making such changes in the Work as may be required to accommodate the option and will bear costs and waive claims for additional compensation for costs that subsequently become apparent arising out of the option, including costs of the Consultant’s re-design, and preparation of drawings and details.

.4 For use of products other than those specified, refer to 1.3 below.

1.3 SUBSTITUTIONS

.1 Submit proposals for substitution only in writing in accordance with the Instructions to Bidders.

.2 Contractor will assemble requests for Substitutions requested by Subcontractors and submit to the Consultant for review.

.3 Consultant will review the substitute products with the Owner for acceptability within ten (10) days after receipt of Proposed Substitutions.

.4 Consultant is not obliged to accept any Proposed Substitution offered by the Subcontractor. The Consultant reserves the right to dismiss any item with no further explanation.

.5 Accepted Proposed Substitutions will be provided in an addendum prior to tender closing.

.6 Completed list of substitutions must include statements of respective costs of items originally specified and proposed substitutions.

.7 Consultant may consider proposal if:

.1 Products selected by Contractor from those specified are not readily available.

.2 Delivery date of products selected from those specified would unduly delay completion of Contract.

.3 Different products or construction methods to those specified that are considered by the Contractor as performing in a manner similar to, or superior to those specified.

.4 Verification that the substitute products can be obtained, meet the performance required for the project, and meet requirements of the British Columbian Building Code (latest edition), and area acceptable to the Owner and are part of it’s standards.

.8 Include with Proposed Substitutions:

.1 Complete data substantiating compliance of the proposed substitute with contract requirements.

.2 Substitute Products, provide the following:

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

.2 Manufacturer's literature, including product description, performance and test data, reference standards, and limitations

.3 Comparison of properties to specified products;

.4 Samples if appearance is relevant;

.5 Names and addresses of similar projects where the product has been used.

.3 Substitute Construction Methods, provide the following:

.1 Detailed description of the proposed method, and drawings illustrating it.

.2 Itemized comparison of proposed substitution with product or method specified.

.3 Data relating to changes in schedule.

.4 Detailed description of modifications required by proposed substitution to adjacent materials and configurations (if any).

.4 Verification that product complies with the British Columbian Building Code (latest edition)

.9 Should Proposed Substitution be found acceptable by the Consultant and the Owner, in part or in whole, the Contractor shall:

.1 Assume full responsibility and costs when substitution affects any other Work,

.2 Ensure that drawings incorporating and coordinating aspects of affected Work bear the seal and signature of an Architect or Engineer registered in Province of the Work.

.10 In making a proposal for substitution the Contractor represents:

.1 That it has personally investigated the proposal and (unless the proposal explicitly states otherwise) determined that it performs in a similar way or is superior to the product or method specified;

.2 That the same guaranty will be furnished as for the originally specified product or construction method;

.3 That it will coordinate installation of the accepted substitute into the Work, making such changes in the Work as may be required to accommodate the change;

.4 That it will bear costs and waives claims for additional compensation for costs that subsequently become apparent arising out of the substitution;

.5 That the quotation is complete and includes related costs.

.11 The Consultant reserves the right to disregard any requests for substitutions submitted after the tender closes and that are not presented in with the information requested in 1.3.8 above.

.12 Substitutions will not be considered that are implicit in submitted shop drawings and samples rather than formally presented proposals as described above.

.13 Substitutions will not be considered which require substantial changes in the Contract Documents.

.14 No substitutions will be permitted without Consultant's written acceptance and issued as an addendum. Where substitutions are found in the Work that have not been formally accepted by the Consultant, the Contractor will be required to remove such products and replace with specified materials or provide a credit to the value of the contract at the Consultant’s discretion.

.15 Substitutions will not be considered that arise from negligence in ordering specified product in proper advance time considering place of origin of product, normal method of delivery and manufacturers ordering requirement. In the case of the preceding, Consultant will either select a substitute product or recommend that extraordinary delivery methods be utilized to deliver specified product at no additional cost to the Owner

END OF SECTION 01620

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and co-ordinated with all other parts.

1.2 REQUIREMENTS

.1 On completion of their Work, Contractors shall provide maintenance manuals giving full operating and maintenance instructions for each system and major piece of equipment, as well as, maintenance instructions for building elements, fixtures and finishes.

.2 Manuals shall cover all systems, equipment, finishes, etc. provided by the construction contract including items provided by all change orders.

.3 The manuals shall be thoroughly reviewed by the Consultant and certified by him as being complete and accurate.

.4 Manuals shall be submitted to the Consultant within 14 days of Substantial Performance. The Consultant shall withhold double the value of the cost of preparing the manuals until they are submitted.

.5 For details to be included in manuals refer to:

| | |
|---|---|
| Building Trades | See 3.4 below |
| Electrical | See 3.0 below |

## 2.0 PRODUCTS/MATERIALS

2.1 BINDERS

.1 Binders shall be ACCO Canadian Co. Ltd. or approved equal by the Owner as follows:

ACCO RING "Customizer" Binder 11 x 8-1/2" Beige
1 inch - 13401
2 inch - 13403
ACCO Catalogue Binder 11 x 8-1/2" Black
Casemade Expansion Style
3 to 5 inches - 05436

.2 Label holders shall be affixed to the binder as follows:

ACCO self-adhesive Label Holders
No. 18803 at top of spine
No. 18804 on front cover

2.2 PAGES

.1 Descriptions and lists are to be neatly typed or printed on 8-1/2 x 11" heavy bond or offset bookpaper.

.2 The maximum paper size for schedules and diagrams is 11 x 17". Larger paper sizes will be accepted for diagrams only if a mylar sepia is provided for each sheet.

.3 Alphabetical index tab separators are to be used in each manual to identify each information "section"

.4 A USB Drive containing PDF files of all O&M items to be submitted with O&M manuals.

## 3.0 EXECUTION

### 3.1 SUBJECT MANUALS

.1 Separately bound manuals are to be prepared for the following trade work:

| TRADES | SUBJECT | NO. OF MANUALS & USB Drive TO OWNER |
|---|---|---|
| Mechanical | Heating, ventilating, air conditioning, refrigeration, etc. | 1 |
| Plumbing | Plumbing | 1 |
| Electrical | Power, lighting, fire alarm systems, etc. | 1 |
| Building | Architectural elements, fixtures, finishes, casework, hardware, specialties, etc. | 1 |

.2 Information on special equipment and specific items not covered above shall be placed in appropriate manuals, e.g. Kitchen equipment, etc.

.3 Manual directory:

.1 Manuals to include all consultant's reviewed shop drawings (including review cover letter, is applicable)

.2 Manuals to be organized as follows:

Division 1 – General Requirements
- General Contractor Warranty
- Permits & WorkSafe BC Notice of Work
- Asbuilt drawings
- Proposed Changes
- Change orders
- Site Instructions
- RFI's
- Inspections (all disciplines)
- Discipline's Schedules

Division 2 – Sitework
- Site servicing (equipment)
- Locates
- Grading changes
- Landscaping

Division 3 – Concrete
- Mix Design
- Rebar shop drawings
- Concrete testing
- Hardener / sealer (if used) shop drawing

Division 4 – Masonry
- Concrete / brick units (shop drawing)
- Reinforcement (rebar, wire, hanger shop drawings)

Division 5 – Metals
- Structural Steel & detailing shop drawings
- Steel truss & deck shop drawings
- Roof design calculations
- Steel stud (and fasteners) shop drawings
- Guardrail & handrail shop drawings

Division 6 – Wood & Plastics
- Wood truss shop drawings
- Millwork shop drawings
- Millwork warranty

Division 7 – Thermal & Moisture Protection
- Roof insulation shop drawing & attachment drawings, and warrantee letter
- Roofing assembly (membrane, barriers, protection, shingle etc.) shop drawings
- Roof venting shop drawings
- Cavity & exterior wall insulation shop drawings
- Foam insulation shop drawings
- Cladding, girts / clips, fasteners, and trim shop drawings
- Caulking shop drawings

Division 8 – Doors & Windows
- Glass (type / assembly) shop drawing, and sealed unit warranty
- Glass guardrail and supports shop drawings
- Window frame shop drawings
- Doors & frame shop drawings
- Door hardware schedule & shop drawings
- Maintenance and care

Division 9 – Finishes
- Flooring shop drawing and warranty
- GWB shop drawing
- Sound control (resilient channels, membranes, insulation, and surface absorption) shop drawings
- Fire stopping materials shop drawings
- Ceiling tiles & clip shop drawings
- Ceramic / terrazzo shop drawings
- MPI guarantee letter

Division 10 – Specialties
- Washroom compartments shop drawings
- Washroom accessories shop drawings

Division 11 – Equipment (if specified)
- Owner supplied contractor installed shop drawings

Division 12 – Furnishings (if specified)

Division 13 – Special Constriction (if specified)

Division 14 – Conveying Systems (elevators etc., if specified)

Division 15 – Mechanical (see mechanical specifications)
- All shop drawings
- Description of systems, maintenance & lubrication, list of equipment, and list of Sub-contractors
- Test reports: pre-operational cleaning, chemical treatment, hydrostatic & air tests on piping systems
- Gas inspection approval certificate
- Heating and ventilation inspection approval certificate
- Air balance report
- Fire damper report
- Guarantee certificate

Division 16 – Electrical (see electrical specifications)
- All shop drawings
- Panel circuit lists
- Communication testing report
- Fire alarm verification report

3.2 TEXT

.1 Instructions are to be written clearly in a language easily understood by the Owner's operating and maintenance personnel.

.2 Request the manufacturer's brochures at the time of equipment purchase.

.3 Include on specific information pertinent to the equipment and material installed. Advertising literature and brochures of a general nature will be rejected.

.4 Instructions shall be complete for installation, operation and maintenance and shall include the names and addresses of spare parts and material suppliers.

.5 The title sheet in each manual shall identify the project name, the Owner's project number, the date and the Owner Name and shall state the names, addresses and telephone numbers of the following firms:

Consultant
Other Applicable Consultants
General Contractor
Applicable Sub-Contractors

3.3 PREPARATION SCHEDULE

Draft copies of the proposed contents are to be submitted to the Consultant for approval, no later than 30 days prior to the startup of the systems and equipment. After the contents are approved, the manuals are to be prepared and submitted to the Consultant. The complete sets of manuals must be certified by the Consultant as being complete and in the Owner's hands prior to final certificate.

3.4 GUARANTEES

.1 Guarantees, warranties and bonds shall be inserted in each applicable manual and shall provide the following information:

Name and location of project.
Guarantee commencement date.
Duration of guarantee.
Clear indication of what is being guaranteed and what remedial action will be taken under guarantee.
Signature and seal of Contractor

END OF SECTION 01730

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and co-ordinated with all other parts.

2.0 AS-BUILT DRAWINGS

.1 The Contractor shall keep one set of white prints of all contract drawings, Architectural, Structural, Mechanical, Electrical, Plumbing and Drainage, including all addenda, revisions, clarifications, change orders and reviewed shop drawings in the site office and identify them as "As-Built drawings".

.2 As the work proceeds, the Contractor's Superintendent or Foreman is to record clearly and indelibly in red pencil "as-built" conditions wherever they deviate from the original direction of the contract drawings.

.3 At Substantial Performance, the Contractor will submit the As-Built white prints to the Consultant.

.4 The Contractor shall certify to the Consultant that the marked up white prints provided represent the work "as-built".

.5 The deviations that are to be recorded shall include, in general, items that are hidden from view and items of major importance to future operations and maintenance and to future alterations and additions. Detailed requirements in this connection are set out in the body of the specification work.

.6 Approval for backfilling of underground services will not be given before the Owner is satisfied that the exact location of the underground service has been surveyed and recorded. The Contractor must employ a qualified surveyor or instrument man to record the horizontal and vertical location of underground services. This survey information is to be shown on the As-Built drawings and must indicate the location of all buried services, as well as those capped or exposed by the work of this contract.

.7 Prior to acceptance of the work, the Contractor is to arrange and pay for a set of CAD drawing files of the as-built drawings.

.8 A holdback in an amount to be determined by the Owner will be withheld from the monies due to the Contractor and will be retained until all the "as-built" white prints and CAD files are certified as correct and delivered to the Consultant.

3.0 GUARANTEE

.1 Contractor shall provide the Owner with a written guarantee covering all Work and all trades to repair or replace all defects in workmanship or materials including "consequential damages" to the work appearing within a period of 1 year from the date of Substantial Performance of the work except as indicated in some specific sections of the work where longer periods shall apply.

4.0 PERIODIC CLEANING

.1 On completion of Work in the building area, the Contractor shall ensure that each Subcontractor removes all tools and equipment and leave areas swept clean and ready for Work of following trades.

.2 The Contractor shall be responsible for removal of all rubbish, debris and waste. Remove from the building site periodically. No accumulation of rubbish or debris will be permitted.

.3 Clean paved areas and City roads along truck route.

5.0 FINAL CLEANING

The Contractor shall employ professional cleaners to thoroughly clean the completed Work before handing over to the Owner. This Work shall include:

.1 Examine and clean all fixtures to produce intended appearance and use.

.2 Remove all paint spots, stains, rubbish, debris, tools and equipment from all areas and broom clean.

.3 Wash down and dry all floors, stairs and glazed wall faces; wax and polish floors.

.4 Brush off, dust and polish all ledges, stairs, steps, etc.

.5 Clean and polish all glass, including mirrors and remove all paint, putty and dirt.

.6 Clean off all dirt and paint, etc., from plumbing and electrical fitments and other equipment throughout the building and leave in first class order.

.7 Clean up roofs, including spreading displaced gravel evenly and clear all drains, gutters, etc.

.8 Clear grounds and exterior paved areas. Leave hosed down, swept and made ready for the Owner's use.

6.0 BROKEN GLASS

.1 Contractor shall replace all damaged, broken or scratched glass, resulting from Construction operations.

7.0 FIELD QUALITY CONTROL

.1 Testing of work or installations where called for in various trade sections will be arranged and paid for by the Contractor unless otherwise specifically directed under the contract.

.2 Owner will employ and pay for the services of an independent testing agency for the following sections:

| | |
|---|---|
| Cast-in-Place Concrete | Section 03300 |

8.0 TESTING AND INSPECTION SERVICES

.1 Particular requirements for inspection and testing to be carried out by testing service or laboratory approved by Consultant are specified under various sections if required.

.2 Contractor will appoint and pay for services of testing laboratory including the following:

.1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.

.2 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.

.3 Where tests or inspections performed by the testing service reveal Work is not in accordance with the contract requirements, Contractor shall pay costs for additional tests or inspections as Consultant may require to verify acceptability of corrected Work.

.4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Consultant.

9.0 SUBSTANTIAL PERFORMANCE & DEFICIENCIES

.1 Cost for additional inspections by the Consultant arising from a requested substantial performance inspection not resulting in substantial performance shall be billed hourly at a rate of $100.00 per hour to the Contractor.

.2 The value of deficiency holdback will be determined by the Consultant’s estimate of deficiency value multiplied times 2.

.3 Cost for additional inspections requested by the Contractor beyond 2 reviews of completed deficiencies shall be billed hourly at a rate of $100.00 per hour.

END OF SECTION 01740

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and co-ordinated with all other parts.

1.2 SECTION INCLUDES

Specifically, but not limited to the following:

.1 Selectively remove existing drywall, flooring siding, doors and frames, floorslab, and wall framing as indicated in the drawings.

.2 Make good damaged areas. Match patching and making good work at least to that displayed by the existing; provide so new surfaces are plumb, level, and properly aligned with existing.

.3 All material and debris resulting from demolition shall be promptly removed from site and disposed of in a legal manner.

1.4 REQUIREMENTS OF REGULATORY AGENCIES

.1 Comply with all bylaws and acquire all necessary permits.

.2 Comply with all Worker's Compensation Board of B.C. Accident Prevention Regulations.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

.1 Store materials and equipment at site only when immediately necessary, and as otherwise approved; and so as not to cause any obstruction.

1.6 EXISTING CONDITIONS

.1 The Contractor shall accept the site as it exists and will be responsible for all demolition work as shown on the Drawings.

.2 The Contractor shall visit the site at his own expense prior to the submission of Bids and take whatever time is required to ascertain the site conditions and surrounding features related to the proposed demolition and new construction work, and ensure himself that conditions are suitable for the execution of the work.

.3 No additional sums of money will be allowed for any items resulting from lack of familiarity with the site conditions; report any discrepancies to the Consultant.

1.7 PROTECTION

.1 Use sufficient measures to protect existing services in the vicinity of the demolition. Make good all damaged areas.

.2 Maintain free and safe passage for all thoroughfares on the property.

.3 Take precautions to guard against damage of any adjacent structures and services.

.4 The Contractor will be held responsible for any such damage (movement or settlement) and must repair promptly such damage to the Owner's property at no additional cost to the Owner.

.5 Provide and maintain all legal and necessary guards, railings, lights and warning signs during the execution of the work to fully protect all persons; provide adequate insurance in order that the Owner shall be saved harmless from any loss, damage, death or injury through neglect, carelessness, or incompetence of the Contractor, or the handling or condition of appliances.

1.8 CLIMATIC CONDITIONS

.1 Provide protection at all times against weather so as to maintain work, material, and equipment and property free from injury or damage, and as necessary to ensure work is carried out expeditiously in accordance with agreed time schedule and completion date.

## 2.0 PRODUCTS

2.1 MATERIALS

.1 All materials, or equipment not specifically described but required for the proper completion of the work of this Section, shall be selected by the Contractor subject to approval by the Owner.

## 3.0 EXECUTION

3.1 PREPARATION

.1 Verify at site conditions of the existing site and obtain information from local authority having jurisdiction regarding all existing and sub-surface building structures, all existing underground services (sanitary and storm sewer, gas lines, water, electrical, telephone, etc.).

3.2 WORKMANSHIP

.1 Inspect existing conditions to confirm that extent and location of demolition will not damage adjacent areas.

.2 Should any conflicts arise, immediately contact the Consultant for direction prior to proceeding. At completion recover all materials. Leave site neat and clean.

.3 The Contractor will be held responsible for the work of the Sub-contractors and to see that they carry out the provisions of the contract. All demolished material to be carefully contained and removed by chutes or other approved means from roof surfaces in order of procedure listed generally.

3.3 ADJUSTING AND CLEANING

.1 Upon the completion of all demolition work, remove all equipment, material and debris and leave the site ready for the construction of the new work.

END OF SECTION 02050

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 SCOPE

.1 Furnish all labour, equipment to complete all rough carpentry work including all steel stud framing for walls, all blocking.

.2 Rough hardware including angles, plates, nails, bolts, joist hangers, metal shelf and lintel angles, plug-in standards, etc.

.3 All plywood sheathing.

.4 All temporary enclosures.

## 2.0 PRODUCTS

2.1 MATERIALS

.1 Plywood to walls shall be Spruce or Douglas Fir, sheathing grade to CSA 0121.

2.2 HARDWARE

.1 All exterior nailing, bolting and fixings shall be galvanized.

2.3 PRESERVATIVE

.1 All new material coming in contact with earth, concrete or masonry shall be dipped in preservative, ‘ Cuprinol’ or equal, or shall be pressure treated.

## 3.0 EXECUTION

3.1 TEMPORARY ENCLOSURES

.1 Close all openings and areas as required as work proceeds with temporary enclosures to maintain security and temperatures within building.

3.2 BEAMS

.1 Carefully install all steel stud lintels and make all connections to walls and columns. Install all temporary and permanent bracing prior to application of loads.

.2 Install temporary horizontal and cross bracing as required.

.3 Install permanent bracing in accordance with shop drawings prior to application of loads or trusses.

END OF SECTION 06100

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 SCOPE

.1 Furnish all labour, material and equipment to complete all moisture protection including:

.2 Ground seal under floor slabs.

.3 Vapour/air barriers.

.4 'Peel and stick' moisture protection to windows and door frames, and as shown elsewhere.

1.3 RELATED WORK

.1 Caulking - Section 07900.

## 2.0 PRODUCTS

2.1 MOISTURE SEAL

.1 To floor slabs shall be 6 mil polyethylene film (black).

2.2 VAPOUR/AIR BARRIER

.1 To exterior walls and ceilings, over blanket insulation shall be 6 mil polyethylene film.

2.3 PEEL & STICK

.1 To windows and door frames shall be 0.01 mm (0.94") thick, UV resistant composite sheet consisting of rubberized asphalt, cross-laminated to polythene sheet.

## 3.0 EXECUTION

3.1 MOISTURE SEAL

.1 Lay full width over the sub base and lap joints 150mm (6") minimum. Protect from puncture to ensure complete coverage.

3.3 VAPOUR / AIR BARRIER

.1 Install vapour/air barrier where shown on drawings to protect the entire wall surfaces.

.2 Cut and trim vapour/air barrier to fit tight and continuous around inside of entire building. Seal joints and junctions with a tape, adhesive or by 150mm (5") overlaps and turnbacks on studs. Cut and seal tight behind and around electrical boxes, vent pipes, etc. Caulk with continuous sealant bead around all openings and along floors; between joists and along floor and roof deck.

3.4 WEATHER BARRIER

.1 Exterior walls, over panel boarding shall be Henry Blue Skin VP160 self-adhered air barrier 1/8" permeable.

3.5 PEEL & STICK

.1 Install Sopraseal Stick 1100T over clean and dry surfaces at locations shown on the Drawings. No materials will be installed during rain or snowfall.

END OF SECTION 07100

## 1.0 GENERAL

### 1.1 DESCRIPTION

.1 General Requirements: Division 1, General Requirements, is part of this specification and shall apply as if repeated here

.2 Work furnished and included:
- .1 Cladding profile to exterior canopies.
- .3 Accessories including associated flashings, closures, sealants.

.3 Related work not included:
- .1 Structural framing members including purlins, eave and ridge elements, and other elements required to support the cladding system.
- .2 Doors, louvers, sashes, ventilators as well as their supporting framing.
- .3 Caulking of elements in 1.1.3.
- .4 Flashings associated with other trades.

### 1.2 STANDARDS

.1 Design of cladding system in accordance to the latest edition of:
- .1 CSA-S136 for the design of Cold Formed Steel Structural Members
- .2 Canadian Sheet Steel Building Institute Standards 20M.
- .3 National Building Code of Canada

### 1.3 QUALITY ASSURANCE

.1 Manufacturer of wall system, and installer shall demonstrate at least five years experience in projects similar in scope.

.2 This section establishes the standard of quality required for the complete metal wall system. Proposed substitutions must meet this standard, and will be considered as follows:
- .1 A written request for approval of a substitution is received at least ten (10) days prior to tender closing.
- .2 The request includes a complete item-by-item description comparing the proposed substitution to the specified system, together with manufacturer's literature, samples, test data, engineering standards and performance evaluation indicating comparable standards to those specified.

### 1.4 DESIGN REQUIREMENTS

.1 Design wall system to resist:
- .1 Hourly wind pressure 1/50 0.37 kPa

.2 Deflection of the wall system is not to exceed 1/180th of the span for the wind load based on serviceability limit states.

.3 Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, overstressing of components, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime sky heat loss.
- .1 Temperature Change (Range): 20 deg C, ambient; 40 deg C, material surfaces

.4 Design expansion joints to accommodate movement in cladding and between cladding and structure to prevent permanent distortion or damage to the cladding.

.5 Design wall system to maintain the following erection tolerances:
- .1 Maximum variation from plane or location shown on shop drawings: 20 mm/10 m (3/4 inch/30 feet).
- .2 .Maximum offset from true alignment between two adjacent members abutting end to end in line: 1 mm (0.04 inches).

### 1.5 SAMPLES

.1 .Submit samples of standard coloured metal cladding profile for review by the consultant, prior to fabrication

1.6 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section [01 33 23].

.1 Indicate arrangement of cladding system, including dimensions, location of joints, profiles of inner and outer skin, types and locations of supports, fasteners, flashing, closures and all metal components related to the cladding installation.

.2 Drawings shall be signed and sealed by a Professional Engineer, attesting to the ability of the metal panels assembly to withstand the specified loads

1.7 MAINTENANCE DATA

.1 Provide maintenance data for cleaning and maintenance of panel finishes for incorporation into manual specified in Section 01730.

1.8 PRODUCT, DELIVERY, HANDLING AND STORAGE

.1 Store components and materials in accordance with panel manufacturer's recommendations and protect from elements.

.2 Protect prefinished steel during fabrication, transportation, site storage and erection, in accordance with CSSBI Standards.

1.9 GURARANTEE

.1 For work in this section, warranty by installer against defects or deficiencies in materials or workmanship shall be for a period of one year from date of substantial completion.

1.10 WARRANTY

.1 Provide a manufacturer's written warranty: Furnish panel manufacturer's written warranty covering failure of factory-applied exterior finish within the warranty period. Warranty period for finish: 20 years after the date of Substantial Completion. The values below are based on normal environments and exclude any aggressive atmospheric conditions.

.1 Peel, Crack, Check, Blister or Chip.

.2 Chalk more than eight (8) vertical units and seven (7) non-vertical units during years one through ten, and six (6) vertical units and five (5) non-vertical units during years eleven through twenty when measured per ASTM D 4214.

.3 Fade more than five (5) vertical NBS (hunter) units and six (6) non-vertical NBS (hunter) units during years one through ten and seven (7) vertical NBS (hunter) units and eight (8) non-vertical NBS (hunter) units during years eleven through twenty following field installation. Color measurements are to be made as per ASTM D 2244 and on only clean surfaces after removing surface deposits and chalk per ASTM D 3964.

## 2.0 PRODUCTS

2.1 MATERIALS

.1 Metal Wall System:

.1 Steel Cladding:

.1 Profile: WF-636 R 22 gauge by Westform Metals.

.2 Fabricated from Z275 galvanized sheet steel conforming to ASTM A653M Grade 230 or AZ150 Galvalume, sheet steel conforming to ASTM A792M Grade 230. having a nominal core thickness.

.2 Fasteners: Galvanized, with exposed fasteners colour matched to cladding

2.2 PANEL FINISHES

.1 Cladding coating: Silicon modified Polyester.

2.3 COLOUR

.1 Prefinished cladding colour to be Cascadia SMP Standard, selected from the manufacturer's standard colour range.

2.4 ACCESSORIES

.1 Flashing: In accordance with Section [07 62 00]. Material to match cladding in exposed locations, galvanized material in concealed locations. Custom fabricated to suit architectural details, as required. Use preformed corner pieces only. Double back exposed edges.

.2 Closures: Metal closures to suit profiles selected, to manufacturer's recommendations.

.3 Sealants:
- .1 Concealed: Tape or compound, non-skinning, non-drying, butyl rubber.
- .2 Exposed: {Acrylic co-polymer to CGSB 19GP-5M} {One part silicone to CGSB CAN2-19.13}.

.4 Clip Inserts:
- .1 Sub-framing Thermal Spacer: 100 % Pultruded glass fibre and thermoset polyester resin insulation clip.
  - .1 Thermal Spacer thickness for top, base and web: 4.8 mm nominal.
  - .2 Thermal spacer depth: 102 mm nominal.
    - .1 Depth tolerance: ± 0.127 mm.
  - .3 Basis of Design: Cascadia Windows Inc., Cascadia Clip®, www.cascadiaclip.com.
- .2 Spacer Fasteners: High hex head washer head with sharp twin lead threaded design of heat treated corrosion resistant coated steel.
  - .1 Fastener for steel framing: 1/4 - 14 x 152 mm long with hex head.
    - .1 Acceptable material: Leland Industries Inc., Master Driller™ No. 2 Mini Drill Point with DT2000 coating.
- .3 Thermal Spacer Installation: Clip thermal spacer to Z-girt and fasten girt directly to substrate at 660 mm maximum on centre vertically and 400 mm maximum on center horizontally.
- .4 Installation sequence for spacers, sub-framing, and insulation.

2.5 FABRICATION

.1 Fabricate roof components to comply with dimensions, profiles, gauges and details as shown on the shop drawings, including fascia and soffit panels and all companion flashing.

.2 Fabricate all components of the system in the factory, ready for field installation.

.3 Provide metal liner and cladding and all accessories in longest practicable length to minimize field lapping of joints.

## 3.0 EXECUTION

3.1 EXAMINATION

.1 Examine work of other Sections upon which work of this Section depends.

.2 Report all discrepancies to consultant before beginning work on the roof system.

3.2 INSTALLATION

.1 Install over new exterior plywood and air barrier.

.2 Flashing:
- .1 Install starter flashing, drip and other flashing, and corners, edgings, window and door flashing as shown on the drawings.

.3 Exterior Cladding:
- .1 Install exterior cladding {and soffit} in accordance with manufacturer's standard installation procedures, providing proper laps and detailing to ensure a weathertight face.
- .2 Install finishing flashing and cap flashing.

.4 Sealants:
- .1 Install sealants at junctions with adjoining work, and where shown on the drawings, in accordance with Section [07 92 00].

.5 Clip Inserts:
- .1 Pre-punch or pre-drill holes in Z-girts and tracks to accommodate fasteners.
- .2 Position Z-girts directly over thermal spacer before installation of fasteners.
- .3 Completely install spacers, screws and sub-framing, prior to installing insulation.
- .4 Friction fit insulation in place as follows:
  - .1 For semi-rigid insulation batts or boards, score or cut insulation down its centreline to 50 % maximum of its depth to enable fitting insulation in correct position.
  - .2 Fold edges of insulation board back to enable friction fitting in correct position. Position edges of partially folded board into space between girts and thermal spacers, and flatten partially folded board against substrate.
  - .3 Ensure insulation is tightly fitted with sides of insulation slightly compressed at each insulation spacer.
- .5 Install corrosion resistant stick pins or other mechanical insulation retention devices 400 mm maximum on centre along centreline of insulation batts or boards and in accordance with insulation manufacturer's written recommendations.
  - .1 Use sufficient number of stick pins or retention devices to ensure insulation remains flat and in correct position.
  - .2 Use 3 minimum stick pins or retention devices for each 1.2 m long batt or board.
- .6 Ensure insulation pieces are in contact with no linear gaps between spacers.

3.3 CLEAN UP

.1 Clean exposed panel surfaces in accordance with manufacturer's instructions.

.2 Repair and touch up with colour matching high grade enamel minor surface damage, only where permitted by the Architect and only where appearance after touch-up is acceptable to Architect.

.3 Replace damaged panels and components that, in opinion of the Architect, cannot be satisfactorily repaired.

END OF SECTION 074213

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 SCOPE

.1 Furnish and install Hardie-panel fibre-cement soffit panels.

.2 Coordinate this section with interfacing and adjoining work for proper sequence of installations.

.3 Fibre cement trim system to be clear anodized aluminum.

1.3 RELATED WORK

| | | |
|---|---|---|
| .1 | Rough Carpentry | Section 06100 |
| .2 | Insulation | Section 07200 |
| .3 | Caulking. | Section 07900 |
| .4 | Flashing & Wall & Sheet Metal | Section 07600 |

## 2.0 PRODUCTS

2.1 QUALITY ASSURANCE

.1 Submittals: within ten (10) days of Owner's notice

.1 Submit three 6 inch x 6 inch pieces of Hardie-panel claddings in texture (smooth) and widths shown and specified herein.

.2 Submit three copies of specifications, installation data and other pertinent manufacturer's literature.

2.2 PRODUCT HANDLING

.1 Stack Hardie-panel cladding on edge or lay flat on a smooth, level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

2.3 HARDIE-PANEL

.1 Non-asbestos fibre-cement siding to comply with ASTM Standard Specification C1186, Grade II, Type A.

.2 Siding to meet the following Building Code compliance National Evaluation Report No. NER 405 (BOCA, ICBO, SBCCI).

.3 All trims (head, jambs, sills, vertical & horizontal) to be extruded aluminum by Easytrim Reveals (black anodized) or approved equal.

2.4 APPROVED EQUAL

.1 Certainteed Colormax Fibre-cement Siding, as supplied by Steels Industrial Products, 2050 Robertson Road, Prince George, BC.

.2 Allura Fibre Cement Products, as supplied by WR Ventures, Prince George, BC.

## 3.0 EXECUTION

3.1 INSTALLATION

.1 Examine the work of other trades over which the Hardie products are to be applied, for conformity to drawings. Report all discrepancies to consultant before starting work.

.2 Install panels and soffits in accordance with manufacturing procedures. Touch-up after installation; filling of nail holes on corner trims and painting.

.3 Block between joists where horizontal joints occur.

.4 Place fasteners no closer than 9 mm (3/8 inch) from panel edges and 40 mm from panel corners.

.5 Panels to be supplied with Hardie Panel Pre-finished colours.

.6 Install panels as per layout shown on the elevations, trimming panels to suit building module & reveal system.

## 4.0 OTHER REQUIREMENTS

4.1 WARRANTY

.1 James Hardie's limited product warranty against manufacturing defects in Hardie-panel products for 30 years.

.2 Workmanship: application limited warranted for 10 years.

END OF SECTION 07460

## 1.0 GENERAL

### 1.1 REFERENCE STANDARD

.1 Submit a report, issued by a certified materials testing laboratory, attesting that the specified roofing system was tested in accordance with CSA A123.21-10, Standard test method for the dynamic wind uplift resistance of membrane-roofing systems. Test results shall demonstrate that the roofing system provides a Dynamic Uplift Resistance as noted on drawings.

.2 Submit a report showing that the specified roofing system has been tested for Wind Uplift Resistance. The test results shall demonstrate that the roofing system provides a resistance of 2.87 kPa (60lb /ft²) for the field surface of the roof. Edges and corners must be installed according to the requirements .

.3 Membranes must meet or exceed requirements of CGSB 37.56–M (9th Draft), Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing.

.4 Membranes must meet or exceed requirements of ASTM D 6162, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fibre Reinforcements.

.5 Membranes must meet or exceed requirements of ASTM D 6163, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fibre Reinforcements.

.6 Membranes must meet or exceed requirements of ASTM D 6164, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

.7 Polyisocyanurate thermal insulation boards must meet or exceed requirements of CAN/ULC S704 011, Thermal Insulation, Polyurethane and Polyisocyanurate, Boards Faced.

.8 Roofing system must meet or exceed requirements of CAN/ULC-S107-10, Methods of Fire Tests of Roof Coverings, Class A.

### 1.2 SCOPE

.1 Furnish all labour, material and equipment to install and complete all elastomeric bitumen membrane roofing, rigid insulation, pre-finished metal flashings, roof drain & scuppers, and leaders.

.2 Installation only of lead flashings to vents.

.3 Warranty and bond.

### 1.3 COMPATIBILITY

.1 All waterproofing materials will be provided by the same manufacturer.

### 1.4 TECHNICAL DOCUMENTS

.1 Submit two (2) copies of the most current technical data sheets. These documents must describe the physical properties of materials [and explanations about product installation, including restrictions, limitations and other manufacturer recommendations].

### 1.5 QUALITY ASSURANCE AND ENVIRONMENTAL MANAGEMENT

.1 The manufacturer of elastomeric bitumen products will provide proof of ISO 9001 and ISO 14001 Certifications.

### 1.6 CONTRACTOR QUALIFICATONS

.1 Roofing contractors and sub-contractors must, when tendering and during works, possess a roofing contractor operating license.

.2 Roofing contractors and sub-contractors must also be registered with SOPREMA's PAQ + S program, and provide the architect with a written certificate issued by SOPREMA to this effect before beginning any roofing work.

### 1.7 MATERIALS STORAGE AND DELIVERY

.1 .All materials will be delivered and stored in their original packaging, in conformance with the

requirements described in the manufacturer's technical documentation.

.2 At all times, materials will be adequately protected and stored in a dry and properly ventilated area, away from any welding flame or spark, and sheltered from the elements and any harmful substances.

.3 Store adhesives and solvent-based mastics at a minimum of 5 °C (41 °F).

.4 Materials delivered in rolls will be carefully stored upright; flashings will be stored to avoid wrinkling, buckling, scratches or any other possible damage.

.5 Avoid gathering construction materials on the roof, which may affect the structural integrity by imposing loads exceeding what is admissible.

1.8 FIRE PROTECTION

.1 Prior to the start of work, conduct a site inspection to ensure its safety in order to minimize fire risks and hazards.

.2 Respect safety measures recommended by the related local authorities.

.3 At the end of each workday, use a heat detector gun to spot any smouldering or concealed fire. Job planning must be organized to ensure workers are still on location at least 2 hours after welding works. An inspection must be performed by an employee of the roofing contractor who specializes in this kind of job at the end of works and, if necessary, with the help of a member of the fire protection service of the city.

.4 Never apply the torch directly to flammable materials.

.5 Throughout roofing installation, maintain a clean site and have a fire hose (when possible) and at least one ULC-approved Class A, B or C fire extinguisher, charged and in perfect operating condition, within 6 m (20 ft) of each torch. Respect all safety measures described in technical data sheets of sealants. Welding torches must never be placed near combustible or flammable products, nor be used where the flame is not visible or cannot be easily controlled.

1.9 WARRANTIES

.1 The membrane manufacturer will issue a written document in the owner's name, valid for a 10-year period, stating that it will repair any leaks in the roofing membrane to restore the roofing system to a dry and watertight condition, to the extent that manufacturing or installation defects caused such water infiltration. The warranty must cover the total cost of repair(s) during the entire warranty period

.2 The membrane manufacturer will issue a written and signed document in the owner's name, certifying that the roofing membranes are free of manufacturing defects for a period of ten (10) years, starting from the date of completion of membrane installation. This warranty will cover the removal and replacement of defective roof membrane products, including workmanship. The warranty must remain full and complete for the duration of the period specified. The warranty certificate must reflect these requirements.

.3 The contractor will provide a written and signed document to the owner's name certifying that the work executed will remain in place and free of waterproofing defect for a 10-year period from the date of

.4 [The contractor will provide RCABC a certificate of warranty for this project, valid for a 10-year period.

## 2.0 PRODUCTS

2.1 VAPOUR RETARDER

.1 Self-Adhesive Vapour Barrier:

.1 Description: Self-adhesive membrane composed of SBS modified bitumen, with a surface screen made of high-density polyethylene laminated between two layers of polyethylene films. The width of the membrane is 1.14 m (45 in) to allow the membrane to fit on the top of most structural steel deck profiles. The self-adhesive underface is protected with a silicone plastic release film.

.2 Specified product: **SOPRAVAP'R by SOPREMA**, and approved equal IKO MVP / MVP Sand.

2.2 INSULATION

.1 Tapered Insulation Board:

.1 Description: Tapered insulation panel made of polyisocyanurate designed to create a 2 percent (%) slope to the roof system.

.2 Specified product: **ENERGY 3 BY JOHNS MANVILLE**, and approved equal IKO Therm III Tapered

2.3 MEMBRANES

.1 Base Sheet Membrane for Field Surface:

.1 Description: Roofing membrane composed of SBS modified bitumen and a composite reinforcement. The surface is covered with a thermofusible plastic film], the underside is sanded. The membrane side lap is part self-adhesive and part thermofusible.

.2 In conformance with: ASTM D6162.

.3 Properties:

| | | MD | XD |
|---|---|---|---|
| .1 | Peak load at -18 °C ± 2 °C (kN/m) | 25 | 22 |
| | 90 days at 70 °C | 26 | 22 |
| .2 | Elongation at -18 ± 2 °C (%) | | |
| | Initial | 43 | 45 |
| | 90 days at 70 °C | 33 | 32 |
| .3 | Peak load at 23 °C ± 2 °C (kN/m) | | |
| | Initial | 20 | 16 |
| | 90 days at 70 °C | 20 | 17 |
| .4 | Elongation at 23 °C ± 2 °C (%) | | |
| | Initial | 58 | 60 |
| | 90 days at 70 °C | 47 | 53 |
| .5 | Tear strength at 23 °C ± 2 °C (N) | | |
| | Initial | 82 | 80 |
| | 90 days at 70 °C | 51 | 57 |
| .6 | Tear resistance at 23 °C ± 2 °C (N) | 690 | 600 |
| .7 | Low temperature flex (°C) | | |
| | Initial | -20 | -20 |
| | 90 days at 70 °C | -18 | -20 |
| .8 | Dimensional stability, max (%) | 0.2 | 0.1 |
| .9 | Compound stability temp. (°C) | 125 | |

.4 Specified product: SOPREMA SOPRASMART BOARD 180, or approved equal IKO Protectobase 180.

.5 Reinforced PMMA liquid membrane at steel trusses, Alsan RS 230 by SOPREMA, or approved equal IKO Metatech System.

,2 Base Sheet Membrane for Flashings and Parapets:

.1 Description: Membrane composed of SBS modified bitumen and composite heavy duty reinforcement. The surface is sanded and the underface is covered with a thermofusible plastic film. The surface shall be marked with three (3) chalk lines to ensure proper roll alignment.

.2 In conformance with: CGSB 37.56-M (9th Draft).

.3 Properties:

| | | MD | XD |
|---|---|---|---|
| .1 | Ultimate elongation (%) | 45 | 45 |
| .2 | Cold bending at -30 °C | No cracking | |
| .3 | Lap joint strength (kN/m) | [ ] | |

.4 Specified product: **SOPRA SOPRASMART BOARD 180,** or approved equal IKO Protectobase 180.

.3 Colour Choices for Roofing Cap Sheet Membrane Granules
For field surfaces: grey

.4 Roofing Cap Sheet Membrane for Field Surfaces

.1 Description: Roofing membrane composed of SBS modified bitumen with a composite with flame-retarding agent. The surface is protected by coloured granules. The underface is covered with a thermofusible plastic film.

.2 In conformance with: ASTM D6162.

| .3 Properties: | MD | XD |
|---|---|---|
| .1 Peak load at -18 °C ± 2 °C (kN/m) | 25 | 22 |
| 90 days at 70 °C | 26 | 22 |
| .2 Elongation at -18 ± 2 °C (%) | | |
| Initial | 43 | 45 |
| 90 days at 70 °C | 33 | 32 |
| .3 Peak load at 23 °C ± 2 °C (kN/m) | | |
| Initial | 20 | 16 |
| 90 days at 70 °C | 20 | 17 |
| .4 Elongation at 23 °C ± 2 °C (%) | | |
| Initial | 58 | 60 |
| 90 days at 70 °C | 47 | 53 |
| .5 Tear strength at 23 °C ± 2 °C (N) | | |
| Initial | 82 | 80 |
| 90 days at 70 °C | 51 | 57 |
| .6 Tear resistance at 23 °C ± 2 °C (N) | 690 | 600 |
| .7 Low temperature flex (°C) | | |
| Initial | -20 | -20 |
| 90 days at 70 °C | -18 | -20 |
| .8 Dimensional stability, max (%) | 0.2 | 0.1 |
| .9 Compound stability temp. (°C) | 125 | |

.4 Specified Product: **SOPREMA SOPRALENE FLAM 180 FR GR,** or approved equal IKO PrevENt TP 250-Cap

.5 Roofing Cap Sheet Membrane for Flashings and Parapets

.1 Description: Roofing membrane composed of SBS modified bitumen with a composite with flame-retarding agent. The surface is protected by coloured granules. The underface is covered with a thermofusible plastic film.

.2 In conformance with: ASTM D6162.

| .3 Properties: | MD | XD |
|---|---|---|
| .1 Peak load at -18 °C ± 2 °C (kN/m) | 25 | 22 |
| 90 days at 70 °C | 26 | 22 |
| .2 Elongation at -18 ± 2 °C (%) | | |
| Initial | 43 | 45 |
| 90 days at 70 °C | 33 | 32 |
| .3 Peak load at 23 °C ± 2 °C (kN/m) | | |
| Initial | 20 | 16 |
| 90 days at 70 °C | 20 | 17 |
| .4 Elongation at 23 °C ± 2 °C (%) | | |
| Initial | 58 | 60 |
| 90 days at 70 °C | 47 | 53 |
| .5 Tear strength at 23 °C ± 2 °C (N) | | |
| Initial | 82 | 80 |
| 90 days at 70 °C | 51 | 57 |
| .6 Tear resistance at 23 °C ± 2 °C (N) | 690 | 600 |
| .7 Low temperature flex (°C) | | |
| Initial | -20 | -20 |
| 90 days at 70 °C | -18 | -20 |
| .8 Dimensional stability, max (%) | 0.2 | 0.1 |
| .9 Compound stability temp. (°C) | 125 | |

.4 Specified Product: **SOPREMA SOPRALENE FLAM 180 FR GR** or approved equal IKO PrevENt TP-250-Cap

.6 Starter Roll

.1 Description: Waterproofing membranes composed of SBS modified bitumen, covered with granules on surface, with a 100 mm (4 in) selvedge on both sides. The underface is covered with a thermofusible plastic film.

.2 In conformance with: CGSB 37.56-M (9th Draft).

| .3 Properties: | | MD | XD |
|---|---|---|---|
| .1 | Strain energy (kN/m) | 13 | 10 |
| .2 | Breaking strength (kN/m) | 25 | 21 |
| .3 | Ultimate elongation (%) | 66 | 93 |
| .4 | Tear resistance (N) | 118 | |
| .5 | Static puncture resistance (N) | 432 | |
| .6 | Dimensional stability (%) | -0.2 | 0.2 |
| .7 | Plastic flow (°C) | ≥ 110 | |
| .8 | Cold bending at -30 °C | No cracking | |
| .9 | Lap joint strength (kN/m) | Pass > 4 kN/m | |

.4 Specified Product: **STARTER FLAM GR by SOPREMA**, or approved equal IKO TP-250-Cap

2.4 ACCESSORY MEMBRANCE

.1 Cover Strip:

.1 Description: Membrane strip of [330 mm (13 in)] [240 mm (9.45 in)] made of SBS modified bitumen with a composite reinforcement. Both faces are covered with a plastic thermofusible film. The strip ensures water-tightness in the end laps.

.2 In conformance with: ASTM D6162.

.3 Specified product: SOPRALAP by SOPREMA, or approved equal IKO Torch Tape 180 FF

2.5 FASTENERS

.1 Membranes Fasteners:

.1 Description: fasteners with #14 self-tapping screws, with washer of 50 mm (2 in) in diameter.

.2 In conformance with: FM 4470 Approvals standard.

.3 Specified products: SOPRAFIX FASTENERS/PLATES by SOPREMA, or approved equal IKO InnoviFast AP Fasteners and Plates

2.6 COMPLEMENTARY WATERPROOFING PRODUCTS

.1 Waterproofing Mastic

.1 Description: Multi-purpose mastic composed of SBS modified bitumen, fibres mineral fillers and solvents.

.2 Specified product: SOPRAMASTIC [ALU] by SOPREMA, or approved equal IKO Aquabarrier Mastic

.2 Pitch Pocket Filler

.1 Description: Polyurethane pitch pocket system made of pre-fabricated modules of various sizes, with interlocking compounds and solvent-free mastic, composed of two-component urethane and mono-component elastomeric sealant.

.2 Specified product: INTERCLIP SYSTEM by SOPREMA, or approved equal Royal Millenium Lockin Pocket Interclip System

.3 Sealing Product

.1 Description: Bitumen/polyurethane waterproofing mono-component resin and polyester reinforcement.

.2 Specified products: ALSAN FLASHING and ALSAN REINFORCEMENT by SOPREMA, or approved equal IKO MS-Detail Flashing and Reinforcement

## 3.0 EXECUTION

3.1 INSPECTION

.1 Inspect the roof deck for levels and drainage before roofing is commenced.

.2 Do not lay roofing until any unevenness in the deck has been corrected.

3.2 SURFACE EXAMINATION AND PREPARATION

.1 Sweep clean and remove all debris from roof deck surfaces before commencement of work.

.2 Do not work during rain, fog, sleet, ice or snow. Warm roofing materials before using in cold weather as recommended by material manufacturer.

.3 Surface examination and preparation must be completed in conformance with instructions in the membrane manufacturer's technical documentation.

.4 Before roofing work begins, the owner's representative and roofing foreman will inspect and approve deck conditions (including slopes and wood grounds) as well as flashings at parapets, roof drains, plumbing vents, ventilation outlets and other construction joints. If necessary, a non-conformity notice will be issued to the contractor so that required corrections can be carried out. The start of roofing work will be considered as acceptance of conditions for work completion.

.5 Do not begin any portion of work before surfaces are clean, smooth, dry, and free of ice and debris. Use of calcium or salt is forbidden for ice or snow removal.

.6 Be sure plumbing, carpentry and all other works have been duly completed.

.7 No materials will be installed during rain or snowfall.

3.3 INSTALLATION GENERAL

.1 Use materials in accordance with the Manufacturer's recommendations.

3.4 METHOD OF EXECUTION

.1 Roofing work must be completed in a continuous fashion as surfaces are readied and as weather conditions allows it.

.2 It's preferable to seal all joints that are not covered by a cap sheet membrane the same day. A second cap sheet cannot be installed if any moisture is present in joints.

.3 Ensure waterproofing of roofs at all times, including protection during installation work by other trades and protection as work is completed (e.g. vents, drains, etc.).

3.5 MEMBRANES

.1 Provide a smooth application, free of air pockets, wrinkles, fishmouths, tears or bleed-out exceeding ¼".

3.6 MEMBRANE FLASHINGS

.1 Nail through the completed flashings where indicated, using large head galvanized nails at 6" o/c. Locate nails not closer than 1" from top edge of membrane flashings.

3.7 METAL FLASHINGS

.1 Flashings shall be 8'-0" long with flat slip lock seams and preformed corners to **RCABC Specifications**.

.2 Cap flashing to be nailed in extended locks and screwed on the outside face, two screws per length.

.3 Mitre and seal corners with sealant.

.4 Form expansion flashing as detailed.

.5 Turn over to Section 06200 flashing for Hardi-Panel at truss soffits.

.6 Roof Scuppers to be hot welded copper.

.7 New rainwater leaders to be 4" Ø PVC (painted).

3.8 ROOF VENTS

.1 Install lead flashing (supplied by others).

3.9 SEALANT

.1 Apply sealant into all reglets upon completion of metal flashings work.

.2 Apply sealant where required by common good roofing practice.

3.10 SITE PROTECTION

.1 Protect the exposed surfaces of finished work to avoid damage during roof installation and material transportation. [Install walkways made of rigid boards over installed roofing materials to enable passage of people and transport of products.] Assume full responsibility for any damage.

3.11 INSTALLATION OF SELF-ADHESIVE VAPOUR BARRIER

.1 Primer must be dry prior to the installation of the vapour barrier membrane.

.2 Starting at the bottom of the slope, without adhering the membrane, unroll it onto the substrate for alignment. Do not immediately remove the silicone release film.

.3 Align the roll parallel to the ribs of the steel deck. Make sure membrane overlaps are supported along their entire length.

.4 Remove one end of the silicone release film and adhere this part of the membrane to the substrate. Remove the remaining release film at a 45º angle to avoid wrinkles in the membrane.

.5 Overlap adjacent rolls of 75 mm (3 in) and 100 mm (4 in). End laps must be 150 mm (6 in). Space end laps by at least 300 mm (12 in).

.6 When the vapour barrier is installed directly on a steel deck, place a thin sheet of metal under the end laps of the vapour barrier.

3.12 INSTALLATION OF INSULATION

.1 It is not required to fasten insulation boards to achieve wind uplift resistance when base sheet membranes are mechanically fastened. However, in order to prevent any insulation board movement, they can be fastened at a rate of one fastener per 4 ft².

3.13 INSTALLATION OF MECHANICALLY-FASTENED BASE SHEET

.1 Dry unroll the flame-stop membrane onto the insulation, being careful to overlap adjacent selvedges to ensure that the flame will not penetrate the insulation.

.2 Dry unroll the base sheet membrane on the substrate, taking care to align the edge of the first selvedge with the centre of the drain (parallel to the edge of the roof).

.3 Mechanically fasten membranes with screws and plates for membranes. Mechanical fasteners must be installed in the centre of the membrane side selvedge at a rate of “as noted on roof plan drawing” on the field surface, at a rate of on the perimeter, and on corners. Corners and perimeters must be installed as per FM requirements listed in the PLPDS 1-29.

.4 Each selvedge should overlap the previous one along the lines provided for this purpose.

.5 Adhere the first part of the self-adhesive side laps using a roller, then heat-weld the last part (combined self-adhesive and heat-welded side laps).

.6 Seal end laps by welding a 330-mm (13-in) wide protection strip centered on the joint.

.7 Avoid the formation of wrinkles, swellings or fishmouths.

3.14 INSTALLATION OF SELF-ADHESIVE BASE SHEET ON FLASHINGS AND PARAPETS

.1 Apply base sheet flashing only after primer coat is dry.

.2 Before applying membranes, always burn the plastic film from the section to be covered if there is an overlap (inside and outside corners and field surface). For sanded base sheet membranes, apply primer for self-adhesive membrane on the area to be covered at the foot of the parapets.

.3 Cut off corners at end laps of areas to be covered by the next roll.

.4 Each selvedge will overlap the previous one along lines provided for this purpose, and by 150 mm (6 in) at the ends.

.5 Position the pre-cut membrane. Remove 150 mm (6 in) of the silicone release film to hold the membrane in place at the top of the parapet.

.6 Then, gradually peel off the remaining silicone release film, pressing down on the membrane with an aluminum applicator to ensure good adhesion. Use the aluminum applicator to ensure a perfect transition between the flashing and the field surface. Smooth the entire membrane surface with a membrane roller for full adhesion.

.7 Install a reinforcing gusset at all inside and outside corners.

.8 Always seal overlaps at the end of the workday.

.9 Avoid the formation of wrinkles, swellings or fishmouths.

3.15 INSTALLATION OF WELDABLE BASE SHEET ON FLASHINGS AND PARAPETS

.1 Apply base sheet flashing only after primer coat is dry.

.2 Cut off corners at end laps to be covered by the next roll.

.3 Each selvedge will overlap along lines provided for this purpose, and by 150 mm (6 in) at the ends.

.4 This base sheet membrane must be welded directly to the substrate, proceeding from top to bottom using a propane torch.

.5 Avoid the formation of wrinkles, swellings or fishmouths.

3.16 INSTALLATION OF REINFORCED GUSSETS

.1 Install reinforcing gussets at all inside and outside corners.

.2 Heat-weld the gussets in place after installing base sheet membrane.

3.17 INSTALLATION OF WELDABLE REINFORCING MEMBRANES

.1 Install reinforcing membranes specified according to the typical detailed instructions in the documentation of membrane manufacturer.

3.18 INSTALLATION OF THERMOFUSIBLE CAP SHEET ON FIELD SURFACE

.1 Begin with double-selvedge starter roll. If starter roll is not used, side laps covered with granules must be de-granulated by embedding granules in torch-heated bitumen over a 75 mm (3 in) width.

.2 Starting at drain, dry unroll the membrane on the base sheet, taking care to align the edge of the first selvedge with the edge of the roof.

.3 Cut off corners at end laps at areas to be covered by the next roll.

.4 Each selvedge will overlap the previous one along lines provided for this purpose, and will overlap by 150 mm (6 in) at the ends. Space end laps a minimum of 300 mm (12 in).

.5 Heat-weld cap sheet membrane with a torch on the base sheet to create a bleed out of 3 to 6 mm (1/8 to 1/4 in).

.6 During installation, be careful not to overheat the membrane or its reinforcements.

.7 Avoid the formation of wrinkles, swellings or fishmouths.

.8 Avoid walking over finished surfaces; use rigid protective walkways as needed.

3.19 INSTALLATION OF THERMOFUSIBLE CAP SHEET ON FLASHINGS AND PARAPETS

.1 This cap sheet must be installed in one-metre-wide strips (3.25 ft).

.2 Each selvedge will overlap the previous one laterally along lines provided for this purpose, and will overlap by 150 mm (6 in) the field surface. Membranes for flashings must be spaced at least 100 mm (4 in) with respect to the cap sheet membranes on the field surface, to avoid areas of excessive membrane thickness.

.3 Cut off corners at end laps on areas to be covered by the next roll.

.4 Use a chalk line to draw a straight line on the field surface, 150 mm (6 in) from flashings and parapets.

.5 Use a torch and round-nose trowel to embed the surface granules in the layer of hot bitumen, starting

from the chalk line on the field surface to the bottom edge of the flashing or parapet, as well as on the granulated vertical surfaces to be overlapped.

.6 This cap sheet will be heat-welded directly to the base sheet membrane, proceeding from bottom to top.

.7 Avoid the formation of wrinkles, swellings or fishmouths.

.8 During installation, be careful not to overheat the membrane and its reinforcements.

3.20 WATERPROFFING FOR VARIOUS DETAILS

.1 Install waterproofing membranes at various roofing details in conformance with typical details indicated in technical documentation of the manufacturer.

## 4.0 OTHER REQUIREMENTS

4.1 QUALITY ASSURANCE

.1 Workmanship standards shall conform to the latest Roofing Contractors Association (RCABC) Guarantee Corp. standards as published in the RCABC Roofing Practices Manual for a 5-year RoofStar Guarantee or a Waterproofing guarantee, unless modified by the contract documents to exceed these minimums.

.2 Conform to the latest RCABC Guarantee Corp. standards published in the Roofing Contractors Association (RCABC) Roofing Practices Manual and the appropriate CSA, CTSB and ASTM standards for the roofing system specified. Materials used must be listed on the most current RCABC Accepted Materials List.

.3 Conform to the latest RoofStar Guarantee standards of the Roofing Contractors Association of British Columbia as published in the RCABC Roofing Practices Manual for a 5 year RoofStar Guarantee, unless modified by the contract documents to exceed those minimums.

4.2 PROTECTION

.1 Protect walls where hoisting is necessary. Locate kettles so that smoke and fumes will not discolour the building or adjacent buildings or become a nuisance to adjacent occupants.

.2 Protect roofs from damage due to traffic and material handling until completion of the building.

4.3 GUARANTEE

.1 Provide a written RCABC 5-year RoofStar guarantee from date of Substantial Completion that the roofing system and flashings will stay in place and remain effective and leak-proof.

.1 Cost of RCABC inspections are to be included in this section.

END OF SECTION 07500

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 SECTION INCLUDES

.1 Flashing & Sheet Metal at door and window frames.

.2 Removal of existing flashing at roof perimeter.

.3 Installation of new flashing to replace existing at roof perimeter.

1.3 RELATED SECTIONS

.1 Sealants and Caulking Section 07900

1.4 QUALITY ASSURANCE

.1 Do roofing work in accordance with applicable standards in Roofing Contractors Association of British Columbia (RCABC) Manual and to ULC requirements.

.2 Complete work using experienced trades persons familiar with common roofing sheet metal applications.

1.5 SUBMITTALS

.1 Samples:

.1 Submit samples of each type of sheet metal material, colour and finish.

.2 Shop Drawings:

.1 Submit shop drawings.

.2 Indicate flashings, control joints details.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

.1 Provide and maintain dry, off-ground weatherproof storage.

.2 Store rolls of roofing membrane on end that are to be used in conjunction with metal flashings.

.3 Remove in quantities required for same day use.

.4 Indicate on sheet metal flashings or wrappings:

.1 Manufacturer’s name & brand

.2 Compliance with applicable standards.

.5 Deliver fasteners in boxes or kegs and keep in protective storage until used. Do not oil or grease.

.6 When requested, make available copies of purchase orders to Consultant or Roofing Consultant.

1.7 INSPECTION & WARRANTY

.1 Upon completion of work, this Contractor hereby warrants that the metal flashings will stay in place and remain leak proof in accordance with GC 12, but for five years.

.2 Upon completion of work, this Contractor shall furnish Owners with a 5-YEAR RCABC guarantee work of this section.

1.8 COMPATIBILITY

.1 Compatibility between metal flashing components is essential. Materials to be incorporated into the system must be compatible.

.2 Provide written declaration that metal flashings will be installed to comply RCABC Standards.

.3 Where the trade believes incompatible components may be in contact, advise consultant in writing, get directive before proceeding.

## 2.0 PRODUCTS

2.1 PRE-FINISHED SHEET STEEL

.1 Finish enamel coated factory applied coating to CGSB 93-GP-3M including:

.1 Class F2S

.2 Custom colour to be selected by Consultant.

.3 Thickness to be 0.071 mm.

2.2 SHEET METAL ACCESSORIES

.1 Cleats: galvanized iron .056 mm thickness, minimum 50 mm wide shall be used where additional securement required at standing seams.

.2 Fasteners: galvanized threaded screws with soft neoprene washer.

.3 Sealant: as specified under Section 07920.

.4 Underlayment for metal flashings shall be Type CF Coated Base sheet (40# type).

.5 Touch-up paint as recommended by metal flashing manufacturer.

2.3 FABRICATION

.1 Fabricate metal flashings and other sheet metal work in accordance with RCABC and CRCA standards.

.2 Form pieces in 3000 mm (10'-0") maximum lengths.

.3 Hem exposed edges on underside. Use standing seams at inside and outside corners.

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

.5 Coat metal with protective paint coating where in contact with mortar, concrete or dissimilar metal.

2.4 METAL FLASHINGS

.1 Caulk perimeter flashings with specified sealant where necessary to make a proper seal.

.2 'S' Lock and caulk end joints in flashing. Provide standing seams with concealed clips at corners. Hem exposed edges of flashing a minimum of 12.5 mm for rigidity.

.3 Provide flashings with edges turned to form a drip. Make proper allowance for expansion and contraction. Face clip flashings with concealed clips (600 mm) on centres.

.4 Provide new baked enamel coated galvanized iron base flashings at vents, chimneys, control joints and skylights.

.5 Carry face metal down exterior face a minimum of 100 mm.

.6 Provide metal base and cap flashings to extend to within 25 mm of roof surface.

.7 At vent stacks, install aluminum vent stacks as manufactured by Menzies Metal Products where supplied by this sub-trade. Include for aluminum metal caps.

2.5 REGLETS

.1 Supply and install reglets as indicated on drawings.

.2 Provide and install connecting units between sections of reglet to provide weather-tight joint.

## 3.0 EXECUTION

3.1 INSTALLATION

.1 Install sheet metal flashings in accordance with Drawings and Specifications and minimum RCABC standards.

.2 Use concealed fastenings except where approved before installation by Consultant.

.3 Provide underlay sheet under flashings.

.4 Counterflash bituminous flashings at intersections of roof with vertical surfaces and curbs. Flash joints using S-lock seams on vertical and standing seams on horizontal joints. Form tight fit over roof cleats.

.5 Lock end joints and caulk with sealant.

.6 Where surface mounted reglets are used mount true and level, caulk top of reglet.

.7 Insert metal flashings into reglets and under cap flashings to form weathertight junction.

.8 Turn top edge of flashing into recessed reglet or mortar joint a minimum 25 mm. Use lead wedge to secure in joint.

.9 Caulk flashing joints with sealant.

END OF SECTION 07600

## 1.0 GENERAL

1.1 DOCUMENTS

.1 This Section of the Specifications forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts.

1.2 SCOPE

.1 Furnish all labour, material and equipment to complete all caulking work including but not necessarily confined to:

.2 Caulking of both sides all grilles, all gaps in exterior surfaces and thresholds. Sealants to plumbing fixtures, all joints between dissimilar materials on exterior areas, shall be caulked to provide tight waterproof and airtight seals.

## 2.0 PRODUCTS

2.1 MATERIALS

.1 Deliver and store materials in original sealed packages, all labels attached. Damaged materials shall be rejected.

.2 Polysulphide sealants - for all exterior sealing work to CGSB 19-GP-24 epoxidized polyurethane terpolymer sealant. Approved manufacturers: Tremco 'Dymeric', Sternsons 'Duoflex', Dap Duratite of Canada's 'Flexiseal'.

.3 Silicone sealant - Mildew Resistant; 'Tremco Proglaze'; General Electric 1700 Series; Dow Corning 785 or approved alternate.

.4 Fire barrier / fire stopping - Double A/D Distributors Ltd., meeting NLC S114 (ASTM E814) and ULC-S101 preformed semi-rigid fire stopping, non-combustible mineral fibre felt.

.5 Backup material - Closed cell foam. Polyethylene urethane, neoprene, vinyl or butyl rods.

.6 Primers - non staining, as recommended by the caulking and compound manufacturers for proper bonding.

.7 Colours to be selected by the Architect.

## 3.0 EXECUTION

3.1 EXAMINATION

.1 Examine all surfaces to receive caulking. All surfaces must be clean, free from loose or damp material.

.2 Prepare joints to ensure complete adhesion of sealants.

.3 Unacceptable conditions or surfaces must be corrected before work commences.

3.2 APPLICATION

.1 Approved thinners shall be applied if recommended by the sealant manufacturer.

.2 Open joints wider than 13mm (½") shall be restricted in depth to 13mm (½") by use of backup material, sized to ensure 30% compression of backing.

.3 Apply sealants with gun, nozzle sized and shaped for the joint required. Joint size and depth recommended by the manufacturer shall be strictly adhered to. Surface finish of joint shall be smooth and free from ridges or voids.

.4 Do not work in temperatures less or greater than those recommended by the manufacturer and never in temperatures of 4°C or less.

.5 Install fire barrier / fire stopping in accordance with manufacturer's directions, to fit into cavities and spaces between tops of gypsum board on wood stud fire rated walls and wood deck, at cavities, pipe,

duct and conduit openings in walls and floors. Use purpose made impale clips as necessary to secure in position. Use 'Rockwool' insulation only for backup material in fire separations.

## 4.0 OTHER REQUIREMENTS

4.1 POT LIFE

.1 The specified pot life of the material must be strictly observed.

4.2 PROTECTION

.1 Protect all adjacent surfaces and remove excess or misapplied material.

4.3 GUARANTEE

.1 This Contractor shall provide a written extended guarantee from the date of Substantial Performance of the Work, for a period of five (5) years against faulty materials and workmanship.

END OF SECTION 07900