

Town of Yarmouth




**Water Treatment Plant
Lower Roof Replacement**

Issued for Tender

**September 1, 2023
Contract No. 220231.00**

Water Treatment Plant Lower Roof Replacement

1	Issued for Tender	Steve Eisan, P.Eng.	1-Sep-2023	Dillon Woudstra, P. Eng.
Rev.	Issue	Reviewed By:	Date	Issued By:
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<u>Section</u>	<u>Title</u>	
<u>Division 00 - Procurement and Contracting Requirements</u>		
00 21 13	INFORMATION TO TENDERERS	2
00 41 42	TENDER FORM	4
00 53 42	FORM OF AGREEMENT - STIPULATED PRICE CONTRACT CCDC 2 – 2020	8
00 71 00	DEFINITIONS - CCDC 2 STIPULATED PRICE CONTRACT – 2020	3
00 72 45	GENERAL CONDITIONS - CCDC 2 STIPULATED PRICE CONTRACT – 2020	23
00 73 00	SUPPLEMENTARY GENERAL CONDITIONS FOR CCDC 2 – 2020	6
<u>Division 01 - General Requirements</u>		
01 11 00	SUMMARY OF WORK	2
01 14 00	WORK RESTRICTIONS	3
01 25 00	SUBSTITUTION PROCEDURES	3
01 26 00	CONTRACT MODIFICATIONS PROCEDURES	4
01 29 00	PAYMENT PROCEDURES	2
01 31 19	PROJECT MEETINGS	2
01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION	3
01 33 00	SUBMITTAL PROCEDURES	3
01 35 29.06	HEALTH AND SAFETY REQUIREMENTS	4
01 40 00	QUALITY REQUIREMENTS	3
01 51 00	TEMPORARY UTILITIES	2
01 52 00	CONSTRUCTION FACILITIES	2
01 56 00	TEMPORARY BARRIERS AND ENCLOSURES	2
01 61 00	COMMON PRODUCT REQUIREMENTS	2
01 73 00	EXECUTION	2
01 74 00	CLEANING AND WASTE MANAGEMENT	3
01 77 00	CLOSEOUT PROCEDURES	2
01 78 00	CLOSEOUT SUBMITTALS	3
<u>Division 02 – Existing Conditions</u>		
02 41 00	REMOVALS AND REINSTALLATIONS	3
<u>Division 06 – Wood, Plastics, and Composites</u>		
06 10 00	ROUGH CARPENTRY	4
<u>Division 07 – Thermal and Moisture Protection</u>		
07 52 00	MODIFIED BITUMINOUS MEMBRANE ROOFING	10
07 62 00	METAL FLASHING AND TRIM	2
07 92 00	SEALANTS	3

1. A complete Tender is comprised of the following:
 - a) The Tender Form in its entirety, with all pages and spaces for entry of information by Tenderers filled in as instructed.
 - b) Acknowledgment of addenda received by the Tenderer during the tendering period.
 - c) Tender Security (refer to clause 12 herein).
2. **Tenders shall be submitted exclusively by mail and addressed to:**
Rob Chetwynd, Chief Operator Water/Wastewater Treatment
Town of Yarmouth, 400 Main Street,
Yarmouth, NS B5A1G2,

Tenders must be submitted by 3:00 p.m., local time, on September 26th, 2023, hereinafter.
Envelopes will be time stamped by the Town of Yarmouth when received at the above-noted address.
3. Tender opening will occur following Tender Closing. Tender opening will be private and will occur immediately after the closing time.
4. Before tendering, Tenderers shall have examined the *Site* of the work and shall have satisfied themselves as to the working conditions, including labour conditions and labour rules, the nature and kind of work to be done, any special risks associated therewith and all other matters which may be necessary in order to form a proper conception under which the work will be required to be performed. Tenderers shall not be entitled to claim at any time after closing of tenders that there was any misunderstanding in regard to all such conditions.
5. When forming their estimates and preparing their tenders, Tenderers shall take full cognizance of the content of all the Contract Documents listed in Section 00 41 42 – Tender Form – Stipulated Price.
6. Any ambiguities, inconsistencies, or uncertainties in the Contract Documents which may become apparent to Tenderers when tendering shall be advised in writing to the *Consultant* at 1505 Barrington Street, Suite 901, Halifax, NS, B3J 2R7, Attention: Dillon Woudstra, P.Eng., at dwoudstra@cbcl.ca, not less than four (4) working days before Tender Closing. Tenderers will be advised simultaneously of any decisions on such matters as necessary by means of addenda (which will be serially numbered) and all addenda issued shall be incorporated into the Contract Documents.
7. Tenderer shall fill in the Completion Time and is notified that the completion date based on this may be taken into account in considering the tenders.
8. All tenders shall be valid for acceptance for sixty (60) calendar days from the Closing Date.
9. The Agreement is included in the Contract Documents at the time of tendering and is provided for information only and shall not be completed at the time of tendering.
10. The appending of any qualifying clauses to the tender or failure to comply with these instructions and with all other relevant provisions contained in the documents in the completing of any tender may render such tender liable to disqualification as determined by the *Owner*.
11. Contract Price to exclude HST. Harmonized sales tax shall be indicated as a separate amount and included in the *Total Amount Payable*.
12. Each tender shall be accompanied by Tender Security in the amount of ten percent (10%) of the *Total Amount Payable* in evidence of the bona fide nature of the tender.

13. This tender Security shall be in favour of the Owner and shall be in the form of a Certified Cheque, irrevocable Letter of Credit or a Bid Bond which shall guarantee to the Owner that in the event of the successful Tenderer declining to enter into a formal agreement with the Owner as called for in the Contract Documents, or declining or neglecting to provide the Insurance or Contract Security required by the Contract Documents, then the Owner will be reimbursed the additional cost of accepting another tender or Tender Security amount, whichever is the lesser.
 - .1 A scan of a hard copy bond, certified cheque, or irrevocable letter of credit is permitted provided the original is provided in the subsequent hard copy submission
 - .2 The bonds shall be issued by a company whose guarantee bonds are acceptable to the Government of Canada. Use the latest edition of CCDC Form 220.
 - .3 A bid bond may be submitted in an electronic or digital format provided it meets the following criteria:
 - .1 The version submitted by the Tenderer must be verifiable by the Owner with respect to the totality and wholeness of the bond form, including: the content; all digital signatures; all digital seals; with the Surety Company, or an approved verification service provider of the Surety Company.
 - .2 The version submitted must be viewable, printable and storable in standard electronic file formats acceptable to the Owner, and in a single file. Allowable formats include pdf.
 - .3 The verification may be conducted by the Owner immediately or at any time during the life of the bond and at the discretion of the Owner with no requirement for passwords or fees.
 - .4 The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding subsection 12.3.1 above.
 - .5 Bonds failing the verification process will not be considered to be valid.
 - .6 Bonds passing the verification process will be treated as original and authentic.
14. The Tender Security of the unsuccessful Tenderers will be returned to them after the *Owner* enters into a formal agreement with the successful Tenderer or the expiration of validity of their tenders, whichever occurs first.
15. On the written acceptance by the *Owner* of a tender, that tender becomes the Contract and the Tenderer who has submitted it becomes the Contractor. The Contractor will be required to enter into a formal agreement with the *Owner* following receipt of a written notice of acceptance from the *Owner*. The written notice of acceptance forms a Contract Agreement until the formal "Agreement" is executed.
16. Within seven (7) days of written acceptance of a tender, the Contractor shall provide Contract Security in the amount and form as specified in Section 00 41 42 – Tender Form – Stipulated Price and Insurance as specified in CCDC 2-2020, GC 11.1.
17. Complete the Tender Form and have corrections initialled by the individual signing the tender.
18. Where manufactured articles are described or specified in the Contract Documents by name, catalogue number of a manufacturer or supplier, Tenderers shall tender on the basis of using only such articles. Procedure concerning substitution of a specified article with another shall be in accordance with equivalents and alternates in Section 01 25 00 – Substitution Procedures.
19. The *Owner* will not defray any expenses whatsoever incurred by Tenderers in the preparation and submission of their tenders. The *Owner* reserves the right to waive any formality or technicality in any tender.
20. The *Owner* reserves the right to accept or to reject any or all tenders received, or to select a tender which is deemed by the *Owner* to be in its best interests. The *Owner* reserves the right to negotiate with the lowest compliant tenderer in the event that all tendered prices are higher than anticipated.
21. Tenders, which in the opinion of the *Owner* are considered to be informal or unbalanced, may be rejected.

END OF SECTION

TO: Rob Chetwynd, Chief Operator Water/Wastewater Treatment

Town of Yarmouth, 400 Main Street, Yarmouth, NS B5A1G2

FROM: _____

The undersigned Tenderer, having carefully read and examined the undermentioned Contract Documents prepared by CBCL Limited for the completion of the Town of Yarmouth, WTP Lower Roof Replacement, Contract No.220231.00, which comprise all the tender documents in accordance with the following documents:

Description of *Work* and List of Drawings

Tender Form – Stipulated Price

CCDC 2-2020:

Agreement Between *Owner* and Contractor

Definitions

General Conditions of the Stipulated Price Contract - CCDC 2-2020 Supplementary General Conditions

Specifications

Drawings

Addendum/Addenda

hereby accepts the same as part and parcel of the Contract herein referred to, and having carefully examined the locality and site of *Work* and having full knowledge of the *Work* required and of the materials to be furnished and used, does hereby Tender and offer to enter into a contract to perform and complete, the whole of the said *Work* and provide all necessary labour, plant, tools, materials and equipment and pay all applicable taxes, as set forth and in strict accordance with the Specifications, Drawings and other Contract Documents and to do all therein called for on the terms and conditions and under the provisions therein set forth as follows.

CONTRACT PRICE \$ _____ **(A)**

ADD HST (15% OF CONTRACT PRICE) \$ _____ **(B)**

TOTAL AMOUNT PAYABLE (A+B) \$ _____

Tenderer's HST Registration No. _____

COMPLETION TIME

1. Tenderer agrees to achieve Ready-for-Takeover of the *Work* within ____ weeks from written notification of Award.

The Undersigned Tenderer:

- .1 Declares that this tender is valid for acceptance until November 25, 2023 (being sixty (60) calendar days from the Tender Closing).

- .2 Declares that the Contract Price set forth in the Tender Form has been correctly computed for the purposes of this tender and that it includes and covers all duties, and handling charges; transportation; and all other charges. Harmonized sales tax is not to be included in the Contract Price.
- .3 Hands you herewith by way of Tender Security a Bid Bond or Certified Cheque or irrevocable Letter of Credit in the amount of ten percent (10%) of the *Total Amount Payable* on the understanding that in the event of this tender not being accepted by you, then this Tender Security will be returned to the undersigned Tenderer either at the time that the Contract is entered into with some other Tenderer, or at the expiration of validity of this tender, whichever is the sooner.
- .4 Undertakes in the event of your acceptance of this tender, to execute a formal agreement in the form hereto attached, within seven (7) calendar days of written acceptance and further agrees to provide the Contract Security in the amount specified herein, and Insurance as specified in GC 11.1
- .5 Undertakes, in the event of your acceptance of the Tender, to achieve Substantial Performance of the *Work* within the number of weeks of written notification of Award indicated above.
- .6 Upon request, provide evidence of ability and experience within seven (7) calendar days of request, including experience in similar *Work*, *Work* currently in progress, senior supervisory staff available for the *Work*, equipment available for the *Work*, and financial resources.
- .7 Agrees prior to commencement of the *Work*, to provide to the *Owner* a Performance Bond and a Labour and Materials Bond, each in the amount of 50% of the *Total Amount Payable*. Bonds must be submitted to the Town of Yarmouth following the awarding of the contract and prior to commencement of any work on the project. This Contract Security will be held by the Town for a minimum period of ninety (90) days unless otherwise specified in the Tender Documents. Should it become apparent that the final cost of the project will exceed the *Total Amount Payable* by more than 10%, arrange to have bonds reissued, based on the projected final cost.
- .8 Agrees that in the event of failing or neglecting either to provide the Contract Security and Insurance and/or to execute the Agreement in the manner herein before undertaken, then the Tender Security shall be forfeited.
- .9 Agrees that unless and until a formal agreement is prepared and executed, this tender together with your written acceptance thereof shall constitute a binding Contract between us.
- .10 Understands and agrees that the *Owner* is not bound to accept the lowest or any tender which they may receive.
- .11 Agrees to provide, maintain and pay for the insurance coverages specified in the Contract Documents. One copy of all insurance policies of the Contractor and two copies of certificates of insurance, certifying to the issuance of all insurance policies, shall be furnished to the *Owner*. Each and every insurance policy shall name the Contractor, *Owner* and *Consultant* as being insured in the full amount of the insurance.
- .12 Declares to have personal knowledge of the location of the proposed *Work* and is informed as to the actual conditions and requirements, including labour conditions and labour rules and shall not claim at any time after execution of the Agreement that there was any misunderstanding in regard to such conditions and requirements.
- .13 Declares to have carefully examined the documents and Addenda No. _____ to _____ referred to in the first paragraph of this Tender Form, and the Tenderer hereby accepts and agrees to the same as forming a part of the Contract.

- .14 Understands that in the event that the tendered Contract Price is not within the project budget, the *Owner* has the right to negotiate the Contract with the low bidder or reject all tenders received.
- .15 Agrees that the Warranty Period defined in the Contract Documents shall be for a period of one (1) year from the date of Ready-for-Takeover of the *Work*.
- .16 Understands that Substantial Performance of the *Work* will be established in accordance with General Conditions of the Contract and applicable lien legislation at the Place of *Work*.
- .17 Understands that after the issuance of the certificate of Substantial Performance of the Work by the Consultant, provided that the Contractor has relieved the Owner from any and all claims, demands and lien claims for and in respect of the Contract, and has completed all outstanding items and corrected all deficiencies, the Contractor shall submit an application for Final Payment and the Consultant will thereafter prepare the Final Certificate for payment in accordance with the General Conditions of the Contract and applicable lien legislation at the Place of Work.
- .18 Understands that Ready-for-Takeover will only be given when the Contractor has completed all outstanding items and corrected all deficiencies. The Contractor can then submit an application for Final Payment and the *Consultant* will thereafter prepare the Final Certificate for payment in accordance with the General Conditions of the Contract.
- .19 Understands that the payment of holdback will be in accordance with the General Conditions of the Contract and subject to the provisions of the lien legislation applicable to the Place of *Work*.
- .20 Understands the occupational Health and Safety Legislation and any Workers or Workplace compensation legislation applicable to the Place of the *Work* and declares that they are in good standing and have all necessary certification as required by such legislation.
- .21 Agrees that time shall be construed as being of the essence of the Contract.

DATED THIS ____ DAY OF _____, 202__.

[Seal]

Name of Firm Tendering

Signature of Signing Officer

Witness

Name and Title (Printed)

Witness

Signature of Signing Officer

Name and Title (Printed)

Company Address

Telephone No.

Fax No.

Email

*NOTE: Tenders submitted by or on behalf of any Corporation must be signed and sealed in the name of such Corporation by a duly authorized officer or agent.

END OF SECTION

AGREEMENT BETWEEN
OWNER AND CONTRACTOR
CCDC 2 – 2020

CCDC 2

Stipulated Price Contract

2020

[Name of Project]

Apply a CCDC 2 copyright seal here. The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 2 – 2020 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
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CCDC 2 STIPULATED PRICE CONTRACT

TABLE OF CONTENTS

AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A-1 The Work
- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

DEFINITIONS

- Change Directive
- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Other Contractor
- Payment Legislation
- Place of the Work
- Product
- Project
- Ready-for-Takeover
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Value Added Taxes
- Work
- Working Day

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by the Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Construction Schedule
- GC 3.5 Supervision
- GC 3.6 Subcontractors and Suppliers
- GC 3.7 Labour and Products
- GC 3.8 Shop Drawings

PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Payment
- GC 5.3 Payment
- GC 5.4 Substantial Performance of the Work and Payment of Holdback
- GC 5.5 Final Payment
- GC 5.6 Deferred Work
- GC 5.7 Non-conforming Work

PART 6 CHANGES IN THE WORK

- GC 6.1 Owner's Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Conditions
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price

PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Adjudication
- GC 8.3 Negotiation, Mediation and Arbitration
- GC 8.4 Retention of Rights

PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

PART 11 INSURANCE

- GC 11.1 Insurance

PART 12 OWNER TAKEOVER

- GC 12.1 Ready-for-Takeover
- GC 12.2 Early Occupancy by the Owner
- GC 12.3 Warranty

PART 13 INDEMNIFICATION AND WAIVER

- GC 13.1 Indemnification
- GC 13.2 Waiver of Claims

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when a stipulated price is the basis of payment.

This Agreement made on _____ day of _____ in the year _____,
by and between the parties

hereinafter called the "Owner"

and

hereinafter called the "Contractor"

The Owner and the Contractor agree as follows:

ARTICLE A-1 THE WORK

The Contractor shall:

1.1 perform the *Work* required by the *Contract Documents* for (insert below the description or title of the *Work*)

located at (insert below the Place of the *Work*)

for which the Agreement has been signed by the parties, and for which (insert below the name of the Consultant)

is acting as and is hereinafter called the "Consultant" and

1.2 do and fulfill everything indicated by the *Contract Documents*, and

1.3 commence the *Work* by the _____ day of _____ in the year _____ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the _____ day of _____ in the year _____.

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bid documents that are not expressly listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS.

2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement – THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- General Conditions
-

** (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; Division 01 of the Specifications – GENERAL REQUIREMENTS; Project information that the Contractor may rely upon: technical Specifications, giving a list of contents with section numbers and titles, number of pages and date, material finishing schedules; Drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date; time schedule)*

ARTICLE A-4 CONTRACT PRICE

4.1 The *Contract Price*, which excludes *Value Added Taxes*, is:

/100 dollars \$

4.2 *Value Added Taxes* (of _____ %) payable by the *Owner* to the *Contractor* are:

/100 dollars \$

4.3 Total amount payable by the *Owner* to the *Contractor* for the *Work* is:

/100 dollars \$

4.4 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.5 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents* and *Payment Legislation*, and in accordance with legislation and statutory regulations respecting holdback percentages, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* unless otherwise prescribed by *Payment Legislation* together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 Interest

.1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by adjudication, arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:

- (1) 2% per annum above the prime rate for the first 60 days.
- (2) 4% per annum above the prime rate after the first 60 days.

Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by
(Insert name of chartered lending institution whose prime rate is to be used)

for prime business loans as it may change from time to time.

.2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.2.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below.

6.2 The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.

6.3 A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it will be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* will be deemed to have been received on the *Working Day* next following such day.

6.4 A *Notice in Writing* sent by any form of electronic communication will be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof.

6.5 An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

*name of Owner**

address

email address

Contractor

*name of Contractor**

address

email address

Consultant

*name of Consultant**

address

email address

** If it is intended that a specific individual must receive the notice, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / French # language shall prevail.
Complete this statement by striking out inapplicable term.
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

- 8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED
in the presence of:

WITNESS

OWNER

signature

name of Owner

name of person signing

signature

name and title of person signing

WITNESS

CONTRACTOR

signature

name of Contractor

name of person signing

signature

name and title of person signing

- N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.

DEFINITIONS

CCDC 2 – 2020

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the amount stipulated in Article A-4 of the Agreement – CONTRACT PRICE.

Contract Time

The *Contract Time* is the time from commencement of the *Work* to the date of *Ready-for-Takeover* as stipulated in paragraph 1.3 of Article A-1 of the Agreement – THE WORK.

Contractor

The *Contractor* is the person or entity identified as such in the Agreement.

Drawings

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement.

Other Contractor

Other Contractor means a contractor, other than the *Contractor* or a *Subcontractor*, engaged by the *Owner* for the *Project*.

Payment Legislation

Payment Legislation means such legislation in effect at the *Place of the Work* which governs payment under construction contracts.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or Products means material, machinery, equipment, and fixtures forming part of the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Ready-for-Takeover

Ready-for-Takeover shall have been attained when the conditions set out in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER have been met, as verified by the *Consultant* pursuant to paragraph 12.1.4.2 of GC 12.1 – READY-FOR-TAKEOVER.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models, or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS OF THE
STIPULATED PRICE CONTRACT
CCDC 2 – 2020

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 The *Contract Documents* are complementary, and what is required by one shall be as binding as if required by all. Performance by the *Contractor* shall be required only to the extent consistent with the *Contract Documents*.
- 1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating co-ordination and execution of the *Work* by the *Contractor*.
- 1.1.4 The *Contractor* is not responsible for errors, omissions or inconsistencies in the *Contract Documents*. If there are perceived errors, omissions or inconsistencies discovered by or made known to the *Contractor*, the *Contractor* shall promptly report to the *Consultant* and shall not proceed with the work affected until the *Contractor* has received corrected or additional information from the *Consultant*.
- 1.1.5 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between *Owner* and *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 01 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 amended or later dated documents shall govern over earlier documents of the same type.
 - .5 noted materials and annotations shall govern over graphic indications.
- 1.1.6 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.7 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.8 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.9 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.10 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.11 Physical models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, the *Consultant* or the *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Consultant* and the *Contractor*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement – PAYMENT, GC 5.3 – PAYMENT and GC 5.5 – FINAL PAYMENT.
- 2.2.5 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to perform the *Work* in accordance with the *Contract Documents*.
- 2.2.6 Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.7 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.8 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.9 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.10 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.11 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.
- 2.2.12 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.13 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other submittals by the *Contractor*, in accordance with the *Contract Documents*.

- 2.2.14 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 2.2.15 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* and verify that *Ready-for-Takeover* has been attained.
- 2.2.16 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.17 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.
- 2.2.18 If the *Consultant's* engagement is terminated, the *Owner* shall immediately engage a *Consultant* against whom the *Contractor* makes no reasonable objection and whose duties and responsibilities under the *Contract Documents* will be that of the former *Consultant*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for tests, inspections or approvals in the *Contract Documents*, by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for review and inspection. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the inspections or tests satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is required by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by others if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work was incorporated in the *Work* or the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly *Other Contractors'* work destroyed or damaged by such corrections at the *Contractor's* expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a finding.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.

- 3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY THE OWNER OR OTHER CONTRACTORS

- 3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to *Other Contractors* and to perform work with own forces.
- 3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:
- .1 provide for the co-ordination of the activities and work of *Other Contractors* and the *Owner's* own forces with the *Work* of the *Contract*;
 - .2 enter into separate contracts with *Other Contractors* under conditions of contract which are compatible with the conditions of the *Contract*;
 - .3 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 – INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
 - .4 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of *Other Contractors* or the *Owner's* own forces.
- 3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:
- .1 afford the *Owner* and *Other Contractors* reasonable opportunity to store their products and execute their work;
 - .2 co-ordinate and schedule the *Work* with the work of *Other Contractors* or the *Owner's* own forces that are identified in the *Contract Documents*;
 - .3 participate with *Other Contractors* and the *Owner* in reviewing their construction schedules when directed to do so; and
 - .4 report promptly to the *Consultant* in writing any apparent deficiencies in the work of *Other Contractors* or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.
- 3.2.4 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of *Other Contractors* or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 3.2.5 Disputes and other matters in question between the *Contractor* and *Other Contractors* shall be dealt with as provided in Part 8 of the General Conditions – DISPUTE RESOLUTION provided the *Other Contractors* have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any *Other Contractor* whose contract with the *Owner* contains a similar agreement to arbitrate. In the absence of *Other Contractors* having reciprocal obligations, disputes and other matters in question initiated by the *Contractor* against *Other Contractors* will be considered disputes and other matters in question between the *Contractor* and the *Owner*.
- 3.2.6 Should the *Owner*, the *Consultant*, *Other Contractors*, or anyone employed by them directly or indirectly be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 3.3 TEMPORARY WORK

- 3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work* unless otherwise specified in the *Contract Documents*.
- 3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.
- 3.3.3 Notwithstanding the provisions of GC 3.1 – CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 CONSTRUCTION SCHEDULE

- 3.4.1 The *Contractor* shall:
- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
 - .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
 - .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions – CHANGES IN THE WORK.

GC 3.5 SUPERVISION

- 3.5.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while the *Work* is being performed. The appointed representative shall not be changed except for valid reason.
- 3.5.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

- 3.6.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:
- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
 - .2 incorporate the applicable terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
 - .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.
- 3.6.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.
- 3.6.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.
- 3.6.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the difference occasioned by such required change.
- 3.6.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.
- 3.6.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

GC 3.7 LABOUR AND PRODUCTS

- 3.7.1 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and employ only workers that are skilled in the tasks assigned.
- 3.7.2 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.
- 3.7.3 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

GC 3.8 SHOP DRAWINGS

- 3.8.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.8.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in accordance with an agreed schedule, or in the absence of an agreed schedule, in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of *Other Contractors* or the *Owner's* own forces.

- 3.8.3 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.8.4 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.8.5 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.8.6 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.8.7 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of the *Work* or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.
- 4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.
- 4.1.6 The value of the *Work* performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement – PAYMENT shall be submitted monthly to the *Owner* and the *Consultant* simultaneously as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 The amount claimed shall be for the value, proportionate to the amount of the *Contract*, of *Work* performed and *Products* delivered to the *Place of the Work* as of the last day of the payment period.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the parts of the *Work*, aggregating the total amount of the *Contract Price*, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values shall be made out in such form as specified in the *Contract* and supported by such evidence as the *Consultant* may reasonably require.
- 5.2.6 Applications for payment shall be based on the schedule of values accepted by the *Consultant* and shall comply with the provisions of *Payment Legislation*.
- 5.2.7 Each application for payment shall include evidence of compliance with workers' compensation legislation at the *Place of the Work* and after the first payment, a declaration by the *Contractor* as to the distribution made of the amounts previously received using document CCDC 9A 'Statutory Declaration'.
- 5.2.8 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PAYMENT

- 5.3.1 After receipt by the *Consultant* and the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:
 - .1 The *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* certifies a different amount, or rejects the application or part thereof, the *Owner* shall promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
 - .2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment, and in any event, in compliance with *Payment Legislation*.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 The *Consultant* will review the *Work* to certify or verify the validity of the application for *Substantial Performance of the Work* and will promptly, and in any event, no later than 20 calendar days after receipt of the *Contractors* application:
 - .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.2 Where the holdback amount required by the applicable lien legislation has not been placed in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.4.3 Subject to the requirements of any *Payment Legislation*, all holdback amount prescribed by the applicable lien legislation for the *Work* shall become due and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.4.4 The *Contractor* shall submit an application for payment of the lien holdback amount in accordance with GC 5.3 – PAYMENT.
- 5.4.5 Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release, such portion to the *Contractor* in accordance with such legislation.

- 5.4.6 Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

- 5.5.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.5.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and when the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment to the *Owner*, with a copy to the *Contractor*.
- 5.5.3 If the *Consultant* rejects the application or part thereof, the *Owner* will promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
- 5.5.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with *Payment Legislation*.

GC 5.6 DEFERRED WORK

- 5.6.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, or if the *Owner* and the *Contractor* agree that, there are items of work that must be deferred, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such deferred *Work*.

GC 5.7 NON-CONFORMING WORK

- 5.7.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present to the *Consultant*, in a form that can be reasonably evaluated, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 When the *Owner* and the *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the applications for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.

- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following in as much as it contributes directly to the implementation of the *Change Directive*:

Labour

- .1 rates that are listed in the schedule or as agreed by the *Owner* and the *Contractor* including wages, benefits, compensation, contributions, assessments, or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan for:
 - (1) trade labour in the direct employ of the *Contractor*;
 - (2) the *Contractor's* personnel when stationed at the field office;
 - (3) the *Contractor's* personnel engaged at shops or on the road, in expediting the production or transportation of materials or equipment; and
 - (4) the *Contractor's* office personnel engaged in a technical capacity, or other personnel identified in Article A-3 of the Agreement – CONTRACT DOCUMENTS for the time spent in the performance of the *Work*;

Products, Construction Equipment and Temporary Work

- .2 cost of all *Products* including cost of transportation thereof;
- .3 in the absence of agreed rates, cost less salvage value of *Construction Equipment, Temporary Work* and tools, exclusive of hand tools under \$1,000 owned by the *Contractor*;
- .4 rental cost of *Construction Equipment, Temporary Work* and tools, exclusive of hand tools under \$1,000;
- .5 cost of all equipment and services required for the *Contractor's* field office;

Subcontract

- .6 subcontract amounts of Subcontractor with pricing mechanism approved by the *Owner*;

Others

- .7 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7.1;
- .8 deposits lost provided that they are not caused by negligent acts or omissions of the *Contractor*;
- .9 cost of quality assurance such as independent inspection and testing services;
- .10 charges levied by authorities having jurisdiction at the *Place of the Work*;
- .11 royalties, patent license fees, and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 – PATENT FEES;
- .12 premium for all contract securities and insurance for which the *Contractor* is required, by the *Contract Documents*, to provide, maintain and pay in relation to the performance of the *Work*;
- .13 losses and expenses sustained by the *Contractor* for matters which are the subject of insurance under the policies prescribed in GC 11.1 – INSURANCE when such losses and expenses are not recoverable because the amounts are in excess of collectible amounts or within the deductible amounts;
- .14 taxes and duties, other than *Value Added Taxes*, income, capital, or property taxes, relating to the *Work* for which the *Contractor* is liable;
- .15 charges for voice and data communications, courier services, expressage, transmittal and reproduction of documents, and petty cash items;
- .16 cost for removal and disposal of waste products and debris;
- .17 legal costs, incurred by the *Contractor*, in relation to the performance of the *Work* provided that they are not:
 - (1) relating to a dispute between the *Owner* and the *Contractor* unless such costs are part of a settlement or awarded by arbitration or court,
 - (2) the result of the negligent acts or omissions of the *Contractor*, or
 - (3) the result of a breach of this *Contract* by the *Contractor*;
- .18 cost of auditing when requested by the *Owner*; and
- .19 cost of *Project* specific information technology in accordance with the method determined by the parties.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* performance of the *Work* attributable to the *Change Directive* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for a finding.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* and differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will promptly inform the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES, GC 9.3 – ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by the *Owner*, the *Consultant*, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, resulting in the failure of the *Contractor* to attain *Ready-for-Takeover* by the date stipulated in Article A-1 of the Agreement – THE WORK, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or

.4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, the *Consultant* or anyone employed or engaged by them directly or indirectly.

6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.

6.5.5 If no schedule is made under paragraph 2.2.12 of GC 2.2 – ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.

6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:

- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
- .2 keep such records as may be necessary to support the claim.

6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based and the *Consultant* will make a finding upon such claim.

6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.

6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.

6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.

7.1.2 If the *Contractor* neglects to perform the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* which provides the detail of such neglect to perform the *Work* properly or such failure to comply with the requirements of the *Contract* to a substantial degree, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor* *Notice in Writing*, containing particulars of the default including references to applicable provisions of the *Contract*, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.

7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:

- .1 commences the correction of the default within the specified time,
- .2 provides the *Owner* with an acceptable schedule for such correction, and
- .3 corrects the default in accordance with the *Contract* terms and with such schedule.

- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may by giving *Notice in Writing*:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* for the *Work* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor*'s right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor*'s right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense,
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued,
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant*'s additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 – WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor*'s work under GC 12.3 – WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor*'s obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue in force after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner*'s insolvency, or if a receiver is appointed because of the *Owner*'s insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner*'s contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner*'s obligations under the *Contract*,
 - .2 the *Consultant* fails to issue a certificate as provided in Part 5 of the General Conditions – PAYMENT,
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by adjudication, arbitration or court, or
 - .4 the *Owner* fails to comply with the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, gives a written statement to the *Owner* and the *Contractor* that provides detail of such failure to comply with the requirements of the *Contract* to a substantial degree.
- 7.2.4 The *Contractor*'s *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* by giving a *Notice in Writing* to the *Owner* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved

in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION.

- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.3.3 to 8.3.8 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.4 – RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 ADJUDICATION

- 8.2.1 Nothing in this *Contract* shall be deemed to affect the rights of the parties to resolve any dispute by adjudication as may be prescribed by applicable legislation.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.3.1 In accordance with the rules for mediation as provided in CCDC 40 'Rules for Mediation and Arbitration of Construction Industry Disputes' in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.3.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 – ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.3.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid, and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.3.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.3.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the rules for mediation as provided in CCDC 40 in effect at the time of bid closing.
- 8.3.5 If the dispute has not been resolved at the mediation or within such further period as is agreed by the parties, the Project Mediator will terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.3.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.3.5, either party may refer the dispute to be finally resolved by arbitration under the rules of arbitration as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.3.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.3.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.3.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.
- 8.3.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.3.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.3.6 shall be:
- .1 held in abeyance until:
 - (1) *Ready-for-Takeover*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and

.2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.3.6.

GC 8.4 RETENTION OF RIGHTS

- 8.4.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions – DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.4.2 Nothing in Part 8 of the General Conditions – DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.3.6 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work*, the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors or omissions in the *Contract Documents*; or
 - .2 acts or omissions by the *Owner*, the *Consultant*, *Other Contractors*, or their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or the *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substance exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless any toxic or hazardous substance which was present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substance exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.

- 9.2.6 If the *Owner* and the *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.8 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 The *Contractor* shall be responsible for establishing, initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the *Work* in accordance with the applicable health and safety legislation.
- 9.4.2 The *Owner* and the *Contractor* shall comply with all health and safety precautions and programs established at the *Place of the Work*.
- 9.4.3 The *Owner* and the *Contractor* shall comply with the rules, regulations and practices required by the applicable health and safety legislation.
- 9.4.4 The *Owner* shall cause the *Consultant*, *Other Contractors* and the *Owner's* own forces to comply with all health and safety precautions and programs established by the *Contractor* at the *Place of the Work*.
- 9.4.5 Nothing in this *Contract* shall affect the determination of liability under the applicable health and safety legislation.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or the *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing,
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and

- .3 if the *Owner* and the *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.5.2 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor*'s operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 make good any damage to the *Work*, the *Owner*'s property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.3 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 – MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will issue the changes required to the *Contract Documents* as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*'s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the physical model, plan or design of which was supplied to the *Contractor* as part of the *Contract*.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, and again with the *Contractor*'s applications for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*.

PART 11 INSURANCE

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 13.1 – INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the requirements of which are specified in CCDC 41 'CCDC Insurance Requirements' in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover* on an ongoing basis for a period of 6 years following *Ready-for-Takeover*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
 - .3 Unmanned aerial vehicle aircraft, manned aircraft or watercraft Liability Insurance when owned or non-owned manned or unmanned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 - .4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Ready-for-Takeover*;
 - (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*; and
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
 - .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Ready-for-Takeover*.
 - .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except

that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces or *Other Contractors*, the *Owner* shall, in accordance with the *Owner's* obligations under the provisions relating to construction by the *Owner* or *Other Contractors*, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

.7 Contractors' Equipment Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

.8 Contractors' Pollution Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.

11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.

11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.

11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.

11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

11.1.6 If a revised version of CCDC 41 is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.

11.1.7 If a revised version of CCDC 41 is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.

11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41.

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

12.1.1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are limited to the following:

- .1 The *Consultant* has certified or verified the *Substantial Performance of the Work*.
- .2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having jurisdiction.
- .3 Final cleaning and waste removal at the time of applying for *Ready-for-Takeover*, as required by the *Contract Documents*.
- .4 The delivery to the *Owner* of such operations and maintenance documents reasonably necessary for immediate operation and maintenance, as required by the *Contract Documents*.
- .5 Make available a copy of the as-built drawings completed to date on site.
- .6 Startup, testing required for immediate occupancy, as required by the *Contract Documents*.
- .7 Ability to secure access to the *Work* has been provided to the *Owner*, if required by the *Contract Documents*.
- .8 Demonstration and training, as required by the *Contract Documents*, is scheduled by the *Contractor* acting reasonably.

12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 must be deferred because of conditions reasonably beyond the control of the *Contractor*, or by agreement between the *Owner* and the *Contractor* to do so, *Ready-for-Takeover* shall not be delayed.

12.1.3 When the *Contractor* considers that the *Work* is *Ready-for-Takeover*, the *Contractor* shall deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for *Ready-for-Takeover* for review. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.

12.1.4 The *Consultant* will review the *Work* to verify the validity of the application and will promptly, and in any event, no later than 10 calendar days after receipt of the *Contractor's* list and application:

- .1 advise the *Contractor* in writing that the *Work* is not *Ready-for-Takeover* and give reasons why, or
- .2 confirm the date of *Ready-for-Takeover* in writing to each of the *Owner* and the *Contractor*.

12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

12.1.6 The provision of GC 12.1 – READY-FOR-TAKEOVER shall be subject to GC 12.2 – EARLY OCCUPANCY BY THE OWNER.

GC 12.2 EARLY OCCUPANCY BY THE OWNER

12.2.1 The *Owner* may take occupancy of a part or the entirety of the *Work* before *Ready-for-Takeover* has been attained only as agreed by the *Contractor* which agreement shall not be unreasonably withheld.

12.2.2 The *Owner* shall not occupy a part or the entirety of the *Work* without prior approval by authorities having jurisdiction.

12.2.3 If the *Owner* takes occupancy of a part of the *Work* before *Ready-for-Takeover* has been attained:

- .1 The part of the *Work* which is occupied shall be deemed to have been taken over by the *Owner* as from the date on which it is occupied.
- .2 The *Contractor* shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the *Owner*.
- .3 The warranty period specified in paragraph 12.3.1 of GC 12.3 – WARRANTY for that part of the *Work* shall start from the date on which it is occupied.

12.2.4 If the *Owner* takes occupancy of the entirety of the *Work* before all the prerequisites are met as described in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER, the *Work* shall, subject to the requirements of the applicable lien legislation, be deemed to achieve *Ready-for-Takeover*. This shall not relieve the *Contractor*'s responsibility to complete the *Work* in a timely manner.

GC 12.3 WARRANTY

12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date when *Ready-for-Takeover* has been attained.

12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.

12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor* *Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.

12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor*'s expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.

12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.

12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor*'s responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

13.1.1 Without restricting the parties' obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in paragraphs 13.1.4 and 13.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose negligent acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

- 13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:
- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the minimum liability insurance limit for one occurrence, of the applicable insurance policy, as referred to in CCDC 41 in effect at the time of bid closing.
 - .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
 - .3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss and damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.
 - .4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.
- 13.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 13.1.1 and 13.1.2 shall be inclusive of interest and all legal costs.
- 13.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.
- 13.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:
- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
 - .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.
- 13.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:
- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based become known; and
 - .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 13.2 WAIVER OF CLAIMS

- 13.2.1 Subject to any lien legislation applicable to the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than 5 calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work* or 20 calendar days following the *Ready-for-Takeover* date, whichever is later;
 - .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances, patent fees and defect in title matters for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 13.1.4 or 13.1.5 of GC 13.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.2 The *Contractor* waives and releases the *Owner* from all claims resulting from acts or omissions which occurred after the *Ready-for-Takeover* date except for:
- .1 indemnification respecting third party claims, and claims respecting toxic and hazardous substances, patent fees and defect in title matters, all as referred in paragraphs 13.2.1.2 and 13.2.1.3; and
 - .2 claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.3 Subject to any lien legislation applicable to the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than 20 calendar days following the *Ready-for-Takeover* date;

- .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 13.1.4 of GC 13.1 – INDEMNIFICATION;
 - .4 damages arising from the *Contractor*'s actions which result in substantial defects or deficiencies in the *Work*. "Substantial defects or deficiencies" mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 – WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.4 Respecting claims arising upon substantial defects and deficiencies in the *Work*, as referenced in paragraph 13.2.3.4, and notwithstanding paragraph 13.2.3.5, the *Owner* waives and releases the *Contractor* from all claims except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the *Ready-for-Takeover* date, provided that any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, the time within which any such claim may be brought shall be such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- 13.2.5 The *Owner* waives and releases the *Contractor* from all claims arising from acts or omissions which occur after the *Ready-for-Takeover* date, except for:
- .1 indemnification for claims advanced against the *Owner* by third parties, as referenced in paragraph 13.2.3.2;
 - .2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor*, as referenced in paragraph 13.2.3.3;
 - .3 claims arising under GC 12.3 – WARRANTY; and
 - .4 claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.6 "Notice in Writing of claim" as provided for in GC 13.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 13.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of an intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 13.2.7 A claim for lien asserted under the lien legislation prevailing at the *Place of the Work* shall qualify as notice of claim for the purposes of this *Contract*.
- 13.2.8 The party giving the *Notice in Writing* of claim as provided for in GC 13.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 13.2.9 Where the event or series of events giving rise to a claim made under paragraphs 13.2.1 or 13.2.3 has a continuing effect, the detailed account submitted under paragraph 13.2.8 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which such claim is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 13.2.10 Nothing in GC 13.2 – WAIVER OF CLAIMS shall be deemed to affect the rights of the parties under any lien legislation or limitations legislation prevailing at the *Place of the Work*.

CCDC 41 CCDC INSURANCE REQUIREMENTS

PUBLICATION DATE: December 14, 2020

1. General liability insurance shall be with limits of not less than \$10,000,000 per occurrence, an aggregate limit of not less than \$10,000,000 within any policy year with respect to completed operations, and a deductible not exceeding \$10,000. The insurance coverage shall not be less than the insurance provided by IBC Form 2100 (including an extension for a standard provincial and territorial form of non-owned automobile liability policy) and IBC Form 2320. To achieve the desired limit, umbrella or excess liability insurance may be used. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
2. Automobile liability insurance in respect of vehicles that are required by law to be insured under a contract by a Motor Vehicle Liability Policy, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property, covering all vehicles owned or leased by the *Contractor*. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.
3. Manned Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft (if used directly or indirectly in the performance of the *Work*), including use of additional premises, shall have limits of not less than \$10,000,000 inclusive per occurrence for bodily injury, death and damage to property including loss of use thereof and limits of not less than \$10,000,000 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*.
4. Unmanned aerial vehicle liability insurance with respect to owned or non-owned aircraft (if used directly or indirectly in the performance of the *Work*), shall have limits of not less than \$5,000,000 per occurrence or accident for bodily injury, death and damage to property or such amounts as required by any applicable law or regulation.
5. "Broad form" property insurance shall have limits of not less than the sum of 1.1 times *Contract Price* and the full value, as stated in the *Contract*, of *Products* and design services that are specified to be provided by the *Owner* for incorporation into the *Work*, with a deductible not exceeding \$10,000. The insurance coverage shall not be less than the insurance provided by IBC Forms 4042 and 4047 or their equivalent replacement. Subject to satisfactory proof of financial capability by the *Contractor*, the *Owner* may agree to increase the deductible amounts.
6. Boiler and machinery insurance shall have limits of not less than the replacement value of the permanent or temporary boilers and pressure vessels, and other insurable objects forming part of the *Work*. The insurance coverage shall not be less than the insurance provided by a comprehensive boiler and machinery policy including hot testing and commissioning.
7. Contractors' equipment insurance coverage written on an "all risks" basis covering *Construction Equipment* used by the *Contractor* for the performance of the *Work*, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance, the *Owner* may agree to waive the equipment insurance requirement.
8. Contractors' Pollution liability insurance shall have limits of not less than \$5,000,000 per occurrence for bodily injury, death and damage to property.

Association of
Canadian
Engineering
Companies

Canadian
Construction
Association

Construction
Specifications Canada

The Royal Architectural
Institute of Canada

These Supplementary Conditions amend the Stipulated Price Contract – CCDC 2 – 2020. Where a portion of the Contract is modified or deleted by these Supplementary General Conditions, the unaltered portions of the Contract shall remain in effect.

AGREEMENT BETWEEN OWNER AND CONTRACTOR

Page 4, after Article A-8 insert the following new Articles A-9 and A-10:

“ARTICLE A-9 SEVERABILITY

9.1 Each and every paragraph, section, clause, sub-clause or other component of the *Contract* is severable one from the other. Should it be found by a court of competent jurisdiction that any one or more paragraphs or parts thereof are null and void, the validity of the remaining paragraphs or parts thereof shall not be affected.

ARTICLE A-10 TIME OF THE ESSENCE

10.1 Time shall be deemed to be of the essence of the *Contract*.”

DEFINITIONS

Page 6, Add the following new Definitions:

Approved or Approval

Approved or Approval means acceptance by the *Consultant* in accordance with the *Consultant's* responsibilities described in Clause GC 2.2 ROLE OF THE *CONSULTANT*.

Period of Delay

The period of time from *Ready-for-Takeover* date specified in Article A-1, subclause 1.3, and the actual *Ready-for-Takeover* date; if any.

Site

The *Site* means the geographical location of the *Work* identified in the *Contract Documents*

Total Amount Payable

Total Amount Payable means the sum of the Contract Price as stipulated in Article A-4, subclause 4.3 subject to adjustments made in accordance with the provisions of the Contract Documents plus the amount of *Value Added Taxes*.

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

PART 2 – ADMINISTRATION OF THE CONTRACT

Page 10, delete clause 2.3.3 and replace with the following:

2.3.3 The *Contractor* shall furnish promptly to the *Consultant* one (1) electronic file, in pdf file format, of certificates and inspection reports related to the *Work*. The *Contractor* will provide hard copies, in the quantity required, only upon request of the *Consultant* or *Owner*.

PART 3 – EXECUTION OF THE WORK

GC 3.4 CONSTRUCTION SCHEDULE

Page 12, in Clause 3.4.1.1, delete “prior to the first application for payment” and replace with “not later than two (2) weeks after receipt of the notice of award”.

Page 12, add new clause 3.4.2 as follows:

- “3.4.2 If, at any time, it should appear to the Owner or the Consultant that the actual progress of the Work is behind schedule or is likely to become behind schedule, or if the Contractor has given notice of such to the Owner or the Consultant pursuant to clause 3.4.1.3, the Contractor shall take appropriate steps to cause the actual progress of the Work to conform to the schedule or minimize the resulting delay and shall produce and present to the Owner and the Consultant a recovery plan demonstrating how the Contractor will achieve the recovery of the schedule. If the Contractor intends to apply for a change in the Contract Price in relation to a schedule recovery plan, then the Contractor shall proceed in accordance with General Condition 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.”

GC 3.5 SUPERVISION

Page 12, add new clause 3.5.3 as follows:

- “3.5.3 The Owner may, at any time during the course of the Work, request the replacement of the appointed representative(s), where the grounds for the request involve conduct which jeopardizes the safety and security of the Site or the Owner’s operations. Immediately upon receipt of the request, the Contractor shall make arrangements to appoint a replacement acceptable to the Owner and Consultant.”

GC 3.8 SHOP DRAWINGS

Page 12, delete Clause 3.8.2 and replace with the following:

- “3.8.2 Prepare and submit to the Consultant for review, a schedule of the dates for provision, review and return of Shop Drawings. Provide this submission a minimum of two (2) working days prior to the project start-up meeting.”

PART 4 - ALLOWANCES

GC 4.1 CASH ALLOWANCES

Page 13, delete Clause 4.1.7 and replace with the following:

- “4.1.7 The Contractor shall prepare a schedule, acceptable to the Consultant that shows when the Consultant and Owner must authorize ordering of items called for under cash allowances to avoid delaying the progress of the Work.”

Page 13, add the following new Clause:

- “4.1.8 The Owner reserves the right to call, or to have the Contractor call, for competitive bids for portions of the Work, to be paid for from cash allowances.”

PART 5 - PAYMENT

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Page 14, after Clause 5.4.1.2, add the following:

- “5.4.1.3 Submit a certificate by lien search to the Owner by a solicitor licensed to practice law in the Province of the Place of Work, certifying that no lien associated with the Work exists against the Owner’s property or Work;
- 5.4.1.4 Submit a clearance letter from the Workers’ Compensation Board or provincially equivalent regulatory body; and
- 5.4.1.5 All such documents shall be dated not earlier than the expiry of the lien period as stipulated by the lien legislation in the Place of Work.”
- 5.4.1.6 The *Consultant* will provide an electronic copy of the Certificate of *Substantial Performance* and instruct the *Contractor* to post the certificate at the Site and to website indicated by the lien legislation of the place of *Work*. “

Page 14, delete Clause 5.4.3 in its entirety.

Page 14, after Clause 5.4.4, add the following:

- “5.4.4.1 If, within sixty (60) calendar days after the issue of the certificate of Substantial Performance of Work, the Contractor has not corrected all the documented deficiencies, the Owner shall retain sufficient monies, as determined by the Consultant, to cover the cost of completing said deficiencies. These monies shall be held in addition to holdback monies retained in accordance with the provisions of the Contract and subject to the terms of the lien legislation in the Place of Work.”

Page 15, Clause 5.5.4, in line 2, change “5 calendar days” to “20 calendar days”.

PART 6 – CHANGES IN THE WORK

Page 15, add new clause 6.1.1.3 as follows:

- 6.1.1.3 Changes that do not affect the Contract Price and time by Supplemental Instruction.

GC 6.2 CHANGE ORDER

Page 15, after Clause 6.2.2, add the following:

- “6.2.3 The mark-up on agreed upon changes are as follows:
 - .1 Work performed by the Contractor’s own forces will be the cost of the Work plus ten (10%) percent overhead and profit.
 - .2 Work performed by the subcontractor’s force will be the cost of Work plus 15% overhead and profit. Where the Work can be done by the Contractor’s forces, as solely determined by the Consultant, but is done by the Subcontractor’s forces, the mark-up for overhead and profit will be limited to ten (10%) percent.

- 6.2.4 Before the approval of any change order over \$1,000 in value the Consultant is entitled to receive, upon request, at a minimum, the following breakdown of cost associated with such change order:
- .1 Labour rates, excluding operators.
 - .2 Equipment rates including operators.
 - .3 Supervisory staff rates.
 - .4 Subcontractor and material or equipment invoices where applicable.
 - .5 Overhead costs including worker's compensation, *site* trailer cost as applicable, insurance, bonding, small tool expenses, CPP, and EI contributions.
- 6.2.5 No compensation for extra Work or material shall be allowed unless the Consultant issues a Notice in Writing authorizing such Work or material to be ordered in the form of a Change Order, Change Directive or Supplemental Instruction.
- 6.2.6 No compensation will be allowed for the cost of repairs to equipment or in respect of construction equipment of any kind idle on the Site except as directed by the Consultant in writing or for damage to anything used in performing any such extra Work or making any such alteration.
- 6.2.7 The price applicable to any Work deleted from the Contract, shall be deducted from the Contract Price and shall be mutually agreed upon by the Contractor and the Consultant. The price shall be comparable to prices quoted on Work of similar nature.

GC 6.4 – CONCEALED OR UNKNOWN CONDITIONS

Page 17, add a new clause 6.4.5 as follows:

- “6.4.5 If the Contractor was given access to the Place of Work and/or professional reports relating thereto (including, without limitation, environmental, geotechnical, and structural reports) prior to the submission of the bid on which the Contract was awarded, then the Contractor confirms that they have investigated the Place of Work and, in doing so, applied to that investigation the degree of care and skill required. In those circumstances, notwithstanding the provisions of clause 6.4.1, the Contractor is not entitled to an adjustment to the Contract Price or to an extension of the Contract Time for conditions which could reasonably have been ascertained by the Contractor by such investigation, or which could have been reasonably inferred from the material provided with the Contract Documents. In those circumstances, should a claim arise, the Contractor will have the burden of establishing that it could not have discovered the materially different conditions from an investigation because of restrictions placed on its access or inferred the existence of the conditions from the material provided with the Contract Documents.”

GC 6.5 DELAYS

Page 18, after Clause 6.5.5, add the following new Clauses:

- “6.5.6 Should the Contractor fail to attain Ready-for-Takeover for the Work by the date indicated in Article A-1, Clause 1.3 in the AGREEMENT BETWEEN OWNER AND CONTRACTOR, the period of time from this agreed date to the actual date when the Consultant confirms the Work is Ready-for-Takeover, shall be termed the Period of Delay.
- 6.5.7 In the event there is a Period of Delay, the Contractor shall be liable for and shall pay to the Owner the cost of continuance of supervision during the Period of Delay, and all additional fees, disbursements and costs incurred by the Owner as a result of the Period of Delay, such charges hereby termed as Delay Charges. The Owner may deduct the amount of such Delay Charges from further progress payments.”

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

Page 18, add the following new Clause as 6.6.6 and renumber the last and subsequent clause:

- "6.6.6 The Owner may make claims arising out of the costs incurred for additional services provided by the Consultant resulting from the Contractor's failure to reasonably perform the Work in accordance with the terms and conditions of the Contract, including the Contractor's issuance of unnecessary Requests for Information (RFI's). The Consultant will notify the Owner and Contractor where it has been determined that additional services will be required or have been provided in order not to cause a delay. The Owner shall make claims based on the Consultant's invoices."

PART 9 - PROTECTION OF PERSONS AND PROPERTY

GC 9.4 – CONSTRUCTION SAFETY

Page 22, after GC 9.4.5, add the following:

- "9.4.6 The Contractor shall indemnify and save harmless the Owner, its agents, officers, directors, employees, Consultants, successors, appointees and assigns from and against the consequences of any and all safety infractions committed by the Contractor under the applicable occupational health and safety legislation in the Place of Work, including the payment of legal fees and disbursements on a solicitor and client basis. Such indemnity shall apply to the extent to which the Owner is not covered by insurance, provided that the indemnity contained in this clause shall be limited to costs and damages resulting directly from
- such infractions and shall not extend to any consequential, indirect or special damages."

PART 10 - GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

Page 23, after Clause 10.1.2, add new Clause 10.1.3 as follows:

- "10.1.3 Indicate on each application for payment as a separate amount, the appropriate value added tax the Owner is legally obliged to pay. This amount will be paid to the Contractor in addition to the amount certified for payment under the Contract."

GC 12.3 WARRANTY

Page 26, add new clause 12.3.5 as follows and renumber subsequent clauses:

"All *Work* of repair or replacement carried out during the Warranty Period shall be maintained for a period of one (1) year from the date of the *Consultant's* acceptance of the *Work* of repair or replacement notwithstanding that the Warranty Period expires before the expiration of the said year. This clause shall not apply to normal operation maintenance, which shall be carried out by the *Owner*."

PART 13 – INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

Page 26, Clause 13.1.1, in line 2, after “hold harmless the other” replace with “hold harmless the other and the *Consultant*.”

END OF SECTION

PART 1 - GENERAL

1.1 WORK OF THE PROJECT

- .1 The project is located at 1046 Lake George Road, Brenton, Nova Scotia.
- .2 The project generally involves the replacement of a portion of the existing roof on the Water Treatment Plant. The Work includes but is not necessarily limited to removal and off-site disposal of the existing stone ballast, concrete pavers, and roofing assembly on the lower roof of the main building (i.e. northwest portion), and the supply and installation of a new 2-ply modified bitumen roofing membrane assembly, including new vapour barrier, insulation, cover board, 2-ply modified bitumen membrane, deck drains, flashings, and appurtenances, and all Work as specified and as shown on the Project Drawings. The Work also includes the removal and off-site disposal of the existing waterproofing membrane on the concrete roof slab between the building and lime storage silo, and the supply and installation of a new 2-ply modified bitumen roofing membrane, including flashings, and appurtenances.

1.2 DIVISION OF WORK

- .1 Division of the *Work* among *Subcontractors* and *Suppliers* is solely *Contractor's* responsibility. *Consultant* and *Owner* assume no responsibility to act as an arbiter to establish subcontract limits between Sections or Divisions of the *Work*.

1.3 SPECIFICATIONS LANGUAGE AND STYLE

- .1 These specifications are written in the imperative mood and in streamlined form. The imperative language is directed to Contractor, unless stated otherwise.
- .2 Fulfill and perform all indicated requirements whether stated imperatively or otherwise.
- .3 When used in the context of a *Product*, read the word "provide" to mean "supply and install to result in a complete installation ready for its intended use".

1.4 CONTRACT DOCUMENTS FOR CONSTRUCTION PURPOSES

- .1 *Owner* will supply *Contractor* with a complete set of *Contract Documents* in electronic form before commencement of the *Work*. *Contractor* may print hard copies for construction purposes as required.

1.5 DOCUMENTS AT THE SITE

- .1 Keep the following documents at *Place of the Work*, stored securely and in good order and available to *Owner* and *Consultant*:
 - .1 Current *Contract Documents*, including *Drawings*, *Specifications* and addenda.
 - .2 *Change Orders*, *Change Directives*, and *Supplementary Instructions*.
 - .3 Reviewed *Shop Drawings*, *Product* data and samples.
 - .4 Field test reports and records.
 - .5 Construction progress schedule.
 - .6 Meeting minutes.

- .7 Manufacturer's certifications.
- .8 Permits, inspection certificates, and other documents required by authorities having jurisdiction.
- .9 Current as-built drawings.
- .10 Safety Data Sheets (SDS) for all controlled Products.
- .11 Any other documents as stipulated as *site* documents at the construction start-up meeting.

1.6 CONTRACTOR'S USE OF PREMISES

- .1 Except as otherwise specified, Contractor has unrestricted use of Place of the Work from time of Contract award until *Ready-for-Takeover*.
- .2 Other contractors will be on *site*. Coordinate the use of the *site* with other contractors. Should a conflict in the use of the *site*, promptly report this to the *Owner* who will provide a resolution.

Confine Construction Equipment, Temporary Work, storage of Products, waste products and debris, and all other construction operations to limits required by laws, ordinances, permits, and *Contract Documents*, whichever is most restrictive. Do not unreasonably encumber *Place of the Work*.

1.7 REFERENCES AND CODES

- .1 Perform *Work* in accordance with the latest edition of the National Building Code (NBC), National Fire Code (NFC), National Plumbing Code (NPC), Canadian Electrical Code, and/or any other code of provincial or local regulations provided that in any case of conflict or discrepancy the more stringent requirement governs.
- .2 Reference has been made to certain Domestic, National and International Standards throughout the various sections of the Specification contained herein. These Standards will be considered an integral part thereof and shall be read in conjunction with the Drawings and Specifications as if they were reproduced herein. Be completely familiar with their contents and requirements.

1.8 ASSISTANCE TO THE CONSULTANT AND THE CONSULTANT'S REPRESENTATIVE

- .1 During the continuance of the Contract, provide necessary labour and tools to assist the *Consultant's* authorized representative in measuring, checking, testing and examining the *Work* and for the setting out and measurement of the *Works*, the cost of all such being deemed to be covered by and included in the Contract Price.

PART 2 -- PRODUCTS

2.1 NOT USED

- .1 Not Applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not Applicable.

END OF SECTION

PART 1 - GENERAL

1.1 RESTRICTIONS ON USE OF PREMISES

- .1 This subsection identifies restrictions that may impact the scheduling or execution of the Work. This does not purport to identify all potential disruptions, but rather it is meant to assist the Contractor to understand the project.
- .2 Be fully aware that the *Owner* and other contractors will occupy premises during the entire construction period for execution of normal operations. Co-operate with *Owner* in scheduling work to minimize conflict and to facilitate *Owner's* operation and maintenance activities.
- .3 Work of this Contract is located in an area where normal working hours are:
 - .1 7:30am to 4:30pm, Monday to Friday inclusive.
 - .2 Work performed outside these hours require *approval* by the *Owner*. Request *approval* in writing at least 48 hours in advance.
- .4 Make all reasonable efforts to provide access by the *Owner's* personnel to areas of the existing building. Temporary gravels, walkways, handrails, markers and other means will be taken to provide safe, clean access to all areas requiring routine access.
- .5 The existing plant is a fully functional Water Treatment Plant. Working areas must remain reasonably clean and attention to dust control and prevention of excessive debris must be paid.
- .6 In general, the plant must remain functional throughout all stages of Work. Any required pre-planned disruptions to process operations require significant coordination with the *Owner*.

1.2 WORK SEQUENCE

- .1 Schedule and construct *Work* in stages to accommodate *Owner's* continued use of premises during construction.
 - .1 Schedule and construct *Work* in stages to provide for continuous public usage. Do not close off public usage of facilities until use of one stage of *Work* will provide alternate usage.

1.3 OWNER OCCUPANCY

- .1 *Owner* will occupy premises during entire construction period.
- .2 Cooperate with *Owner* in scheduling operations to minimize disruptions and to facilitate *Owner* usage.

1.4 RESTRICTED HOURS OF WORK IN OCCUPIED FACILITIES

- .1 As soon as it is practicable, in any case not later than two (2) week(s) after the start of the Contract, submit to the Consultant for review and approval, a program and construction schedule showing the order of procedure, significant Contract dates, and proposed method to carry out and complete the Work within time period required by Contract Documents.

- .2 Provide information regarding the execution of the Work and of the equipment temporary works, and labour which the Contractor intends to supply, use or construct as the case may be.
- .3 Construction schedule to be standard "bar" type, showing commencement, duration and completion of activities of all trades and suppliers involved.
- .4 The construction schedule is subject to review by *Consultant*. Revise and resubmit as directed.
- .5 Construction schedule to identify activities and work of other contractors for full execution and coordination of the Work.
- .6 Update schedules periodically and submit updated construction schedule two (2) days prior to routine construction meetings held with *Owner* and *Consultant*. Where work has fallen behind the original schedule times, indicate methods proposed to correct such loss of time, to maintain the stated Completion Time.

1.5 NOISY WORK RESTRICTIONS IN OCCUPIED FACILITIES

- .1 Schedule excessively noisy work to avoid disturbance to building occupants. Coordinate any excessive noise generating work with the *Owner* as required.
- .2 Owner's business hours.
 - .1 Use powder actuated devices only with *Consultant's* written permission.
 - .2 Operate construction equipment such that there is a minimum amount of noise and vibration. Should excessive noise and vibration be caused, at own expense, rectify the same to the *approval* of the *Consultant*.

1.6 MAINTAINING LIFE IN OCCUPIED FACILITIES

- .1 Maintain operational life safety systems and safety systems in public access to exits in occupied areas during all stages of the *Work*.
- .2 Determine nature and exact locations of existing fire and smoke sensors prior to the commencement of the *Work*. Avoid direct or indirect jarring while working in adjacent areas and exercise caution to avoid triggering these devices.
- .3 Be responsible for costs incurred by *Owner* on account of false fire alarms activated as a result of the execution of the *Work* without adequate precautions.

1.7 WEATHER CONDITIONS

- .1 Do not perform work when the weather is unsuitable. Do not install roofing membrane during freezing weather or upon frozen material unless *approved* in writing by the *Consultant*. When work is performed during freezing weather, provide necessary means for heating and all materials required in the work. If there is delay or interruption in the work due to weather conditions, the necessary precautions shall be taken to bond new work to old.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not applicable.

PART 3 - EXECUTION

3.1 Not Used

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 DEFINITION

- .1 In this Section "Substitution" means a *Product*, a manufacturer, or both, not originally specified in *Contract Documents* by proprietary name but proposed for use by *Contractor* in place of a *Product*, a manufacturer, or both, specified by proprietary name.

1.2 EQUIVALENTS AND ALTERNATES

- .1 Where any particular brand of manufactured article is described or specified, it is to be regraded as a standard of acceptance but another brand of equivalent quality and function may be accepted at the discretion of the Consultant.
- .2 When the Owner is prepared to permit the use of a non-equivalent brand of manufactured article as an alternative to any specified brand of manufactured article, it may be used at the discretion of the Consultant but only after price adjustments have been negotiated and approved by the Consultant. No extra fees will be charged for approved equivalents.
- .3 If the suggested alternative requires modifications, adjustments or additions to the specified Works, submit to the Consultant, drawings and specifications for these modifications, adjustments or additions in the same detail as presented in the Contract. Approval in principle by the Consultant of these modifications, adjustments or additions in no way relieves the Contractor of obligations or liabilities under the Contract to provide for finished piece of Work complete and operational in all essentials.
- .4 No change or substitution can be made without the written consent of the Consultant.
- .5 The Consultant will record the time required to evaluate equivalents and alternates proposed by the Contractor including making changes to the Contract Documents occasioned thereby. Whether or not the Consultant accepts a proposed substitute, reimburse the Owner for the charges of the Consultant for evaluating any proposed substitute.

1.3 SUBSTITUTION PROCEDURES – TENDER PHASE

- .1 No change in the specification will be made prior to the acceptance of the tenders.

1.4 SUBSTITUTION PROCEDURES – CONSTRUCTION PHASE

- .1 Contractor may propose a Substitution wherever a Product or manufacturer is specified by proprietary name(s), unless there is accompanying language indicating that Substitutions will not be considered.
- .2 Contractor may propose a Substitution wherever a *Product* or manufacturer is specified by proprietary name(s) and accompanied by language such as "or equal", "or *approved* equal", or other similar words. Do not construe such language as an invitation to unilaterally provide a Substitution without *Consultant's* prior acceptance in writing. Do not order or install any Substitution without a *Supplemental Instruction* or *Change Order*.

- .3 Provided a proposed Substitution submission includes all of the information specified in this Section under Submission Requirements For Proposed Substitutions, *Consultant* will promptly review and accept or reject the proposed Substitution.
- .4 *Consultant* may accept a Substitution if satisfied that:
 - .1 the proposed substitute *Product* is the same type as, is capable of performing the same functions as, interfaces with adjacent *Work* the same as, and meets or exceeds the standard of quality, performance and, if applicable, appearance and maintenance considerations, of the specified Product, the proposed substitute manufacturer has capabilities comparable to the specified manufacturer, and the Substitution provides a benefit to *Owner*.
- .5 If Contractor fails to order a specified Product or order a Product by a specified manufacturer in adequate time to meet Contractor's construction schedule, *Consultant* will not consider that a valid reason to accept a Substitution.
- .6 If *Consultant* accepts a Substitution and subject to Owner's agreement, the change in the *Work* will be documented in the form of either a Supplemental Instruction or Change Order as specified in Section 01 26 00 – Contract Modification Procedures.
- .7 If a Substitution is accepted in the form of a Supplemental Instruction or Change Order, Contractor shall not revert to an originally specified Product or manufacturer without *Consultant's* prior written acceptance.

1.5 SUBMISSION REQUIREMENTS FOR PROPOSED SUBSTITUTIONS

- .1 Include with each proposed Substitution the following information:
 - .1 Identification of the Substitution, including product name and manufacturer's name, address, telephone numbers, and website.
 - .2 Reason(s) for proposing the Substitution.
 - .3 A statement verifying that the Substitution will not affect the Contract Price and Contract Time or, if applicable, the amount and extent of a proposed increase or decrease in Contract Price and Contract Time on account of the Substitution.
 - .4 A statement verifying that the Substitution will not affect the performance [or warranty] of other parts of the *Work*.
 - .5 Manufacturer's Product literature for the Substitution, including material descriptions, compliance with applicable codes and reference standards, performance and test data, compatibility with contiguous materials and systems, and environmental considerations.
 - .6 Product samples as applicable.
 - .7 A summarized comparison of the physical properties and performance characteristics of the specified Product and the Substitution, with any significant variations clearly highlighted.
 - .8 Availability of maintenance services and sources of replacement materials and parts for the Substitution, as applicable, including associated costs and time frames.
 - .9 If applicable, estimated life cycle cost savings resulting from the Substitution.
 - .10 Details of other projects and applications where the Substitution has been used.
 - .11 Identification of any consequential changes in the *Work* to accommodate the Substitution and any consequential effects on the performance of the *Work* as a whole. A later claim for an increase to the *Contract Price* or *Contract Time* for other changes in the *Work* attributable to the Substitution will not be considered.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 SCHEDULE OF LABOUR RATES

- .1 Prior to the first application for payment, submit for the *Consultant's* review a schedule of labour rates for all trades and classifications of trades, such as journeymen, apprentices, and foremen that will be employed in the *Work*. Provide a breakdown of payroll burden component of labour rates.
- .2 Labour rates shall reflect the salaries, wages, and benefits paid to personnel in the direct employ of the Contractor, Subcontractors, and sub-Subcontractors, stated as hourly rates, that will be used when:
 - .1 preparing price quotations for Change Orders, and
 - .2 determining the cost of *Work* attributable to Change Directives.
- .3 Labour rates stated in the schedule of labour rates shall be consistent with rates that will actually be paid, and payroll burden costs that will actually be incurred, in the normal performance of the *Work*, during regular working hours. Labour rates shall not include any additional overhead and profit component.
 - .1 Where collective agreements apply, the labour rates shall not exceed those established by collective agreement.
 - .2 Obtain the *Owner's* written acceptance of the schedule of labour rates before submitting the first Change Order quotation.
 - .3 Accepted schedule of labour rates will be used solely for evaluating Change Order quotations and cost of performing *Work* attributable to Change Directives.
- .4 The Contractor may request amendments to the accepted schedule of labour rates if changes in the labour rates that will actually be paid, or payroll burden cost that will actually be incurred, in the normal performance of the *Work* can be demonstrated. Obtain the *Owner's* written acceptance of such changes.

1.2 SCHEDULE OF EQUIPMENT RATES

- .1 Equipment rates shall reflect the rates that will be used when:
 - .1 preparing price quotations for Change Orders, and
 - .2 determining the cost of *Work* attributable to Change Directives.
- .2 Equipment rates stated in the schedule shall be consistent with local equipment rental market rates and shall not include any additional overhead and profit component.
- .3 Obtain the *Owner's* written acceptance of the schedule of equipment rates before submitting the first Change Order quotation.
- .4 Accepted schedule of equipment rates will be used solely for evaluating *Change Order* quotations and cost of performing *Work* attributable to *Change Directives*.
- .5 The *Contractor* may request amendments to the accepted schedule of equipment rates if changes in local equipment rental market rates can be demonstrated. Obtain the *Owner's* written acceptance of such changes.

1.3 VALUATION OF CHANGES BASED ON AGREED UNIT PRICES

- .1 The *Consultant* may, at the outset of the Contract or at any other time, request the Contractor to submit unit prices anticipated to be required in valuing changes in the *Work*.
- .2 submit such unit prices promptly upon request.
- .3 The unit prices shall be valid for a specified duration.
- .4 The unit prices shall exclude all fees for overhead and profit and shall be subject to the percentage fees specified in Section 00 73 00 – Supplementary General Conditions.
- .5 The *Consultant* will evaluate the Contractor's quoted unit prices and, if accepted by the *Owner* in writing, the agreed unit prices shall be used to value subsequent proposed changes in the *Work* wherever they are applicable.

1.4 METHOD OF CONTRACT PRICE ADJUSTMENT – CHANGE ORDERS

- .1 Unless otherwise agreed, the adjustment of the Contract Price on account of a proposed change in the *Work* shall be based on a quotation for a fixed price increase or decrease to the Contract Price regardless of the Contractor's actual expenditures and savings.

1.5 CHANGE ORDER PROCEDURES

- .1 Upon issuance by the *Consultant* to the Contractor of a proposed change in the *Work*, and unless otherwise requested in the proposed change or unless otherwise agreed:
 - .1 Submit to the *Consultant* a fixed price quotation for the proposed change in the *Work* within seven (7) days after receipt of the proposed change in the *Work*.
 - .2 If requested in the proposed change, provide a detailed breakdown of the price quotation including the following to the extent applicable, with appropriate supporting documentation:
 - .1 Estimated labour costs, including hours and applicable hourly rates based on the accepted schedule of labour rates.
 - .2 Estimated Product costs, including Supplier quotations, estimated quantities and unit prices.
 - .3 Estimated Construction Equipment costs.
 - .4 Enumeration of all other estimated costs included in the price quotation.
 - .5 Estimated credit amounts for labour and Products not required on account of the proposed change.
 - .6 Where applicable, Subcontractor quotations, also including a detailed breakdown of all of the above.
- .2 Include in the quotation the increase or decrease to the Contract Time, if any, for the proposed change, stated in number of days.
- .3 Include in the quotation the number of days for which the quotation is valid.
- .4 The quotation will be evaluated by the *Consultant* and the *Owner* and, if accepted by the *Owner*, be documented in the form of a signed Change Order.

1.6 FEES FOR OVERHEAD AND PROFIT – CHANGE ORDERS AND CHANGE DIRECTIVES

- .1 Where the Contractor's price quotation for a Change Order results in a net increase to the Contract Price, the Contractor's entitlement to a fee for overhead and profit in the quotation shall be as set forth in Section 00 73 00 – Supplementary General Conditions.
- .2 Where a Subcontractor's price quotation for a Change Order results in a net increase to the Subcontractor's contract price, the Subcontractor's entitlement to a fee for overhead and profit in the quotation shall be as set forth in Section 00 73 00 – Supplementary General Conditions.
- .3 Where the Contractor's or a Subcontractor's price quotation for a Change Order results in a net decrease in price before adjustment for fees for overhead and profit, such a price quotation shall be for the net decrease without any adjustment for fees for overhead and profit.
- .4 Where a Change Directive results in net savings on account of *Work* not required to be performed and a net decrease in the Contractor's or Subcontractor's cost, the net savings to the Contractor or Subcontractor shall be calculated without any adjustment for fees for overhead and profit.
- .5 When a Change Directive is ultimately recorded as a Change Order, there shall be no additional entitlement to fees for overhead and profit beyond those specified in this article.

1.7 CHANGE DIRECTIVE PROCEDURES

- .1 If a Change Directive is issued for a change in the Work for which a proposed change was previously issued, but no Change Order has yet been signed, the Change Directive shall cancel the proposed change and any Contractor quotations related to that change in the Work.
- .2 When proceeding with a change in the *Work* under a Change Directive, keep accurate records of daily time sheets for labour and Construction Equipment, and invoices for Product and Construction Equipment costs. Submit such records to the *Consultant* weekly, until the Change Order superseding the Change Directive is issued.

1.8 SUPPLEMENTAL INSTRUCTIONS

- .1 The Consultant may issue Supplemental Instructions to provide clarifications to the Contract Documents, provide additional information, or make minor variations in the Work not involving adjustment in the Contract Price or Contract Time.
- .2 If the Contractor considers a Supplemental Instruction to require an adjustment in Contract Price or Contract Time, the Contractor shall promptly notify the *Consultant* and the *Owner* in writing and shall not proceed with any *Work* related to the Supplemental Instruction pending receipt of a Change Order, a Change Directive, or, in accordance with the dispute resolution provisions of the General Conditions of Contract, a Notice in Writing of a dispute and instructions to proceed.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 SCHEDULE OF VALUES

- .1 Prior to the first application for payment, submit for Consultant's review an initial schedule of values. Modify the initial schedule of values if and as requested by Consultant. Obtain Consultant's written acceptance of the initial schedule of values prior to the first application for payment.
- .2 Together with the first and all subsequent applications for payment, submit updated versions of the schedule of values to indicate the values, to the date of application for payment, of *Work* performed and *Products* delivered to *Place of the Work*.
- .3 Provide the schedule of values in an electronic spreadsheet format that provides for inclusion of the following information:
 - .1 Identifying information including title and location of the *Work*, name of *Contractor*, number and date of application for payment, and period covered by the application for payment.
- .4 A *Work* breakdown structure that is sufficiently detailed and comprehensive to facilitate *Consultant's* evaluation of applications for payment at an appropriate level of detail.
- .5 Provisions for *approved* Change Orders so that the breakdown amounts indicated in the schedule of values aggregate to the current total Contract Price. Also provide for indicating the estimated value of Change Directives within the schedule of values, separately from the current total Contract Price.
- .6 For each item in the *Work* breakdown structure, provide as a minimum the following information, under headings as indicated:
 - .1 Breakdown Amount: A dollar amount, including an appropriate pro rata portion of *Contractor's* overhead and profit.
 - .2 Performed to Date: The value of *Work* performed and *Products* delivered to *Place of the Work* up to the date of the application for payment, stated as a percentage of the *Contract Price* and in dollars.
 - .3 Previously Performed: The value of *Work* performed and *Products* delivered to the *Place of the Work* for which payment has been previously certified, stated in dollars.
 - .4 Current Period: The value of *Work* performed and *Products* delivered to *Place of the Work* for which *Contractor* is currently applying for payment, stated in dollars.
 - .5 Balance to Complete: The value of *Work* not yet performed and *Products* not yet delivered to *Place of the Work*, stated in dollars.

1.2 WORKERS' COMPENSATION CLEARANCE

- .1 Submit proof of workers' compensation clearance with each application for payment.

1.3 STATUTORY DECLARATIONS

- .1 Submit a statutory declaration in the form of CCDC 9A – Statutory Declaration of Progress Payment Distribution by Contractor with each application for payment except the first.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 CONSTRUCTION START-UP MEETING

- .1 Within the notice of intent to award the Consultant will establish the time and location of a construction start-up meeting to review and discuss administrative procedures and responsibilities. Where possible, the Consultant will notify Contractor at least five (5) Working Days before the meeting.
 - .1 Senior representatives of Owner, Consultant, and Contractor, including Contractor's project manager and site superintendent, and any major Subcontractors, shall be in attendance.
- .2 Confirm attendance of the parties associated with the Contractor's forces listed above. The *Consultant* will chair the preconstruction meeting. The Contractor will be responsible for all subsequent construction progress meeting as stipulated in subsection 1.2 herein and record and distribute the minutes.
- .3 Agenda to include the following as applicable:
 - .1 Appointment of official representatives of *Owner*, Contractor, Subcontractors, *Consultant*, and subconsultants.
 - .2 Project communications.
 - .3 Contract Documents for construction purposes.
 - .4 Documents at the *site*.
 - .5 Contractor's use of premises.
 - .6 *Owner*-supplied Products.
 - .7 *Work* restrictions.
 - .8 Substitution procedures.
 - .9 Contract modification procedures.
 - .10 Payment procedures.
 - .11 Construction progress meetings.
 - .12 Construction progress schedule, including long lead time items.
 - .13 Submittals schedule and procedures.
 - .14 Special procedures.
 - .15 Quality requirements, including testing and inspection procedures.
 - .16 Contractor's mobilization.
 - .17 Temporary utilities.
 - .18 Existing utility services.
 - .19 Construction facilities.
 - .20 Temporary barriers and enclosures.
 - .21 Temporary controls.
 - .22 Field engineering and layout of *Work*.
 - .23 *Site* safety.
 - .24 Cleaning and waste management.
 - .25 Closeout procedures and submittals.
 - .26 Commissioning.
 - .27 Other items.

1.2 CONSTRUCTION PROGRESS MEETINGS

- .1 Construction progress meetings will be scheduled as required for the duration of the Work.
- .2 Arrange for and provide physical space for meetings.

- .3 Arrange for the attendance of Subcontractors as and when appropriate to the progress of the *Work*.

- .4 Agenda for each meeting to include the following, as a minimum:
 - .1 *Approval* of minutes of previous meeting.
 - .2 *Work* progress since previous meeting.
 - .3 Field observations, including any problems, difficulties, or concerns.
 - .4 Construction progress schedule.
 - .5 Submittals schedule.
 - .6 Proposed changes in the *Work*.
 - .7 Requests for information.
 - .8 *Site* safety issues.
 - .9 Other business.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- .1 This Section specifies Contractor's responsibilities for preparation and submission of schedules and other documentation related to tracking construction progress.
- .2 The purpose of submitting progress schedules is to:
 - .1 Inform *Owner* and *Consultant* of actual progress versus planned progress, and
 - .2 Provide assurance that scheduling issues are being proactively identified and addressed in a timely manner, and that planned progress is being maintained as closely as possible.

1.2 CONSTRUCTION PROGRESS SCHEDULE

- .1 Format and Content:
 - .1 Prepare schedule in the form of a Gantt chart using appropriate scheduling software.
 - .2 *Consultant* will review format and content of initial schedule and request necessary changes, if any, within five (5) Working Days after receipt.
 - .3 Provide a *Work* breakdown structure identifying key activities, *Work* packages, and major milestones, including long delivery Products, inspection and testing activities, shutdown or closure activities, and similar items, at a sufficient level of detail to effectively manage construction progress.
 - .4 Provide an updated schedule with each progress claim. Claims will not be certified until an updated progress schedule showing current progress in the form of percent complete is submitted and accepted by the *Consultant*.
 - .5 Indicate milestone date[s] for Ready-for-Takeover and Substantial Performance of the *Work*.
- .2 If changes are required, resubmit finalized initial schedule within five (5) Working Days after return of review copy.
- .3 Submit updated progress schedule indicating actual and projected start and finish dates with report date line and progress, activity relationships, critical path, float, and baseline comparison to current progress.

1.3 SUBMITTALS SCHEDULE

- .1 Format and Content:
 - .1 Prepare schedule identifying all required Shop Drawing, Product data, and sample submissions, including samples required for testing.
 - .2 Prepare schedule in electronic format.
 - .3 Provide a separate line for each required submittal, organized by Specifications section names and numbers, and further broken down by individual Products and systems as required.
 - .4 For each required submittal, show planned earliest date for initial submittal and latest date for return of reviewed submittal without causing delay.
- .2 Submission:
 - .1 Submit initial schedule to *Consultant* within ten (10) Working Days after Contract award.
 - .2 Submit schedule via e-mail as .xl files.

- .3 *Consultant* will review format and content of initial schedule and request necessary changes, if any, within five (5) Working Days after receipt.
- .4 If changes are required, resubmit finalized schedule within five (5) Working Days after return of review copy. Allow time in schedule for resubmission of submittals, should resubmission be necessary.
- .5 Submit updated submittals schedule to *Owner* and *Consultant* upon request.

1.4 SCHEDULE MANAGEMENT

- .1 A schedule submitted as specified and accepted by *Consultant* becomes the baseline schedule and shall be used as the baseline for updates.
- .2 At each regular progress meeting, review and discuss current construction progress and submittals schedules with *Consultant* and *Owner*, including activities that are behind schedule and planned measures to regain schedule slippage in key areas on or near the critical path.
- .3 Activities considered behind schedule are those with start or completion dates later than the dates shown on the baseline schedule.

1.5 RECORDING ACTUAL SITE CONDITIONS ON AS-BUILT DRAWINGS

- .1 Obtain from *Consultant* an electronic copy of the construction Drawings for the purpose of creating as-built drawings. Record information in electronic form, clearly identifying as-built deviations from the originally obtained construction Drawings.
- .2 Clearly label each drawing as "AS-BUILT DRAWING". Record information concurrently with construction progress. Do not conceal *Work* until required information is recorded.
- .3 Record actual construction including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of pipes, ducts, conduits, outlets, fixtures, access panels, and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by Change Orders and Supplemental Instructions
 - .6 References to Shop Drawings, where Shop Drawings show more detail.
- .4 Do not use as-built drawings for construction purposes.

1.6 PROGRESS PHOTOGRAPHS

- .1 Arrange for periodic digital photography to document and provide a photographic record of the progress of the *Work*.
- .2 Identify each photograph by project name and date taken.
- .3 Submission: Submit .jpg format files in standard resolution via e-mail at intervals indicated at the start up meeting or as requested by the *Consultant*.
- .4 Do not use progress or any other Project photographs for promotional purposes without *Owner's* written consent.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 ADMINISTRATIVE

- .1 Submit specified submittals to *Consultant* for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in the *Work*. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time or for Product substitutions or other deviations from the Drawings and Specifications.
- .2 Where required by authorities having jurisdiction, provide submittals to such authorities for review and *approval*.
- .3 Do not proceed with *Work* affected by a submittal until review is complete.
- .4 Present Shop Drawings, Product data, and samples in SI metric units. Where items or information is not produced in SI Metric units, converted values are acceptable.
- .5 Review submittals, provide verified field measurements where applicable, and affix Contractor's review stamp prior to submission to *Consultant*. Contractor's review stamp represents that necessary requirements have been determined and verified, and that the submittal has been checked and coordinated with requirements of the *Work* and Contract Documents.
- .6 Verify field measurements and that affected adjacent *Work* is coordinated.
- .7 Submittals not meeting specified requirements will be returned with comments.
- .8 Reproduction of construction Drawings to serve as background for Shop Drawings is not permitted.
- .9 Do not propose Substitutions or deviations from Contract Documents via Shop Drawing, Product data and sample submittals.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 Submit shop detail or working drawings and manufacturer's data for all items requiring fabrication, on or off the site, and for all proprietary equipment to the Consultant for review before any such items or equipment are incorporated into the Works. This review of Shop Drawings by the Consultant is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that the Consultant approves the detailed design inherent in the Shop Drawings, the responsibility for which remains with the Contractor submitting them, and such review shall not relieve the Contractor of responsibility for errors or omissions in Shop Drawings or of responsibility for meeting all requirements of the Construction and Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the jobsite, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the Work of all sub-trades.
- .2 Indicate Products, methods of construction, and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of the Work.
 - .1 Where *Products* attach or connect to other Products, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross-references to Drawings, Specifications and other already reviewed Shop Drawings.
 - .2 Accompany submittals with a transmittal information including:

- .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification of each submittal item and quantity.
 - .5 Other pertinent data.
 - .3 Shop Drawing submittals to include the following as a minimum:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, date, and signature of Contractor's authorized representative responsible for Shop Drawing review, indicating that each Shop Drawing has been reviewed for compliance with Contract Documents and, where applicable, that field measurements have been verified.
 - .5 Details of appropriate portions of the *Work* as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationships to other parts of the *Work*.
 - .6 Product data submittals shall include safety data sheets (SDS) for all controlled Products.
- .3 Submit one (1) electronic file in pdf file format of all relevant shop drawings to the *Consultant*. Limit file sizes to 10Mb. Scans must be legible. Illegible pdf files will be returned unreviewed and must be resubmitted so they are legible for larger projects with multiple shop drawing submissions an FTP site can be set up used upon request to the *Consultant* for shop drawing submittals if required.
 - .4 Submit electronic copy of Product data sheets or brochures where specified in the technical Specifications and in accordance with the format restrictions set forth in 1.2.6 above.
 - .5 Where a submittal includes information not applicable to the *Work*, clearly identify applicable information and strike out non-applicable information.
 - .6 The *Consultant* will not review shop drawings and other material involving a large amount of *Work* in those instances where it is evident that the Contractor has not used all the information contained in, or where such details are obviously not consistent with the Contract Documents.
 - .7 Supplement standard information to include details applicable to Project.
 - .8 Allow five (5) Working Days for *Consultant's* review of each submittal and incorporate in submittals schedule specified in Section 01 32 00 – Construction Progress Documentation.
 - .9 If upon *Consultant's* review no errors or omissions are discovered, or if only minor corrections are required as indicated, submittal will be returned and fabrication or installation of *Work* may proceed.

- .10 If upon *Consultant's* review significant errors or omissions are discovered, a so noted copy will be returned for correction and resubmission. Do not commence fabrication or installation.
- .11 *Consultant's* notations on submittals are intended to ensure compliance with Contract Documents and are not intended to constitute a change in the *Work* requiring change to the Contract Price or Contract Time. If Contractor considers any *Consultant's* notation to be a change in the *Work*, promptly notify *Consultant* in writing before proceeding with the *Work*.
- .12 Resubmit corrected submittals through same procedure indicated above before any fabrication or installation of the *Work* proceeds. When resubmitting, notify *Consultant* in writing of any revisions other than those requested by *Consultant*.
- .13 The *Consultant* will provide a shop drawing list with ID's. Shop drawings are to have an ID written on them.

1.3 SAMPLES

- .1 Submit samples for *Consultant's* review in the number specified in the technical Specifications. Label samples as to origin, Project name, and intended use.
- .2 Deliver samples prepaid to *Consultant's* business address.
- .3 Notify *Consultant* in writing of any deviations in samples from requirements of Contract Documents.
- .4 Where a required colour, pattern or texture has not been specified, submit full range of available Products meeting other specified requirements.
- .5 *Consultant* selection from samples is not intended to change the Contract Price or Contract Time. If a selection would affect the Contract Price or Contract Time, notify *Consultant* in writing prior to proceeding with the *Work*.
- .6 Resubmit samples as required by *Consultant* to comply with Contract Documents.
- .7 Reviewed and accepted samples will establish the standard against which installed *Work* will be reviewed.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures.

1.2 REFERENCE STANDARDS

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of Nova Scotia
 - .1 Occupational Health and Safety Act, S.N.S. - Updated [2013].

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit one (1) copy of Contractor's authorized representative's work *site* health and safety inspection reports Consultant and/or authority having jurisdiction, weekly.
- .3 Submit copies of reports or directions issued by Federal and/or Provincial health and safety inspectors.
- .4 Submit copies of incident and accident reports.
- .5 Submit WHMIS Safety Data Sheets (SDS) for all products to be used on-site in advance of construction and in accordance with Section 01 33 00 – Submittal Procedures.
- .6 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for *site* personnel prior to commencement of Work, and submit additional certifications for any new *site* personnel to Consultant.
- .7 On-*site* Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 FILING OF NOTICE

- .1 File notice of project with Provincial authorities prior to beginning of work.
- .2 Work zone locations include:
 - .1 Work at heights
 - .2 Confined space work.
- .3 Install proper *site* separation and identification in order to maintain time and space at all times throughout life of project.

1.5 SAFETY ASSESSMENT

- .1 Perform *site* specific safety hazard assessment related to project.

1.6 MEETINGS

- .1 Schedule and administer health and safety meeting with Consultant prior to commencement of work as required.

1.7 REGULATORY REQUIREMENTS

- .1 Do work in accordance with Section 01 41 00 - Regulatory Requirements.

1.8 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on *site*, safety of property on *site* and for protection of persons adjacent to *site* and environment to extent that they may be affected by conduct of work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances.

1.9 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, Occupational Safety General Regulations, N.S. Reg. 53/2013.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.10 UNFORESEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of work, follow procedures in place for employee's right to refuse work in accordance with acts and regulations of Province having jurisdiction and advise Consultant verbally and in writing.
- .2 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, advise Health and Safety co-ordinator and follow procedures in accordance with Acts and Regulations of Province having jurisdiction and advise Consultant verbally and in writing.

1.11 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to work, competent and authorized representative as health and safety co-ordinator. Health and safety co-ordinator must:
 - .1 Have *site*-related working experience specific to activities.
 - .2 Have working knowledge of occupational safety and health regulations.
 - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter *site* to perform Work.
 - .4 Be responsible for implementing, enforcing daily and monitoring *site*-specific Contractor's Health and Safety Plan.
 - .5 Be on *site* during execution of Work and report directly to and be under direction of the Site supervisor.

1.12 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on *site* in accordance with acts and regulations of Province having jurisdiction, and in consultation with Consultant.

1.13 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Consultant.
- .2 Provide Consultant with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Consultant may stop Work if non-compliance of health and safety regulations is not corrected.

1.14 WORK STOPPAGE

- .1 Give precedence to safety and health of public and *site* personnel and protection of environment over cost and schedule considerations for work.

1.15 HAZARDOUS MATERIAL

- .1 Should material resembling hazardous materials other than those identified within the Contract Documents, including, but not limited to, spray or trowel applied asbestos, be encountered in course of work; stop work immediately. Do not proceed until written instructions have been received from the Consultant.
- .2 Where work entails use, storage, or disposal of toxic or hazardous materials, chemicals and or explosives, or otherwise creates a hazard to life, safety, health, or the environment; work shall be in accordance with the Jurisdictional Authority.

1.16 CONFINED SPACES

- .1 Carry out Work in confined spaces in compliance with the Provincial occupational Health and Safety Regulations (OH&S), - Occupational Safety General Regulations, Confined Space Entry provisions.
- .2 Provide *approved* air monitoring equipment where workers are working in confined spaces and ensure any test equipment to be used is calibrated, in good working order and used by trained persons.
- .3 Develop a confined space entry program specific to the nature of Work performed and in accordance with OH&S Act and Regulations and confirm supervisors and workers are trained in the confined space entry program.
- .4 Confirm personal protective equipment and emergency rescue equipment are appropriate to the nature of the work being performed is provided and used.
- .5 Provide and maintain training of workers, as required by the Federal and Provincial Legislation.
- .6 Provide Consultant with a copy of an "Entry Permit" for each entry into the confined space to ensure compliance with Federal and Provincial Legislation.

1.17 FIRST AID

- .1 During the progress of the Works, provide and maintain at all times and in easily accessible positions on the Works adequate first aid kits equal to those required by the Worker's Compensation Act for the free use as necessary of all persons on the Site.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not used.

END OF SECTION

PART 1 - GENERAL

1.1 REFERENCE STANDARDS

- .1 "Reference standards" means consensus standards, trade association standards, guides, and other publications expressly referenced in Contract Documents.
- .2 Where an edition or version date is not specified, referenced standards shall be deemed to be the latest edition or revision issued by the publisher at the time of bid closing. However, if a particular edition or revision date of a specified standard is referenced in an applicable code or other regulatory requirement, the regulatory referenced edition or version shall apply.
- .3 Reference standards establish minimum requirements. If Contract Documents call for requirements that differ from a referenced standard, the more stringent requirements shall govern.
- .4 If compliance with two or more reference standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to *Consultant* for clarification.

1.2 TESTING

- .1 Provide such assistance, labour and materials as are normally required for examining, measuring and testing the quality, weight or quantity, pay all costs of any material used, and supply samples of materials before incorporation in the *Works* for testing as may be selected and as specified herein.
- .2 Perform or arrange for the performance of all tests on all equipment in complete accordance with the relevant clauses of these Specifications and in the presence of the *Consultant*.
- .3 The cost of providing assistance, samples, etc., for testing and arranging tests shall be deemed to be covered by and included in the Contract Price unless noted otherwise, elsewhere in these Specifications.
- .4 The Contractor shall have no claim against the Owner or the Consultant in respect of any financial loss which may be suffered from the rejection of any materials or equipment due to their failure to meet specified test requirements, and the Contractor shall also bear the cost of remedying any defects such that the material or equipment will meet the specified tests, or failing this, of removing the material or equipment from the Site. The decision to repair or replace materials and equipment which have failed to meet test requirements will be made by the Consultant.
- .5 Employment of inspection and testing agencies by Contractor or Owner does not relieve Contractor from responsibility to perform the Work in accordance with Contract Documents.
- .6 Allow and arrange for inspection and testing agencies to have access to the Work, including access to off-site manufacturing and fabrication plants.
- .7 For inspection and testing required by Contract Documents or by authorities having jurisdiction, provide Consultant and inspection and testing agencies with timely notification in advance of required inspection and testing.

- .8 Submit test samples required for testing in accordance with submittals schedule specified in Section 01 32 00 – Construction Progress Documentation and in accordance with Section 01 33 00 – Submittal Procedures.
- .9 Provide labour, Construction Equipment and temporary facilities to obtain and handle test samples on site.

1.3 MOCK-UPS

- .1 Prepare mock-ups of *Work* as specified in the technical Specifications. If a mock-up location is not indicated in the Drawings or Specifications, locate where directed by *Consultant*.
- .2 Modify mock-up as required until *Consultant approval* is obtained.
- .3 *Approved* mock-ups establish an acceptable standard for the *Work*.
- .4 Protect mock-ups from damage until the *Work* they represent is complete.
- .5 Unless otherwise specified in the technical Specifications, *approved* mock-ups forming part of the *Work* may remain as part of the *Work*.
- .6 Remove mock-ups only when the *Work* they represent is complete or when otherwise directed by *Consultant*.
- .7 Employment of inspection and testing agencies by Contractor or *Owner* does not relieve Contractor from responsibility to perform the *Work* in accordance with Contract Documents.
- .8 Allow and arrange for inspection and testing agencies to have access to the *Work*, including access to off-*site* manufacturing and fabrication plants.
- .9 For inspection and testing required by Contract Documents or by authorities having jurisdiction, provide *Consultant* and inspection and testing agencies with timely notification in advance of required inspection and testing.
- .10 Submit test samples required for testing in accordance with submittals schedule specified in Section 01 32 00 – Construction Progress Documentation.
- .11 Provide labour, construction equipment and temporary facilities to obtain handle test samples on *site*.

1.4 INSPECTION AND TESTING AGENCY REPORTS

- .1 For inspection and testing required by contract documents or by regulatory requirements, and performed by Contractor retained inspection and testing agencies, submit to *Consultant* and *Owner* copies of reports. Submit within five (5) days after completion of inspection and testing.
- .2 For inspection and testing performed by *Owner* retained inspection and testing agencies, copies of inspection and testing agency reports will be provided to Contractor.

PART 2 - PART 2 – PRODUCTS

2.1 NOT USE

.1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 TEMPORARY UTILITIES – GENERAL

- .1 Provide temporary utilities as specified and as otherwise necessary to perform the *Work* expeditiously.
- .2 Remove temporary utilities after use.

1.2 TEMPORARY WATER SUPPLY

- .1 Arrange and pay for a temporary supply of water as required during construction.

1.3 TEMPORARY HEATING AND VENTILATION

- .1 Arrange and pay for temporary heating and ventilation required during construction.
- .2 Vent construction heaters in enclosed spaces to the outside or use flameless type of construction heaters.
- .3 Provide temporary heat for the *Work* as required to:
 - .1 Facilitate progress of *Work*.
 - .2 Protect the *Work* against dampness and cold.
 - .3 Prevent moisture condensation on surfaces, freezing, or other damage to finishes or stored *Products*.
 - .4 Maintain specified minimum ambient temperatures and humidity levels for storage, installation and curing of *Products*.
 - .5 After building is enclosed, maintain interior temperature of minimum 10 degrees C.
- .4 Provide temporary ventilation for the *Work* as required to:
 - .1 Prevent accumulations of fumes, exhaust, vapours, gases and other hazardous, noxious, or volatile substances in enclosed spaces, as required to maintain a safe *Work* environment meeting applicable regulatory requirements.
 - .2 Ensure that hazardous, noxious, or volatile substances do not migrate to *Owner* occupied spaces.
- .5 Do not use permanent building heating and ventilation systems during construction.

1.4 TEMPORARY ELECTRICAL POWER AND LIGHTING

- .1 Arrange and pay for temporary power and lighting required during construction.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 CONSTRUCTION FACILITIES – GENERAL

- .1 Provide temporary construction facilities as necessary for performance of the Work and in compliance with applicable regulatory requirements.
- .2 Maintain temporary construction facilities in good condition for the duration of the *Work*.
- .3 Remove temporary construction facilities from *Place of the Work* when no longer required.

1.2 CONSTRUCTION PARKING

- .1 Limited parking will be permitted at Place of the Work provided it does not disrupt continuing operation of the facility.

1.3 VEHICULAR ACCESS

- .1 Provide and maintain adequate access to *Place of the Work*.

1.4 SITE OFFICES

- .1 If a *site* office is required, provide at no additional cost. No interior space will be provided.

1.5 SANITARY FACILITIES

- .1 Provide temporary sanitary facilities at the time of initial mobilization and maintain them throughout the course of the work.
 - .1 Sanitary facility is to include an odourless flushing chemical-type temporary toilet that is properly enclosed, and weatherproof.
 - .2 The sanitary facilities must be serviced daily.
 - .3 The building toilets and facilities shall not be used by the Contractor's forces unless approved by Owner.

1.6 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection systems and equipment during construction.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

PART 1 - GENERAL

1.1 BARRIERS AND ENCLOSURES – GENERAL

- .1 Provide temporary barriers and enclosures necessary to protect the building occupants and to secure Place of the Work during performance of the Work.
- .2 Comply with applicable regulatory requirements.
- .3 Maintain temporary barriers and enclosures in good condition for the duration of the *Work*.
- .4 Remove temporary barriers and enclosures from *Place of the Work* when no longer required.

1.2 EXTERIOR HOARDING

- .1 Erect temporary exterior site hoarding to comply with applicable regulatory requirements. The Owner accepts no liability for material or equipment that goes missing on the Site as a result of ineffective protection or Site security.

1.3 WEATHER ENCLOSURES

- .1 Provide weather-tight enclosures to the tops of shafts and other openings in floors and roofs.
 - .1 Provide weather enclosures to protect floor areas where walls are not finished and to enclose *Work* areas that require temporary heating.
 - .2 Design weather enclosures to withstand wind pressure and snow loading requirements.

1.4 CONTROL OF CONSTRUCTION-GENERATED DUST, DEBRIS, FUMES, ETC.

- .1 Dust, dirt, construction debris, water and fumes from the work areas must not be permitted to enter areas of the building or rooms in or adjacent to work areas.
 - .2 Protection shall be provided for all entrance and exit ways, floors, walls and all standing fixtures, air intakes, exhaust fan openings, floor drains, and equipment rooms against dust, spillage or overspray of materials and/or damage during the construction period. The required protection shall consist of but is not limited to the following:
 - .1 Filter cloth in all floor drains within the work area
 - .2 Filter cloth over all intake and exhaust louvers and openings
 - .3 Poly-weave tarping over doorways and around the exterior perimeter of the work area as required to prevent dust & debris from entering the building.
 - .4 Protect sprinkler heads as required with Polyethylene or filter cloth to prevent dust build-up.
 - .5 Provide for protection of vehicles in or near the area of work and payment for cleaning or damage to vehicles.
-

1.5 TEMPORARY ENCLOSURES

- .1 Provide full enclosures to localize silica dust-generating activities, and for the protection of workers, finished areas of Work and public as indicated on the phasing plan drawings.
 - .1 Erect, maintain, and relocate screens and/or partitions as required to facilitate construction operations and *Owner's* operational requirements.
 - .2 Cutting, breaking or pulverizing of concrete products may result in exposure to airborne silica. Appropriate hygiene and personal protection of workers must be developed and employed as per the applicable Occupational Health and Safety Act with respect to airborne concentrations. Refer to the Ontario Ministry of Labour, Training and Skills Development Health and Safety Guidelines for Silica On Construction Projects for additional procedures.
 - .3 The size and locations of temporary enclosures shown on the plans are approximate. Adjust size and locations to accommodate repairs but maintain suitable drive aisles during the *Work*.
 - .4 Take special care to mitigate any dust from migrating to areas outside the enclosed *Work* areas. The *Consultant* reserves the right to stop *Work* if it is found that areas outside the enclosed *Work* areas are being subjected to unacceptable dust levels.
 - .5 Maintain and relocate protection as required until such *Work* is complete.
 - .6 At a minimum, provide temporary construction signage indicated on the drawings. Additional signage may be required by the *Consultant* and/or *Owner*.

1.6 FIRE ROUTES

- .1 Maintain fire access routes, including overhead clearances, for use by emergency response vehicles.

1.7 PROTECTION OF BUILDING FINISHES

- .1 Provide necessary temporary barriers and enclosures to protect existing and completed or partially completed finished surfaces from damage during performance of the *Work*.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 GENERAL

- .1 Provide *Products* that are not damaged or defective, and suitable for purpose intended, subject to specified requirements. If requested by *Consultant*, furnish evidence as to type, source and quality of *Products* provided.
- .2 Unless otherwise specified, maintain uniformity of manufacture for like items throughout.
- .3 Unless otherwise specified, all products used must be NSF certified. For all products that are not NSF certified, the Contractor shall have spill kits on site in case of spills or leaks per Section 01 74 00.

1.2 MATERIALS AND WORKMANSHIP

- .1 All equipment, materials and workmanship shall be the best of the respective kinds described in the Contract and in accordance with the *Consultant's* instructions and may be subjected to standard tests as the *Consultant* may direct at the place of manufacture or fabrication or on the *Site*.
- .2 Where the *Consultant* has requested and before ordering materials for incorporation into the *Works* inform the *Consultant* of the source of the materials. No order for such materials will be given except with the authorization of the *Consultant*. Notwithstanding the fact that such authorization may have been given, the *Consultant* may forbid the use of any such materials, if upon delivery, they are found to be defective or unsuitable for incorporation in the *Works*. Keep the *Consultant* fully advised of the orders and delivery dates of materials.
- .3 All material and equipment required to be incorporated into the *Work* must be new and unused. Any material found during the progress of the *Work* to have cracks, flaws, or other defects will be rejected by the *Consultant*.
- .4 Replace materials and equipment found defective in manufacturer. This includes the furnishing of all materials and labour required for the replacement of installed material and equipment discovered defective prior to the final acceptance of the *Works*.
- .5 Permanent manufacturer's markings, labels, trademarks, and nameplates on *Products* are not acceptable in prominent locations, except where required by regulatory requirements or for operating instructions, or when located in mechanical or electrical rooms.

1.3 PRODUCT OPTIONS

- .1 Subject to the provisions of Section 01 25 00 –Substitution Procedures:
 - .1 Wherever a *Product* or manufacturer is specified by a single proprietary name, provide the named *Product* only.
 - .2 Wherever more than one *Product* or manufacturer is specified by proprietary name for a single application, provide any one of the named *Products*.

- .2 Wherever a *Product* is specified by reference to a standard only, provide any *Product* that meets or exceeds the specified standard. If requested by *Consultant*, submit information verifying that the proposed *Product* meets or exceeds the specified standard.
- .3 Wherever a *Product* is specified by descriptive or performance requirements only, provide any *Product* that meets or exceeds the specified requirements. If requested by *Consultant*, submit information verifying that the proposed *Product* meets or exceeds the specified requirements.

1.4 PRODUCT AVAILABILITY AND DELIVERY TIMES

- .1 Promptly upon Contract award and periodically during construction, review and confirm Product availability and delivery times. Order Products in sufficient time to meet the construction progress schedule and the Contract Time.
 - .1 If a specified *Product* is no longer available, promptly notify *Consultant*. *Consultant* will take action as required.
 - .2 If delivery delays are foreseeable, for any reason, promptly notify *Consultant*.
 - .3 If a delivery delay is beyond *Contractor's* control, *Consultant* will provide direction.
 - .4 If a delivery delay is caused by something that was or is within *Contractor's* control, *Contractor* shall propose actions to maintain the construction progress schedule for *Consultant's* review and acceptance.

1.5 STORAGE, HANDLING, AND PROTECTION

- .1 Store, handle, and protect Products during transportation to Place of the Work and before, during, and after installation in a manner to prevent damage, adulteration, deterioration and soiling.
 - .1 Comply with manufacturer's instructions for storage, handling and protection.
 - .2 Store packaged or bundled *Products* in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in *Work*.
 - .3 Comply with the requirements of the workplace hazardous materials information system (WHMIS) regarding use, handling, storage, and disposal of hazardous materials, including requirements for labeling and the provision of safety data sheets (SDS).
 - .4 Store *Products* subject to damage from weather in weatherproof enclosures.
 - .5 Store sheet *Products* on flat, solid, supports and keep clear of ground. Slope to shed moisture.
 - .6 Remove and replace damaged *Products*.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- .1 Except where otherwise specified in technical *Specifications* or otherwise indicated on *Drawings*, comply with requirements of this Section.

1.2 MANUFACTURER'S INSTRUCTIONS

- .1 Install, erect, or apply *Products* in strict accordance with manufacturer's instructions.
- .2 Notify *Consultant*, in writing, of conflicts between *Contract Documents* and manufacturer's instructions where, in *Contractor's* opinion, conformance with *Contract Documents* instead of the manufacturer's instructions may be detrimental to the *Work* or may jeopardize the manufacturer's warranty.
- .3 Do not rely on labels or enclosures provided with *Products*. Obtain written instructions directly from manufacturers.
- .4 Provide manufacturer's representatives with access to the *Work* at all times. Render assistance and facilities for such access so that manufacturer's representatives may properly perform their responsibilities.

1.3 FASTENINGS – GENERAL

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials.
- .2 Prevent electrolytic action and corrosion between dissimilar metals and materials by using suitable non-metallic strips, washers, sleeves, or other permanent separators to avoid direct contact.
- .3 Use non-corrosive fasteners and anchors for securing exterior *Work*.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Do not use fastenings or fastening methods that may cause spalling or cracking of material to which anchorage is made.

1.4 FASTENINGS – EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Bolts shall not project more than one diameter beyond nuts.

1.5 FIRE RATED ASSEMBLIES

- .1 When penetrating fire rated walls, ceiling, or floor assemblies, completely seal voids with fire-stopping materials, smoke seals, or both, in full thickness of the construction element as required to maintain the integrity of the fire rated assembly.

1.6 PROTECTION OF COMPLETED WORK AND WORK IN PROGRESS

- .1 Adequately protect parts of the Work completed and in progress from any kind of damage.
- .2 Promptly remove, replace, clean, or repair, as directed by *Consultant*, Work damaged as a result of inadequate protection.
- .3 Do not load or permit to be loaded any part of the Work with a weight or force that will endanger the safety or integrity of the Work.

1.7 REMEDIAL WORK

- .1 Notify *Consultant* of, and perform remedial Work required to, repair or replace defective or unacceptable Work. Ensure that properly qualified workers perform remedial Work. Coordinate adjacent affected Work as required.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 REGULATORY REQUIREMENTS

- .1 Comply with applicable regulatory requirements when disposing of waste materials.
- .2 Obtain permits from authorities having jurisdiction and pay disposal fees where required for disposal of waste materials and recyclables.

1.2 GENERAL CLEANING REQUIREMENTS

- .1 Provide adequate ventilation during use of volatile or noxious substances. Do not rely on building ventilation systems for this purpose.
- .2 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .3 Prevent cross-contamination during the cleaning process.
- .4 Notify the *Consultant* of the need for cleaning caused by *Owner* or other contractors.
- .5 Contractor to ensure spill kits are available on-site at all times for all required products and waste materials, including gasoline and diesel fuel.

1.3 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL - GENERAL

- .1 Keep *Work*, property, road surfaces, etc. in vicinity of the *Works* and in areas where Contractor's trucks will travel in a clean and orderly condition, free from excessive dirt, dust, snow, ice, rubbish, etc. at all times during the progress of the *Work*.
- .2 Maintain trucks so that no spillage will occur. Before leaving the *Site*. Trim loads and free wheels of accumulations of soil.
- .3 Keep *Site* free from accumulations of waste material and rubbish to prevent an unsightly or hazardous condition. On the completion of the *Works* clear away and remove from the *Site* all Construction Equipment, surplus materials, rubbish and temporary *Works* of every kind and leave the whole of the *Site* and *Works* in a condition that meets the *approval* of the *Consultant*.
- .4 Do not dispose of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or into streams or waterways.
- .5 Dispose of debris and waste materials in accordance with the latest regulations respecting Solid Waste Resource Management issued by Nova Scotia Environment, at no additional cost to the Contract.
- .6 Dispose of all construction and demolition waste at an *approved* C&D waste disposal *site*.
- .7 Where possible, divert construction and demolition waste to the appropriate recycling facilities. Minimize waste generated by the *Work*.

- .8 Do not burn or bury waste materials at Place of the *Work*.
- .9 Cover or wet down dry waste materials to prevent blowing dust and debris.

1.4 PROGRESSIVE CLEANING AND WASTE MANAGEMENT

- .1 Maintain the *Work* in a tidy and safe condition, free from accumulation of waste materials and construction debris.
- .2 Provide appropriate, clearly marked, covered, and secured containers for the collection of waste materials and recyclables. Locate containers as directed by the *Owner* and/or *Consultant*.
- .3 Remove waste materials and recyclables from *Work* areas, separate, and deposit in designated containers at end of each Working Day. Collect packaging materials for recycling or reuse.
- .4 Remove waste materials and recyclables from Place of the *Work* at regular intervals in order to maintain a clean and orderly *site*.
- .5 Clean interior building areas prior to start of finish *Work* and maintain free of dust and other contaminants during finishing operations.
- .6 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly finished surfaces nor contaminate building systems.
- .7 Clear snow and ice from public sidewalks as required to comply with applicable municipal regulatory requirements.

1.5 FINAL CLEANING

- .1 Before final cleaning, arrange a meeting at *Place of the Work* to determine the acceptable standard of cleaning. Make a request to the *Owner* and *Consultant*, to be in attendance.
- .2 Remove from *Place of the Work* surplus *Products*, waste materials, recyclables, *Temporary Work*, and *Construction Equipment* not required to perform any remaining *Work*.
- .3 Lock or otherwise restrict access to each room or area after completing final cleaning in that area.
- .4 Re-clean as necessary areas that have been accessed by Contractor's workers prior to *Owner* occupancy.
- .5 Remove stains, spots, marks, and dirt from finished surfaces, electrical and mechanical fixtures, furniture fitments, walls, floors and any other surface soiled as a result of the *Work*.
- .6 As applicable, clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and all other finished surfaces, including mechanical and electrical fixtures. Replace broken, scratched or otherwise damaged glass.
- .7 Remove dust from lighting reflectors, lenses, lamps, bulbs, and other lighting surfaces.
- .8 Vacuum clean and dust exposed wall, floor, and ceiling surfaces, behind grilles, louvres, and screens.

- .9 Clean mechanical, electrical, and other equipment. Replace filters for mechanical equipment if equipment is used during construction.
- .10 Remove waste material and debris from crawlspaces and other accessible concealed spaces.
- .11 Remove stains, spots, marks, and dirt from exterior facades.
- .12 Clean exterior and interior window glass and frames.
- .13 Clean and sweep roofs, clear roof drains, clean gutters and downspouts, sunken wells.
- .14 Use leaf blowers to clean landscaped surfaces.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 SUBSTANTIAL PERFORMANCE OF THE WORK

- .1 Complete the prerequisites to, and the procedures for, attaining substantial performance of the Work, or similar such milestone as provided for in the lien legislation applicable to the Place of the Work.

1.2 READY-FOR-TAKEOVER

- .1 The prerequisites to attaining *Ready-for-Takeover* of the Work are described in the General Conditions of the Contract.

1.3 INSPECTION AND REVIEW BEFORE READY-FOR-TAKEOVER

- .1 Contractor's Inspection: Before applying for the Consultant's review to establish Ready-for-Takeover of the Work:
 - .1 Ensure that the specified prerequisites to *Ready-for-Takeover* of the Work are completed.
 - .2 Conduct an inspection of the Work to identify defective, deficient, or incomplete work.
 - .3 Prepare a comprehensive and detailed list of items to be completed or corrected.
 - .4 Provide an anticipated schedule and costs for items to be completed or corrected.
- .2 *Consultant's Review*: Upon receipt of the Contractor's application for review, together with the Contractor's list of items to be completed or corrected, the Consultant and the Contractor shall arrange a mutually satisfactory agreed date and time to jointly review the Work. The Consultant will advise the Contractor whether or not the Work is *Ready-for-Takeover*. Add additional items, if any, to the Contractor's list of items to be completed or corrected. Provide the Consultant with a copy of the revised list.
- .3 Maintain the list of items to be completed or corrected and promptly correct or complete defective, deficient and incomplete work. The Contractor's inspection and Consultant's review procedures specified above shall be repeated until the Work is *Ready-for-Takeover* and no items remain on the Contractor's list of items to be completed or corrected.
- .4 When the Consultant determines that the Work is *Ready-for-Takeover*, the Consultant will notify the Contractor and the Owner in writing to that effect.

1.3 PREREQUISITES TO FINAL PAYMENT

- .1 After *Ready-for-Takeover* of the Work and before submitting an application for final payment in accordance with the General Conditions of Contract:
 - .1 Correct or complete all remaining defective, deficient, and incomplete work.
 - .2 Remove from the *Place of the Work* all remaining surplus *Products, Construction Equipment, and Temporary Work*.
 - .3 Perform final cleaning and waste removal necessitated by the Contractor's work performed after *Ready-for-Takeover*, as specified in Section 01 74 00 – Cleaning and Waste Management.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 OPERATION AND MAINTENANCE MANUAL

- .1 Prepare a comprehensive operation and maintenance manual, in the language of the *Contract*, using personnel qualified and experienced for this task.
- .2 Fifteen working days before the anticipated Ready-for-takeover date submit an initial draft of the operation and maintenance manual for *Consultant's* review. If required by *Consultant's* review comments, revise manual contents, and resubmit for *Consultant's* review. If required, repeat this process until *Consultant* accepts the draft manual in writing.
- .3 Submit final version to *Owner* in hard copy and electronic format. Provide three (3) hard copies.

1.2 OPERATION AND MAINTENANCE MANUAL FORMAT

- .1 Organize data in the form of an instructional manual.
- .2 Binders: vinyl, hard covered, three D-rings, loose leaf, 216 x 279 mm, with spine and face pockets.
- .3 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: Identify each binder with typed or printed title "Operation and Maintenance Manual", name of Project or facility, and subject matter of contents.
- .5 Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate *Product* or system, with typed description of *Product* and major component parts of equipment.
- .7 Text: Manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 In addition to the hard copy requirements given above, provide an electronic copy of manual in PDF format.
- .10 Provide electronic copy of Shop *Drawings* in manual as 1:1 scaled CAD files in .dwg format on electronic media acceptable to *Owner*.

1.3 OPERATION AND MAINTENANCE MANUAL – GENERAL CONTENT

- .1 Table of contents for each volume.
- .2 Introductory information including:
 - .1 Date of manual submission.

- .2 Complete contact information for *Consultant*, subconsultants, other consultants, and *Contractor*, with names of responsible parties.
- .3 Schedule of *Products* and systems indexed to content of volume.
- .3 For each *Product* or system, include complete contact information for *Subcontractors*, *Suppliers* and manufacturers, including local sources for supplies and replacement parts.
- .4 *Product Data*: mark each sheet to clearly identify specific products, options, and component parts, and data applicable to installation. Delete or strike out inapplicable information. Supplement with additional information as required.
- .5 Reviewed *Shop Drawings*.
- .6 Permits, certificates, letters of assurance and other relevant documents issued by or required by authorities having jurisdiction.
- .7 Warranties.
- .8 Operating and maintenance procedures, incorporating manufacturer's operating and maintenance instructions, in a logical sequence.

1.4 OPERATION AND MAINTENANCE MANUAL – PRODUCTS AND FINISHES CONTENT

- .1 Include Product data, with catalogue number, options selected, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured Products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Include an outline of requirements for routine and special inspections and for regular maintenance to ensure that on-going performance of the building envelope will meet the initial building envelope criteria.
- .4 Include additional content as specified in technical *Specifications* sections.

1.5 OPERATION AND MAINTENANCE MANUAL – WARRANTIES CONTENT

- .1 Separate each warranty with index tab sheets keyed to Table of Contents listing.
- .2 List each warrantor with complete contact information.
- .3 Verify that documents are in proper form and contain full information. Ensure that warranties are for the correct duration and are in *Owner's* name.

1.6 RECORD INFORMATION

- .1 Record Drawings:
 - .1 After award of Contract, Consultant will provide a set of drawings for purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents caused by *site* conditions and changes ordered by Consultant.
 - .2 Identify drawings as "Project Record Copy". Maintain in new condition and make available for inspection on *site* by Consultant.

- .3 On completion of Work and prior to final inspection, submit record documents to Consultant.
- .2 Maintain record drawings on *site* as the work progresses for all aspects of the work.
- .3 Owner will mark on "Project Record Copy" modifications made for work under the Owner's Scope of Work.

1.7 PROJECT RECORD DRAWINGS

- .1 Transfer all information marked up on the as-built drawings during the progress of the *Work* to a master set of record drawing files provided by *Consultant*, in electronic format.
- .2 Mark revised drawings as "RECORD DRAWINGS".
- .3 Submit completed record drawings in electronic form to *Owner* and *Consultant*.

1.8 MAINTENANCE MATERIALS, AND SPECIAL TOOLS

- .1 Supply maintenance materials, and special tools in quantities specified in technical Specifications sections.
- .2 Maintenance materials must be new, not damaged nor defective, and of same quality, manufacturer, and batch or production run as installed *Products*.
- .3 Provide tags for special tools identifying their function and associated *Product*.
- .4 Deliver to and store items at location directed by *Owner* at *Place of the Work*. Store in original packaging with manufacturer's labels intact and in a manner to prevent damage or deterioration.
- .5 Catalogue all items and submit to *Consultant* an inventory listing organized by *Specifications* section. Include *Consultant* reviewed inventory listing in operation and maintenance manual.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not applicable.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

- .1 This Section includes the removal of the existing roof assemblies from the subject roofs shown on the drawings, down to the existing roof deck, including the removal of existing stone ballast, concrete pavers, roof membrane, cover board, insulation, vapour retarder, flashing, removal and replacement or retrofitting of existing drains, and temporary removal and reinstallation of rooftop equipment, skylights, and devices.

1.2 RELATED WORK

- .1 Section 06 10 00 – Rough Carpentry
- .2 Section 07 52 00 – Modified Bituminous Membrane Roofing
- .3 Section 07 62 00 – Metal Flashing and Trim
- .4 Section 07 92 00 - Sealants

1.3 EXISTING CONDITIONS

- .1 Protect existing items and surfaces to remain. In the event of damage, immediately replace or make repairs at no extra cost to the Contract, and to the approval of the Consultant.
- .2 Prevent movement, settlement, or damage of adjacent structures, and surfaces to remain. Repair damage and be liable for injury caused by removals.
- .3 Prevent debris from blocking the surface drainage system.
- .4 Protect building systems, services, and equipment.
- .5 Keep noise, dust, and inconvenience to occupants to minimum.
- .6 Provide temporary covers, railings, supports, and other protection as required.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not applicable.

PART 3 - EXECUTION

3.1 INSPECTION & PREPARATION

- .1 Visit and examine the site and note all characteristics and features affecting the Work of this Section.
- .2 Ensure all services, whether buried; fastened to the roof deck soffit; built-in or exposed are properly identified as to position, type of service, size, direction of flow.
- .3 Inspect materials, equipment, and components to be re-used or turned over to the Owner. Note their condition and advise the Consultant in writing of any defects or conditions which would affect their removal and re-use.
- .4 Cut and/or cap existing services within the work area, if any, prior to the start of Work as required, but do not affect the services of areas not under construction or essential to the ongoing operation of the building.
- .5 In all cases, exercise all reasonable care during removal operations to avoid damaging items to be salvaged, re-used, or items that are not part of the Scope of Work.
- .6 Seal off all work areas to prevent dust and debris from affecting other areas outside of the work area. Prevent public access to areas being repaired.
- .7 Tape and/ or seal and provide protection to all mechanical and electrical services and all fire alarms and security devices still functioning adjacent to the work areas to prevent damage resulting from dust, water, or impact.
- .8 Cover drains as required to prevent any construction-related materials and debris from entering the drains. Ensure that all drains continue to operate as required during construction.
- .9 Remove or protect in place all surface mounted or permanent fixtures not to be demolished from damage during the demolition procedure.
- .10 Apply filter cloth to all exhaust and ventilation vents within the work area to prevent dust generated by the construction activity from escaping.
 - .1 Contractor shall clean or replace filter cloth if the filter cloth becomes unsuitably dirty as determined by Consultant.

3.2 REMOVALS

- .1 Remove and dispose of material and debris resulting from the removal of the existing roofing system to the level of the structural deck. Existing system shall be totally removed from the deck surface leaving a clean, sound, and smooth surface suitable for the placement of new materials to the approval of the Consultant.
- .2 Remove, store, and protect existing gutters, downspouts, ladders, mechanical equipment, and fans. Reinstall these items after the new roof is installed. Test all reinstated mechanical items to the satisfaction of the Consultant and the Owner. Confirm there is no loss in performance of this equipment from the values noted in the preexisting condition record.
- .3 The Contractor is to take care not to

- .4 Demolition procedures and equipment shall meet all applicable noise-control by-laws and regulations of the location of the work.
- .5 The Contractor is to take care not to damage the surface of sound material which is to remain through the removal operation. Where any such damage is done, it is to be repaired by the Contractor at their own expense to the approval of the Consultant.
- .6 All required re-painting due to damage, overspray, etc. is the Contractor's responsibility.
- .7 At end of each day's work, leave work in safe condition so that no part is in danger of causing injury or damage.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

- .1 This Section specifies requirements for supplying, transporting and installing all items of rough carpentry.

1.2 REFERENCES

- .1 CSA O86-19, Engineering Design in Wood.
- .2 CAN/CSA O141, Softwood Lumber.
- .3 CSA O121, Douglas Fir Plywood.
- .4 CSA O151, Canadian Softwood Plywood.
- .5 CAN/CSA 0325.0-21, Construction Sheathing.
- .6 CAN 0437 Series-93, Standard on OSB and Waferboard.
- .7 CSA B111, Wire Nails, Spikes and Staples.
- .8 National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber, Latest Edition.

1.3 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals (to be submitted before starting any work of this Section):
 - .1 Product Data:
 - .1 submit manufacturer's product data describing requirements for storage, instructions for use and site dressings for cut ends, and health and safety requirements for handling and disposal of specified products
 - .3 Informational Submittals (to be submitted during the course of work):
 - .1 Fastenings and Hardware:
 - .1 submit list of fastenings and hardware proposed for use
 - .2 confirm size and configuration, appropriate corrosion resistance based on the type of wood preservative treatment materials used for the Project

1.4 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood identification: by grade mark in accordance with applicable CSA standards.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Delivery and Acceptance Requirements: Protect materials from weather while in transit and on the jobsite.
- .2 Storage and Handling Requirements:
 - .1 Store materials at least 150 mm above the ground on pallets or blocks.
 - .2 Cover with protective waterproof sheets allowing for air circulation and ventilation under the covering.
 - .3 Protect edges and corners of sheet materials from damage during handling and storage
 - .4 Protect kiln dried and seasoned wood materials under conditions that will not cause an increase to moisture content.
 - .5 Stack, lift, brace, cut and notch engineered lumber products in accordance with manufacturer's instructions and recommendations.
 - .6 Store separated reusable wood waste convenient to cutting station and work areas.

PART 2 - PRODUCTS

2.1 LUMBER MATERIALS

- .1 Lumber: unless specified otherwise, softwood, kiln dried, spruce-pine-fir (S-P-F) species, S4S, moisture content 15% or less in accordance with the following standards:
 - .1 CAN/CSA O141.
 - .2 Graded and stamped in accordance with the National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber and by an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Glued end-jointed (finger-jointed) lumber is not acceptable.
- .3 Machine stress-rated lumber is acceptable for all purposes.
- .4 Framing and Board members: in accordance with NBC 2015.
- .5 Furring, Blocking, Strapping, Nailing Strips, Grounds, Rough Bucks, Cants, Curbs, Fascia Backing and Sleeper:
 - .1 Unless specified otherwise, softwood, spruce-pine-fir (S-P-F) species.
 - .2 S2S or S4S is acceptable.
 - .3 S-Dry
 - .4 Board Sizes: "Standard" grade to NLGA, Paragraph 114c.
 - .5 Dimension Sizes: "Standard" grade to NLGA, Paragraph 122c.
- .6 Wood Trim: kiln-dried spruce, comb faced fascia material.

2.2 SHEATHING MATERIALS

- .1 Construction sheathing: to CSA O325, 13mm exterior grade plywood.

2.3 ACCESSORIES

- .1 Sealants: as specified in Section 07 92 00.

- .2 Nails, spikes and staples: stainless steel for exterior work, plain finish for interior work.
- .3 Bolts: stainless steel, 12 mm diameter unless indicated otherwise, complete with nuts and washers.
- .4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.
- .5 General purpose adhesive to CSA-O112.

2.4 FINISHES

- .1 Stainless steel: use stainless steel fasteners for work as indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Comply with requirements of NBC 2015, Division B, Part 9 supplemented by following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown-edge" up.
- .5 Install furring and blocking as required to space-out and support casework, cabinets, electrical equipment mounting boards, and other work as required.
- .6 Install furring to support siding applied vertically where there is no blocking.
- .7 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .8 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .9 Install wood cants, nailers, curbs and other wood supports as required and secure using stainless steel fasteners.
- .10 Install sheathing as and where indicated on the Drawings.
- .11 Cutting of holes by trades or splices in members not indicated are not be permitted.

3.2 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.3 CLOSEOUT ACTIVITIES

- .1 Waste Management: Dispose of construction waste at a landfill facility licensed to accept pressure preservative treated wood products:
- .2 Do not burn or dispose of waste on-site by burying;
- .3 Do not recycle scrap materials;
- .4 Do not compost scrap materials; and
- .5 Separate preservative treated waste materials from non-preservative treated wood products to prevent contamination of waste stream and storm drainage system.

PART 1 - GENERAL

1.1 WORK INCLUDED

- .1 This Section specifies requirements for supplying and installing a two-ply modified bituminous roof system, including membrane flashings, insulation cover board, polyisocyanates rigid insulation, and air/vapour retarder over an existing concrete roof deck, complete with new metal flashing and trim as shown on the Drawings and as specified.

1.2 RELATED WORK

- .1 Section 02 41 00 – Removals and Reinstallations
- .2 Section 07 62 00 – Metal Flashing and Trim

1.3 REFERENCES

- .1 Canadian Roofing Contractors Association (CRCA)
- .2 CGSB 7-GP-56M, Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing.
- .3 CAN/CGSB 51.33-M, Vapour Barrier Sheet, excluding Polyethylene, for Use in Building Construction.
- .4 CSA B111-74, Wire Nails, Spikes and Staples.
- .5 CSA A123.21-20, Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane Roofing Systems.
- .6 CSA A123.23-15(R2020), Product Specification for Polymermodified Bitumen Sheet, Prefabricated and Reinforced
- .7 CAN/CSA A123.4, Asphalt for Constructing Built-up Roof Coverings and Waterproofing Systems.
- .8 CAN/ULC – S706-09 – Standard for Wood Fibre Insulating Boards for Buildings.
- .9 CAN/ULC-S770-09, Standard Test Method for Determination of Long-Term Thermal Resistance of Closed-Cell Thermal Insulating Foams.
- .10 CAN/ULC-S701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
- .11 CAN/ULC-S704-17, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate, Boards, Faced.
- .12 ASTM D41/D41M - 11(2016) Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing
- .13 ASTM E108-16, Standard Test Methods for Fire Tests of Roof Coverings

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Division 01 requirements.
- .2 Provide Product Data as follows:
 - .1 Provide an electronic submission of the most recent technical roofing components data sheets, describing materials physical properties and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Provide electronic copy of the Workplace Hazardous Materials Information System (WHMIS) -Safety Data Sheets (SDS). Indicate VOC content for:
 - .1 Primers.
 - .2 Sealers.
 - .3 Provide shop drawings:
 - .1 Indicate flashing, control joints, and fastening details.
 - .2 Provide layout for tapered and/or cut-to-fit insulation and details.
 - .4 Manufacturer's Certificate: certify that products meet or exceed specified requirements.
 - .5 Manufacturer's Installation Instructions: indicate special precautions required for seaming the membrane.
 - .6 Test report: manufacturer's documentation of roof assembly and components tested to CSA A123.21 for dynamic wind uplift resistance.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Coordinate site deliveries with the Owner and Facility Staff.
- .2 Deliver and store all materials in their original packaging bearing the manufacturer's name, the grade, weight and applicable standards. Remove only in quantities required for same day use.
- .3 Storage and Handling Requirements:
 - .1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of asphalt, sealing compounds, primers and caulking materials.
 - .2 Provide and maintain dry, off-ground weatherproof storage. Remove from the site any material damaged or exposed to wet weather.
- .4 Ensure the shelf life of all materials has not elapsed.
- .5 Store material in accordance with the manufacturer's directions.
- .6 Do not overload the structure or adjacent structures, including suspended slabs.
- .7 Store rolls on ends with selvage edge up, one (1) pallet high only.
- .8 Ensure all rolled base sheet membranes are maintained at a temperature between 10°C and 40°C prior to use.
- .9 Store solvent based liquids, adhesives, and primers away from excessive heat and open flames and at temperatures between 15°C and 26°C, in accordance with manufacturer's written instructions.
- .10 Store insulation protected from sunlight, weather and deleterious materials.
- .11 Metal Flashings And Trim

- .1 Transport, handle, and store assembled units and/or their component parts in a manner to preclude damage of any nature.
 - .2 Stack preformed material in manner to prevent twisting, bending and rubbing.
 - .3 Remove all units or components that are stained, watermarked, cracked, bent, chipped, scratched or otherwise unsuitable for installation and replace with new.
 - .4 Protect finish and edges in accordance with manufacturer's directions.
 - .5 Prevent contact of dissimilar metals during storage and protect from acids, flux, and other corrosive materials and elements.
- .12 Place plywood runways over completed work to enable movement of material and other traffic.
- .13 Be responsible for the safe disposal of all debris from the job site and in compliance with the Environmental Protection Act.

1.6 ENVIRONMENT REQUIREMENTS

- .1 Roofing application shall not be carried out when materials are damp, or when ambient temperatures are less than the manufacturer's specifications.
- .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of products including special conditions governing use.

1.7 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Do not install roofing when temperature remains below -18 degrees C for torch application, or -5 degrees C for mop application.
 - .2 Minimum temperature for solvent-based adhesive is -5 degrees C.
- .2 Install roofing on a dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into the roofing system.

1.8 PROTECTION

- .1 Receive "Hot Work Permits" on a daily basis from the Owner or their designated representative.
- .2 Fire Extinguishers: maintain one (1) fire extinguisher on roof per torch applicator, ULC labelled for A, B and C class protection, within 6 m of torch applicator. Cartridge operator type or stored pressure rechargeable type with hose and shut-off nozzle. Size 9 kg.
- .3 Maintain continuous fire watch for three (3) hours after each day's roofing operations cease.
- .4 Maintain periodic fire watch for an additional three (3) hours after the initial continuous (1) hour fire watch.

1.9 WARRANTY

- .1 Furnish an extended warranty that expressly states that the modified bituminous membrane roofing and membrane flashing under this Section will be free from defects of material for a period of twenty (20) years from the date of Certificate of Substantial Performance of the Works. This is to be a non-prorated warranty and includes all labour and materials.

- .2 Provide a two-year CRCA warranty that expressly states that modified bituminous roofing and membrane flashings will stay in place and remain leakproof for two years, and includes all labour and materials required to maintain a waterproof system.
- .3 Provide a two (2) year CRCA warranty against defects of materials and workmanship for the metal work.

1.10 QUALITY ASSURANCE

- .1 The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator must be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years of successful experience installing 2 ply modified bituminous membrane roofing systems.
- .2 Provide the services of a technical representative of the membrane manufacturer system used, to inspect the installation procedure and to verify compliance with all manufacturer's specifications and details at no additional cost to the Contract.

1.11 COMPATIBILITY

- .1 Compatibility between components of roofing system is essential. Materials to be incorporated into the system must be compatible.
- .2 Provide written declaration that components of roofing system are compatible.

1.12 PERFORMANCE CRITERIA

- .1 Roofing System: to CSA A123.21 for wind uplift resistance. See drawings for factored design wind uplift pressures in field, edge and corner zones, and for zone locations and extents.

PART 2 - PRODUCTS

2.1 EXISTING DECK

- .1 Existing Hollow Core Concrete Roof Slab: inspect deck for deterioration and loose concrete. Repair deck as required.

2.2 ASSEMBLY

- .1 All roofs in Contract:
 - .1 Granule surfaced modified bitumen cap sheet membrane, adhered (torch-applied).
 - .2 Composite cover boards and base sheet combination: Mineral fortified asphalt cover board with factory adhered bitumen base sheet membrane, factory-adhered.
 - .3 Membrane flashings: modified bitumen, adhered (torch-applied).
 - .4 Polyisocyanurate insulation, adhered.
 - .5 Vapour retarder.
 - .6 Deck primer.
 - .7 Existing concrete roof slab.

2.3 WOOD COMPONENT COVERING

- .1 Items listed in this part are used to protect wood components from flames of torch application, at all parapets and curbs. Refer to details.
- .2 Recovery board: mineral fortified asphalt core between two (2) layers of high strength reinforcing glass fibre mat, 48" x 60", 1/4" thick.
- .3 Base sheet: as specified in item 2.3 herein, with sanded/sanded top/bottom surfaces.
- .4 Self-adhesive: self-adhering SBS modified bitumen base sheet with a self-adhesive underside covered by a release film, having a nominal weight of 180g/m² and thickness of 2.5mm.
 - .1 Top surface: sanded, where applied on exterior side of parapets.

2.4 DECK PRIMER

- .1 Asphalt primer: to CGSB 37-GP-9Ma and as supplied by the membrane manufacturer.

2.5 VAPOUR RETARDER

- .1 Base sheet: to CSA A123.23 and CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) elastomeric polymer, prefabricated sheet, non-woven polyester reinforcement, weighing 180g/m².
 - .1 Type: 2 - fully adhered.
 - .2 Class: C - plain surfaced.
 - .3 Grade: 2 - heavy duty service.
 - .4 Thickness: 2 mm, minimum.
 - .5 Top and bottom surfaces - polyethylene/polyethylene.

2.6 POLYISOCYANATES INSULATION

- .1 Polyisocyanates insulation: to CAN/ULC S704 Type 2; flat and tapered (for roof drain sumps):
 - .1 1,200 mm x 1,200 mm
 - .2 Facer: coated fibreglass.
 - .3 Square edges.
 - .4 Tapered and uniform thickness.
 - .1 Insulation in multiple layers.
 - .2 Top and bottom layers 75 mm uniform thickness boards.
 - .3 Deck drain sump slope: 2% minimum.
 - .4 Thickness at centreline of drain: 62 mm.
 - .5 Provide crickets where shown on the drawings. Min. slope 2%.

2.7 ROOFING ADHESIVE

- .1 Adhesive: elastomeric, two (2)-part foamable insulation adhesive, designed for roofing applications, to achieve attachment to Factory Mutual I-90 wind load resistance and as per manufacturer's recommendation.
- .2 Acceptable product: Duotack by Soprema, Roofmix by Roofcraft, IKO Millenium Adhesive, or approved equivalent.
- .3 Acceptable product for bonding to 24 hrs. old asphalt: Cold Gold by IKO, or approved equivalent.

2.8 ROOF MEMBRANE

- .1 Composite base sheet and board: base sheet of 180 modified bitumen factory-laminated to high density fire-resistant fiberboard.
 - .1 Base sheet: to CSA A123.23 and CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) elastomeric polymer, prefabricated sheet, polyester reinforcement, weighing 180g/m².
 - .1 Type: 2 - fully adhered.
 - .2 Class: C - plain surfaced.
 - .3 Grade: 2 - heavy duty service.
 - .4 Top surface: polyethylene.
- .2 Cap sheet: to CSA A123.23 and CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) elastomeric polymer, prefabricated sheet, polyester reinforcement, weighing 250 g/m² complete with coloured granule top.
 - .1 Type: 1 - fully adhered.
 - .2 Class: A - granule-surfaced.
 - .3 Colour for granular surface: white.
 - .4 Grade: 2 - heavy-duty service.
 - .5 Bottom surface: polyethylene.
 - .6 To be from the same manufacturer as the insulation cover board with factory-applied base sheet.
- .3 Base flashings: to CSA A123.23 and CGSB 37-GP-56M, styrene-butadiene-styrene (SBS) elastomeric polymer, prefabricated sheet. Polyester reinforcement, weighting 180 g/m².
 - .1 Type: 2 - fully adhered.
 - .2 Class: C - plain surfaced.
 - .3 Grade: 2 - heavy-duty service.
 - .4 Top and bottom surfaces:
 - .5 Polyethylene/polyethylene.
- .4 Self-adhesive: self-adhering SBS modified bitumen base sheet with a self-adhesive underside covered by a release film, having a nominal weight of 180 g/m² and thickness of 2.5mm.
 - .1 Top surface: sanded.
 - .2 For use at exterior face of parapets.

2.9 FASTENERS

- .1 Metal flashing and cleats:
 - .1 Concealed - nails: of same material as sheet metal, to ASTM F1667, hot dipped galvanized flat head roofing nails of length and thickness suitable for metal flashing application.
 - .2 Exposed: #14 x 38 mm master gripper with 15mm bonded washer in the standard long life coating NZF30000S - colour grey by Leland Industries.

2.10 FLASHING AND ACCESSORIES

- .1 See Section 07 62 00.

2.11 ROOF DRAIN INSERT

- .1 Roof drain insert with aluminum dome, under deck clamp, extension gasket, roof soap receiver and all ancillaries.

- .1 Acceptable products: Thaler V-Flow, or approved equal, complete with aluminum dome.
- .2 Re-insulate underside of drain sump and other disturbed areas of existing pipe insulation to match existing.

PART 3 - EXECUTION

3.1 WORKMANSHIP

- .1 Do roofing Work in accordance with applicable standard in Canadian Roofing Contractors Association (CRCA) Roofing Specifications.
- .2 Make adjustments to specified roofing procedures caused by weather and site conditions only with approval.
- .3 Maintain equipment in good working order to ensure control of roofing operations and protection of Work.
- .4 Do not penetrate roof deck with fastening devices unless specified and approved.
- .5 Complete entire roofing system up to line of termination of each workday.
- .6 Do priming in accordance with manufacturer's written recommendations.

3.2 PROTECTION

- .1 Cover walls and adjacent work where materials are hoisted or used.
- .2 Use warning signs and barriers. maintain in good order until completion of work.
- .3 Dispose of rainwater away from face of building until drains are installed and connected, or repaired.
- .4 Protect roofing from traffic and damage.
- .5 Place plywood runways over work to enable movement of material and other traffic.
- .6 At end of each workday or when stoppage occurs due to inclement weather, provide protection for completed work and materials out of storage. Ensure that all temporary seals are watertight and weathertight.
- .7 Seal exposed edges.

3.3 REMOVALS AND REINSTALLATIONS

- .1 As stipulated on the drawings and specified in Section 02 41 00.

3.4 EXAMINATION

- .1 Examine roof and wall upstand substrate and immediately inform the Departmental Representative in writing of defects.
- .2 Before starting Work confirm:
 - .1 Substrates are smooth, firm, straight, dry, free of water, snow, ice or frost, and swept clean of dust and debris.
 - .2 Parapets and curbs have been built or repaired as required.
 - .3 New roof drain insert has been installed at proper elevations relative to finished surfaces as required.
 - .4 Plywood and lumber nailer plates have been installed as required.
- .3 Do not install roofing materials during rain or snowfall.

3.5 WOOD COMPONENTS COVERING

- .1 Plywood under parapets and curbs: install specified self-adhesive base sheet to primed plywood surface.
- .2 Plywood at walls, curbs, and parapets: install dry base sheet and recovery board. Secure to plywood with specified fasteners and plates at 12" on center, each way. Refer to details.

3.6 VAPOUR BARRIER

- .1 Apply primer to plywood and existing vapour barrier substrate at the rates recommended by manufacturer and per CRCA specification.
- .2 Starting at low point of roof, perpendicular to slope, unroll base sheet, align and reroll from both ends.
- .3 Unroll and torch base sheet onto existing roof membrane taking care not to burn membrane or its reinforcement.
- .4 Lap sheets 75mm minimum for side laps and 150mm minimum for end laps. Offset joints in base sheet 300mm minimum from those in base sheet.
- .5 Application to be free from blisters, sags, wrinkles and fish mouths.
- .6 Do membrane application in accordance with manufacturer's recommendations.

3.7 POLYISOCYANATES INSULATION

- .1 Install insulation over vapour barrier in multiple layers.
- .2 Place boards in parallel rows with ends staggered, and in firm contact with one another. Offset 150mm minimum from joints in both directions.
- .3 Install flat and tapered insulation in accordance with reviewed shop drawings.
- .4 Stagger all joints and maintain sheets tight fitting with no voids to impair the insulation value.
- .5 Use adhesive specified by manufacturer.

3.8 INSULATION COVER BOARD

- .1 Edge and corner zones as indicated.
- .2 Install insulation cover board with factory applied base sheet in accordance with manufacturer's requirements, specified wind uplift resistance requirements, and per CSA A123.21 tested assembly adhesive and/or fastening patterns.
- .3 Torch apply base sheet cover strips/patches at exposed pressure distribution plates (if any) and at board end laps.

3.9 ROOF MEMBRANE INSTALLATION

- .1 Cap sheet to be unrolled and left to relax for the minimum time specified by the manufacturer before being installed.
- .2 Base sheet flashing application:
 - .1 Complete installation of flashing base sheet stripping prior to installing membrane cap sheet.
 - .2 Torch base and cap sheet onto substrate in 900mm wide strips.
 - .3 Lap flashing base sheet to membrane base sheet minimum 150mm and seal by torch welding.
 - .4 Lap flashing cap sheet to membrane cap sheet 250mm minimum and torch weld.
 - .5 Provide 75mm minimum side lap and seal.
 - .6 Properly secure flashings to their support, without sags, blisters, fish mouths or wrinkles.
 - .7 Install self-adhesive base sheet at parapet/fascia in accordance with manufacturer's instructions.
 - .8 Do work in accordance with manufacturer's recommendations.
- .3 Cap sheet application:
 - .1 Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and reroll from both ends.
 - .2 Unroll and torch cap sheet onto base sheet taking care not to burn membrane or its reinforcement.
 - .3 Lap sheets 75mm minimum for side laps and 150mm minimum for end laps. Offset joints in cap sheet 300mm from those in base sheet.
 - .4 Application to be free of blisters, fish mouths and wrinkles.
 - .5 Do membrane application in accordance with manufacturer's recommendations.
 - .6 Degranulate all end and side laps which are not factory degranulated.
 - .7 Install such that there is some bleed out of bitumen at laps.
- .4 Roof penetrations:
 - .1 Install roof drain pans, and other roof penetration flashings and seal to membrane in accordance with the manufacturer's recommendations and details and CRCA details.

3.10 METAL FLASHING AND TRIM

- .1 Do sheet metal Work in accordance with manufacturer's written recommendations including product technical bulletins, handling, storage and installation instructions and data sheets.
- .2 Install sheet metal work in accordance with CRCA FL series details and as detailed.
- .3 Use concealed fastenings except where approved before installation. Secure cleats as indicated.

- .4 Counter flash joints using S-lock seams forming tight over hook strips.
- .5 Lock end joints of flashings and caulk with sealant.
- .6 Provide self-adhesive base sheet underlay under sheet metal. Lap joints 75mm. Secure metal cap flashing over roofing membrane, into wood framing with colour mate screws at 750mm on center.

3.11 ROOF DRAINS

- .1 Install roof drain inserts in accordance with the manufacturer's written instructions and CRCA details.

3.12 PROTECTION OF FINISHED WORK

- .1 Protect completed roofs during construction.
- .2 Take adequate protective measures to prevent damage and that unnecessary traffic is kept off roof.

3.13 FIELD QUALITY CONTROL

- .1 Periodic site review of roofing installation will be carried out by the Owner or their designated representative. The Contractor is responsible for workmanship and quality control.

3.14 CLEAN-UP

- .1 Upon completion of the Work, clean area of unused material, packages and containers.
- .2 Clean soiled surfaces, bituminous markings, spatters, and damage caused by work of this Section. Repair or replace defaced or disfigured finishes caused by work of this section.
- .3 Remove existing debris from drain piping. Confirm roof drains and piping are clean and cleared of all construction materials and debris after roofing work is complete.

PART 1 - GENERAL

1.1 RELATED WORK

- .1 Section 07 92 00 – Joint Sealant

1.2 REFERENCES

- .1 Canadian Roofing Contractors Association (CRCA)
- .2 ASTM D523-14(R2018) Test Method for Specular Gloss.
- .3 CAN/CGSB-51.32-M77 Sheathing, Membrane, Breather Type.
- .4 CAN/CGSB-93.1-M85 Sheet, Aluminum Alloy, Prefinished, Residential.
- .5 Aluminum Association Aluminum Sheet Metal Work in Building Construction.
- .6 Canadian Roofing Contractors Association (CRCA) Manual.

1.3 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00.

PART 2 - PRODUCTS

2.1 PREFINISHED STEEL SHEET FLASHING

- .1 Prefinished steel, with factory applied silicone modified polyester.
 - .1 Class F1S.
 - .2 Colour to match existing building.
 - .3 Specular gloss: 30 units +/- 5 in accordance with ASTM D523.
 - .4 Thickness - 0.76 mm (22 gauge).

2.2 ACCESSORIES

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Underlay for metal flashing: dry sheathing to CAN/CGSB-51.32.
- .3 Sealants: as per Section 07 92 00.
- .4 Cleats: of same material as flashing specified, and temper as sheet metal, minimum 50 mm wide. Thickness 0.76 mm (22 gauge).
- .5 Fasteners: of same material as sheet metal, ring thread flat head roofing nails of length and thickness suitable for metal flashing application.

- .6 Washers: of same material as sheet metal, with rubber packings.

2.3 FABRICATION

- .1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series details.
- .2 Fabricate aluminum flashings and other sheet aluminum work in accordance with Aluminum Association Aluminum Sheet Metal Work in Building Construction.
- .3 Form pieces in 2400 mm maximum lengths. Make allowance for expansion at joints.
- .4 Hem exposed edges on underside 12 mm. Miter and seal corners with sealant.
- .5 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- .6 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.4 METAL CAP FLASHINGS

- .1 Form flashings, copings and fascias to profiles of prefinished steel.
- .2 Form flashings in accordance with CRCA FL series details. Provide slotted fixing holes and steel/plastic washer fasteners. Cover face and ends with plastic tape.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Install sheet metal work in accordance with CRCA FL series details, Aluminum Sheet Metal Work in Building Construction.
- .2 Use concealed fastenings except where approved before installation.
- .3 Provide underlay under sheet metal. Secure in place and lap joints 100 mm.
- .4 Counterflash bituminous flashings at intersections of roof with vertical surfaces and curbs. Flash joints using S-lock forming tight fit over hook strips.
- .5 Lock end joints and caulk with sealant.
- .6 Install surface mounted reglets true and level, and caulk top of reglet with sealant.
- .7 Insert metal flashing into reglets under cap flashing to form weathertight junction.
- .8 Caulk flashing at reglet cap flashing with sealant.

PART 1 - GENERAL

1.1 WORK INCLUDED

- .1 This Section specifies requirements for supplying, and applying sealants as indicated.

1.2 RELATED WORK

- .1 Section 07 52 00 – Modified Bituminous Membrane Roofing
- .2 Section 07 62 00 – Metal Flashing and Trim

1.3 REFERENCES

- .1 ASTM C920-18, Specification for Elastomeric Joint Sealants.
- .2 CAN/CGSB-19.13-M87 Sealing Compound, One Component, Elastomeric, Chemical Curing.
- .3 CAN/CGSB-19.24-M90 Multi-component, Chemical Curing Sealing Compound.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and store materials in original wrapping and containers with manufacturer's seals and labels intact. Protect from freezing, moisture and water.

1.5 ENVIRONMENTAL AND SAFETY REQUIREMENTS

- .1 Sealant and substrate materials to be minimum 5°C.
- .2 Should it become necessary to apply sealants below 5°C, consult sealant manufacturer and follow their recommendations.
- .3 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.
- .4 Conform to manufacturer's recommended temperatures, relative humidity and substrate moisture content for application and curing of sealants including special conditions governing use.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Primers: type recommended by sealant manufacturer.
- .2 Joint fillers:
 - .1 General: compatible with primers and sealants, oversized 30 to 50%.
 - .2 Polyethylene, urethane, neoprene or vinyl: extruded closed cell foam, Shore A hardness 20.
- .3 Bond breaker: pressure sensitive plastic tape, which will not bond to sealants.
- .4 Sealants:
 - .1 Exterior caulking around flashings and mechanical equipment and curbs: to CAN/CGSB-19.13, one-component, moisture curing, modified polyurethane, paintable, normal temperature range dry conditions, movement range to 10%.
 - .1 Acceptable product: DyMonic by Tremco Limited, or approved equivalent.
- .5 Joint cleaner: xylol, methylethyleketon or non-corrosive type recommended by sealant manufacturer and compatible with joint forming materials.

PART 3 - EXECUTION

3.1 PREPARATION

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .2 Remove by brushing, scrubbing, scraping or grinding loose mortar, dust, oil, grease, oxidation, mill scale, coatings and all other materials affecting bond of compounds from surfaces to which sealant compounds must adhere, except for painted surfaces.
- .3 Clean down caulked metal surfaces with clean cellulose sponges or rags soaked in solvent recommended by sealant manufacturer, and wipe dry with clean cloths. Confirm solvent is not injurious to painted surfaces.
- .4 Confirm releasing agents, coatings or other treatments have either not been applied to joint surfaces, or that they are entirely removed.
- .5 Confirm joint surfaces are dry and frost free.

3.2 APPLICATION

- .1 Apply sealant products where indicated on the drawings and as outlined in Clause 2.1 of this Section.
- .2 Where necessary to prevent staining, mask adjacent surfaces before priming and caulking.
- .3 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.
- .4 Apply sealants, primers, joint fillers, and bond breaker if required, to manufacturer's instructions. Apply sealant using gun with proper size nozzle. Use sufficient pressure to fill voids and joints solid. Superficial pointing with skin bead is not acceptable.

- .5 Form surfaces of sealant with full bead, smooth, free from ridges, wrinkles, sages, air pockets, embedded impurities. Neatly tool surface to a slight concave joint.

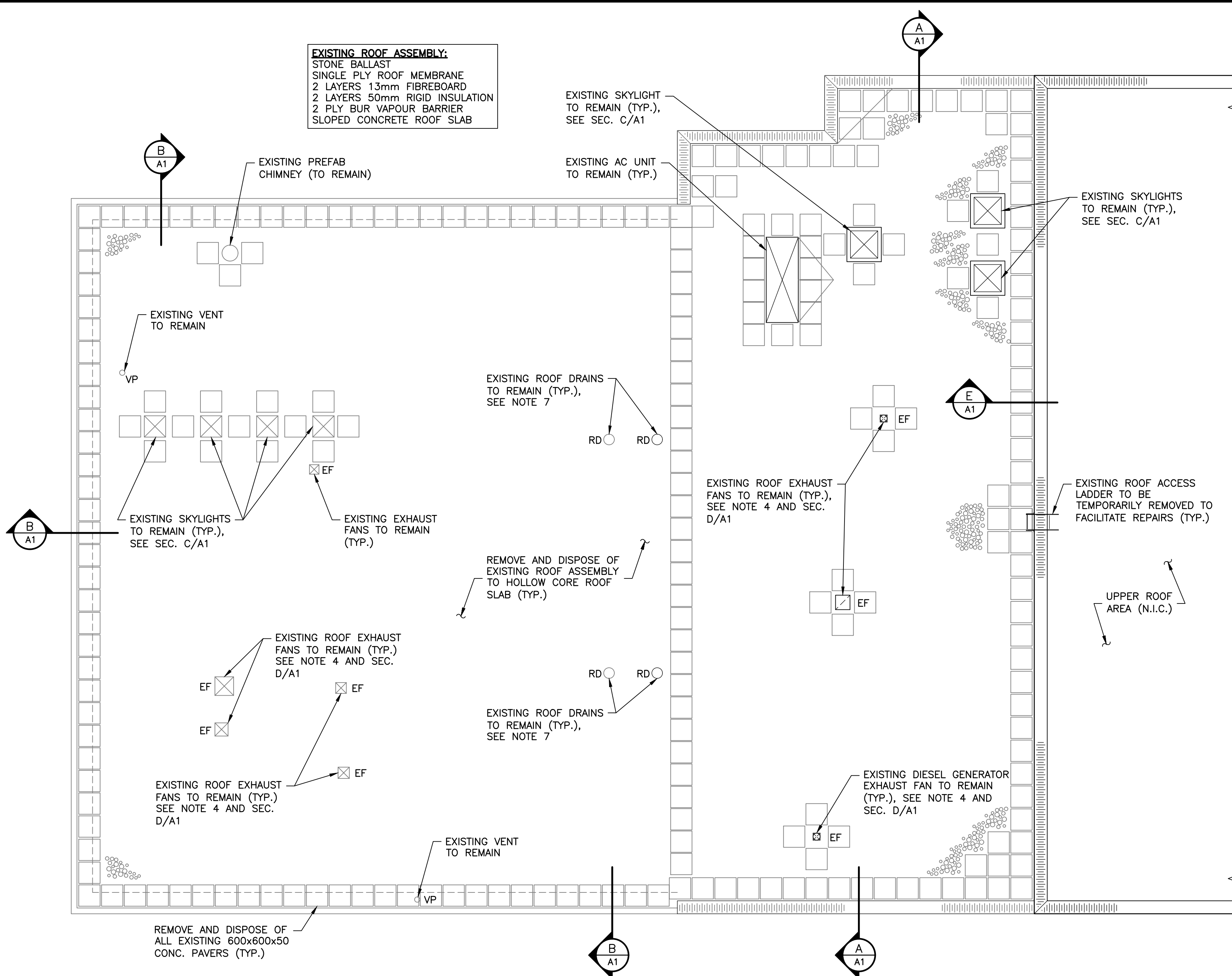
3.3 CURING

- .1 Cure sealants in accordance with sealant manufacturer's instructions.
- .2 Do not cover up sealant until proper curing has taken place.

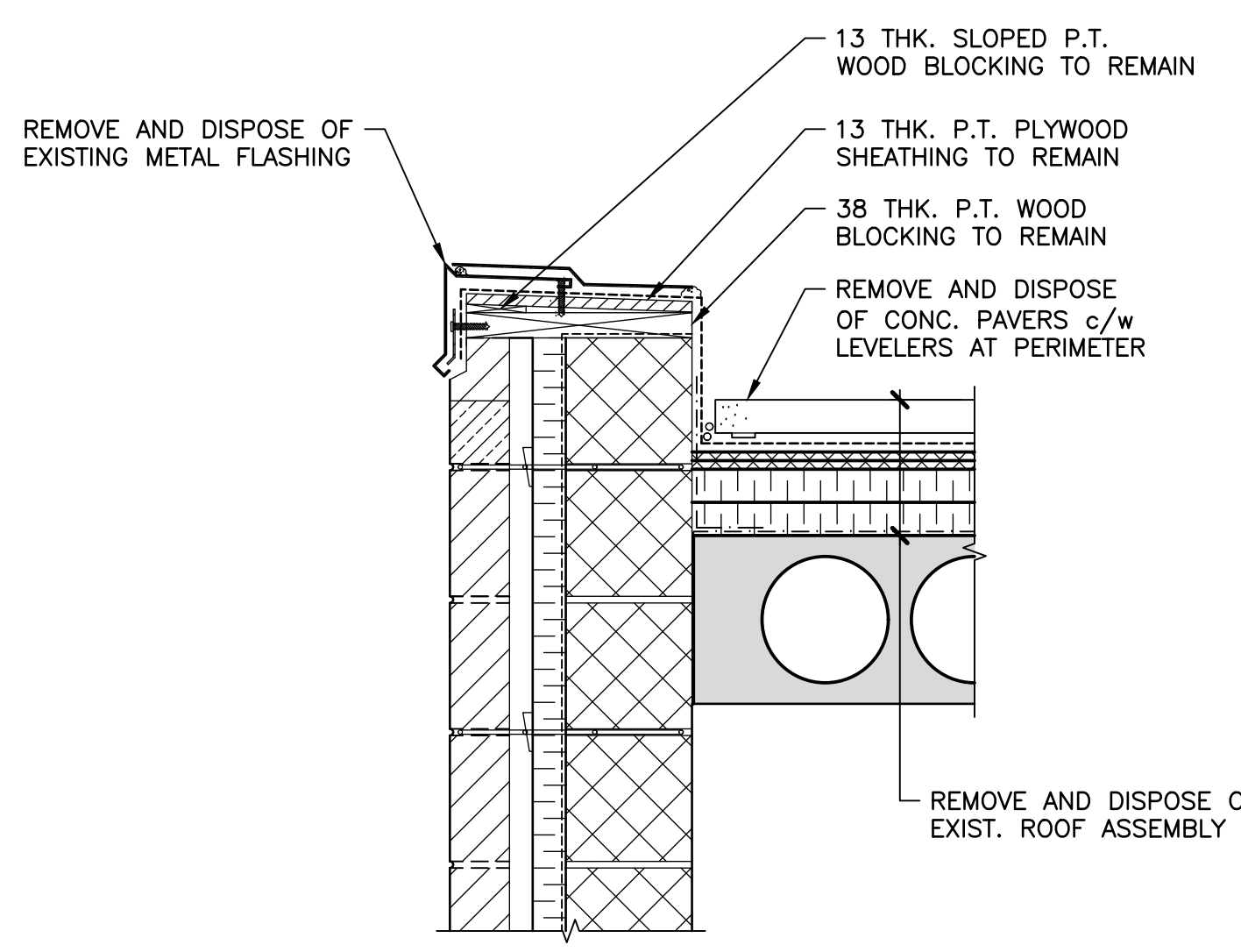
3.4 CLEANING

- .1 Clean adjacent surfaces immediately and leave work neat and clean.
- .2 Remove excess and droppings, using recommended cleaners as work progresses.
- .3 Remove masking tape after initial set of sealant.
- .4 Do not use chemicals, scrapers, or other tools which would damage surfaces of caulked materials when excess compounds or droppings are removed. Repair Work damaged by cleaning.

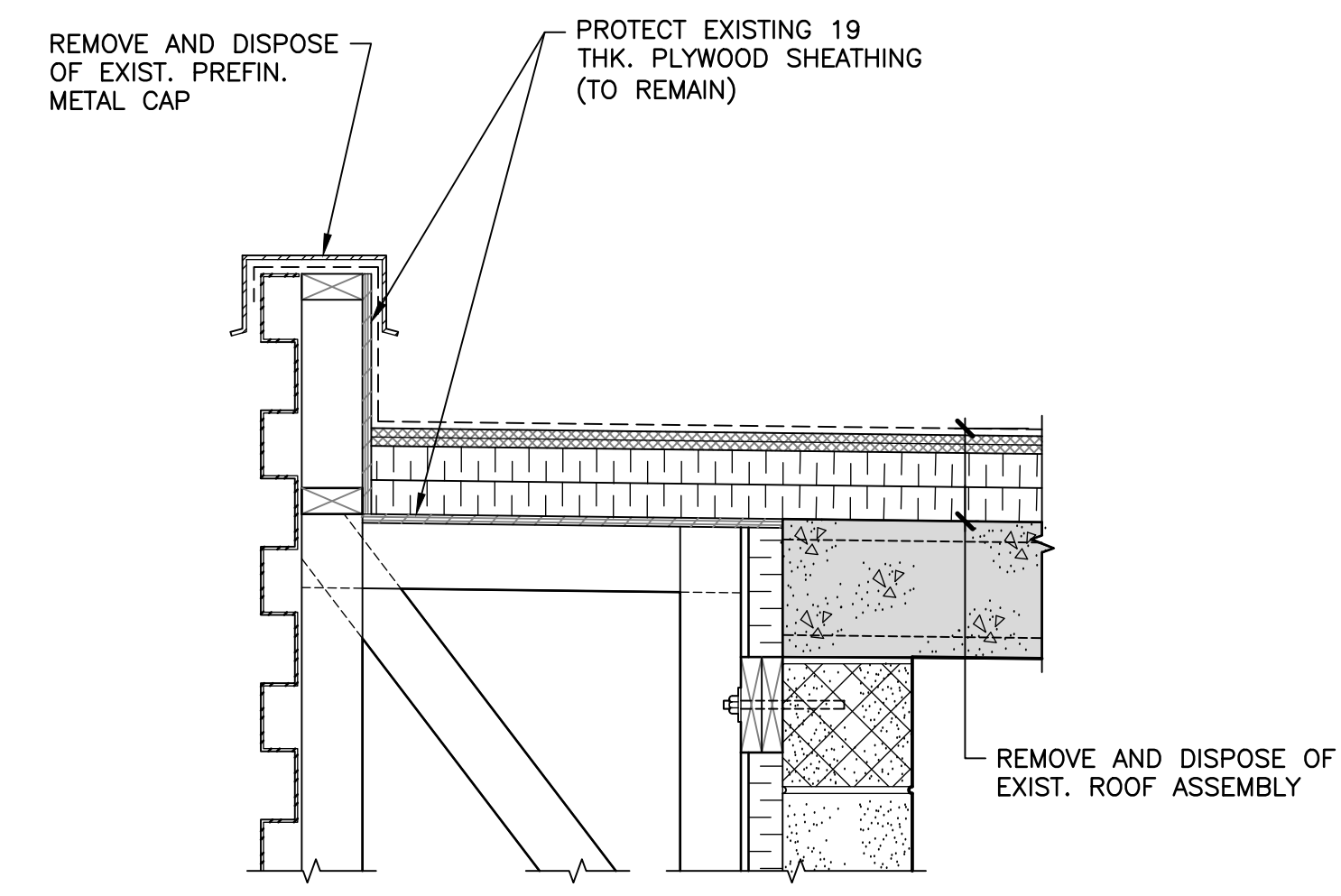
EXISTING ROOF ASSEMBLY:
 STONE BALLAST
 SINGLE PLY ROOF MEMBRANE
 2 LAYERS 13mm FIBREBOARD
 2 LAYERS 50mm RIGID INSULATION
 2 PLY BUR VAPOUR BARRIER
 SLOPED CONCRETE ROOF SLAB



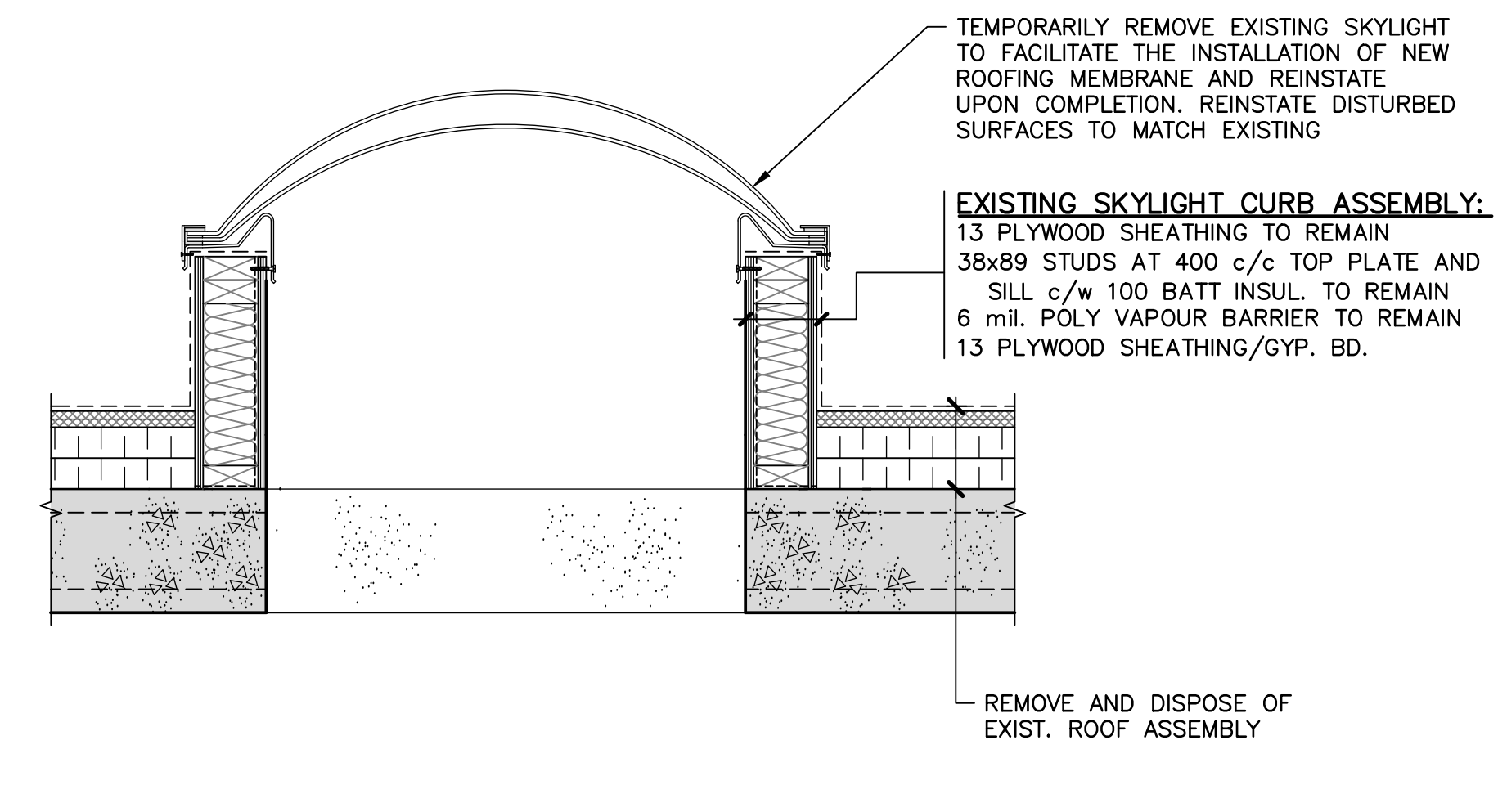
PLAN PARTIAL ROOF (DEMOLITION)
 1:75



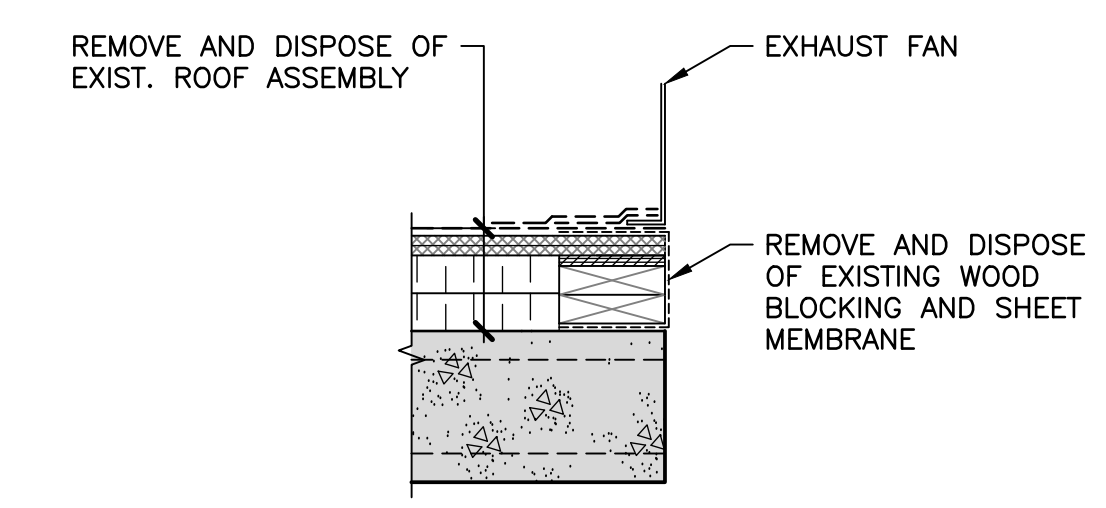
A SECTION TYPICAL PARAPET AT WALL
 1:10



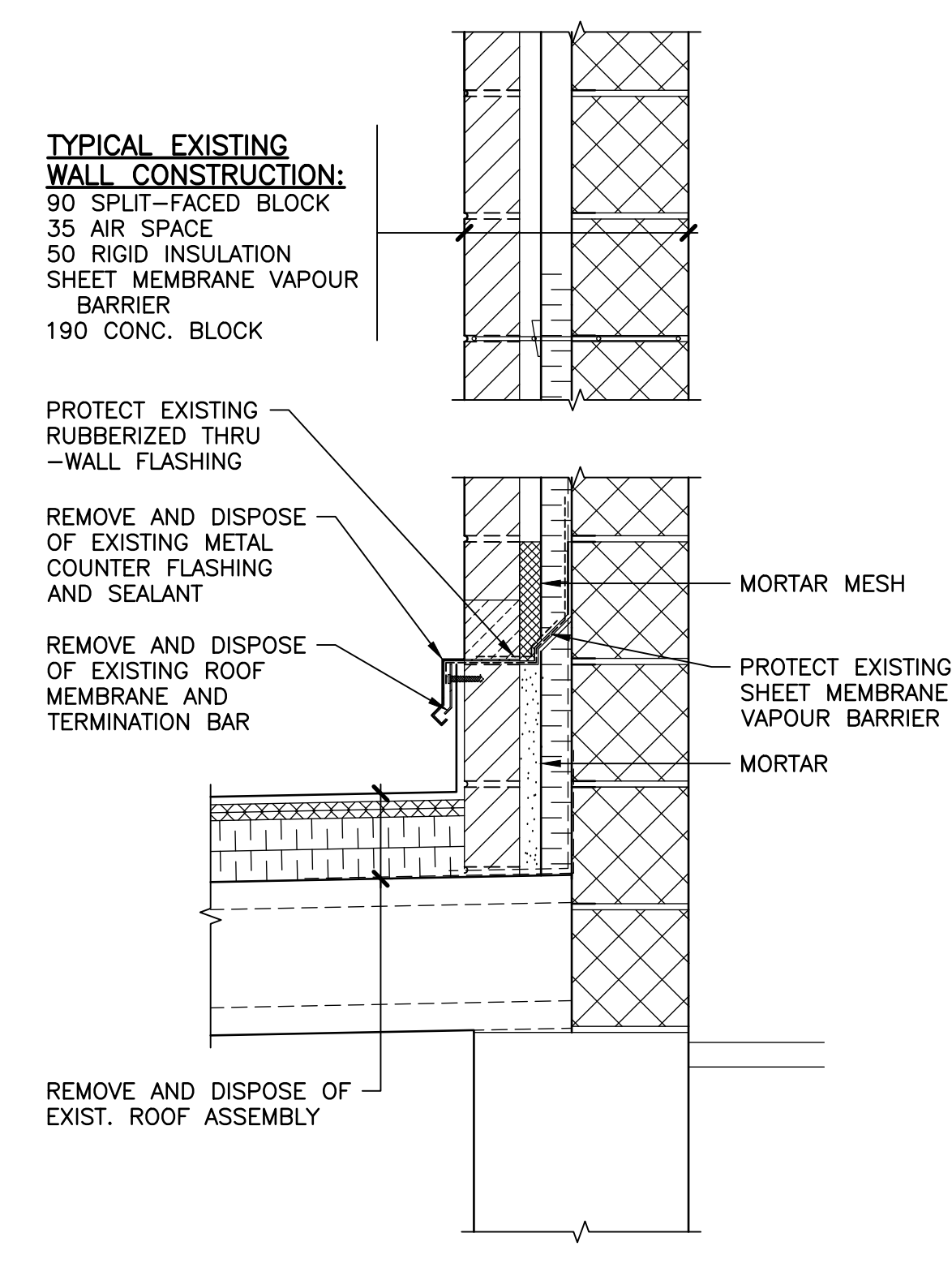
B SECTION PARAPET AT FASCIA OVERHANG
 1:10



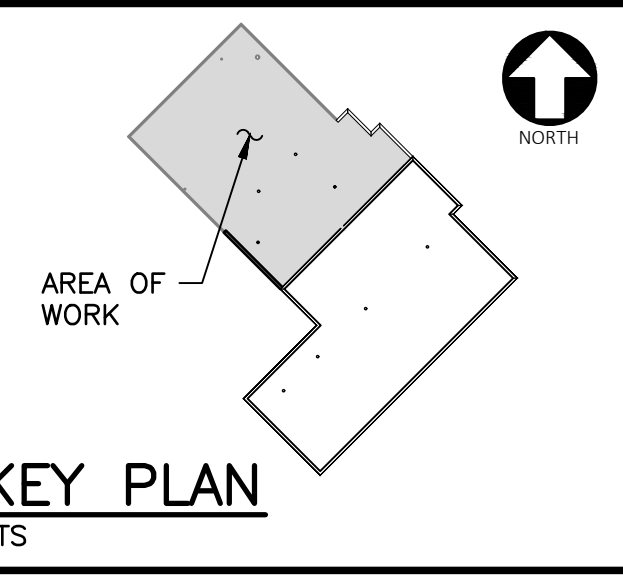
C SECTION TYPICAL SKYLIGHT
 1:10



D SECTION TYPICAL EXHAUST FAN CURB
 1:10



E SECTION TYPICAL UPTURN AT WALL
 1:10



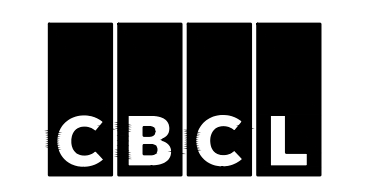
- NOTES:**
- CONTRACTOR TO CONFIRM ALL EXISTING SITE CONDITIONS AND MEASUREMENTS.
 - CONTRACTOR TO INSTALL TEMPORARY ROOF ACCESS/EGRESS SYSTEMS FROM THE ROOF DURING CONSTRUCTION AND REMOVE AFTER COMPLETION OF WORK. REPAIR ANY DISTURBED FINISHES AS REQ'D. TEMPORARY EGRESS TO BE SECURED FROM THE PUBLIC ACCESS AT THE END OF EVERY WORK DAY.
 - THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING, STORING, AND PROTECTING THE EXISTING ROOFTOP MECHANICAL EQUIPMENT, AS WELL AS REINSTATING. PROVIDE NEW FLASHINGS AND ENSURE ROOF PENETRATIONS ARE SEALED.
 - TEMPORARILY REMOVE EXISTING SKYLIGHTS AND MECHANICAL UNITS FROM CURBS TO ALLOW FOR INSTALLATION OF NEW ROOFING MEMBRANES. INSTALL NEW FLASHING OVER EXISTING CURBS & REINSTATE UNITS UPON COMPLETION OF ROOF WORK.
 - ALL EXISTING VENT PIPES, MECHANICAL CURBS & SUPPORTS TO BE A MINIMUM OF 300mm ABOVE FINISHED ROOF. RAISE AS REQUIRED TO ENSURE PROPER CLEARANCE.
 - CONTRACTOR TO CONFIRM ROOF DRAIN LOCATIONS AND PIPE ROUTING. SUPPLY & INSTALL ROOF DRAIN INSERTS OR NEW ROOF DRAIN AS REQUIRED TO SUIT NEW FINISHED ROOF ASSEMBLY THICKNESS, SIZE & STYLE TO MATCH EXISTING DRAIN. EXISTING DRAINS TO BE SNAKED & CLEANED.
 - CONTRACTOR TO REPAIR OR REPLACE EXISTING PLYWOOD SHEATHING AND WOOD BLOCKING AS REQUIRED TO PROVIDE ADEQUATE SUPPORT FOR NEW ROOFING MATERIALS.
 - CONTRACTOR TO INSTALL A CANT AT UPTURNS AS REQUIRED BY THE MEMBRANE MANUFACTURER.

NOT FOR CONSTRUCTION

- LEGEND:**
- RD ROOF DRAIN.
 - EF EXHAUST FAN, SEE NOTE 4.
 - VP VENT PIPE, SEE NOTE 5.

No	Description	Date	By
1	ISSUED FOR TENDER	01/09/2023	

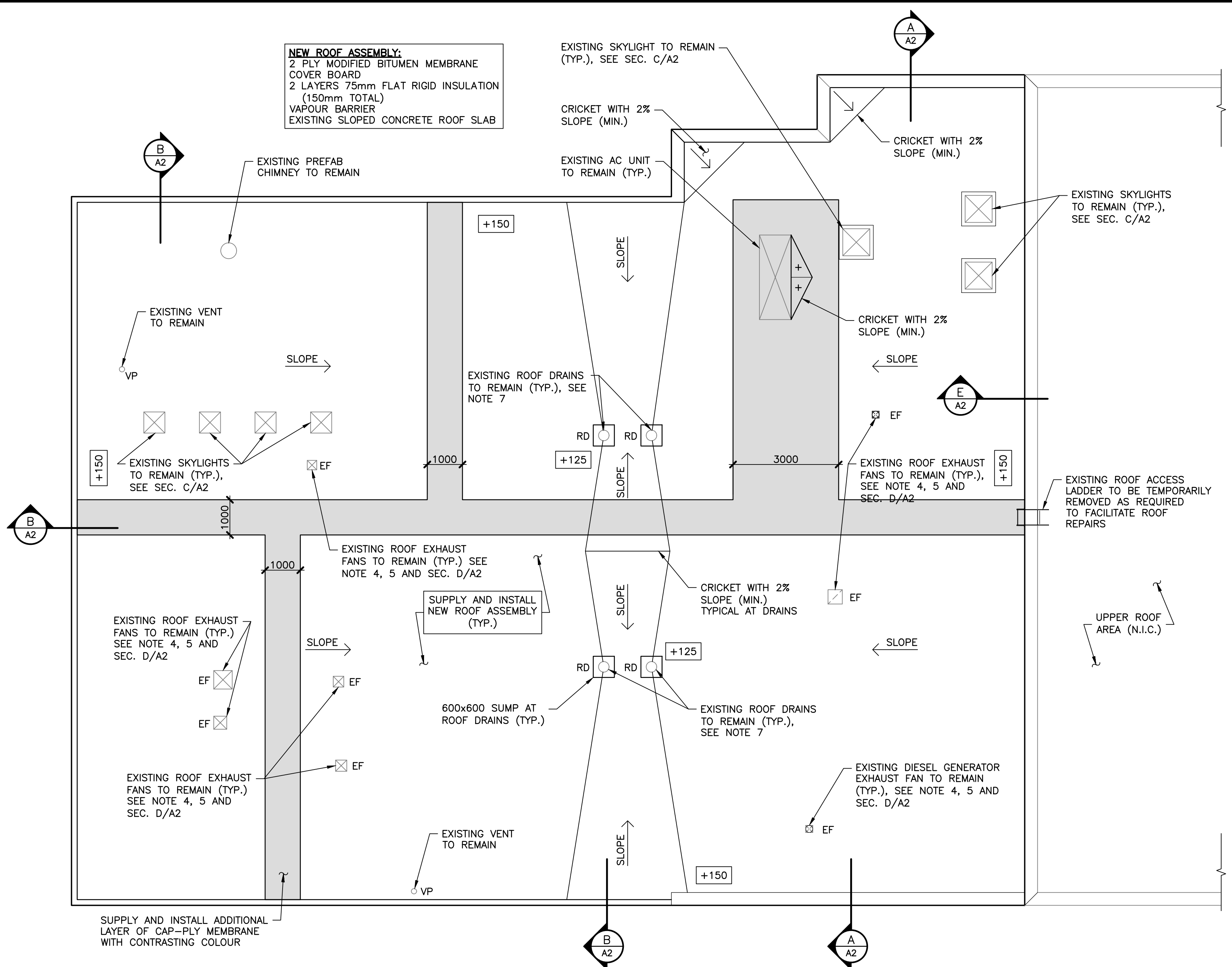
ARCHITECTURAL
 DEMOLITION
 ROOF PLAN AND SECTIONS



Client No 220231.00	Contract No
Date JUN. 2023	Scale AS NOTED
Designed DW	Drawn JK
Checked SE	Approved SE
Sheet No 1	of 2
Drawing No	

A1

NEW ROOF ASSEMBLY:
 2 PLY MODIFIED BITUMEN MEMBRANE
 COVER BOARD
 2 LAYERS 75mm FLAT RIGID INSULATION
 (150mm TOTAL)
 VAPOUR BARRIER
 EXISTING SLOPED CONCRETE ROOF SLAB

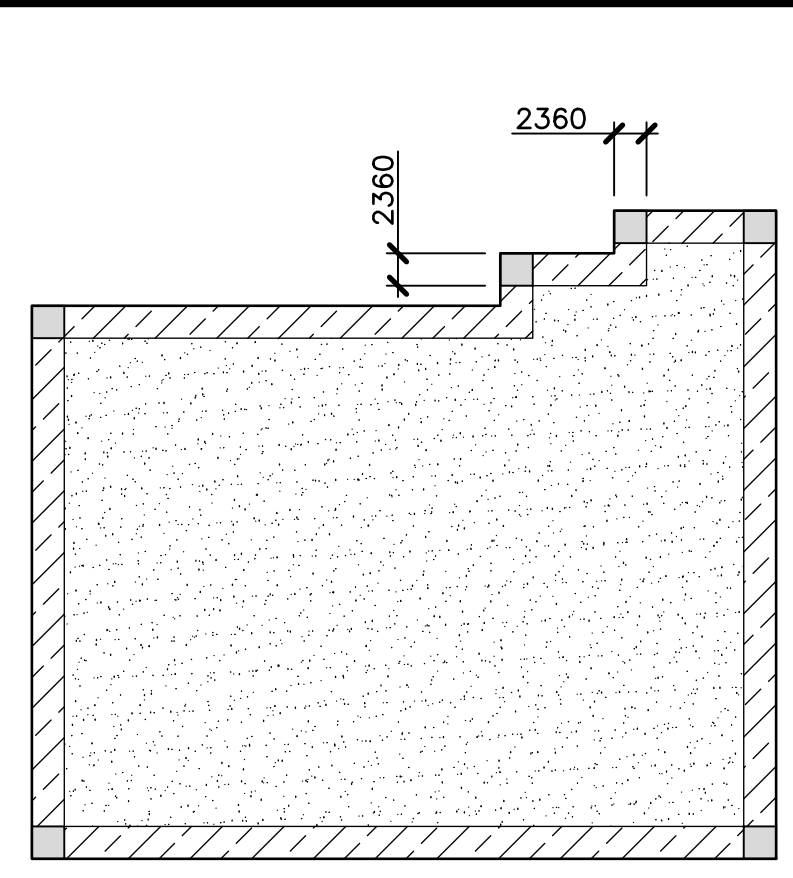
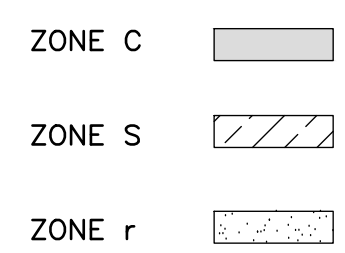


PLAN PARTIAL ROOF
 1:75 (RESTORATION)

- WIND UPLIFT DESIGN PARAMETERS:**
- REFERENCE VELOCITY PRESSURE 0.56 kPa
 - IMPORTANCE CATEGORY HIGH
 - EXPOSURE OPEN TERRAIN
 - DESIGN ROOF HEIGHT 9 Meters
 - TOPOGRAPHIC FACTOR $C_t = 1.0$
 - ROOF SLOPE $< = 7$ DEGREES

ROOF FACTORED EXTERNAL WIND UPLIFT PRESSURES:

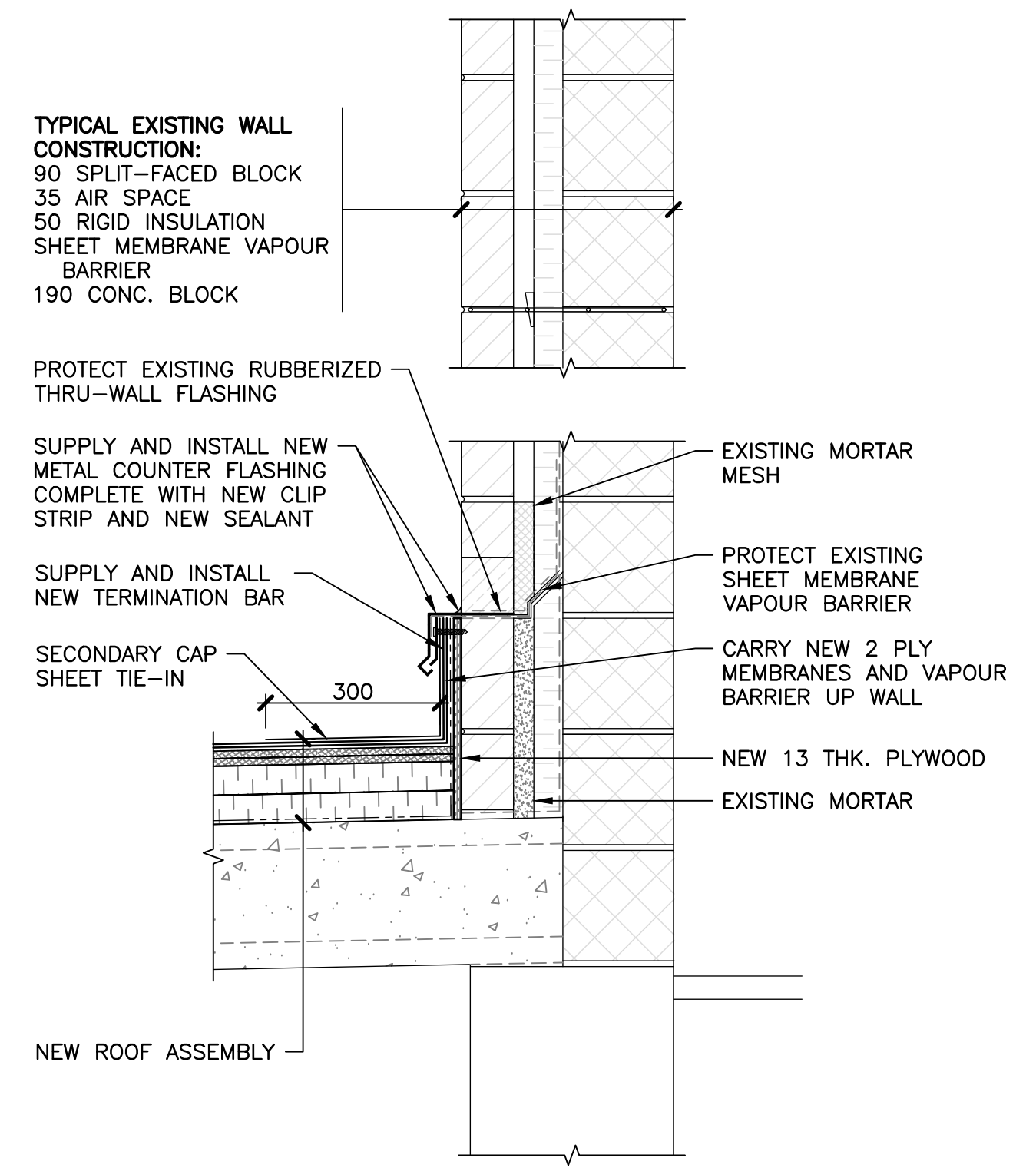
- ZONE C = -5.3 kPa
 ZONE S = -2.7 kPa
 ZONE r = -2.1 kPa



KEY PLAN
 NTS

NOTES:
 1. REFER TO SHEET A1 FOR NOTES.

PLAN WIND UPLIFT
 N.T.S.

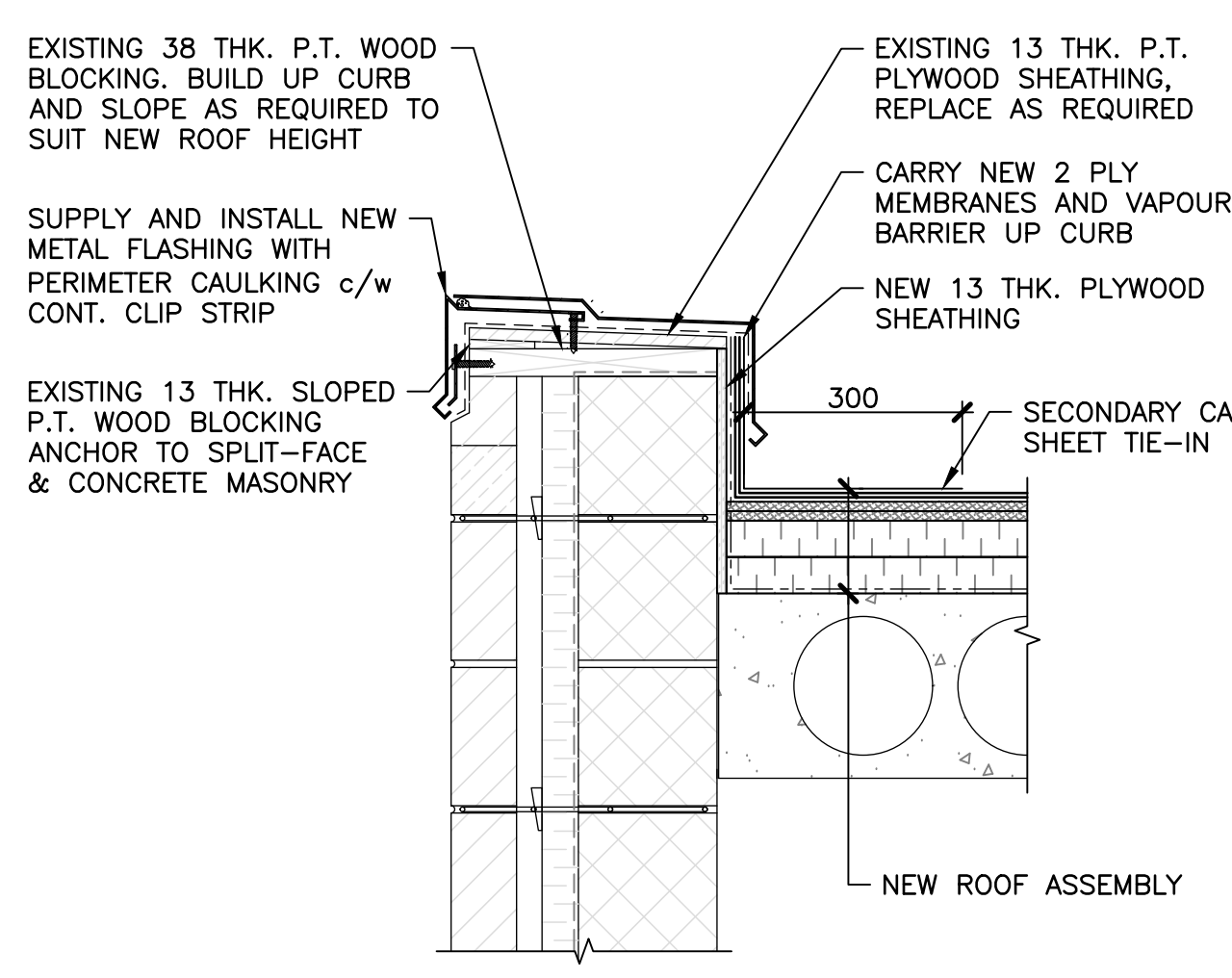


E SECTION TYPICAL UPTURN AT WALL
 1:10

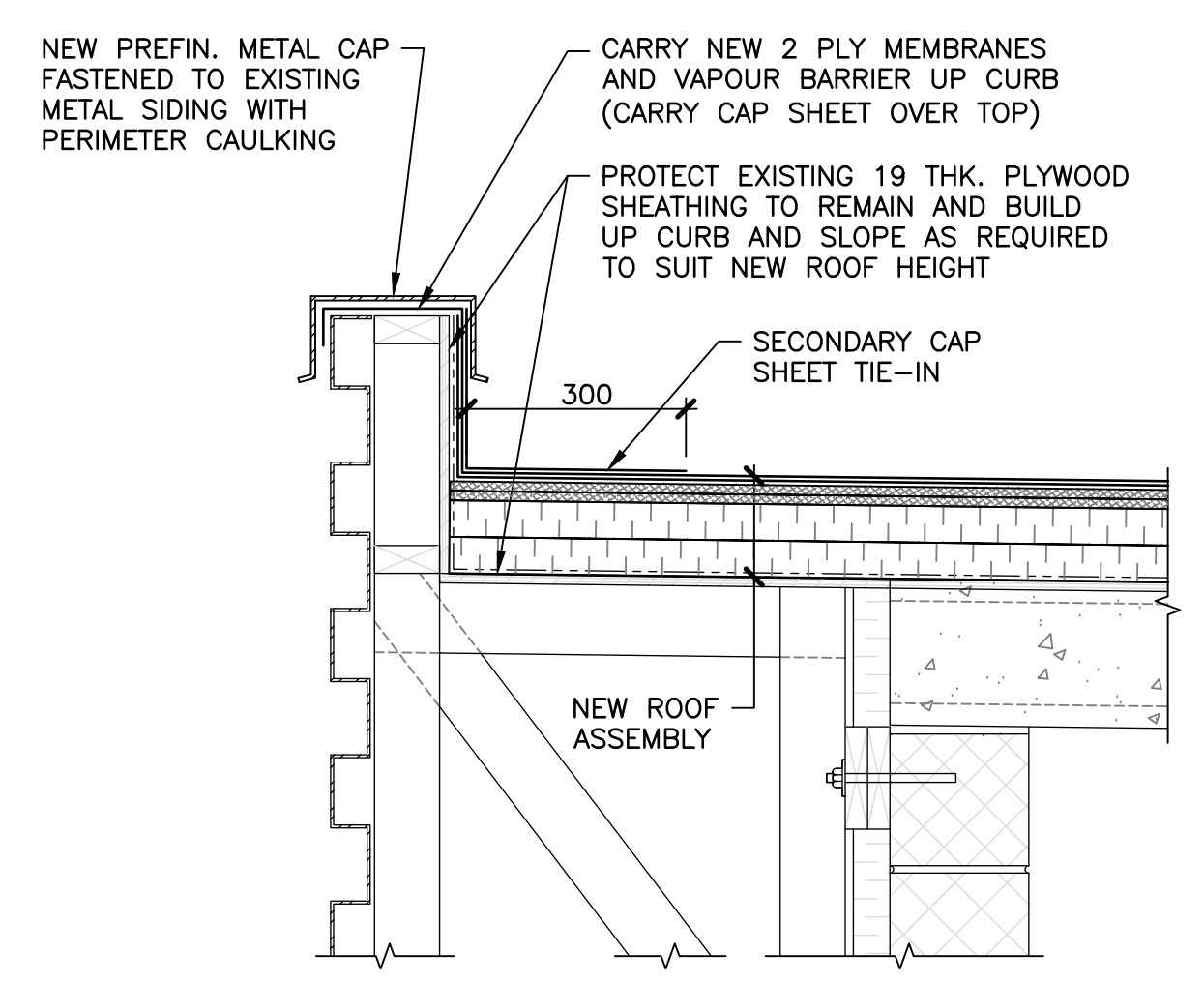
NOT FOR CONSTRUCTION

- LEGEND:**
- RD ROOF DRAIN.
 - EF EXHAUST FAN, SEE NOTE 4.
 - VP VENT PIPE, SEE NOTE 5.
 - +150 TOTAL RIGID INSULATION THICKNESS.

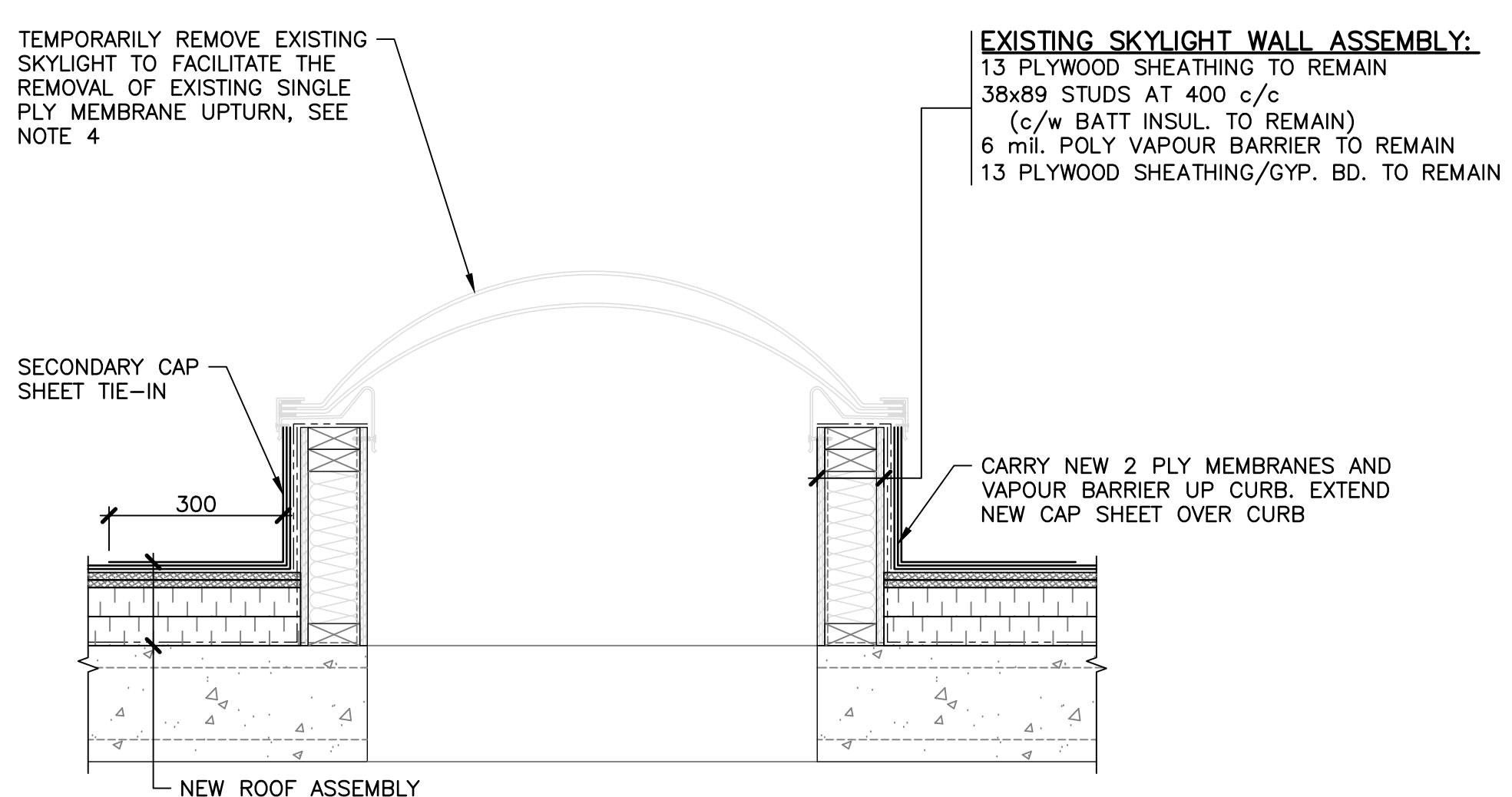
No	Description	Date	By
1	ISSUED FOR TENDER	01/09/2023	



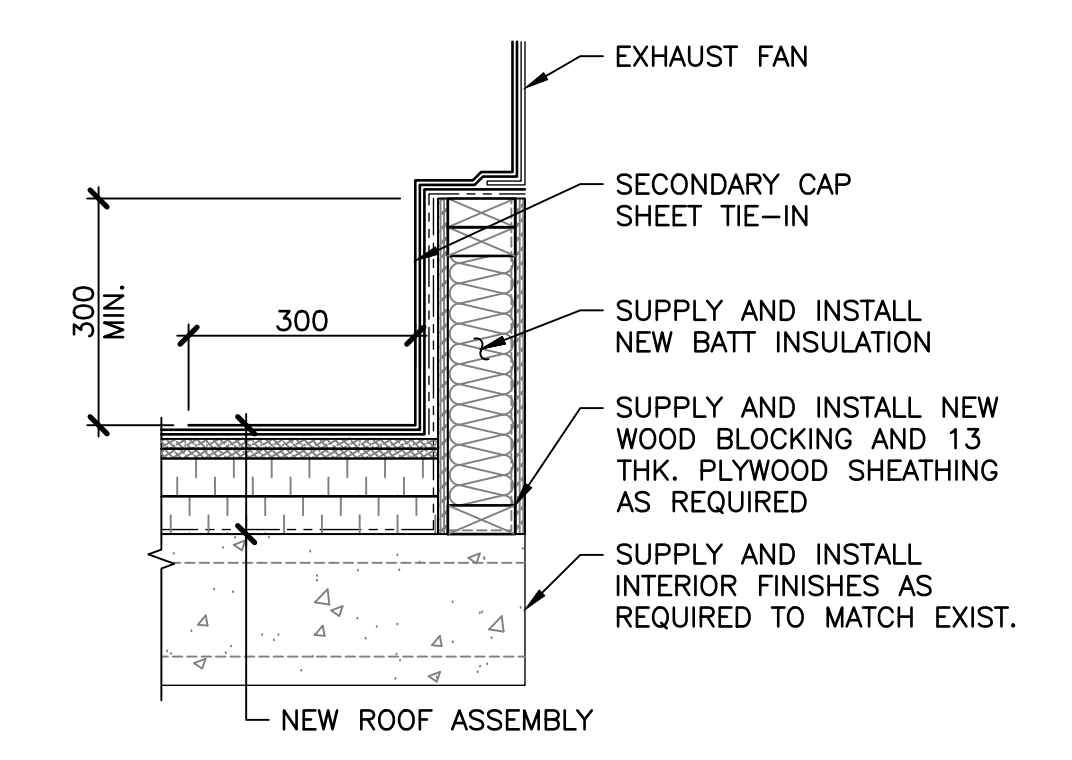
A SECTION TYPICAL PARAPET AT WALL
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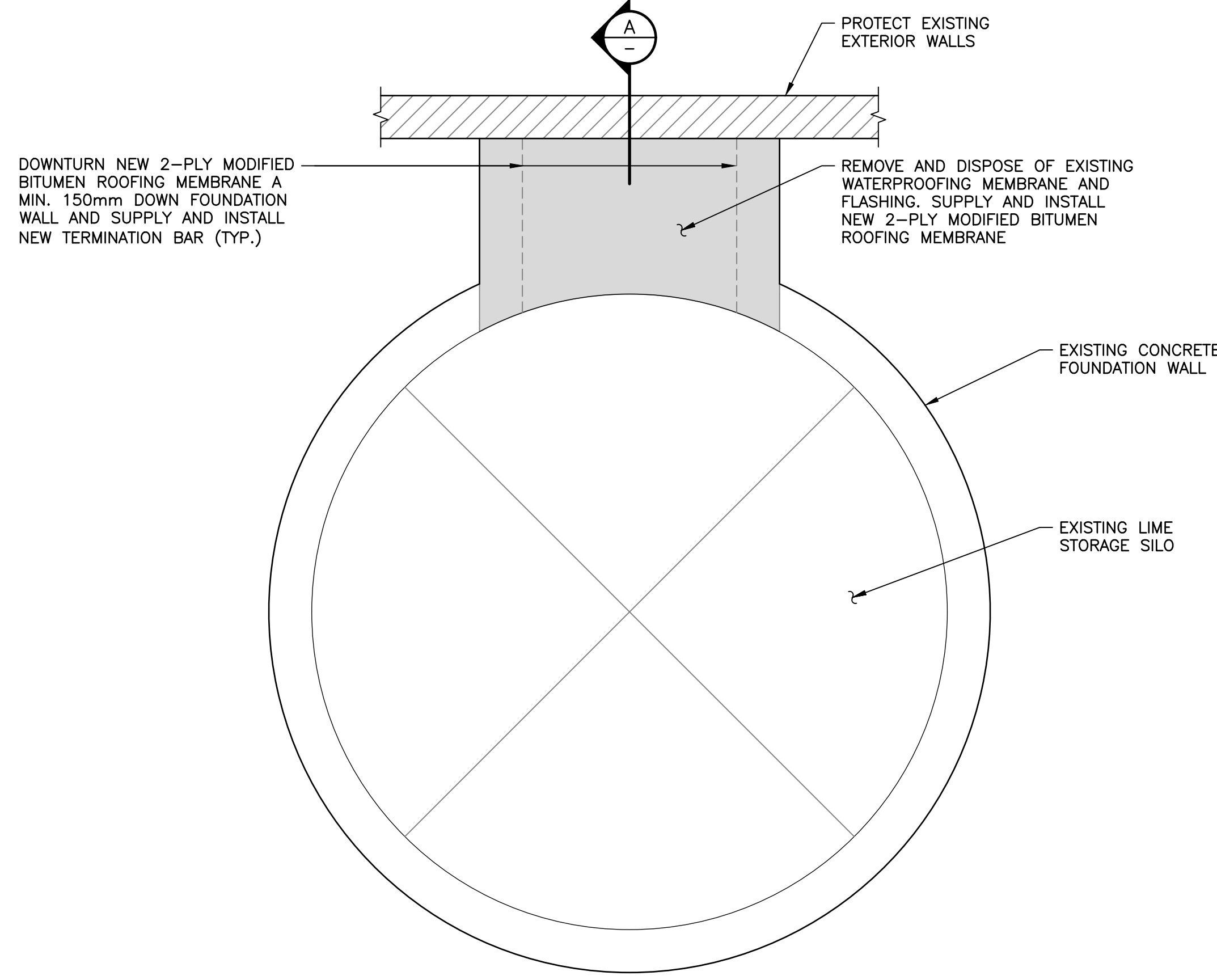
B SECTION PARAPET AT FASCIA OVERHANG
 1:10



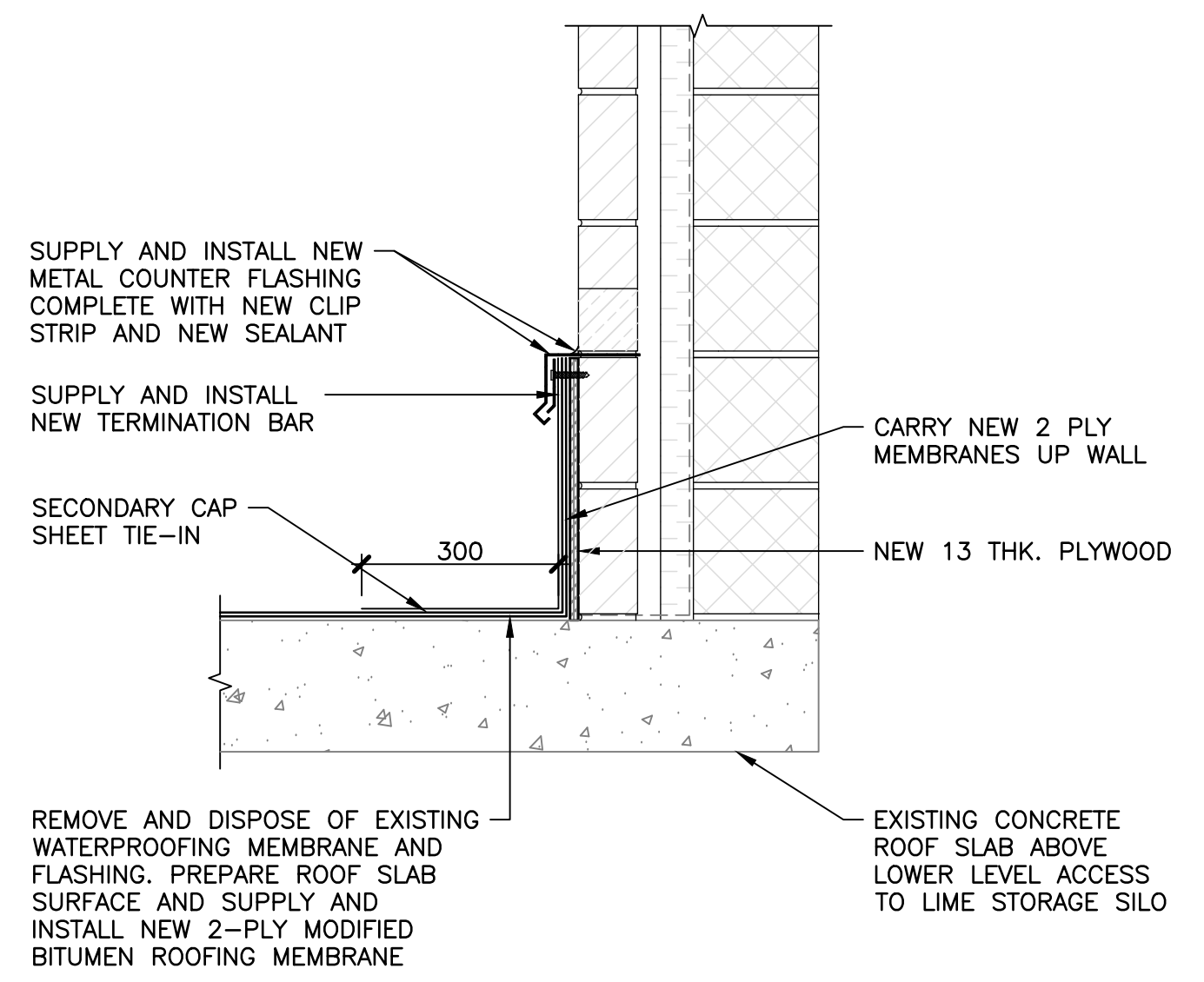
C SECTION TYPICAL SKYLIGHT
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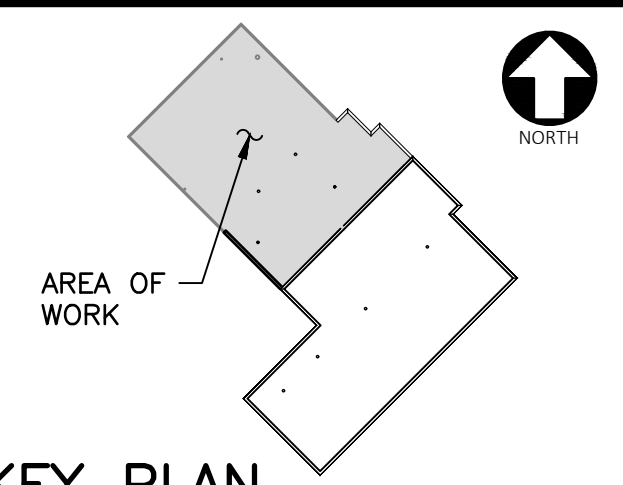
D SECTION TYPICAL EXHAUST FAN CURB
 1:10



PLAN PARTIAL LIME STORAGE SILO ROOF SLAB
1:30



A SECTION LIME STORAGE SILO ROOF SLAB
1:10 (UPTURN DETAIL)



KEY PLAN
NTS

NOTES:
1. REFER TO SHEET A1 FOR NOTES.

NOT FOR CONSTRUCTION

No	Description	Date	By
1	ISSUED FOR TENDER	01/09/2023	

Revision or Issue

ARCHITECTURAL
RESTORATION
ROOF PLAN AND SECTIONS



CBCL No 220231.00	Contract No
Date JUN. 2023	Scale AS NOTED
Designed DW	Drawn JK
Checked SE	Approved SE
Sheet No 2	of 2
Drawing No	

A3