

CCDC 2

Stipulated Price Contract

2 0 2 0

23vR134A - Carlton Park Gardens, 10851-10991 Mortfield Road, Richmond - Exterior Siding and Window Replacement

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CCDC 2 STIPULATED PRICE CONTRACT

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AGREEMENT BETWEEN OWNER AND CONTRACTOR

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

This Agreement made on 11th day of June in the year 2024 .
by and between the parties

CAPREIT Limited Partnership

hereinafter called the "Owner"

and

Roma Building Restorations Ltd.

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)
Exterior Siding and Window Replacement

located at (insert below the Place of the Work)

10851-10991 Mortfield Road, Richmond BC

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

Sense Engineering Ltd

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 17th day of June in the year 2024 and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the 12th day of October in the year 2024 .

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

*

Bid Documents and Specifications Issued for Tender dated March 13, 2024

Roma Building Restoration Fully Executed Addendum No. 1 dated April 23, 2024

Roma Building Restoration Fully Executed Addendum No. 2 dated April 29, 2024

Roma Building Restoration Ltd. Fully Executed Bid Submission dated May 7, 2024

* (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:

Two Hundred Thirty-Seven Thousand, Four Hundred Five and
00 /100 dollars \$ 237,405.00

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

Eleven Thousand, Eight Hundred Seventy and
25 /100 dollars \$ 11,870.25

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

Two Hundred Forty-Nine Thousand, Two Hundred Seventy-Five
 and25 /100 dollars \$ 249,275.25

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

CAPREIT Limited Partnership

*name of Owner**

11 Church Street, Suite 401
Toronto, ON M5E 1W1

address

m.qassim@capreit.net

email address

Contractor

Roma Building Restorations Ltd.

*name of Contractor**

2054 Kingsway Avenue, Unit 2
Port Coquitlam, BC V3C 1S5

address

joe@roma-restoration.ca

email address

Consultant

Sense Engineering Ltd

*name of Consultant**

104-788 Copping Street
North Vancouver, BC V7M 3G6

address

kieran@senseengineering.com

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

CAPREIT Limited Partnership

name of Owner

DocuSigned by:
Adam Sharkawy, Senior Director
A2F254ABF0CB4B6...

signature

Adam Sharkawy, Senior Director

name of person signing

DocuSigned by:
Nick Savino, VP Operations Services
8C9CD57579F04FA...

signature

Nick Savino, VP Operations Services

name and title of person signing

WITNESS

CONTRACTOR

Roma Building Restorations Ltd.

name of Contractor

DocuSigned by:
Dang Siharath
B830FEA5E403427...

signature

Dang Siharath

name of person signing

DocuSigned by:
Hrithik Bhangu
535DE73612824A8...

signature

Hrithik Bhangu

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

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

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*.

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CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
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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



ISSUED FOR TENDER

**BID DOCUMENTS AND
SPECIFICATIONS**

FOR

**EXTERIOR SIDING AND
WINDOW REPLACEMENT**

AT

CARLTON PARK GARDENS

10851 - 10991 MORTFIELD ROAD,
RICHMOND

PREPARED FOR:

Canadian Apartment Properties REIT
11 Church Street
Toronto, ON M5E 1W1

Attention: Jeff Watts

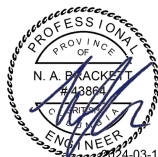
PREPARED BY:

Sense Engineering Ltd.
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Attention: Kieran Bjornson

March 13, 2024

Sense Project No. 23vR134A



Permit to Practice No. 1002213



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D-6.06	Sliding Door Sill
D-6.07	Sliding Door Jamb
D-6.08	Swing Door Head
D-6.09	Swing Door Sill
D-6.10	Swing Door Jamb

APPENDICES

Appendix A – Request for Substitution
Appendix B – Time Sheet Template

End of Section 00 01 10



PART 1 - GENERAL

1.1 Invited Bids

Bids will be accepted only from invited Contractors.

1.2 Bidders Meeting

There will be a briefing meeting in the parking lot in front of the Regency - 10851 Mortfield Road on (Refer to Tender Call).

1.3 Delivery and Opening of Bids

Submit bid via email, with the Bidder's name and project name in the subject line, to:

(Refer to Tender Call)

The recipient will reply to the bid submission email with a confirmation of its receipt. It is the Bidder's responsibility to ensure that email submissions are received before the closing date and time.

Bids shall be signed by a duly authorized signing officer and a witness.

Bids submitted after the above time may be rejected. Bids will be opened privately immediately after the closing date and time.

Amendments to bids will only be accepted if received by email prior to the closing date and time by the same party who signed the bid.

End of Section 00 11 16



PART 1 - GENERAL

1.1 Description of the Work

Refer to Scope of Work - 01 10 00 for a general description of the work. The specific requirements of the work are given in the drawings, details, and technical specifications.

It shall be the Bidder's responsibility to ensure that all items have been included in the submitted bid.

1.2 Examination of Site

It is the responsibility of each Bidder to conduct sufficient investigation of the site and obtain all required information about local conditions prior to submitting their Bid. Bidders may not claim at any time after submission of the bid that there was any misunderstanding of the terms and conditions of the Contract relating to site conditions evident or apparent during the bid period. The Owner, the Consultant and their employees will not be held responsible for the Bidders' failure to obtain such information.

1.3 Omissions and Discrepancies

Bidders shall ensure that their copy of the documents contains all the pages listed in the Table of Contents and on Addenda. Should a Bidder find discrepancies, deficiencies, ambiguities, errors, inconsistencies and/or omissions in bid documentation, or be in doubt as to their meaning, the Bidder shall notify the Consultant immediately.

1.4 Queries

All questions shall be directed to the Consultant. No oral interpretations made to a Bidder as to the meaning of any of the bid documents or specifications shall modify any of the provisions of the bid documents. All requests for interpretation shall be made to the Consultant by email or in writing no later than 96 hours before the tender closing date. Bidders may be advised by email or in writing of clarifications or changes. Bidders may be advised by email or in writing of clarifications or changes no later than 48 hours before the tender closing date. Oral interpretations are only contractually binding when confirmed by written addenda.

1.5 Addenda

All Addenda sent to the Bidders during the bid period shall be considered part of the Contract Documents.

1.6 Collusion

By submitting a bid, the bidder declares:

- (i) there is no collusion or arrangement, formal or informal, between the bidder and any other actual or prospective bidder(s) in connection with bids submitted for this Scope;
- (ii) the bidder has no knowledge of the contents of any other bid; and
- (iii) the bidder has made no comparison of figures, agreement or arrangement, express or implied, with any other party in connection with its bid.



Bidders will be permanently removed from Sense Engineering's preferred contractor roster if any evidence of collusion is identified. Further, if collusion between any bidders is discovered, this work will be re-tendered with all bidders having knowledge of other bids removed from this invitation.

1.7 Limitation of Liability

Bidders agree that the Owner and Consultant shall not be responsible for any damages, interest, costs, losses, expenses or compensation whatsoever or howsoever arising from the tender process, the bid documents, the acceptance or non-acceptance of any bid or by reason of any delay in the acceptance or non-acceptance of the bid.

By submitting a bid, Bidders agree to waive any and all actions, causes of action, claims, suits, debts, complaints, demands which the Bidders now have or at any time hereafter can, shall or may have against the Owner and Consultant arising from the tender process, the bid documents, the acceptance or non-acceptance of any bid or by reason of any delay in the acceptance or non-acceptance of the bid.

The Owner reserves the right to negotiate changes to the supplementary conditions, scope of work, general requirements, materials, specifications, details, or other conditions with any Bidder. The Owner may ask any Bidder to clarify or correct their bid, including revising prices because of a misunderstanding in the scope of work.

The Owner may consider the following factors when determining the awarded bid:

- Schedule (start date and/or duration)
- References (of the Contractor and sub-contractors)
- Contractor and/or sub-contractor experience
- Contractor and/or sub-contractor past performance
- Contractor's understanding of the Work
- Project personnel
- Sub-contractors
- Bidders' financial strength
- Base bid and/or optional pricing
- Bidders' environmental stewardship
- Geographic proximity of the Contractor and sub-contractors to the site
- Ability of the bidder to obtain the specified warranties

1.8 Privilege and Discretion

In its sole discretion, the Owner reserves the right to reject any or all bids and to accept any bid which the Owner considers advantageous (including a non-compliant bid), whether or not it is the lowest bid.

1.9 Bid Rejection

Bids that are unsigned, improperly signed, conditional, illegible, unclear, contain arithmetical errors or alternates, or missing required bid submissions may be rejected.

1.10 CCDC Document



The CCDC 2 2020 Standard Construction Document in combination with the modifications made in this Bid Document shall apply to this Project, subject to negotiation as outlined in Item 1.7 of this Section.

1.11 Prices and Method of Quotation

An Estimated Contract Price will be arrived at by summing prices quoted for the individual Items, and including selected optional Items, if provided. Prices shall include all labour, materials, costs for the co-ordination between the Items, clean-up, temporary removal and replacement of items which will affect the Work, making good finishes affected by the Work, overhead, profit and statutory charges. Breakdown of Work into sections is for the purpose of assessing bids and for payment during construction.

1.12 Alternates

No substitutions for specified materials or procedures will be permitted without written notification in an Addendum prepared by the Consultant. Bids including alternate materials or procedures may be rejected.

1.13 Submittals

As part of the tender submission, bidders shall submit all documents identified in Submittals and Procedures – 01 32 19 that are listed as being submitted with tender documents.

1.14 Completion Dates

The Bidder shall state the time frame required to reach Completion of All Work in working weeks. The site will be available immediately. The work will be performed continuously, efficiently and without interruption until Completion of All Work.

1.15 Project Approval

Bidders expressly acknowledge that proceeding with the scope of work in whole or in part is conditional on approval of funding for the work by the Owner.

End of Section 00 21 13



BID FORM

PROJECT NAME: 10851-10991 Mortfield Road, Richmond
Carlton Park Gardens – Exterior Siding and Window Replacement

SUBMITTED BY:

Contractor Name

Contractor Address

Herein after called the Contractor

SUBMITTED TO:

Sense Engineering Ltd.
104 - 788 Copping Street
North Vancouver, BC V7M 3G6

Herein after called the Consultant

ON BEHALF OF:

Canadian Apartment Properties REIT
11 Church Street
Toronto, ON M5E 1W1

Hereinafter called the Owner

We the undersigned, have carefully examined the site, the conditions pertaining to the work, and the bid documents and specifications, including Addenda Nos. . We offer to enter into a contract to complete the work described plus or minus any work identified by the Consultant in accordance with the requirements of the bid documents and specifications for the price given in the bid breakdown below.

By submitting this bid, the Contractor confirms that:

1. This bid is made without any connection, comparison of figures or arrangements with, or knowledge of, any other corporation, firm or person making a bid for the same Work except for prices submitted for sub-contracts, and is in all respects fair and without collusion or fraud.
2. This bid will be left open for acceptance for a period of 60 days from the date of closing.
3. The drawings and specifications have been examined and there are no materials or methods indicated to which the Bidder objects or for which the Bidder would be unwilling or unable to accept responsibility. The Bidder agrees that after signing the Contract, full responsibility for the performance of the Work will rest with the Bidder and the Owner is in no way to be held liable.



BID BREAKDOWN

Accurate quantities and allowances for parts of the Contract cannot be pre-determined and will only be established at the time of actual field work. The estimates shown below are approximate and shall serve as a guideline only to standardize quantities and allowances used when bidding. The prices submitted are for the completed work, excluding GST but including all other applicable taxes, overhead, profit and all other Contractor expenses.

All other items, whose quantities can be pre-determined, but not specifically itemized and described below, including items shown on drawings, discussed in the scope or other supporting documentation, or required to complete the work are to be quoted under "All Other Items".

1. BASE BID ITEMS

Item No.	Item Description	Estimated Quantity	Unit Price	Price for Item
1	General			
1.1	Access and Mobilization	-	Lump Sum	\$
1.2	Site Protection	-	Lump Sum	\$
1.3	Protection from Weather	-	Lump Sum	\$
2	Exterior Walls			
2.1	Demolition	-	Lump Sum	\$
2.2	Framing and Sheathing Repairs	-	Contingency Allowance	\$ 30,000
2.3	New Fibre Cement Siding	-	Lump Sum	\$
3	Windows and Doors			
3.1	Window and Door Replacement	-	Lump Sum	\$
3.2	Window Testing	-	Contingency Allowance	\$ 5,000
4	Miscellaneous Repairs			
4.2	Modify Existing Fencing	-	Lump Sum	\$
4.3	Miscellaneous Repairs	-	Contingency Allowance	\$ 20,000



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
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BID FORM - SECTION 00 41 00

Item No.	Item Description	Estimated Quantity	Unit Price	Price for Item
5	All Other Items	-	Lump Sum	\$
Estimated Total Contract Price (excluding taxes):				\$

Proposed Start Date (day/month/year)	
A: Construction Duration for Base Bid Lump Sum Items (weeks)	
B: Construction Duration for Base Bid Contingency Allowance and Cash Allowance Items (weeks)	
A + B: Total Estimated Construction Duration (weeks)	
Method(s) of Exterior Access	
Minimum Number of Workers on Site	



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

2. OPTIONAL ITEMS

Optional items shall be priced as stand-alone items, including allowances for increases in bonding, access, mobilization and demobilization, supervision and permits. Optional items may be included at the time of award or may be included after award, by Change Order, if required.

For all optional items, indicate if inclusion of the optional item results in a price increase/decrease and schedule increase/decrease.

Item No.	Optional Item Description	Estimated Quantity	Unit Price	Price for Item (+ or -)	Schedule (+ or -)
O1	Tyvek CommercialWrap Sheathing Paper	-	Lump Sum	\$	wks
O2	Retain Existing Windows and Doors	-	Lump Sum	\$	wks



3. HOURLY RATES

The following hourly rates (which are to include overhead and profit) may be applicable for changes and work completed with allowances:

Rate No.	Trade Description	Rate
1	Labourer	/ hr
2	Foreman	/ hr
3	Superintendent	/ hr
4	Carpenter	/ hr
5	Other: _____	/ hr
6	Other: _____	/ hr



4. CONTRACTOR'S SITE REPRESENTATIVES

Provide the name and qualifications of the personnel who will be assigned to the project.

Project Personnel	Details
Site Foreman	Name: _____ Company: _____ Years Applicable Experience as Foreman: _____ Total Years' Experience: _____
Site Superintendent (if not the same as the foreman)	Name: _____ Company: _____ Years Applicable Experience as Superintendent: _____ Total Years' Experience: _____
Project Manager	Name: _____ Company: _____ Years Applicable Experience as Project Manager: _____ Total Years' Experience: _____

Backup information regarding personnel experience shall be provided upon request.

Substitute personnel will only be allowed upon approval by the Consultant.



5. PROPOSED SUB-CONTRACTORS

The name of each proposed sub-contractor must be given in the following list. If the Bidder proposes to sublet a part of the work, which is not listed below, the sub-trade and the proposed sub-contractor's name shall be added to the list. Failure by a Bidder to comply with the foregoing requirements may result in default of the Contract.

Failure to supply the name of proposed sub-contractor at the time of the bid shall indicate that work will be performed by the bidding Contractor's own forces. Sub-contractors not proposed at the time of bid shall not be permitted to perform work in this Contract without the Owner's/Consultant's approval.

Preference may be given to contractors relying more on their own forces than sub-contractors.

Sub-Trade	Proposed Sub-Contractor
Demolition	
Wood Framing	
Interior Finishes	
Carpentry	
Siding	
Windows and Doors Supply	
Windows and Doors Installation	
Mechanical	
Electrical	
Sealant	
Flashings	
Other: _____	



SIGNATURES

Signature

Print Name

Company

Witness

Print Name

Date

End of Section 00 41 00



PART 1 - GENERAL CONDITIONS

1.1 Application of Supplementary Conditions

This Contract shall be governed by the General Conditions, CCDC 2 (2020) – Stipulated Price Contract (Including CCDC 41 – CCDC Insurance Requirements), except as such conditions are amended in these Supplementary Conditions.

PART 2 - SUPPLEMENTARY CONDITIONS

2.1 Supplements to General Conditions

All articles contained within these Conditions of the Contract shall be read in conjunction with, and apply to, the General Conditions of the Construction Contract.

2.2 Article A-3 Contract Documents

The Conditions of the Contract shall be a part of the Contract Documents.

2.3 Definitions

Add to the last sentence, deleting the full stop and adding after 'thereto': "and without limiting the foregoing, includes all matters and things necessary for and incidental to the proper and timely performance of the Work in accordance with the Contract Documents, and includes all overhead, labour, supervision, management and administration, materials, temporary works, plant, supplies, permits, licences and approvals related thereto."

2.4 GC 1.1 – Contract Documents

- .1 Add to the end of GC 1.1.4, after 'Consultant': "Errors, omissions or inconsistencies which could have been reasonably identified when pricing the work shall not be the basis for claiming a change in the Contract Price and/or Contract Time."
- .2 Replace 1.1.5.1 with: ".1 the order of priority of documents, from highest to lowest, shall be:
 - Supplementary Conditions
 - Supplementary Conditions – Unit Rates
 - the Agreement between Owner and Contractor
 - the Definitions
 - the General Conditions
 - Division 01 of the Specifications
 - technical specifications
 - material and finishing schedules
 - the Drawings.
- .3 Add 1.1.12: "The Contractor shall keep one copy of current Contract Documents, submittals, reports, and records of meetings at the Place of Work, in good order and available to the Owner and the Consultant."



2.5 GC 2.4 – Defective Work

- .1 In 2.4.3, replace “the difference in the value between the Work as performed and that called for in the Contract documents” with “the value of such work as necessary to correct any work which does not conform with the Contract Documents”.

2.6 GC 3.1 – Control of the Work

- .1 Add new GC 3.1.3: “The Contractor shall complete the Work in a good, proper and workmanlike manner that meets or exceeds the highest standard of either the Contract Documents or the local construction industry practice of competent contractors experienced in work similar to the Work to be performed.”
- .2 Add new GC 3.1.4: “The Contractor shall confirm Construction Equipment, Temporary Work, storage of Products, waste products and debris, and operations of employees and subcontractors to limits indicated by laws, ordinances, permits, or the Contract Documents and shall not unreasonably encumber the place of work.”
- .3 Add new GC 3.1.5: “The Contractor shall not load or permit to be loaded any part of the Work with a weight or force that will endanger the safety of the Work, people, or surrounding property.”

2.7 GC 3.4 - Construction Schedule

- .1 In 3.4.1.1, replace: "prior to the first application for payment" with "before the Work commences."
- .2 In 3.4.1.1, delete “major activities of the.”
- .3 Add 3.4.1.4: “perform the Work in accordance with the construction schedule.”
- .4 Add new 3.4.1.5: “Provide sufficient labour for the steady progress of the Work including overtime work, if required, to meet the scheduled date of completion.”
- .5 Add new 3.4.1.6: “Carry out the Work to completion as rapidly as possible, or as otherwise agreed with the Owner and Consultant, consistent with good practice, safe working conditions.”
- .6 Add new GC 3.4.2: "Once approved, the construction schedule shall not be altered without approval from the Owner and Consultant."
- .7 Add new GC 3.4.3: "The Owner or Consultant may direct the Contractor to suspend any part of the Work that causes excessive disruption pending development and implementation of acceptable solutions that allow the work to proceed."

2.8 GC 3.5 - Supervision

- .1 Add to 3.5.1: “and not without prior consultation and agreement by the Consultant and Owner.”



- .2 Add new GC 3.5.3: "Unless agreed to by the Consultant and Owner prior to the start of the Work, the Contractor's appointed representative shall be employed directly by the Contractor, and shall not be a Subcontractor."
- .3 Add new GC 3.5.4: "Supervision shall be deemed not satisfactory and changes or additions to supervision may be demanded when,
 - .1 control, general safety, organization and coordination of the Work is not satisfactory in the opinion of the Consultant;
 - .2 the quality of the Work does not meet the requirements of the Contract, or local industry standards;
 - .3 directions given by the Consultant are not followed; and/or
 - .4 the progress of the Work is not in compliance with the approved construction schedule, or the Contractor is unlikely, in the opinion of the Consultant, to achieve Completion of All Work within the Contract Time."

2.9 GC 3.7 – Labour and Products

- .1 Add 3.7.4: "The Contractor is responsible for the safe on-site storage and protection of Products (including Products supplied by the Owner and other contractors to be installed under the Contract) in such ways as to avoid dangerous conditions or contamination to the Products or other persons or property to the satisfaction of the Owner and the Consultant. The Owner shall provide SDS sheets and any other relevant information regarding the products they are supplying."

2.10 GC 3.8 - Shop Drawings

- .1 Delete GC 3.8.7 and replace with the following: "The Consultant will review and return Shop Drawings in accordance with the schedule agreed upon. Unless otherwise agreed to, the schedule for the Consultant to review and return Shop Drawings shall not be less than 10 working days."

2.11 GC 4.2 - Contingency Allowance

- .1 Delete 4.2.3 and replace with the following:

"Expenditures made under the contingency allowance shall be authorized in advance by the Consultant. Work shall be valued in accordance with GC 6.1 Owner's Right to Make Changes, GC 6.2 Change Order and GC 6.3 Change Directive, and shall not exceed the contingency allowance".

2.12 GC 5.2 - Applications for Payment

- .1 In GC 5.2.3, change: "Work Performed and Products delivered to the Place of the Work" to "Work Performed and Products incorporated into the Work".



- .2 Add to GC 5.2.4 "The Consultant and Owner reserve the right to charge back the Contractor for their time and expenses incurred to address inaccuracies with applications for payment. Such amounts would be deducted by the Owner from subsequent payments to the Contractor."
- .3 Add to GC 5.2.6 "An application for payment will only be deemed proper and received if submitted complete with required supporting documentation, as determined by the Consultant."
- .4 Add to GC 5.2.7 "In addition to the CCDC 9A, the Contractor shall submit with each application for payment, including application for release of holdback, the following:
 - .1 an updated construction schedule in the form and content specified by the Consultant;
 - .2 time sheets and invoice back-up documentation for work completed on a time-basis; and
 - .3 a current WorkSafeBC Clearance Certificate

The CCDC 9A shall confirm that all payments for wages and salaries, all payments due to sub contractors, all payments for materials furnished, and all other accounts have been paid in full as required by the Contract up to and including the last progress payment received."

- .5 Add at the end of GC 5.2.8 after '*Products*': "The material cost for windows/doors may be claimed by the Contractor after:
 - .1 the Products are delivered to the Place of Work,
 - .2 the Contractor provides waybills all applications for payment related to windows/doors,
 - .3 the Contractor confirms that the products are defect-free and correct/proper under the Contract Documents, and
 - .4 the Contractor provides photographs, proof of insurance, evidence that products are safely stored/protected, set aside and labelled."

2.13 GC 5.3 – Payment

- .1 In 5.3.1.1, replace "the *Owner* shall promptly issue a written notice to the *Contractor*" with "the *Consultant* shall issue a written notice to the *Contractor*."
- .2 Change 5.3.1.2 to: "The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement - PAYMENT, on or before 30 calendar days after receipt of the Consultant's certificate for payment."

2.14 GC 5.4 – Substantial Performance of the Work and Payment of Holdback

- 1. Add new GC 5.4.7: "Before final review is completed and before applying for release of holdback, the Contractor shall submit to the Owner/Consultant:
 - .1 all specified written guarantees/warranties, bonds, records, certificates and maintenance, annotated drawings, as-built drawings and operation manuals (including instructions to the Owner's staff in the operation of any windows or equipment); and
 - .2 the name, address, telephone number, and contact person of the general contractor, sub-contractors, material manufacturers and material suppliers."



2.15 GC 5.5 – Final Payment

1. Delete 5.5.4 in its entirety.
2. Add new GC 5.5.5: "In addition to any other remedy to which the Owner may be entitled pursuant to the Contract Documents, if the Contractor is in default of any of its obligations under the Contract, the Owner may perform or cause to be performed such acts as may be necessary to fulfil any such obligations and all actual and reasonable costs incurred by the Owner in respect thereof will be deducted from the Contract Price and may be withheld from any payment made by the Owner to the Contractor."

2.16 GC 6.3 - Change Directive

- .1 Add new GC 6.3.6.4: "The Contractor's mark-up on proven costs for sub-contractors, materials, equipment, etc. shall be no more than 15 percent."

2.17 GC 6.5 – Delays

- .1 In GC 6.5.1, add to the second sentence: "but excluding any consequential, indirect or special damages."
- .2 In GC 6.5.2, add: "Reasonable costs shall not include lost opportunity costs or lost profits, and be based on actual Contractor costs expended up to the time of the stop work order, as determined by the Consultant."
- .3 Add new GC 6.5.6: "The extension of Contract Time and reimbursement of related costs shall be made only if and to the extent that the Contractor has taken all reasonable steps to mitigate and minimize the impact of the delay."
- .4 Add new GC 6.5.7: "The Contractor shall be responsible for the care, maintenance and protection of the Work in the event of a shutdown or interruption in the performance of the Work due to reasons under the control of the Contractor."

2.18 GC 7.2 – Contractor's Right to Suspend the Work or Terminate the Contract

- .1 In GC 7.2.5, add: ", as determined by the Consultant."

2.19 GC 9.4 - Construction Safety

- .1 Add to GC 9.4.1: "No comments, suggestions or instructions from the Owner or Consultant are to be relied upon or assumed to reduce or replace the Contractor's responsibility for construction safety."
- .2 Add to GC 9.4.5: "The Contractor shall be responsible for the safety of the workers, Subcontractors and Suppliers, and of all other persons who enter the Place of the Work, whether during working hours or not, and for that purpose shall install such hoardings and signs and incorporate such safety and security measures as may be necessary to ensure the safety of such persons."



2.20 GC 11.1 – Insurance

- .1 Delete the following from GC 11.1.1.3: “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.”
- .2 Delete GC 11.1.1.4 in its entirety.
- .3 Delete GC 11.1.1.5 in its entirety.
- .4 Delete GC 11.1.1.6 in its entirety.
- .5 Delete GC 11.1.6 in its entirety.

2.21 GC 12.1 – Ready-For-Takeover

- .1 Delete 12.1.1.2, and 12.1.1.3 and replace with:

“.2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having Jurisdiction, and the Consultant to confirm that all Work is complete according to the Contract Documents.

.3 Final cleaning and completion of all known defects and waste removal at the time of applying for Ready-for-Takeover, as required by the Contract Documents including all removal of waste products and debris. The Contractor shall leave the Place of the Work clean and suitable for use or occupancy by the Owner. The Contractor shall remove products, tools, Construction Equipment, and Temporary Work not required for the performance of the remaining work. “

2.22 GC 12.3 - Warranty

- .1 In 12.3.1, 12.3.3, 12.3.4, and 12.3.6 replace: "one year" with: "two years."
- .2 Add to the end of GC 12.3.4 after 'warranty period': "In correcting a defect or deficiency, the Contractor shall bear all costs involved in removing or replacing adjacent affected materials that may be disturbed and which are required in the finished Work."
- .3 Add new GC 12.3.7: "The remedy to fix or remediate any defect in the Work includes, at no cost to the Owner, anything necessary including but not limited to labour, materials, equipment and services required to repair the defective areas of the Work and to repair damages incurred in obtaining access to defective areas. The Contractor shall reimburse the Owner for any resulting investigation costs required to define the extent of the defective areas and to retest to confirm the acceptability of the repairs."
- .4 Add new GC 12.3.8: "These warranties do not restrict the liability of the Contractor arising from any applicable law."

2.23 GC 13.1 – Indemnification

In GC 13.1.2.2, replace "\$2,000,000" with "\$5,000,000".



2.24 Add “GC 14 – Other Provisions” as follows:

- .1 Add new GC 14.1: “The Contractor shall, prior to commencement of the Work or within the specified time, provide to the Owner any contract security specified in the Contract Documents.”
- .2 Add new GC 14.2: “If the Contract Documents require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the provide or territory of the Place of the Work and shall be maintained in good standing until the fulfillment of the Contract. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms.”
- .3 Add new GC 14.3: “The Contractor shall save and keep the Owner and the Place of the Work free from all construction liens and all other liens whatsoever arising out of the Work. In the event that any lien is filed or registered, or any written notice of lien is received, and provided the Owner has paid all amounts properly due under the Contract, the Contractor shall, at its own expense, within ten (10) Working Days of being notified of the lien or written notice of the lien, secure the discharge, release, vacating, or withdrawal of such lien or written notice of lien by payment or by giving security, or in such other manner as is or may be required or permitted by law, failing which the Owner may, but shall not be required, take such steps as it, in its absolute discretion, may deem necessary to release, vacate, or discharge the lien or written notice of lien.”
- .4 Add new GC 14.4: “In the event that a lien action or any other action or legal proceeding is commenced, the Contractor shall take all reasonable steps to remove the Owner from such action or legal proceeding and shall fully indemnify the Owner and hold it harmless in such action or legal proceeding, except where the claim asserts substantive claims against the Owner beyond the payment of holdback.”
- .5 Add new GC 14.5: “All amounts, including reasonable solicitor and client costs, interest, borrowing and premium, or other bonding costs and administration and management costs incurred by the owner in releasing, vacating, or discharging any lien and/or written notice of lien and/or dealing with an action or legal proceeding, shall be charged back to the Contractor and shall be set-off and deducted from any amount owing to the Contractor and any security or other funds held by the Owner.”
- .6 Add GC 14.6: “Upon receiving written notice from the Contractor, the parties shall forthwith, and in no less than fourteen (14) days after the said notice, first engage in good faith negotiations in order to resolve the dispute. If the dispute cannot be resolved by good faith negotiations and if the Disputed Amount is higher, in the opinion of the Contractor, than 10%, the parties shall proceed by way of arbitration in accordance with GC 8 – DISPUTE RESOLUTION. Where the arbitrator determines that the Disputed Amount is less than 10% of the solicitor’s fees charged, the Contractor shall pay all solicitor’s costs of the Owner, including professional fees incurred in substantiating the solicitor’s costs.”

2.25 CCDC 41 – CCDC Insurance Requirements

- .1 In Paragraphs 1 and 2, replace both instances of “\$10,000,000” with “\$5,000,000”.
- .2 Delete Paragraphs 3, 4, 5 and 6 in their entirety.



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT

PAGE 8

PROJECT NO: 23VR134A

SUPPLEMENTARY CONDITIONS - SECTION 00 73 00

End of Section 00 73 00



PART 1 - GENERAL

1.1 General

- .1 Accept instructions only from the Consultant and/or sources designated by the Consultant.
- .2 The building shall remain in use in areas not immediately affected by the work. Ensure that normal building operations and maintenance may be carried out without disruption, except as otherwise noted herein or stated in the Bid.
- .3 Unless otherwise notified by the Consultant, work shall be allowed only from 7:30am to 5:00pm, Monday to Friday. The work shall be performed according to the start date and duration given in the Bid document.

1.2 Protection of Work, Property, and Persons

- .1 Supply, install and maintain a construction barrier around all work, storage and staging areas. As a minimum, the following shall be provided:
 - .1 *Interior Protection:* White polyethylene sheet dust screen, sealed to control the spread of dust, around the work areas and drop sheets on all access paths through finished interior areas (alternatively, foot covers can be used).
 - .2 *Exterior Barriers:* Minimum 1.8m high metal construction site fencing around all staging, storage and work areas. Provide fencing to prevent access to the pool at any point while the existing fencing is removed to facilitate work.
 - .3 *Overhead Protection:* Protect all walkways, driveways and building egress routes from overhead hazards using walk-through scaffolding with hardwood planking. Provide temporary lighting if existing light fixtures or natural light is obstructed by overhead protection.
- .2 Maintain all emergency and service access routes clear at all times. Provide barricades and signs necessary to direct vehicular and pedestrian traffic around construction areas.
- .3 Maintain the work area in a tidy condition, free from the accumulation of waste and debris. Store all materials in an orderly manner. If the Owner or Consultant finds the work area is not maintained to an acceptable level of cleanliness, a written notice instructing the site to be cleaned will be issued. Failure to remove waste and debris within 24 hours of issuance of the notice will be cause for the Owner to have the area cleaned. Cost for cleaning will be deducted from the Contractors progress payments.
- .4 Before commencing work, identify all paths for dust, fumes or odours generated by the work to penetrate interior spaces. These shall include make-up air intakes, ventilation/exhaust openings for service rooms such as generator or hydro vault rooms, doors, windows, and pipe or cable penetrations. Take measures such as enclosing, sealing and/or providing sustained negative pressure to prevent dust, fume or odour ingress. If required, coordinate temporary shut-down of mechanical equipment by Owner.
- .5 Be responsible for damage caused or clean-up required by dispersion of dust or other debris generated by the work.



- .6 Before commencing work, inspect all building components, including drains, lights, windows, doors, screens, etc. within the area of the work. In addition, review features in the vicinity of the work areas that may be damaged by the work (e.g. landscaping, fencing, pool, etc.). Submit a written list if there is existing damage, or items not functioning, for components not being replaced or repaired within the work. Record a detailed video and/or photographs of the work area documenting the building condition and submit to the Consultant for their records. The video/photographs will be used as reference if there is a dispute regarding the pre-construction condition of the building.
- .7 Be responsible for and promptly arrange all details of compensation for all damage existing after the work, which was not recorded prior to the work. Unless dealt with promptly by the Contractor, the Contractor will be responsible for costs of the Owner's or Consultant's personnel and other costs incurred for claims not handled by the Contractor. This includes costs for correction of deficiencies paid for by the Owner.
- .8 The Contractor will assume all responsibility for any damage resulting from the use of building systems (drainage, electrical, etc.).
- .9 Take special precautions to protect building components or property that may be easily damaged by the work, including (but not limited to) in-ground pool and all associated mechanical equipment, adjacent fencing, exhaust vents, light fixtures, cameras, landscaping, walking surfaces etc.
- .10 For work requiring interior building access, ensure no combustible materials (e.g. cardboard, wood, plastic, other debris) are placed or stored in the building, unless authorized by the Consultant or Owner.
- .11 Ensure the building areas affected by the work are made watertight prior to adverse weather and at the end of each day, to prevent interior water leakage or wetting of exposed framing. Account for movement of protection if weather forecast calls for extreme wind, rainfall, or snowfall. Be responsible for and promptly arrange all details of compensation for any property damage caused by water leakage.
- .12 Security for the work area is the Contractor's responsibility. Ensure that personnel access is controlled during work hours and prohibited after work hours. Any damage or loss to property that is the result of the work area being less secure than typically provided prior to the project, during or after work hours, will be the Contractor's responsibility.
- .13 The Owner will coordinate having equipment and other items moved away from windows and doors, in order to facilitate work in these areas.
- .14 Curtains and blinds are to be removed and reinstated by the Contractor.
- .15 Smoking cigarettes, e-cigarettes, marijuana or similar will not be allowed on the Owner's property.

1.3 Progress of Work and Schedule

- .1 Monitor and verbally report on compliance with the Contract schedule on a weekly basis. Provide the Consultant with an updated schedule on a monthly basis minimum.



- .2 At no time shall the size of the work crew be decreased from the size indicated on the project schedule or in the Contract documents.
- .3 If the Owner or Consultant, at any time, considers the number of workers, equipment or materials to be insufficient to maintain the Contract schedule, the Owner, through the Consultant, may, in writing, order the Contractor to increase the rate at which work is being completed. The Contractor shall notify the Consultant, in writing, that they plan to work weekends/and or additional hours or provide additional workers, equipment, or materials, or by another means so the Work can be completed according to the terms of the Contract. Should the Contractor fail to comply with the order, the Contractor shall be considered to be in default of the Contract.
- .4 Should the Contractor fail to meet the project schedule as a result of conditions under their control, the Owner reserves the right to deduct costs for additional time required by the Consultant from amounts owed to the Contractor and for other costs that can be justified.
- .5 Where temperature sensitive work must take place and environmental conditions are not likely to be within the specified limits, and where it is not feasible to provide heat or protection from precipitation (as agreed to by the Contractor and Consultant), and where the Manufacturer has provided approval to proceed with the work, the Contractor shall proceed only with written authorization from the Consultant. At least five days before the work is to take place, submit Manufacturer's written instructions to the Consultant. The Manufacturer's written instructions must include the revised environmental condition limits, details of required modifications to products or application procedures, and risks associated with proceeding under the revised conditions. The Consultant is not obliged to authorize the change.

1.4 Project Supervision and Coordination

- .1 Ensure that the designated site foreman/site superintendent, capable of communicating effectively in the English language and familiar with the requirements of these specifications, is on site at all times and monitoring the quality of all work, including during subcontractor activities. The Consultant and Owner shall be provided with the site foreman/site superintendent cell phone number where they may be reached at any time in case of an emergency. All communications must be answered within 24 hours within regular business days.
- .2 Be aware that the breakdown of the specification into sections does not represent any actual division of the work. Be responsible for coordination between items of work which would be covered under separate specification sections. Coordinate and be responsible for the work and conduct of the various subcontractors.
- .3 Coordinate required submittals at the times required.
- .4 Take reasonable measures to control noise, dust, smoke, water leakage, and odours during construction. Control execution of all work to minimize interference of occupant's use of the building. Be responsible for worker's activities while on the site.
- .5 Conform to all by-laws and all legislated requirements including those related to labour, noise and the environment.



- .6 Maintain at the job site one copy, including all amendments, of each of the following:
 - .1 Contract drawings and specifications
 - .2 Original copy of the building permit
 - .3 Field Review Reports issued by the Consultant
 - .4 Site Instructions and additional drawings issued by the Consultant
 - .5 Contemplated Change Orders and Change Orders
 - .6 Material test reports
 - .7 Accurate daily records of all work performed, weather, and labour force
 - .8 Manufacturer's specifications for all products to be used
 - .9 Proof of WHMIS training for all site personnel
 - .10 Product data sheets to meet the WHMIS requirements
 - .11 Occupational Health and Safety Regulation
 - .12 Emergency phone numbers
- .7 Notify all staff and subcontractors that the Contractor is entirely responsible for site safety. No action or lack of action by the Owner or Consultant shall be deemed to be an instruction related to safety of the workplace.
- .8 Drawings are, in part, diagrammatic and are intended to convey the scope of work and indicate general and approximate locations and arrangement of work. Obtain more accurate information about locations, arrangements and sizes from actual conditions on site.
- .9 When site conditions require reasonable changes to the drawings, obtain the Consultant's approval prior to making such changes.
- .10 Arrange for all necessary approvals and safety measures for work in laneways and streets, including at power-lines.
- .11 Coordinate interior access with a representative designated by the Owner. Organize work such that it minimizes time in the building interior and disruption.

1.5 Applicable Laws, Regulations and Standards

- .1 Perform all work in accordance with current Code requirements and local and municipal by-laws.
- .2 All Standards referred to shall be the current editions as amended at the date of issue of the Contract documents.
- .3 The Contractor is responsible for obtaining and paying for all trades' permits, street permits, tree permits, power line protection, damage deposits, etc., as required. Any required permit costs will be included in the contract price under "All Other Items".
- .4 The Contractor is responsible for notifying the proper municipal inspector in advance (as specified by the inspector) to complete review of any project component the local municipal authority requires. Ensuring that correct municipal reviews are completed shall be solely the Contractor's responsibility. Additional work to expose or re-do uninspected work shall be completed by the Contractor at their expense.



1.6 Substitutions

- .1 Submit to the Consultant, in writing, any requests for substitutions to materials and/or installations specified and/or stated in the bid documents, at least ten working days prior to the intended application.
- .2 Submit information regarding the proposed substitution and the material and/or installation originally specified or stated in the bid document in a format that the two can be readily compared by the Consultant. Submit the reason for the change and the impact on the Contract price and schedule. Unless otherwise approved by the Consultant, use the Request for Substitution form included with the bid documents.

1.7 Project Meetings

- .1 At least one week prior to start of work, attend a meeting between the Consultant, the Owner and/or Owner's representative and the Contractor's project manager and site foreman/site superintendent to discuss the work.
- .2 The Contractor's project manager and foreman/superintendent shall attend regular site meetings with the Consultant, the Owner and/or Owner's representative at a mutually agreeable time for the discussion of progress of the work and to resolve any difficulties. Assume site meetings will occur every two weeks.
- .3 Labour costs to attend meetings will be included in the contract price under "All Other Items".

1.8 Quality Assurance

- .1 Make all measurements required to perform the work. Determine site dimensions and levels so that all new work is installed to correct sizes.
- .2 Maintain all work completed or in progress in its condition as accepted.
- .3 All work shall meet or exceed the more stringent of the manufacturer's requirements, applicable Building Codes, or the requirements of the Contract documents.

1.9 Construction Review

- .1 The Contractor shall notify the Consultant and inspection and testing agents not less than 48 hours prior to each part of work being ready for review or testing, unless otherwise stated in the specifications. Work which requires review or testing shall not be performed on weekends or holidays unless previously agreed.
- .2 Where work will expose existing building structure, the Contractor shall provide the Consultant with a minimum 72-hour advance notice to review the existing structure. Where structural repairs are required, and new repair details are necessary, the Contractor shall allow the Consultant up to 4 business days to provide repair details, unless agreed otherwise. The Consultant may require more time to provide design details if additional site investigation is required or for complex/non-standard repairs.



- .3 The Contractor shall uncover work that has been designated for special tests, approvals or where the Consultant has specifically asked for the opportunity to review when adequate notice has not been provided.
- .4 The Contractor shall be responsible for payment of costs if the work is not ready when stated and if the Consultant and inspection and testing agency are not given sufficient notice of such delay.
- .5 Review of the work by the Consultant, Owner, independent testing parties, or any other parties in no way relieves the Contractor of the responsibility to complete the work in conformance with Contract documents.
- .6 The Owner and Consultant will require a reasonable amount of time to review the site and shall have access to all work at any time requested. The Contractor shall not make any claims related to delay of progress caused by review by the Consultant or Owner.
- .7 Provide all access required for the Consultant to review the work, including equipment, site supervision, and any safety precautions required by WorkSafeBC.

1.10 Temporary Facilities

- .1 Provide a means of direct communication with the site to permit continuous contact on a daily basis.
- .2 Unless otherwise agreed to with the Owner, provide temporary sanitary facilities and maintain in a sanitary condition. Site facilities shall not be used by the Contractor's forces unless authorized by the Owner.
- .3 Temporary electrical power for hand held equipment will be provided free of charge by the Owner. Arrange and pay for any alterations required to the building power supply. Do not connect to individual unit power supply without written permission of Owner.
- .4 The existing water supply from existing hose bibs at the site may be used free of charge. Do not use fire system or other water sources without written permission of building management. Advise the Owner of any procedures that may cause fire alarms to activate.
- .5 With the exception of safety/instruction signs and notices, no signs or advertising shall be permitted on the site or equipment except as authorized by the Owner. Safety/instruction signs and notices shall be posted in accordance with current Code requirements and local and municipal by-laws. Maintain approved signs and notices in good condition for duration of work.
- .6 Provide a neat, clean and orderly space for meetings. When arranged with the Owner, an Owner's meeting room may be used.
- .7 The Contractor will be provided with 2 parking stalls for workers' use, storage of materials, and/or site office space. Contractor vehicles will not be permitted to park on the property unless they can provide documentation confirming that vehicles have automobile liability insurance with a limit of not less than \$5,000,000.
- .8 Temporary removal of fences will be allowed pending Owner approval and installation of temporary hoarding.



- .9 Do not unreasonably encumber the premises with access equipment or temporary structures.
- .10 The Contractor is responsible for all “temporary construction zone” permits from the authority having jurisdiction for the duration of the project.

1.11 Materials and Equipment

- .1 Deliver all materials to the site in their original unopened containers, with labels intact. Where applicable, check material expiry dates. Immediately dispose of all materials older than their expiration date away from the site.
- .2 Store all materials and equipment in accordance with manufacturer’s written requirements, and in a dry, secure and protected manner which will not overload the structure and shall prevent vandalism or unauthorized use. Storage locations shall be approved in advance by the Owner.
- .3 Be responsible for the security of all materials and equipment. Make no claims to the Owner for theft, damage, or other costs resulting from unsecured materials or equipment.
- .4 Non-specified materials shall not be brought to site. Remove any non-specified materials from site within 24 hours upon request by the Consultant.

1.12 Waste Management

- .1 Unless otherwise specified, salvaged material resulting from the Construction shall become the property of the Contractor who must remove it away from the site in a timely manner. Storage locations shall be approved in advance by the Owner.
- .2 Separate recyclable, toxic waste and banned materials from the waste stream in accordance with local by-laws. Deliver to a local waste management facility.

1.13 Deficiencies

- .1 For any deficiencies in the work or damages done by the progress of work, the Contractor shall submit a written proposal for the repair. If engineering design is required, a qualified Professional Engineer shall be engaged by the Contractor. All testing required shall be paid for by the Contractor.
- .2 The Owner reserves the right to deduct from the Contractor amounts for extra field review and testing by the Consultant as required for certification of payment of work done to repair a deficiency.

1.14 Project Start-up

Submit the following before mobilizing the site:

- .1 Signed Contracts.
- .2 WorkSafeBC Clearance Letter.
- .3 Notice of Project filed with WorkSafeBC.



- .4 Letter confirming the Contractor has and implements a construction safety manual.
- .5 Names, phone numbers, and emails of project manager, superintendent, site foreman, and trained site safety personnel.
- .6 After-hours emergency contact information.
- .7 List of hazardous materials that will be on site.
- .8 List of pre-existing damaged or deficiencies in work areas, for components not being replaced or repaired.
- .9 Certificate of General Liability Insurance with the Owner, Canadian Apartment Properties REIT and *Sense Engineering Ltd.* all listed as additionally insured.
- .10 Certificate of Automobile Liability Insurance for vehicles owned or leased by the Contractor.
- .11 Certificate of Pollution Liability Insurance.
- .12 Project schedule, with sufficient detail for progress to be verified on a weekly basis. Identify in the schedule the time estimated for work under contingency allowance items. The schedule must specify timing for shop drawings, mock-ups, and on-site testing, if applicable. Schedules with incomplete information may be rejected.

1.15 Project Closeout

- .1 Flush clear all drains affected by the work.
- .2 Clean site of all materials and debris created by the construction, such that the cleanliness of the site matches or is better than that before construction. Clean all ceilings, walls, and floors adjacent to the work of dust and materials generated during the work, as required. Remove all sealant, paints, cementitious material or the like from windows. Damaged or scratched windows or doors must be replaced at the Contractor's cost.
- .3 Submit written acceptance that utility companies have inspected services to their satisfaction.
- .4 Attend a final walkthrough with the Owner and Consultant. The Consultant will record identified incomplete and deficient work on a punch-list.
- .5 Make good all known deficiencies in the work.
- .6 Notify Consultant of readiness for final field review only after completion of these items.
- .7 The Consultant will review completion of punch-list items during one field review. Additional reviews required to check un-rectified deficiencies or work that remains incomplete may be charged back to the Contractor. These charges may be deducted by the Owner from the Contractor's progress payments and paid from those funds to the Consultant.



1.16 Emergencies

- .1 In an emergency affecting or threatening the safety of life, the work or adjoining property, the Owner and Consultant have authority to stop the progress of the work.
- .2 Provide the Owner and Consultant with the name and telephone number of a person that is available and may be contacted during off hours, weekends and holidays in case of emergency.

1.17 Cash Allowances

- .1 Expend cash allowances only on written instructions from the Consultant.
- .2 Use only Testing Agencies approved by Consultant.
- .3 Include in each expenditure from cash allowances applicable taxes as specified in the General Conditions of the Contract.
- .4 Payment shall be made only for actual charges and only at the rate for work performed during normal business hours or for a pre-agreed fixed amount. Charges for stand-by time or non-productive visits caused by the Contractor or the Contractors' forces will be the Contractors' responsibility.
- .5 Cash allowances for permits shall be used only for the cost of the permit. All other costs associated with obtaining any permit shall be included in "All Other Items".

1.18 Contingency Allowances

- .1 Expend contingency allowances only on written instructions from the Consultant.
- .2 Where work is to be billed under a Contingency Allowance on a time and materials basis, the costs shall be determined as follows:
 - .1 Contractor's hours to perform the work, billed at the hourly rates submitted in Section 00 41 00.
 - .2 Costs for materials as indicated in the Contract conditions, plus overhead and profit not to exceed 15% of the material cost.
- .3 Submit time sheets to the Consultant for all hours to be billed under a Contingency Allowance. Time sheets to include all information outlined in the Time Sheet Template included with the bid documents. The Consultant reserves the right to reject time charges if submitted information is unclear or incomplete.
- .4 Where work to be billed under a Contingency Allowance is carried out by a specialty sub-contractor, the Contractor's overhead and profit on the sub-contractor cost shall not exceed 15%.

End of Section 01 00 00



PART 1 - GENERAL

1.1 Objective

Work under this Contract is to remove existing cladding and window and door assemblies and install new weather resistive barrier, exterior insulation, fibre cement cladding, swing doors and vinyl framed window and sliding door assemblies at the recreation center. The work is being completed in order to improve the performance and durability of the building envelope including thermal, air and water.

The work is to commence by Summer 2024 and be completed by Fall 2024.

PART 2 - BASE SCOPE OF WORK

The work includes, but is not limited to, the following applied to areas indicated on the drawings included in this package:

2.1 General

- .1 **Access and Mobilization:** Mobilize all labour, equipment, and materials necessary to carry out the work and review of this Contract. Upon completion of the work, demobilize all equipment and unused materials from the site, clean the site of all debris and repair any damage caused by the work.
- .2 **Site Protection:** Provide all protection as required to avoid damaging the existing building components, property and surrounding lanes and streets, and to limit occupant access into work areas. Where a worker may be exposed to a fall hazard, provide fall protection as required by WorkSafeBC. Provide overhead protection as required to keep all entrances, exits, sidewalks and roadways open throughout the project. While pool fencing is temporarily removed, provide protection to prevent access to the pool area.
- .3 **Protection from Weather:** At all work areas, provide temporary protection as necessary to keep the building watertight at all times. Water shall not be permitted to penetrate into the building interior, and the Contractor shall be responsible to repair any related damages resulting from inadequate protection.

2.2 Exterior Walls

- .1 **Demolition:** At all wall locations, remove the existing wood siding and building paper to expose the existing sheathing. Identify and mark-out any areas of rotted or otherwise damaged sheathing and wall framing for the Consultant's review. Except where noted otherwise, all exterior cameras, signage and other miscellaneous equipment located on the exterior of the building are to be removed, stored and reinstated by the contractor to accommodate the work. Exterior light fixtures are to be removed and replaced with new LED lights to match existing style.

The existing wall assembly consists of (from exterior to interior):

- Painted wood lapped siding and trim;
- Asphalt saturated building paper;
- Plywood sheathing;



- Wood stud framing with batt insulation in stud cavity;
 - Polyethylene vapour retarder
 - Painted interior gypsum board.
- .2 **Framing and Sheathing Repairs:** Carry out framing repairs as directed by the Consultant. Where damaged or missing, replace stud cavity batt insulation. Payment for sheathing replacement and framing repairs to be on time and materials basis or quoted fixed price, as agreed to prior to work proceeding.
- .3 **New Fibre Cement Siding:** Install a new insulated and drained cavity exterior wall assembly, including base of wall flashings and required detailing. Install new cap flashings to accommodate increased siding thickness. New cladding assembly to be as follows:
- Fibre cement plank lap siding
 - 19mmx75mm pressure treated plywood strapping at 400mm o/c.
 - 50mm rigid mineral wool (Comfortboard 110) insulation
 - Vapour permeable self-adhered waterproofing (Water resistive barrier)
 - Existing plywood sheathing
 - Existing wood stud framing with batt insulation in stud cavity;
 - Existing polyethylene vapour retarder
 - Existing painted interior gypsum board.

At the wing walls, replace the exterior plywood sheathing and install spray foam air barrier at the framing joint to the building walls, as shown in the project details. Include 75mm puck vents at the top and bottom of each wing wall stud space as indicated on the drawings.

Seal joints in exterior cladding to trim, at windows and doors, building corners and at penetrations as indicated on the drawings. Install new light fixtures, hose bib, and vents/penetration flashings to accommodate increased wall cladding thickness.

2.3 Windows and Doors

- .1 **Window and Door Replacement:** Remove and replace all exterior window and door assemblies at the rec center. Double glazed window assemblies are acceptable, provided the maximum U-value is achieved. The existing sliding door assembly shall be replaced with a double-glazed two track vinyl sliding door. Window size and configuration are to match the existing assemblies unless shown otherwise in the window and door schedule. Work includes perimeter waterproofing, air sealing and new painted interior trim.

Existing swing doors are to be removed and replaced with new vinyl swing doors, except at the mechanical room where new metal doors are to be provided. New metal doors shall be insulated steel hollow core doors by Doortek to match existing or pre-approved alternate. Contractor to ensure all existing hardware, including but not limited to locks, handles, hold open hardware and push button operators are to be incorporated on the associated new door assemblies.



- .2 **Window Testing:** Following installation of a mock-up window and sliding door, coordinate a qualified, independent 3rd party testing agency selected by the Consultant to carry out water and air penetration resistance testing. Costs for window testing shall be billed to the Window Testing Allowance. Costs required to address deficiencies in the window material and installation identified during testing and for re-testing shall be completed at no cost to the Owner.

2.4 Miscellaneous Repairs

- .1 **Concealed Repairs:** Complete minor repairs to address unanticipated conditions as found to be necessary and as directed by the Consultant in writing. Payment for this work shall be from the Miscellaneous Repairs allowance on the basis of time and materials or quoted fixed price, as agreed to prior to work proceeding.
- .2 **Modify Existing Fencing:** Modify the existing pool fencing where it attaches to the building walls to accommodate the increased wall thickness. Work shall include at a minimum a new gate and post, including hardware to match the existing. Add blocking behind siding for solid backing at all locations of attachment clips.

PART 3 - OPTIONAL WORK

3.1 Tyvek CommercialWrap Sheathing Paper

In lieu of installing vapour permeable self-adhered waterproofing for the water resistive barrier, install Tyvek CommercialWrap sheathing wrap, including taping all seams and terminations. Pricing for this item shall be a credit or extra to the base scope of work.

3.2 Retain Existing Windows and Doors

In lieu of removing and replacing the existing windows and doors, retain the existing windows and doors in place while completing the siding replacement. Include new closure flashings and sealant at the perimeter of windows and doors to conceal new insulation and drainage cavity, but do not remove the windows or doors. Work shall also omit replacement of window rough opening waterproofing, with new sheathing membrane sealed to window and door perimeters. Pricing for this item shall be a credit or extra to the base scope of work.

End of Section 01 10 00



PART 1 - GENERAL

1.1 Description

This Section specifies the process for submittals. Required submittals are also summarized. Details on specific submittals are indicated in technical specification sections.

1.2 Submission Timing

Submissions shall be forwarded to the Consultant such that they do not delay the project. Loss of schedule as a result of failure to submit at the appropriate time will not be considered a sufficient reason for schedule extensions or claims. The Contractor should allow 10 working days for Consultant review of all submittals.

1.3 Contractor Review

- .1 Review submittals prior to submitting to the Consultant. Contractor review will include, but not be limited to checking dimensions and deviations from the contract documents. Submittals not stamped, signed and dated will be rejected by the Consultant.
- .2 Keep one reviewed copy of each submission on site.

1.4 Engineered Submissions

- .1 The term "Engineered" refers to a submittal designed/reviewed by a Professional Engineer who is technically knowledgeable in the area of work and is registered to practice in the place of work. Drawings must be sealed and signed by the Professional Engineer.
- .2 Engineers preparing any design, including shop drawings required by these specifications, are required to have Professional Liability Insurance in the amount of at least \$1,000,000 per claim. The Contractor shall submit proof of their Engineer's insurance and a copy of their Certificate of Authorization with the project start-up documents.

1.5 Approval

- .1 Do not proceed with ordering the materials or fabrication until approval is received in writing from the Consultant. In the case of shop drawings submitted for review, do not proceed with fabrication until the drawings have been returned as "Reviewed with Changes Noted" or "Reviewed". If the Contractor proceeds with the work before approval is received, the Contractor is responsible to correct any damage or defects at no cost to the Owner.
- .2 Comments made on submittals by the Consultant are not intended to change the Contract price. If adjustments affect the contract price, state such in writing and get approval from the Consultant before proceeding with work.

1.6 Samples

Samples reviewed by the Owner/Consultant will be the standard for those materials unless otherwise specified. Material substitutions without prior written acceptance are not permitted. Allow extra time in the submitted schedule for colour matching materials, approval of samples and mock-ups, and delivery of accepted products to site. Colour submissions must be physical samples.



1.7 Shop Drawings

- .1 Review of drawings by the Consultant does not relieve the Contractor of responsibility for the design adequacy, safety or meeting the requirements of the Contract Documents.
- .2 Drawings shall be clearly legible and are to illustrate all components that are a part of the system, such as the overall size and layout, including dimensions based on measured site conditions. Where necessary, provide plans, vertical and horizontal sections and enlarged details to clearly illustrate components and other associated information. Information in shop drawings shall include material, thickness of all components, anchorages, construction method and finishes.
- .3 Shop drawings to be project-specific and incorporate interface detailing with adjacent building assemblies, including waterproofing, air barriers, cladding, seals, and sealant, as shown in the project details. The Consultant reserves the right to reject drawings that contain items not applicable to the project.
- .4 Submit the shop drawings in electronic format. If required, revise the shop drawings as noted/discussed.
- .5 When required by the Consultant, the Contractor shall attend a meeting at the Consultant's office to discuss the shop drawings and to review their content. The shop drawings shall be submitted a minimum of one week prior to the meeting. The intent of the meeting will be to discuss/confirm the shop drawing and project requirements.

1.8 Submittal List

The required submittals for the project include:

Section	Submittal	Submission Timing
01 00 00	Signed Contracts	Before mobilizing
01 00 00	WorkSafeBC Clearance Letter	Before mobilizing
01 00 00	Notice of Project filed with WorkSafeBC	Before mobilizing
01 00 00	Letter confirming the Contractor has and implements a construction safety manual	Before mobilizing
01 00 00	Names, phone numbers, and email addresses of project manager, superintendent, site foreman, and trained site safety personnel	Before mobilizing
01 00 00	After-hours emergency contact information	Before mobilizing
01 00 00	List of hazardous materials that will be on site	Before mobilizing
01 00 00	Written list and video/photo record of pre-existing damages or deficiencies in work areas, for components not being replaced or repaired	Before mobilizing
01 00 00	Certificate of General Liability Insurance with Owner, Property Manager, and Sense Engineering Ltd. as additional insureds	Before mobilizing
01 00 00	Certificate of Automobile Liability Insurance for vehicles owned or leased by the Contractor	Before mobilizing
01 00 00	Certificate of Pollution Liability Insurance	Before mobilizing



Section	Submittal	Submission Timing
01 00 00	Project schedule with sufficient detail for progress to be verified on a weekly basis	Before mobilizing and with each progress invoicing
07 21 29	Submit product data including manufacturer's literature for foamed-in-place polyurethane insulation components and accessories, indicating compliance with specified requirements and material characteristics. Submit letter from manufacturer verifying applicator's certified to install their product. Submit applicator's 3rd party certification, as per the manufacturer's registered quality assurance program.	Before installation of associated work and before invoicing
07 27 13	Submit a list of all self-adhered waterproofing materials and accessories to be installed for Consultant review and approval.	Before purchasing materials
07 46 10	Submit colour samples of siding, paneling and trim for review by the Owner and Consultant.	Before purchasing materials
07 62 00	Submit a manufacturer's brochure or chip catalog for the Owner to select a flashing colour. The Owner will retain the submittal.	Before purchasing materials
07 92 13	Submit a manufacturer's brochure for the Owner to select a sealant colour. The Owner will retain the submittal.	Before purchasing materials
08 53 13 08 15 16	Submit NAFS testing reports confirming windows and doors meet performance requirements. Submit a manufacturer's brochure or colour chips for the Owner to select the frame finish colour from the standard colour palette. Submit samples of the window and door hardware, including handles, locking devices, sliding door rollers, and hinges.	Before fabricating windows and doors
08 53 13	Submit field review reports from the window and sliding door engineer, stating that they have reviewed the installation and that the work has been completed in accordance with their design.	Before invoicing for associated work
08 15 16	Submit field review reports from the door engineer, stating that they have reviewed the installation and that the work has been completed in accordance with their design.	Before invoicing for associated work
08 53 13 18 15 16	Certificate of professional liability insurance from window/door engineer	Before installing engineered work
08 53 13 08 15 16	Model Schedule S-B from window/door engineer	Before installing engineered work
08 53 13 08 15 16	Model Schedule S-C from window/door engineer	Before invoicing for engineered work
08 53 13	Vinyl Framed Window and Sliding Door Shop Drawings	Before delivery of materials to site
08 15 16	Vinyl Swing Door Shop Drawings	Before delivery of materials to site



Section	Submittal	Submission Timing
08 80 00	Submit manufacturer's information to the Consultant, to confirm conformance with specifications.	Before purchasing materials
08 80 00	Submit 300mm x 300mm glazing unit samples, for the Owner's approval of unit appearance.	Before purchasing materials
08 80 00	Provide a letter from the Contractor's Professional Engineer confirming that glazing has been designed to meet all applicable structural loads, including wind, snow, and guard loads, set out by the British Columbia Building Code.	Before purchasing materials
09 91 23	Submit manufacturer's technical data for the products being used.	Before delivery of materials to site
09 97 03	Submit a minimum three colour chip cards best matching the existing colour for the Owner to select a paint colour and finish/sheen. The Owner will retain the submittal.	Before delivery of materials to site
N/A	Copy of trade permit approval and close out from the Authority Having Jurisdiction for related electrical work, as required.	Before proceeding with related work
07 46 10 08 53 13	Manufacturer Warranty Certificates for Vinyl Windows, Doors, Metal Swing Doors, and Fibre Cement Siding	Before final progress draw for related work

End of Section 01 32 19



PART 1 - GENERAL

1.1 Description

This Section specifies the process for preparing mock-ups. Required mock-ups are also summarized. Details on specific mock-ups are indicated in technical specification sections.

1.2 Purpose

All mock-ups shall be provided for the following purposes:

- .1 An opportunity to review how the work will fit with site conditions.
- .2 Verify that the installation is carried out in a manner that is satisfactory to the Consultant.
- .3 Where applicable for details related to interior or exterior finishes (e.g. cladding, sealant, metal flashings, exposed waterproofing), the mock-up may be reviewed by the Owner to confirm approval of overall aesthetics, such as colour, level of workmanship, and finished appearance.
- .4 Identify adjustments that should be made.

1.3 Location

Unless otherwise approved, the location of the mock-ups will be at areas that do not require the Contractor to provide special access. The locations shall be approved by the Consultant.

1.4 Preparation

Mock-ups shall be prepared by the same workers using the same methods that will be applied to general construction.

1.5 Timing

The Contractor to notify the Consultant a minimum of 72 hours in advance of the mock-up being prepared to allow time to schedule a review. Mock-ups are to be completed sufficiently in advance to permit time to review, correct rejected mock-ups and order materials without compromising the project schedule.

1.6 Approval

- .1 Do not proceed with general work, material ordering, or fabrication until approval is received in writing from the Consultant. If the Contractor proceeds with the general work, material ordering, or fabrication before approval is received, the Contractor is responsible to correct any damage, defects, or non-approved details at no cost to the Owner.
- .2 Comments made on mock-ups by the Consultant are not intended to change the Contract price. If adjustments affect the contract price, state such in writing and get approval from the Consultant before proceeding with general work.



- .3 Mock-ups shall include all components that are part of general construction (i.e., 100% complete). The Contractor is responsible to arrange for Consultant and Owner to view components which may become concealed as installation proceeds.
- .4 Rejected mock-ups are to be corrected as specified by the Consultant. Upon written approval, the approved mock-ups shall form the standard for the method and quality of work to be performed through-out the project.
- .5 Mock-ups rejected by the Owner for subjective reasons (e.g. colour choice, overall aesthetics) shall be corrected as specified by the Consultant. Allow for a minimum of one subjective mock-up correction for each mock-up in the Mock-Up List.
- .6 The Consultant may require field testing of the mock-up prior to accepting the mock-up and authorizing the work.
- .7 The Consultant may request the manufacturer's representative to review the preparation and installation of mock-ups and provide written confirmation of acceptance.

1.7 Mock-Up List

The following list are the required mock-ups for the project:

Section	Mock-Up
06 10 00	Replacement of Wood Studs (where directed by the Consultant) Mock-up is to confirm new stud is installed to specified structural requirements. Installation of Plywood Sheathing (Wing Walls) Mock-up for this item is to confirm fastener pattern matches the requirements set in the Rough Carpentry specifications.
07 27 13	Self-Adhered Membrane Installation at Windows, Doors (Sliding Door and Swing Door), Light Fixture, and Top of Wall Mock-up to include primer installation (if required) and all termination sealants. The Consultant shall perform on-site adhesion testing at the mock-up.
07 46 10	Siding mock up including insulation, strapping, trim and associated flashings and accessories at inside and outside wall corners, electrical boxes, wall penetrations, window and door perimeters, base of wall.
07 62 00	Flashing mock-up at cap flashing, window perimeter, sliding door perimeter, base of wall, typical flashing joint. Include fastening and joining of flashings.
07 92 13	Sealant mock-up at window perimeter, sliding door perimeter, swing door perimeter, cladding interfaces, interior trim, wall penetrations. Notify Consultant for review of surface preparation prior to sealant application, and completed sealant application prior to demobilizing from each work area. The Consultant shall perform on-site adhesion testing at the mock-up and at regular intervals during the work. Do not proceed with general application until the mock-up has cured and adhesion testing has been completed.



Section	Mock-Up
08 53 13	Window installation mock-up of vinyl framed window, sliding door, and swing door assembly. Notify Consultant minimum 72 hours prior to completing mock-up installation. Consultant shall review general installation at all stages of the mock-up.
09 97 03	Prepare a mock-up of painted surfaces for Consultant review prior to commencing general installation.

End of Section 01 43 39



PART 1 - GENERAL**1.1 Description**

This Section specifies warranty requirements.

1.2 Inclusion

- .1 Unless otherwise stated, the warranty shall include, at no cost to the Owner, all labour and materials to correct the defects and deficiencies. This shall include removal and reinstating components where required to gain access to the defect and/or deficiency.
- .2 The warranty shall include all performance and aesthetic related issues as determined by the Consultant, such as air and water leakage, damaged seals, de-bonding, corrosion, fading, discoloration, etc.
- .3 The warranty excludes excessive wear and tear.

1.3 Contractor's Responsibility

If manufacturer warranties differ from the requirements stated herein, the Contractor shall notify the Consultant in writing immediately. Written confirmation of the Contractor's inability to provide manufacturer warranties meeting requirements herein does not relieve the Contractor of contractual obligations.

Non-standard warranty certificates shall be submitted before the final progress draw related to the work covered by the warranty.

1.4 Warranty Period

The warranty period is two years unless otherwise noted herein.

1.5 Non-Standard Warranties

Non-standard warranties include the following:

Component	Description	Minimum Warranty Period
Self-Adhering Sheet Waterproofing	N/A	5 years
Fibre Cement Finish	Manufacturer extended warranty on prefinished colours.	15 years
Fibre Cement Siding	Manufacturer material warranty on horizontal lap siding and associated accessories.	30 years
Vinyl Windows and Sliding Doors	Manufacturer warranty on frames.	20 years
Metal Swing Doors	Manufacturer warranty on frames.	20 years



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Component	Description	Minimum Warranty Period
Vinyl Windows and Sliding Doors	Manufacturer warranty on paint finishes.	5 years
Metal Swing Doors	Manufacturer warranty on paint finishes.	5 years
Glazing	Manufacturer warranty on IGUs.	10 years
Sealant	Manufacturer warranty against material defects arising from normal use including, but not limited to, defects that affect performance of the product.	5 years

End of Section 01 78 36



PART 1 - GENERAL

1.1 Description

This section specifies the supply and installation of wood framing and plywood as defined in the Scope of Work and drawings.

1.2 Environmental Conditions

- .1 Wood framing and plywood shall not be exposed to precipitation and shall be piled off the ground to prevent wetting. Where framing and plywood does become wet, it shall be allowed to dry to 19% moisture content by weight and then reviewed and approved by the Consultant.
- .2 Wood framing and plywood shall be evenly supported during transportation and storage. Warped framing or plywood will not be accepted.
- .3 Review all wood framing and plywood delivered to site for warping, splitting, checks, or other defects prior to installation. All members to be straight, true, square, and free of damage. Defective members shall be discarded and replaced at no additional cost.

1.3 Mock-ups

Prepare framing mock-ups for work indicated by the Consultant, prior to commencing general installation. Mock-ups include a typical deteriorated stud replacement and installation of new plywood sheathing at wing walls.

1.4 Field Review and Testing

Notify the Consultant for review 48 hours prior to covering up framing.

1.5 Design Requirements

All framing and plywood to be in accordance with Part 9 of the version of the British Columbia Building Code in affect at the time of construction, unless noted otherwise.

PART 2 - MATERIALS AND PRODUCTS

2.1 Wood Framing and Plywood

- .1 All wood framing and plywood shall be marked by the grade stamp of an agency certified by the Canadian Lumber Standards Accreditation Board.
- .2 Except for wood blocking applications, lengthwise ripping or sawing of larger wood framing members to obtain members of smaller dimensions is not permitted unless the new sawn members are re-graded by an approved rating agency.
- .3 All wood framing to be SPF Grade No. 1 or 2, unless indicated otherwise in the drawings.
- .4 All plywood to be as follows, unless indicated otherwise in the drawings.



Application	Species	Appearance Grade	Minimum Thickness
Floor and Balcony Decking	CSA O121 DFP or CSA O151 CSP	Sheathing Grade (SHG) or better	15.9mm
Wall Sheathing	CSA O121 DFP or CSA O151 CSP	Sheathing Grade (SHG) or better	12.7mm
Roof Sheathing	CSA O121 DFP	Sheathing Grade (SHG) or better	15.9mm

- .5 All framing and plywood, other than pressure treated materials, to be seasoned or kiln dried to 19% or less moisture content by mass.

2.2 Fasteners

- .1 Wall fasteners shall be hot dipped galvanized, stainless steel, or coated with Leland DT2000, and shall not cause galvanic corrosion with contacted metals or pressure treatment.
- .2 Fasteners shall be as follows, unless indicated otherwise on drawings.

.1 Wood to Concrete and Masonry

Fasteners securing wood to concrete or masonry shall provide a minimum embedment into the substrate of 38mm

.1 For Light/Medium Duty Applications

Acceptable products are: Tapcon by ITW Industries, or approved equivalent. Minimum 9mm diameter shaft. Use stainless steel Tapcon screws for pressure treated lumber applications.

.2 For Heavy Duty Applications (Sill Plate, Beam/Column Connections)

Acceptable products are: Mechanical or adhesive anchor rods by Hilti or Simpson Strong Tie, or approved equivalent. Minimum 9.5mm shaft diameter.

.2 Wood to Wood

Fasteners securing wood to wood shall provide a minimum 30mm embedment into the element being secured to. Only screws shall be accepted to secure decking to framing elements on roofs.

.1 No. 10 spiral framing nails.

.2 No. 12 wood screw.

2.3 Pressure Treatment

- .1 Where indicated in the Scope of Work, specifications, or on drawings, provide pressure treated lumber and plywood.
- .2 Wood preservative pressure treatments to be in accordance with CAN/CSA O80.
- .3 Use the specified pressure treatment for solid wood.



Location	Pressure Treatment	Field Treatment
Protected from moisture (e.g., above grade, drainage cavity or sheltered)	ACQ-C or ACQ-D (4.0 kg/m ³), or CA-B (1.7 kg/m ³)	2.0% solution of copper naphthenate
Risk of moisture (e.g., sill plates or exposed members)	ACQ-C or ACQ-D (6.4 kg/m ³), or CA-B (3.3 kg/m ³)	2.0% solution of copper naphthenate

- .4 All cuts and/or areas where untreated wood has been exposed must be field-treated.

2.4 Wood Preservative Site Treatment

- .1 Review existing framing to be retained for rot and staining. Upon discovery, notify consultant for review and direction regarding removal and replacement of rotten members.
- .2 Where existing wood framing is stained but structural sound, treat the stained with Boracol 20-2 BD by Sansin Corporation or an approved alternate wood surface treatment.

PART 3 - EXECUTION

3.1 Existing Wood Construction

- .1 Existing blocking may be reused if found to be in sound condition, free of excess moisture or rot. Replace deteriorated wood elements with sections to match existing lines and levels.
- .2 Check that fastening of existing elements complies with the specified minimum. Check fasteners for deterioration or loss of connection.
- .3 Provide new fasteners to secure areas where deficient.

3.2 Plywood Installation

- .1 Edge support is required except where a separate panel-type underlay is applied. Edge support must consist of not less than 38mm x 38mm blocking securely nailed between framing membranes, or a tongue and groove edge joint.
- .2 Install plywood with the strong axis oriented at right angles to joists, studs, or other supporting wood framing, unless otherwise noted by the consultant.
- .3 For vertical applications, provide a 2mm to 3mm wide gap between plywood panel edges.
- .4 Fasten plywood wall sheathing and floor decking at minimum 150mm o/c along edges and 300mm o/c along intermediate framing supports.

3.3 Wood Framing and Blocking Installation

- .1 Discard wood with defects which may impair the quality of the work. Do not use wood lengths shorter than 300mm.
- .2 Where layered lumber is employed, offset joints between layers 300mm. Weave corners.



- .3 Construct elements to required levels with lines and members plumb and true.
- .4 Leave expansion gaps of 3mm between the ends of adjoining wood members.

3.4 Fastening and Securement

- .1 Secure non-structural blocking and nailers with fasteners spaced a maximum 300mm o/c.
- .2 Drive securement so fastener heads are flush with wood surfaces.
- .3 Fasteners shall be driven into wood straight. Bent or angled fasteners other than toe nails shall be removed and replaced.

3.5 Horizontal Surfaces

The top of all framed horizontal surfaces that will be receiving sheet metal flashings and/pr waterproofing shall be sloped 6%. At parapets, slope towards interior of roof.

End of Section 06 10 00



PART 1 - GENERAL

1.1 Description

This Section specifies the supply and installation of thermal insulation board and accessories for exterior wall assemblies.

1.2 Environmental Conditions

- .1 Ensure that all materials left on the job site are properly tarped and elevated off the surface at which they rest by 100mm. Dispose of all damaged or wet material off the site.

1.3 Submittals

- .1 Submit insulation type and supplier, fastening pattern and fasteners to Consultant for review prior to installing boards.

1.4 Field Review and Testing

Notify the Consultant of progress of work in this Section. Provide notice to allow review of the insulation installation prior to proceeding.

PART 2 - MATERIALS AND PRODUCTS

2.1 Insulation

- .1 Semi-Rigid Mineral Fibre

Semi-rigid mineral fibre insulation conforming to CAN/ULC-S702.1, density shall be at least 96kg/m³ (6lbs/ft³).

Manufacturer	Product
Rockwool	Comfortboard 110

2.2 Securement of Insulation

Insulation to be held in place with the vertically oriented furring strips fastened through the insulation via long screws. Fasteners to be corrosion resistant screws suitable for the thicknesses of insulation.

Component	Product
Screw Fasteners	➤ 6mm diameter stainless steel Tapcons for concrete/masonry substrates ➤ No. 10 stainless steel self-tapping screws required for steel framed substrates - No. 10 stainless steel screws required for wood substrates
	Note: Minimum length for substrate embedment:
	➤ 37mm in concrete, masonry and wood
	Approved Alternative



PART 3 - EXECUTION

3.1 Examination

- .1 Ensure the water resistant air barrier has been completed and properly flashed for drainage.
- .2 Review cladding anchorage components and accessories and ensure the cladding can follow after the insulation attachment.

3.2 Insulation Board

- .1 Install insulation tight to adjacent boards, with no gaps greater than 1.6mm (1/16inch).
- .2 Adjacent boards shall be square and flush.
- .3 Stagger all end joints horizontally.
- .4 Ensure insulation does not block drainage accessories and/or flashings.
- .5 Cut and trim insulation to fit around penetrations and irregularities. Do not leave gaps greater than 1.6mm (1/16inch).
- .6 Crushed, damaged or mis-cut insulation boards will not be accepted for use.

3.3 Mechanically Secure Insulation

- .1 Install mechanical fasteners in the pattern recommended by the insulation manufacturer, with no less than 6 fasteners per 609x1219mm (2x4ft) insulation boards.
- .2 Ensure fasteners are snug, slightly depressing the insulation, but no more than 1.6mm (1/16inch) from the face of the insulation board.

End of Section 07 21 15



PART 1 - GENERAL

1.1 Description

This Section specifies the supply and installation of spray-applied polyurethane foam insulation, which may be applied as an insulation and/or air/moisture control layer.

1.2 Environmental Conditions

- .1 Perform work only during weather conditions acceptable to the systems manufacturer. Do not apply materials when the ambient and surface temperatures are below 5°C, or above 35°C without first providing written instructions from the manufacturer, and the Consultant approves the foam application outside this temperature range.
- .2 Temperatures shall remain above 5°C for at least 2 hours after application of one component foam, or until the material has cured.
- .3 The Contractor is responsible to provide adequate protection of the materials during the wet, or uncured state, including but not limited to wind, dust, dirt, rain and freezing.
- .4 Provide adequate ventilation during installation and seal rooms off to prevent the escape of off gasses into occupied areas of the suites, if required. Maintain negative pressure in application area.

1.3 Delivery Storage and Handling

- .1 Deliver, store and handle materials following manufacturer's instructions and safety data sheets (SDS).
- .2 Deliver materials to job site in original packaging with labels intact. Store materials in a protected enclosure within temperature limits noted above.
- .3 Protect materials from freezing. Materials suspected of having been subjected to freezing are not to be used unless the Manufacturer verifies in writing that the material has not been damaged. Materials suspected of freezing or confirmed as being frozen shall not be used.

1.4 Safety and Protection Requirements

- .1 Protect workers and occupants as recommended by the appropriate ULC application standard and manufacturer's recommendations.
- .2 Workers must wear gloves, respirators, long sleeve clothing, eye protection, etc., when applying two-component spray-applied polyurethane foam insulation.
- .3 Workers must not eat, drink or smoke while applying foam insulation.
- .4 Provide temporary enclosures to prevent spray and noxious fumes from contaminating air beyond application area.
- .5 Protect adjacent surfaces and equipment from damage by overspray, fall-out, and dusting of insulation materials.



1.5 Submittals

- .1 Submit product data including manufacturer's literature for foamed-in-place polyurethane insulation components and accessories, indicating compliance with specified requirements and material characteristics.
- .2 Submit letter from manufacturer verifying applicator's certified to install their product.
- .3 Submit applicator's 3rd party certification, as per the manufacturer's registered quality assurance program.

1.6 Field Review and Testing

- .1 Notify the Consultant of progress of work in this Section. Consultant to review method and thickness of application.
- .2 The Contractor shall arrange for 3rd party review of the application, as per the manufacturer's quality assurance program.

PART 2 - MATERIALS AND PRODUCTS**2.1 Spray-Applied Polyurethane Foam**

- .1 Polyurethane foam insulating sealant shall comply with:

- .1 ULC-S710.1 for one component foam sealant, such as:

Manufacturer	Product
Adfast	Adfoam 1885
Dupont	Enerfoam or Great Stuff
Approved Alternate	

- .2 ULC-S711.1 for two component foam sealant, such as Froth-Pak by Dupont, or approved alternate.

2.2 Primers, Cleaners and Coatings

- .1 Primers and cleaners: Use primers in accordance with foamed-in-place polyurethane insulation manufacturer's written recommendations for surface conditions.
- .2 Polyurethane foam skin repair materials shall be water-based latex polymer coatings that are compatible with polyurethane foam (water-based styrene-butadiene based materials):

Manufacturer	Product
Bakor	Air Bloc 32
Approved alternative	

PART 3 - EXECUTION**3.1 Surface Preparation**

- .1 All surfaces to receive the spray-applied foam material shall be clean and dry, and free of any deleterious material.
- .2 Use the appropriate equipment to clean up dust or other material that may affect the adhesion of the spray foam, such as a shop-vacuum, or compressed air.
- .3 Use primer and/or cleaner where recommended by manufacturer.
- .4 Ensure that all adjacent surfaces are protected with suitable materials. The Contractor shall be responsible for cleaning and/or repairing surfaces stained from polyurethane droppings and excess material.

3.2 Handling and Mixing

- .1 Comply with all requirements of the authorities having jurisdiction in the handling and disposal of packaging and waste from the application of spray-applied polyurethane foam.
- .2 Two component foam must be mixed and applied according to the published manufacturer's instructions, and in compliance with the applicable standard, ULC-S705.2 or ULC-S711.2.
- .3 Comply with all requirements of the authorities having jurisdiction in the handling and mixing of two-component polyurethane foam.

3.3 Application

- .1 Apply two-component polyurethane foam insulation according to the requirements of ULC-S705.2. The applicator must ensure the spray-applied polyurethane foam is applied in a manner to dissipate the heat without adversely affecting the insulation or adjacent building materials and assemblies.
- .2 Apply one-component polyurethane foam sealant according to the requirements of ULC-S710.2.
- .3 Apply two-component polyurethane foam sealant according to the requirements of ULC-S711.2.
- .4 Install foam in layers of thickness less than maximum recommended by the manufacturer. Allow the minimum curing time between lifts (typically 50mm or less for insulating foam). Foam sealant beads are not to exceed 25mm as recommended by the manufacturer in their published installation instructions.
- .5 Limit quantity of foam as recommended by manufacturer to provide sufficient room for expansion and to prevent damage to adjacent wall components.
- .6 Do not apply material at such a rate that it expands beyond the intended area.
- .7 Cutting off excess cured foam material afterward is not acceptable, unless first approved by the Consultant.

3.4 Fire Protection



- .1 In concealed cavities greater than 25 mm deep, fire protection for polyurethane foam shall be applied.
- .2 Fire protection material shall be applied to a clean, dry surface, at least 18mm thick for polyurethane foam, in conformance with the manufacturer's published installation instructions.

3.5 Cleaning

- .1 Use cleaning methods as recommended by approved by the polyurethane foam manufacturer.
- .2 Minimize the use of solvents and VOC emitting materials for cleaning tools and surfaces.

End of Section 07 21 13



PART 1 - GENERAL

1.1 Description

This Section specifies the supply and installation of materials that form the drainage cavity for exterior walls. The drainage cavity will be constructed to direct all water that penetrates the wall cladding out of the wall.

1.2 Environmental Conditions

Do not install materials during periods of rainfall unless weather protection is provided.

1.3 Mock-ups

Include drainage cavity construction in the wall mock-up.

PART 2 - MATERIALS AND PRODUCTS

2.1 Water Resistive Barrier

- .1 Tyvek CommercialWrap by DuPont (if selected for Optional Item Pricing)
- .2 Refer to Section 07 27 13 for base scope self-adhered WRB.

2.2 Seam Tape

- .1 Tuck Tape by Cantech.
- .2 Tyvek Tape by DuPont.

2.3 Strapping

- .1 Strapping to be solid wood or plywood, meeting requirements of Section 06 10 00.
- .2 All strapping to be pressure treated with wood preservative in accordance with CAN/CSA O80, as follows:

Product	Pressure Treatment	Field Treatment
Solid wood	ACQ-C or ACQ-D (4.0 kg/m³), or CA-B (1.7 kg/m³)	2.0% solution of copper naphthenate
Plywood	CCA (4.0 kg/m³)	2.0% solution of copper naphthenate

- .3 All cuts and/or areas where untreated wood has been exposed must be field-treated. Use Cut-n-Seal Pressure Treated Wood Sealant or approved alternate for field treatment.
- .4 Strapping size to be 75mm x 19mm, unless otherwise approved by the Consultant.

2.4 Fasteners



- .1 For temporary water resistive barrier support, use 25mm wide crown minimum x 12mm deep U staples.
- .2 For strapping, use stainless steel or DT2000 coated #10 screws rated for use with pressure treated materials.

2.5 Insect Screen

Standard fibreglass mesh. Nominal mesh count to be 18x16.

2.6 Detail Waterproofing

Self-adhered modified bitumen waterproofing sheet. Refer to Section 07 27 13.

PART 3 - EXECUTION

3.1 Removals

Remove existing building paper, including all nails and staples. Allow Consultant to review underlying sheathing and framing for damage. Complete repairs as directed by the Consultant.

3.2 Water Resistive Barrier Installation

- .1 Water resistive barrier installation to be in accordance with manufacturer's written instructions.
- .2 Install water resistive barrier horizontally. Start at the bottom of the wall so water resistive barrier is shingle lapped up the wall. Maintain the water resistive barrier plumb and level.
- .3 Lap all vertical edges of water resistive barrier a minimum of 300mm. Stagger all vertical water resistive barrier joints a minimum of 600mm.
- .4 When interfacing with other waterproofing materials, provide a minimum 100mm overlap.
- .5 Apply detail self-adhered waterproofing around all penetrations. Shingle lap water resistive barrier with self-adhered waterproofing.
- .6 Temporarily secure water resistive barrier with staples at horizontal lap joints. Permanently secure water resistive barrier with vertical strapping.
- .7 Tape all vertical and horizontal seams with approved seam tape. Seal any tears or cuts in the water resistive barrier.

3.3 Strapping Installation

- .1 Install vertical strapping over insulation and into all wall studs, to a maximum of 600mm o/c. Install additional strapping where required to support exterior wall cladding, while ensuring strapping does not exceed 20% of any wall area.
- .2 Secure strapping with fasteners spaced at maximum spacing of 600mm o/c. Replace split strapping.



- .3 Install insect screen at the top and bottom of wall areas such that the drainage cavity is blocked from entry of insects. Minimize the laps required in the insect screen. Provide 300mm lap in insect screen where required.

End of Section 07 26 00



PART 1 - GENERAL**1.1 Description**

This section specifies the supply and installation of breathable and non-breathable self-adhered waterproofing membrane.

1.2 Environmental Conditions

Store, handle and install materials in accordance with manufacturer's most recent written environmental requirements.

1.3 Submittals

Submit a list of all self-adhered waterproofing materials and accessories to be installed for Consultant review and approval.

1.4 Mock-ups

Prepare mock-ups for the following work, prior to commencing general installation.

- .1 Membrane installation at window perimeters.
- .2 Membrane installation at sliding and swing door perimeters.
- .3 Membrane installation at light fixture,
- .4 Membrane installation at top and bottom of wall.

PART 2 - MATERIALS AND PRODUCTS**2.1 Primer**

Use primer as recommended by the waterproofing membrane manufacturer, and where approved by the Consultant. Primer to be of the same manufacturer as the waterproofing membrane.

2.2 Non-Breathable Self-Adhered Waterproofing Membrane

- .1 For localized use for transition detailing on exterior walls, (not in contact with plasticized PVC or polyurethane materials), use one of the following membranes (refer to details for locations):

Manufacturer	Product
Henry	Blueskin SA
Protecto Wrap	PW 100/40
Soprema	Soprasedal Stick 1100T
WR Meadows	Air-Shield
Approved equivalent	

- .2 For use at window/door rough opening perimeters (not in contact with plasticized PVC or polyurethane materials), use one of the following foil-faced membranes:



Manufacturer	Product
Henry	FOILSKIN
Protecto Wrap	Protecto Seal 45
Soprema	Soprasolin HD
WR Meadows	Air-Shield Aluminum Flashing
Approved equivalent	

- .3 For corner gussets at window/door rough openings (not in contact with plasticized PVC or polyurethane materials), the following conformable membrane is permitted:

Manufacturer	Product
Protecto Wrap	JS500
Approved equivalent	

- .4 For use under dark coloured metal roof flashings (not in contact with plasticized PVC or polyurethane materials), use one of the following high-temperature membranes:

Manufacturer	Product
Henry	Blueskin PE 200 HT
ProtectoWrap	Protecto Seal 45
Soprema	Lastobond Shield HT
Approved equivalent	

- .5 Use the same manufacturer when interfacing different waterproofing products, unless otherwise approved by the Consultant.
- .6 For self-adhered membrane beneath roofing cap flashings, substitution of self-adhered membrane with heat-welded roofing membrane is acceptable.

2.3 Self-Adhered Breathable Waterproofing Membrane

For field of exterior walls prior to installation of insulation and use at window/door jambs and heads, use one of the following breathable self-adhered membranes under the base scope of work:

Manufacturer	Product
Henry	Blueskin VP100
Soprema	Soprasedal Stick VP
VaproShield	WrapShield SA
WR Meadows	Air-Shield SMP
Approved equivalent	

2.4 Termination Sealant

- .1 Use one of the following termination sealants for non-breathable membrane seams/edges:

Manufacturer	Product
Henry	925 BES Sealant
Soprema	Soprasedal Sealant
VaproShield	VaproLiqui-Flash



Manufacturer	Product
WR Meadows	Air-Shield Liquid Flashing
Approved equivalent	

.2 Use one of the following termination sealants for breathable membrane seams/edges:

Manufacturer	Product
Henry	Henry Kop-R-Lastic Sealant
Henry	BES 925 Sealant
Soprema	Sopraseal Sealant or Sopramastic SP2
VaproShield	VaproLiqui-Flash
WR Meadows	Air-Shield Liquid Flashing
Approved equivalent recommended by the membrane manufacturer	

PART 3 - EXECUTION

3.1 Surface Preparation

- .1 Surfaces to which membrane will be applied are to be smooth, free of voids, and sharp protrusions.
- .2 Inspect all surfaces to be waterproofed for surface contaminants. Surfaces shall be free of dust, dirt, debris, and moisture.
- .3 Membrane to be fully backed in all applications. Notify Consultant if the condition of the substrate or detailing will require membrane to bridge gaps larger than 6mm.

3.2 Priming

- .1 Prime substrate at the coverage rate specified on containers. Allow primer to dry until tack-free. Prime only the area which is expected to be covered with membrane in one working day. Re-prime any areas not covered with membrane in 24 hours.
- .2 For breathable membranes, use primer only as approved by the Consultant.

3.3 Sealing Edges

- .1 On vertical and sloped surfaces, shingle-lap all waterproofing for positive drainage.
- .2 On horizontal surfaces, seal membrane edges with a manufacturer-approved termination sealant/mastic.
- .3 Mechanically attach perimeter edges that are not shingle lapped, or otherwise transitioned with other waterproofing materials, unless otherwise directed by the Consultant. If pre-approved by the Consultant, termination sealant may be used instead of mechanical attachment.



3.4 Sealing Seams

- .1 Overlap all seams a minimum of 65mm, or longer as recommended by the manufacturer. Apply succeeding sheet with a minimum of 65mm overlap and roll entire membrane firmly in accordance with manufacturer's written recommendations.
- .2 All seams shall be shingle-lapped to direct water to the exterior.
- .3 All fishmouths must be slit and the flaps overlapped, repaired with a patch of membrane, pressed and rolled to seal, and edges of the patch sealed with troweled termination sealant or mastic.
- .4 Misaligned or inadequately lapped seams must be patched with self-adhered membrane.
- .5 For vertical application, use heavy hand pressure and a seam roller over all areas.
- .6 For horizontal applications, use a roller that applies approximately 30kg/m pressure.

3.5 Protection

- .1 Cover waterproofing membrane as soon as possible.
- .2 Membrane must not be left exposed to UV at the end of the project.
- .3 Bituminous membranes shall not be in contact with incompatible materials, such as plasticized PVC, uncured polyurethanes, etc. Notify the Consultant immediately for direction if work appears to require contact between incompatible materials.

End of Section 07 27 13



PART 1 - GENERAL

1.1 Description

This Section specifies the supply and installation of prefinished fibre cement siding and trim as a wall cladding material on wood framed walls.

1.2 Environmental Conditions

- .1 Store, handle and install materials in accordance with manufacturer's written recommendations.
- .2 Material shall be stored flat, in original packaging, elevated from the ground, and covered to prevent contact with water.
- .3 Do not allow material to become saturated with water.
- .4 Allow material to acclimatize to the outside environment for at least 24 hours before installing.
- .5 Touch-up painting and coating cut edges shall not be completed at temperatures below 10°C, when condensation may form on surfaces, or when rain is forecasted.

1.3 Submittals

Submit colour samples of siding, paneling and trim for review by the Owner and Consultant.

1.4 Mock-ups

Prepare mock-ups for the following work, prior to commencing general installation.

- .1 Inside and outside wall corner trims.
- .2 Pipe and electrical box wall penetrations.
- .3 Top and bottom of walls.
- .4 Window and door perimeters.

PART 2 - MATERIALS AND PRODUCTS

2.1 Fibre Cement Siding and Trim

Unless noted otherwise, all cladding to be from James Hardie Building Products Inc., prefinished with ColorPlus Technology.

- .1 HardiePlank Lapped Siding
 - .1 Board width to be 6.25" with 5" exposure.
 - .2 Texture: Select Cedarmill



- .3 Colour: To be selected by Owner during construction from standard colour palette.
- .2 EasyTrim Reveals (EZ.17, EZ.34 and EZ.36), as specified in project details.
- .1 Colour: To be selected by Owner during construction from standard colour palette.

2.2 Mounting Blocks for Penetrations

Solid clear cedar wood trim primed and painted to match trim colour.

2.3 Fasteners

- .1 Concealed fasteners (on wood substrate): hot dipped galvanized 6d common nails or approved alternate.
- .2 Exposed fasteners (on wood substrate): hot dipped galvanized 16-ga. finish nails or approved alternate.

2.4 Joint Flashing

- .1 Hal-Tex 30 Building Paper by Hal Industries
- .2 Tyvek CommercialWrap by Dupont.
- .3 Matte sheet metal flashing.

2.5 Exterior Sealant

Refer to Section 07 92 13.

2.6 Touch-Up Paint

As recommended by the cladding manufacturer.

2.7 Patching Compound

- .1 DAP CrackSHOT Spackling Paste
- .2 LePage Polyfilla Multi-Surface Repair
- .3 Pre-approved alternate.

PART 3 - EXECUTION

3.1 Site Preparation

- .1 Check and repair any surfaces used for securement that will cause the siding or panels to be bent, wavy, or buckled.
- .2 Repair any defects in the drainage cavity moisture barrier before proceeding with siding or panel installation.



- .3 Take steps to contain dust during cutting of boards. Cutting shall be completed at least 6m away from openings to the building, and interior or exterior pedestrian traffic areas. Workers cutting fibre cement materials to wear respirators as recommended by the manufacturer.

3.2 General Installation Procedures

- .1 Leave protective laminate sheets on cladding boards during cutting and installation. Do not remove protective sheets until boards are installed and touch-ups are completed.
- .2 Paint all cuts in siding, panels, and trim prior to installation, including cut edges that will be concealed with sealant.
- .3 Fasteners to be driven snug or flush with the cladding material. Do not overdrive nails. Boards with overdriven nails to be removed and replaced, as directed by the Consultant.

3.3 Fibre Cement Lapped Siding Installation

- .1 Locate all horizontal joints over furring.
- .2 All siding boards shall be aligned horizontally over the entire work area, including on opposite sides of trim.
- .3 Stagger butt joints, so that repeated joint patterns are not noticeable at wall areas longer than 3.6m.
- .4 Leave a 3mm gap between the ends of siding boards and vertical trims. Seal siding-to-trim joints with a fillet bead, as per Section 07 92 13.
- .5 Install joint flashing behind butt joints between lap siding boards. Joint flashing to extend a minimum 150mm on either side of the joint, and 25mm onto the siding boards below. Do not seal butt joints.
- .6 Boards to be blind-fastened, unless noted otherwise.
- .7 Fasten boards along the factory installed guide at each strap, at a maximum 600mm o/c. Boards not installed along the guide to be removed and replaced.
- .8 For standard wall penetrations (light fixtures, exhaust vents, hose bibs, electrical power outlets, etc.), install mounting block trim, complete with head flashings.
- .9 For small wall penetrations less than 25mm in diameter (electrical conduits), place the penetration at the mid-point of the exposed face of the fibre cement siding board. Sealant around the penetration.

3.4 EasyTrim Installation

- .1 Provide continuous solid backing behind all vertical trims.
- .2 Install per the manufacturer's installation instructions and install with the minimum number of joints in trim pieces.



3.5 Sealant

Refer to Section 07 92 13.

3.6 Finishing

- .1 Touch-up all nail heads and small blemishes with the manufacturer recommended touch-up paint, following the manufacturer's written instructions. Do not seal nail heads.
- .2 Touch-ups to be used sparingly. Do not paint over fibre cement cladding to conceal defects or other damage.
- .3 Where directed by the Consultant, damaged cladding boards that have not been appropriately protected to be replaced at the Contractor's expense.
- .4 Where approved by the Consultant, minor dents, chips, or cracks that are not on highly visible cladding surfaces may be repaired with the specified patching compound. Cover the patching compound with touch-up paint.

End of Section 07 46 10



PART 1 - GENERAL

1.1 Description

This section specifies the supply and application of pre-finished galvanized sheet metal flashings and trim.

1.2 Submittals

Submit a manufacturer's brochure or chip catalog for the Owner to select a flashing colour. The Owner will retain the submittal.

1.3 Mock-ups

Prepare a mock-up of a cap flashing, window perimeter, sliding door perimeter, swing door perimeter, and base of wall flashing for Consultant review prior to commencing general installation. Include a metal flashing joint and sealant where applicable.

1.4 Field Review and Testing

Notify Consultant for review of installation of sheet metal and sealant.

PART 2 - MATERIALS AND PRODUCTS

2.1 Fastening Strips

20 gauge galvanized sheet metal. Fastening strips shall be continuous unless noted otherwise on the drawings.

2.2 Prefinished Sheet Metal

- .1 24 gauge galvanized prefinished sheet steel sized to project requirements. Colours are to be selected by the Owner from the standard manufacturer colour chart. Any chipped, scratched or dented material shall be rejected. Where work is to occur in the area of the flashing after installation, the flashing will come with protective, removal coverings on finished surfaces. All flashing and trim to have folded edges where exposed.
- .2 Exposed coating to be silicone modified polyester (SMP). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions. Dry film thickness of not less than 1.0 mil (0.025mm) for primer and topcoat. Non-exposed sides shall be protected with a wash coat or better.
- .3 Concealed finish to be acrylic or polyester coating.
- .4 Flashing colours to be as follows (as selected by the Owner from the standard sheet metal colour chips):
 - .1 Window and door: Match trim colour.
 - .2 Small wall penetration: Match trim colour.



- .3 Cap flashing: Match trim colour.
- .4 Base of wall: Match siding colour.

2.3 Fasteners

- .1 Unless otherwise directed by the Consultant, use screws in lieu of nails. Where approved by the consultant, nails shall be spiral type.
- .2 Where rivets are permitted by the Consultant, they shall be stainless steel, sized to suit application and colour matched to sheet metal.
- .3 For fastening into concrete, use ITW Tapcon or approved equivalent.
- .4 All fasteners shall be suitably coated to prevent corrosion or galvanic action. Where fastening into pressure treated wood, use hot dipped galvanized or stainless steel fasteners. Where not fastening into pressure treated wood, Leland DT2000 coating and/or JS100 plating system with powder coating finish are acceptable.
- .5 Exposed fasteners will not be permitted unless preapproved by the Consultant. Where permitted by the Consultant, exposed fasteners shall have EPDM gaskets to reduce water penetration and shall be colour matched to the sheet metal.

PART 3 - EXECUTION

3.1 Fabrication

- .1 Follow the requirements of the latest edition of SMACNA for fabrication and installation.
- .2 Use competent sheet metal mechanics and work accurately to details indicated and specified.
- .3 Construct all joints between sheet metal panels with S-lock type joints in the field and standing seam joints at corners. Install sheet metal sections in 2400mm maximum lengths or as otherwise shown on the drawings.
- .4 Form bends with straight sharp lines. Double back exposed and/or cut edges 12mm for stiffness. Leave no unfinished metal exposed or sharp corners.
- .5 Provide bends to prevent oil canning.
- .6 Slope all horizontal surfaces a minimum of 6%.
- .7 In vertical assemblies, sheet metal flashings should have a minimum 75mm up-leg, positively overlapped by the moisture barrier above.
- .8 In vertical assemblies, sheet metal flashings should have a minimum 12mm down-leg, positively lapped over the cladding surface below.
- .9 Unless detailed otherwise, provide 19mm end dams at all horizontal flashing terminations.



- .10 Unless detailed otherwise, all drip edges to be 12mm.
- .11 Unless noted otherwise, window/door flashings to extend to the outer edges of exterior window/door trims, separating the jamb trim from the head/sill trim.
- .12 Provide protection of sheet metal, as necessary, to prevent scratches or damage. The Consultant reserves the right to reject damaged or scratched sheet metal, including damage that occurs from other project work that occurs after the sheet metal installation.

3.2 Installation

- .1 Provide membrane flashing under all sheet metal, in accordance with Section 07 27 13. Provide backing under the waterproofing flashing to match slope.
- .2 Do not secure flashings through horizontally waterproofed surfaces.
- .3 Unless otherwise noted, secure flashings and fastening strips at 600mm o/c maximum, into solid backing.
- .4 Sheet metal must not be placed in direct contact with pressure treated wood, concrete, or materials that will cause galvanic corrosion. Provide a separation membrane, such as self-adhered waterproofing, between materials that may cause corrosion.

End of Section 07 62 00



PART 1 - GENERAL

1.1 Description

This Section specifies the materials and methods for work involving sealant.

1.2 Environmental Conditions

- .1 Apply primers and sealant only to surfaces which are structurally sound and completely dry, at air and material temperatures within acceptable ranges established by manufacturer's specifications. Should it become necessary to apply sealant at temperatures below 5°C, inform the Consultant and consult the sealant manufacturer's representative. Proceed on their written instructions only.
- .2 When working in cold temperatures, only clean/prime as many surfaces that can be sealed before frost and/or condensation re-occur.

1.3 Submittals

- .1 Submit manufacturer's data sheets for all materials to be used on site.
- .2 Submit a manufacturer's brochure for the Owner to select a sealant colour. The Owner will retain the submittal.

1.4 Mock-ups

- .1 Prepare mock-ups of sealant installation at window, sliding doors and swing door perimeters, and cladding interfaces.
- .2 Prepare mock-ups of three different details for Consultant review prior to commencing general installation.
- .3 The mock-ups may be used for Owner approval of final aesthetics, including colour and joint finishing.

1.5 Qualifications

Surface preparation and sealant installation shall be carried out by an applicator who is thoroughly trained and competent in all aspects of this work. Work shall be overseen by Contractor's personnel who have at least 5 years of experience installing sealant.

1.6 Field Review and Testing

- .1 The Consultant will perform on-site adhesion testing at mock-up locations. Repair adhesion tests at no additional cost to the Owner.
- .2 Notify Consultant for review of surface preparation prior to sealant application.



PART 2 - MATERIALS AND PRODUCTS

2.1 Exterior Sealant

.1 Polyurethane and Hybrid Polymer Sealant

- .1 For concrete, masonry, wood siding, fibre cement siding joints:

Manufacturer	Product
Master Builder Solutions	MasterSeal NP 1
Master Builder Solutions	MasterSeal NP 100
Sika	Sikaflex 15 LM
Tremco	Dymonic 100
Tremco	Dymonic FC

.1 Silicone Sealant

- .1 For metal to metal or metal trim joints:

Manufacturer	Product
Dow	Dowsil 795 Silicone Building Sealant
GE (Momentive Performance Materials)	SCS2000 SilPruf
Tremco	Spectrem 2

2.2 Window Air Seal Sealant

For sealing vinyl and aluminum window frames to breathable and bituminous self-adhered membranes:

Manufacturer	Product
Dow	Dowsil 758 Silicone Weather Barrier Sealant

2.3 Interior Finish Sealant

.1 Interior Air Seals (for interior perimeter of window and door assemblies)

Use one of the following single component, acrylic latex sealant:

Manufacturer	Product
DAP	Dynaflex 230
GE (Momentive Performance Materials)	RCS20
Master Builder Solutions	MasterSeal 520
Tremco	Tremflex 834

2.4 Solvents and Primers

- .1 Solvents/cleaners for surfaces to receive sealant shall be compatible with the surfaces to receive the cleaner (i.e. solvent). The sealant manufacturer shall recommend and approve in writing the cleaner type for each sealant in the project.
- .2 Primers shall be recommended by the sealant manufacturer for surfaces to be adhered to and shall not be detrimental to the surface to which it comes in contact.



2.5 Accessories

- .1 Joint backing shall be used to control depth of joint to recommended thickness of sealant and to prevent three-sided adhesion.
 - .1 Backer Rod: extruded polyolefin foam, non-gassing and have a diameter 25% larger than joint width.

Manufacturer	Product
Alcot Plastics	Soft Type Backer Rod
Industrial Thermo Polymers	Soft Type Backer Rod
Nomaco	SOF ROD

- .2 Bond-breaker Tape:

Manufacturer	Product
3M	Bond Breaker Tape
3M	Painters Tape
Bron	Bondbreaker Tape

- .3 Alternatively, apply a wax crayon to the substrate to prevent three-sided adhesion.

.2 Void Fillers

- .1 Unless otherwise specified, insulation for packing into large voids and cavities shall be light weight resilient, inorganic fibrous batts, such as:

Manufacturer	Product
Owens Corning	Fiberglass Pink Friction Fit Batts
Roxul	Flexibatt Batt Insulation 07210

- .2 Where specified, use a single component, polyurethane foam (solvent free), conforming to CAN/ULC-S710.1 (latest edition), "Spray-Applied Rigid Polyurethane Cellular Plastic Thermal Insulation" such as:

Manufacturer	Product
Adfast	Adfoam 1885-2
Dupont	Enerfoam or Great Stuff
Approved Alternate	

- .3 Cloths for solvent cleaning of surfaces prior to application of sealant shall be clean, white, solvent resistant cloths. Coloured cloths shall not be used. Change cloths frequently as they become soiled during cleaning.



PART 3 - EXECUTION

3.1 General

Consult and follow sealant manufacturer's recommendations.

3.2 Surface Preparation

- .1 Clean all surfaces to receive sealant by wiping with a clean cloth saturated with recommended cleaning solvent and by following immediately with another clean cloth to wipe the surface dry. Clean only as much area as can be sealed in one hour. If cleaned areas are exposed to rain or contaminants (dirt, dust, etc.), the surface must be cleaned again.

3.3 Priming

- .1 If recommended, prime surfaces to receive sealant as per the sealant manufacturer's specifications. Follow the sealant manufacturer's recommendations for application and cure time.
- .2 Take sufficient precautions to prevent staining of adjacent surfaces. Do not apply primer to the backer rod/bond breaker. Where necessary to protect adjacent surfaces, mask surfaces with suitable tape prior to primer and/or sealant installation.
- .3 If primed areas are exposed to rain or contaminants (dirt, dust, etc.), the surface must be cleaned and re-primed.
- .4 Protect the surfaces that do not require primer. If primer is installed accidentally on surfaces other than the one specified, it should be removed immediately with a clean cloth dampened with the manufacturer's recommended cleaner.

3.4 Joint Backing

- .1 At large open cavities, fill cavity with the approved void filler prior to the installation of the backer rod.
- .2 Install backer rod or apply bond breaker tape prior to sealant installation.
- .3 Tightly install backer rod without stretching, twisting, braiding or puncturing its outer skin.
- .4 Use an approved installation tool that is blunt surfaced and developed to accurately set the backer rod at the required depth to achieve recommended sealant profile.
- .5 Joint backing must be thoroughly dry. Do not install more joint backing/bond breaker tape than can be sealed in one working day.

3.5 Sealant Bead Profile

- .1 Maintain the minimum and maximum sealant depths as recommended by the manufacturer. Provide sealant depth that is half the joint width where possible. Increase average sealant size as required to accommodate application tolerances.



- .2 Unless otherwise approved by the Consultant, joint widths shall be greater than 10mm. Identify any joint widths less than this width to the Consultant for direction.
- .3 Notify the Consultant of joints wider than 19mm. Application of sealant in several passes or incorporation of closure flashings may be required (depending on joint configuration, weather conditions, access and material type). Follow the sealant manufacturer's and Consultant's recommendations for maximum joint width and application methods.
- .4 Provide a minimum bond surface of 6mm on each side of joint.
- .5 Provide a minimum of 5mm sealant depth for cap beads.

3.6 Sealant Application

- .1 Apply sealant using equipment approved by, and in accordance with the manufacturer's written instructions.
- .2 Where required to achieve clean, neat lines, apply masking tape to adjacent surfaces prior to sealant.
- .3 Immediately after application, tool the sealant to ensure firm, full contact with the faces of the joint. Neatly tool the surfaces to a slight concave profile. Avoid pulling the sealant out of the joint by frequent cleaning of the tooling instrument. Surface of sealant to be smooth, free from ridges, wrinkles, sags, air pockets and embedded impurities.
- .4 Ensure existing drainage paths are not blocked by the sealant material.
- .5 Silicone and polyurethane sealant shall be placed in contact with each other by wet to wet (prior to skinning over) and/or wet silicone to dry polyurethane application methods, as recommended by the manufacturer and confirmed to be acceptable by an on-site mock-up. The sealant shall be detailed to provide a watertight seal, including lapping in order to provide proper shedding of water flowing with gravity. Where initial lengths of sealant are required to assure the appropriate lap, apply silicone first.
- .6 Do not place sealant in contact with incompatible materials, including bituminous products, unless no adverse effects are confirmed by the sealant manufacturer in writing.

3.7 Cleaning

- .1 Remove sealant smears and droppings on completion of sealant installation in affected areas.
 - .1 For non-porous surfaces (i.e., metal and glass), it is recommended to immediately remove all excess sealant adjacent to the joint as work progresses with a cleaning solvent recommended by the sealant manufacturer.
 - .2 For porous surfaces, it is recommended to allow sealant to develop initial cure, then remove by abrasion or other mechanical means. Caution should be exercised to maintain original surface integrity.
- .2 Remove masking tape immediately after tooling of joints.



- .3 Cleaning solutions and methods to be recommended in advance by the sealant manufacturer.

End of Section 07 92 13



PART 1 - GENERAL

1.1 Description

This Section specifies the fabrication, supply and installation of new vinyl swing doors.

1.2 Environmental Conditions

- .1 Store, handle and install materials in accordance with manufacturer's written recommendations.
- .2 New door installation shall not proceed if weather at time of installation or in immediate forecast is for weather which may result in damage to the exposed wall elements or interior finishes of the building.
- .3 Protect door perimeters once doors are installed to prevent water ingress while wall cladding work is outstanding including, as a minimum, installation of metal flashing at door heads.

1.3 Submittals

- .1 Submit samples of the door hardware, including handles, locking devices and hinges.
- .2 Submit engineered shop drawings for the doors, for Consultant review and approval. Shop drawings to show waterproofing and structural detailing at door perimeters, including interfacing with adjacent cladding. Shop drawings to be signed and sealed by a Professional Engineer authorized to practice in the Province of British Columbia.
- .3 Submit a Schedule S-B and a certificate of professional liability insurance from the door engineer with the shop drawings.
- .4 Submit NAFS testing reports confirming doors meet performance requirements.
- .5 Submit NFRC testing reports confirming doors meet thermal transmittance and condensation resistance performance requirements.
- .6 Submit a letter from the door manufacturer stating that they have reviewed the installation and that the work has been completed in accordance with their recommended practices.
- .7 Submit field review reports from the door engineer, stating that they have reviewed the installation and that the work has been completed in accordance with their design.
- .8 Upon completion of the work, submit a Schedule S-C from the door engineer.

1.4 Mock-ups and Testing

- .1 Prepare a mock-up of the door installation prior to general installation, including perimeter membrane detailing, flashing installation, interior and exterior finishes and door installation.
- .2 Notify Consultant minimum 72 hours prior to completing mock-up installation. Consultant shall review general installation at all stages of the mock-up.



- .3 The Contractor shall engage a 3rd-party testing agency to complete water penetration resistance testing in accordance with ASTM E1105-15, to confirm compliance with the minimum performance levels identified in this specification.
- .4 Test locations will be selected by the Consultant, in consultation with the Owner. Minimum testing locations are as follows:
 - .1 Door mock-up location
- .5 Mock-up and general door units selected for testing shall be representative of door installation for the project. Special modifications to units being tested will not be permitted.
- .6 General door installation shall not proceed until the mock-up location have passed testing.
- .7 Failed Testing:
 - .1 If the tests identify that the specified performance levels have not been met, the Contractor shall undertake remedial work prior to re-testing at no cost to the Owner. Units will be tested until they pass. Water penetration at the perimeter of the window or sliding door (i.e., interface with adjacent building assemblies) shall be considered a fail.
 - .2 For every failed unit, an additional unit of similar configuration will be tested.
 - .3 Costs for re-testing of failed units and additional units as a result of failed tests will be the responsibility of the Contractor.
 - .4 Unless otherwise approved by the Consultant, do not proceed with further manufacturing or installation of the failed type of window or sliding door until the cause of failure is identified and remedied to the satisfaction of the Consultant.
 - .5 Remedial work required to achieve compliance on tested units shall be applied to all project units, at the discretion of the Consultant.
 - .6 If the remedial work does not address the deficiencies, or if the remedial work required to meet the specified performance levels is extensive, the Consultant may require that windows or sliding doors be replaced.
 - .7 The Contractor cannot make any delay claim for schedule delays resulting from failed water penetration resistance testing.

1.5 Design Requirements

- .1 Design door frames to withstand, without any detrimental effects to appearance and performance, structural loads, including wind and guard loads, and temperature ranges, in accordance with the local Codes.
- .2 Door shall be designed to conform to the current edition of the following standards, as applicable:
 - .1 AAMA/WDMA/CSA 101/I.S.2/A440 – NAFS North American Fenestration Standard/Specification for Windows, Doors and Skylights
 - .2 Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, NAFS Canadian Supplement



- .3 IGMA “Glazing Recommendations for Sealed Insulating Glass Units”
 - .4 Applicable Building Codes
 - .5 AAMA 303 Specification for Rigid Polyvinyl Chloride (PVC) Exterior Profiles
- .3 In the case of a conflict between this specification and the above-noted standards, the more stringent shall apply.
- .4 Doors shall meet the following minimum performance levels as described in the NAFS and the Canadian Supplement:
- Performance Class: LC
 - Performance Grade: PG 25
 - Water penetration resistance: 180 Pa
 - Air infiltration/exfiltration for operable units: A2
 - Maximum U value (imperial): 0.214 BTU/(hr°Fft²)
 - Maximum U value (metric): 1.22 W/(m²K)
- .5 All units shall be sufficiently stiff, secured and braced to prevent rattling under design loads.
- .6 Door shall be out-swing configuration.
- .7 Door shall be sized to fit within existing openings, without damaging interior finishes. Minimum gap between existing finishes and jambs shall be 6mm. Verify actual dimensions prior to fabrication, allow installation without damaging the waterproofing materials and allow for thermal expansion. Increase gap if required for expansion.
- .8 Door construction, perimeter clearance, and securement shall allow for expansion and contraction per the specified performance requirements.
- .9 Refer to the glazing schedule for door configurations.

1.6 Delivery, Storage, and Handling

- .1 All components of the doors shall be identified after fabrication by marks clearly indicating their location on the building.
- .2 Store materials in a location and in a manner to avoid damage. Storing shall be done in a way which prevents bending, excessive pressure, abrasion of the finished surfaces, and so that water cannot accumulate on or within materials. Store windows upright.
- .3 Leave all protective elements and labels in place until the doors are installed. Handle materials to avoid damage.

1.7 Quality Assurance

- .1 Installer to be a member in good standing of the Glazing Contractors Association of British Columbia, and have a minimum of 5 years' experience in successfully carrying out projects of similar scope.



PART 2 - MATERIALS AND PRODUCTS

2.1 Swing Doors

- .1 The following vinyl-framed out-swing door systems are acceptable, provided that they meet the performance requirements specified herein:

Manufacturer	Product
Allweather Windows	Belleville Swing Door
Centra Windows	2700 Series Swing Door
Starline Windows	Eurostar Swing Door
Pre-approved alternate	

2.2 Vinyl Framing

- .1 Vinyl frame colour: to match existing windows and sliding doors.
- .2 All joints (joints in frame and door panel) shall be mitre-cut and fusion-welded and designed to be air and water tight.
- .3 Fasteners to be used in connecting or securing the frame assembly shall be Type 300 or Type 400 stainless steel.
- .4 Doors shall be exterior glazed.
- .5 Door frames shall be drained to the exterior.

2.3 Weatherstripping

- .1 The weatherstripping shall be constructed of material resistant to weathering and aging, and compatible with associated materials. Open cell, surface-applied, or glued weatherstripping shall not be used.
- .2 All weatherstripping shall be mechanically secured in position, but designed such that it can be readily replaced.
- .3 Weatherseals: EPDM compression gaskets at door head and jambs, sized to be fully engaged when door is closed. Provide sweep at door sill.
- .4 Weatherseals shall be provided in continuous lengths, butted firm and sealed at ends, except at locations intended to drain.

2.4 Insulated Glazing Units

- .1 As per *Section 08 80 00 – Glazing*.

2.5 Hardware

- .1 Passage set: heavy duty residential grade, ANSI A156.2 Series 4000, with knobs inside and out, both knobs always unlocked. F10 by Schlage or approved alternate. Knobs to be round style.



- .2 Deadbolt: 25mm throw, ANSI A156.5-1992, door bolt with inside turn unit only such as Schlage BC180.
- .3 Hinges: heavy duty full mortise, 5-knuckle, buttom tip, zinc plated with steel pin, exterior grade. Shall shall not be removalbe when door is closed. Number 2789 C2G44NRP or approved alternate. Securement of hinges shall be as recommended by door manufacturer.
- .1 Finish for passage set and deadbolt: to match existing

2.6 Blocking and Shims

Plastic shims shall be provided where intermittent shims are required to maintain drainage. Cedar shims shall be provided where drainage is not required and as shown on details. Install shims at a spacing no greater than 600mm o/c.

2.7 Fasteners

- .1 All fasteners shall be suitably coated/formulated to prevent corrosion or galvanic action.
- .2 Into Concrete Structure or Masonry Walls: Pre-drilled, self-tapping screws formed from carbon steel, 6mm minimum diameter, length as required to provide minimum embedment into concrete or masonry, as shown in the door shop drawings; use Tapcon by ITW Construction products or pre-approved alternate.
- .3 Into Wood: Minimum #8 wood screws, formed from stainless steel, length as required to provide penetration into wood members as shown in the door shop drawings.
- .4 Screw fasteners shall be socket pan head or hex washer head type, except where screws are installed through window frames (fixed and/or operable), where flat head may be used, provided that they are properly countersunk.

PART 3 - EXECUTION

3.1 Fabrication

In addition to the requirements of NAFS, comply with the following:

- .1 Frames are to be assembled in a controlled, interior environment. All joints shall be accurately machined, assembled, and sealed to provide neat weathertight joints. Joints shall be fully welded.
- .2 The Contractor shall measure doors to be replaced to obtain an accurate measurement.
- .3 Fabricate units square and true with a maximum tolerance of $\pm 1.5\text{mm}$ for units with a diagonal measurement under 1800mm and $\pm 3\text{mm}$ for units with a diagonal measurement over 1800mm.
- .4 Mechanical fasteners, flashings, and hardware must not thermally bridge the units, unless the units tested for thermal performance and condensation resistance had the same thermal bridges.
- .5 Arrange fasteners and attachments to ensure that they are concealed from view.



- .6 Provide protection of doors, as necessary, to prevent scratches or damage. The Consultant reserves the right to reject damaged or scratched frames, including damage that occurs from other project work that occurs after the window installation (i.e. siding, etc.).

3.2 Removal of Existing Doors

- .1 Before beginning installation in any assigned area, the Contractor shall examine all parts of the structure affecting installation of this work in this area. Verify that openings and support structure are dimensionally within allowable tolerances, in accordance with reviewed shop drawings, plumb, level, clean, and provide a solid anchoring surface.
- .2 Remove and dispose of existing doors (glass, frames and flashings), including all associated sealants. Take all precautions required (such as precutting glass and tapping) to prevent debris falling below. Frames, glass, and other debris shall not be thrown out of openings onto the ground below.
- .3 All components (aluminum, glass, wood, etc.) from the door removal shall be placed into separate containers on site and delivered to a recognized and approved recycling facility. Supporting documents, such as waybills, shall be submitted as proof of compliance.
- .4 Collect debris in containers for removal from units via exterior.
- .5 Take care to limit damage to the interior finishes and exterior cladding. Damage to sound interior finishes and exterior cladding shall be repaired by the Contractor at no cost to the Owner.

3.3 Installation and Securement

- .1 Install new door framing, glazing, and accessories according to approved shop drawings and manufacturer's written instructions and recommendations.
- .2 Install new doors in existing openings with frames plumb, true, level, square, free from warp, twist and superimposed loads.
- .3 Confirm that existing sill framing is not back-sloped. Notify Consultant if framing is sloped towards the interior.
- .4 Install anchors as per approved shop drawings. At all anchoring locations, install shims to tightly fill space/gap without bending frames. Use a minimum of two shims per location, driven from opposite sides of window frame to provide level support for the full width of the frame. Prior to sealant application, cut off shims flush with interior and exterior face of frames.
- .5 Unless approved by the Consultant, anchorage shall not be permitted through the sill or other drainage planes. If required, wrap the shank of the fastener immediately below the head with unshimmed butyl tape prior to installation, when fastening through perimeter waterproofing.
- .6 Install associated flashings, trim, and interior and exterior sealants in accordance with specifications and drawings.
- .7 Install passage set and deadbolt and ensure operation is smooth and trouble-free.



- .8 Check door alignment and weatherseal contact, and adjust for proper operation and performance of unit as required.

3.4 Cleaning and Adjustment

- .1 All components shall be protected from other building materials during and after installation until acceptance by the Consultant and Owner. Protect finished work from damage.
- .2 Remove protective elements and labels from glass and frames, and thoroughly clean all vinyl and glass surfaces with a solution of mild detergent and warm water. Take care in removing dirt from corners. Dry surfaces using soft cloths.
- .3 Check door alignment and weatherseal contact. Make adjustments for proper operation and performance of unit as required.

End of Section 08 15 20



PART 1 - GENERAL

1.1 Description

This Section specifies the fabrication, supply, and installation of vinyl-framed windows and sliding doors.

1.2 Environmental Conditions

- .1 Store, handle and install materials in accordance with manufacturer's written recommendations.
- .2 Installation shall not proceed if weather at the time of installation or in immediate forecast may result in damage to exposed wall elements, interior finishes, or furnishings.
- .3 Protect window and sliding door perimeters once windows and sliding doors are installed to prevent water ingress while wall cladding work is outstanding. As a minimum, install metal flashings at window and sliding door heads.

1.3 Submittals

- .1 Submit NAFS testing reports confirming windows and sliding doors meet performance requirements.
- .2 Submit a manufacturer's brochure or colour chips for the Owner to select the frame finish colour from the standard colour palette.
- .3 Submit samples of the window and sliding door hardware, including handles, locking devices, sliding door rollers, and hinges.
- .4 Submit engineered shop drawings for the windows and doors for Consultant review and approval. Shop drawings to show waterproofing and structural detailing at window and door perimeters, including interfacing with adjacent cladding. Shop drawings to be signed and sealed by a Professional Engineer authorized to practice in the Province of BC.
- .5 Prior to window and door installation, submit a Schedule S-B and a certificate of professional liability insurance from the Contractor's Professional Engineer.
- .6 Submit field review reports from the window and sliding door engineer, stating that they have reviewed the installation and that the work has been completed in accordance with their design.
- .7 Prior to final progress draw for window and door installation, submit a Schedule S-C from the Contractor's Professional Engineer.

1.4 Mock-ups and Testing

- .1 Prepare mock-ups of the window and sliding door installation prior to general installation, including perimeter membrane detailing, flashing installation, interior and exterior finishes, and window and sliding door installation.



- .2 Notify Consultant minimum 72 hours prior to completing mock-up installation. Consultant shall review general installation at all stages of the mock-up.
- .3 The Contractor shall engage a third-party testing agency to complete water penetration resistance testing in accordance with ASTM E1105, to confirm compliance with the minimum performance levels identified in this specification. Notify Consultant minimum 72 hours prior to scheduled testing.
- .4 Test locations will be selected by the Consultant, in consultation with the Owner. Minimum testing locations are as follows:
 - .1 Window assemblies: 1
 - .2 Sliding door assemblies: 1
 - .3 The required tests shall be completed prior to installing 50% of the total windows and sliding doors, with the remaining tests completed after 50% installation.
- .5 Mock-up and general window and sliding door units selected for testing shall be representative of window and sliding door installation for the project. Special modifications to units being tested will not be permitted.
- .6 Exterior waterproofing transitions with adjacent wall assemblies shall be installed at test locations. Interfaces with adjacent walls shall be included in test area. Units selected for testing shall not have interior finishes installed at the time of testing.
- .7 General window and sliding door installation shall not proceed until the mock-up location(s) have passed testing.
- .8 Failed Testing:
 - .1 If the tests identify that the specified performance levels have not been met, the Contractor shall undertake remedial work prior to re-testing at no cost to the Owner. Units will be tested until they pass. Water penetration at the perimeter of the window or sliding door (i.e., interface with adjacent building assemblies) shall be considered a fail.
 - .2 For every failed unit, an additional unit of similar configuration will be tested.
 - .3 Costs for re-testing of failed units and additional units as a result of failed tests will be the responsibility of the Contractor.
 - .4 Unless otherwise approved by the Consultant, do not proceed with further manufacturing or installation of the failed type of window or sliding door until the cause of failure is identified and remedied to the satisfaction of the Consultant.
 - .5 Remedial work required to achieve compliance on tested units shall be applied to all project units, at the discretion of the Consultant.
 - .6 If the remedial work does not address the deficiencies, or if the remedial work required to meet the specified performance levels is extensive, the Consultant may require that windows or sliding doors be replaced.



- .7 The Contractor cannot make any delay claim for schedule delays resulting from failed water penetration resistance testing.

1.5 Design Requirements

- .1 Design window and sliding door frames to withstand, without any detrimental effects to appearance and performance, structural loads, including wind and guard loads, and temperature ranges, in accordance with the local Codes.
- .2 Windows and sliding doors shall be designed to conform to the current edition of the following standards, as applicable:
- .1 AAMA/WDMA/CSA 101/I.S.2/A440 – NAFS North American Fenestration Standard/Specification for Windows, Doors and Skylights
 - .2 Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, NAFS
 - .3 IGMA “North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use”
 - .4 AAMA 303 Specification for Rigid Polyvinyl Chloride (PVC) Exterior Profiles
 - .5 Applicable Building Codes
- .3 In the case of a conflict between this specification and the above-noted standards, the more stringent shall apply.
- .4 Windows and sliding doors shall meet the following minimum performance levels as described in the NAFS and the Canadian Supplement:
- Performance Class: LC
Performance Grade: PG 25
Water penetration resistance: 180 Pa
Air infiltration/exfiltration for operable units: A2
Maximum U value (imperial): 0.214 BTU/(hr°Fft²)
Maximum U value (metric): 1.22 W/(m²K)
- .5 Limit component deflection under maximum design load to 1/175 of span, or less if required by the IGU manufacturer.
- .6 All units shall be sufficiently stiff, secured and braced to prevent rattling under design loads.
- .7 Window and sliding door system shall withstand expansion and contraction resulting from an ambient temperature range of 80°C.
- .8 Windows and sliding doors shall be sized to fit within existing rough openings and without damaging interior finishes, but still providing a minimum clear gap of 6mm around the full perimeter to limit thermal bridging, allow installation without damaging the waterproofing materials and allow for thermal expansion. Increase gap if required for expansion.
- .9 Window and sliding door construction, perimeter clearance, and securement shall allow for expansion and contraction per the specified performance requirements.
- .10 Provide limiting restrictors on all operable windows. Restrictors to limit opening to 100mm.
- .11 Refer to the glazing schedule for window configurations.



1.6 Delivery, Storage, and Handling

- .1 All components of the windows and sliding doors shall be identified after fabrication by marks clearly indicating their location on the building.
- .2 Store materials in a location and in a manner to avoid damage. Storing shall be done in a way which prevents bending, excessive pressure, abrasion of the finished surfaces, and so that water cannot accumulate on or within materials. Store windows and sliding doors upright.
- .3 Leave all protective elements and labels in place until the windows and sliding doors are installed. Handle materials to avoid damage.

1.7 Quality Assurance

Installer to be a member in good standing of the Fenestration Association of BC and have a minimum of 5 years' experience in successfully carrying out projects of similar scope.

PART 2 - MATERIALS AND PRODUCTS

2.1 Casement/Awning Windows

The following vinyl framed window systems are acceptable, provided that they meet the performance requirements specified herein:

Manufacturer	Product
All Weather Windows	9100 Series
Centra Windows	2900 Series
Starline Windows	7100 Series
Pre-approved alternate	

2.2 Sliding Doors

The following vinyl framed punched sliding door systems are acceptable, provided that they meet the performance requirements specified herein:

Manufacturer	Product
All Weather Windows	Viscount Patio Door
Centra Windows	5200 Series
Starline Windows	8500 Series
Pre-approved alternate	

2.3 Vinyl Framing

- .1 All joints (joints in frame, joints in operable windows and doors, etc.) shall be mitre-cut and fusion-welded and designed to be air and water tight.
- .2 Windows and sliding doors shall be exterior glazed.
- .3 Window and sliding door frames shall be drained to the exterior.
- .4 Window and sliding door frames to have a nailing flange.



2.4 Weatherstripping

- .1 The weatherstripping shall be constructed of material resistant to weathering and aging, and compatible with associated materials. Open cell, surface-applied, or glued weatherstripping shall not be used.
- .2 All weatherstripping shall be mechanically secured in position and designed such that it can be readily replaced.
- .3 Compression gaskets shall be EPDM or santoprene. Weatherseals shall be provided in continuous lengths, butted firm and sealed at ends, except at locations intended to drain.

2.5 Insulating Glazing Units

As per Section 08 80 00 – Glazing.

2.6 Hardware

- .1 Sliding Door Locks: Provide manually operated locks on sliding doors. Doors to have both jamb and sill track locks.
- .2 Sliding Door Rollers: Brass rollers. Submit sample of proposed hardware, subject to approval by Consultant and Owner.
- .3 Opening Restrictors: Spring-loaded metal.
- .4 Hinges: Use continuous, heavy-duty stainless-steel hinges.

2.7 Shims

Plastic shims shall be provided where intermittent shims are required to maintain drainage. Install shims at a spacing no greater than 600mm o/c.

2.8 Insulation

Use one of the following light-weight, inorganic fibrous batt insulation materials:

Manufacturer	Product
Owens Corning	Fiberglass Pink Friction Fit Batts
Roxul	Comfortbatt
Approved Alternate	

2.9 Fasteners

- .1 All fasteners shall be suitably coated/formulated to prevent corrosion or galvanic action.
- .2 Fastener type and size to be specified in the sealed shop drawings.

PART 3 - EXECUTION



3.1 Fabrication

In addition to the requirements of NAFS, comply with the following:

- .1 Frames are to be assembled in a controlled, interior environment. All joints shall be accurately machined, assembled, and sealed to provide neat weathertight joints. Joints shall be fully welded.
- .2 The Contractor shall measure windows and sliding doors to be replaced to obtain an accurate measurement.
- .3 Fabricate units square and true with a maximum tolerance of $\pm 1.5\text{mm}$ for units with a diagonal measurement under 1800mm and $\pm 3\text{mm}$ for units with a diagonal measurement over 1800mm.
- .4 Mechanical fasteners, flashings, and hardware must not thermally bridge the units, unless the units tested for thermal performance and condensation resistance had the same thermal bridges.
- .5 Arrange fasteners and attachments to ensure that they are concealed from view.
- .6 Provide protection of window and sliding door frames and glazing, as necessary, to prevent scratches or damage. The Consultant reserves the right to reject damaged or scratched windows and sliding doors, including damage that occurs from other project work that occurs after the window and sliding door installation.

3.2 Removal of Existing Windows and Sliding Doors

- .1 Remove and dispose of existing windows and sliding doors, including all associated sealant. Take all precautions required (such as precutting glass and tapping) to prevent debris falling below. Frames, glass, and other debris shall not be thrown out of openings onto the ground below.
- .2 All components from the window and sliding door removal shall be placed into separate containers on site and delivered to a recognized and approved recycling facility, as applicable. Supporting documents, such as waybills, shall be submitted as proof of compliance.
- .3 Take care to limit damage to the interior finishes and exterior cladding. Damage to sound interior finishes and exterior cladding shall be repaired by the Contractor at no cost to the Owner.

3.3 Installation

- .1 Before beginning installation in any assigned area, the Contractor shall examine all parts of the structure affecting installation of this work in this area. Verify that openings and support structure are dimensionally within allowable tolerances, in accordance with reviewed shop drawings, plumb, level, clean, and provide a solid anchoring surface.
- .2 Install new window and sliding door framing, glazing, and accessories according to approved shop drawings and manufacturer's written instructions and recommendations.
- .3 Install new windows and sliding doors in existing openings with frames plumb, true, level, with frames square, free from warp, twist and superimposed loads.



- .4 Confirm that existing sill framing is not back-sloped. Notify Consultant if framing is sloped towards the interior.
- .5 Install fasteners as per approved shop drawings. At all anchoring locations, install shims to tightly fill space/gap without bending frames. Conceal all fasteners except where unavoidable for structural anchorage or application of hardware.
- .6 Jambs of adjoining assemblies shall be designed to couple together (male/female coupling). Provide minimum of 19mm engagement at each male/female connection. If required, provide additional lateral support by securing frames through the glazing cavity. At each male/female connection, install a bedding bead of sealant on the interior and exterior sides of the joint prior to coupling the mullions. Wipe off excess sealant before it cures.
- .7 Unless approved by the Consultant, anchorage shall not be permitted through the sill or other drainage planes. If required, wrap the shank of the fastener immediately below the head with un-shimmed butyl tape prior to installation, when fastening through perimeter waterproofing.
- .8 Install associated flashings, trim, and interior and exterior sealant in accordance with specifications and drawings.

3.4 Perimeter Insulation

- .1 Completely fill the head and jambs around the frame perimeters with flexible batt insulation, or other insulation where pre-approved by the Consultant. Limit quantity of insulation to avoid deflecting the frames.
- .2 Cut away insulation extending past joints prior to applying sealant.

3.5 Cleaning and Adjustment

- .1 All components shall be protected from other building materials during and after installation until acceptance by the Consultant and Owner. Protect finished work from damage.
- .2 Remove protective elements and labels from glass and frames, and thoroughly clean all vinyl and glass surfaces with a solution of mild detergent and warm water. Take care in removing dirt from corners. Dry surfaces using soft cloths.
- .3 Check and square the sashes as necessary.
- .4 Check ease of operation of the operable units and removal of any removable pieces. Make adjustments as necessary.

End of Section 08 53 13



PART 1 - GENERAL

1.1 Description

This section specifies the fabrication, supply, and installation of insulating glazing units (IGUs).

1.2 Environmental Conditions

- .1 Store, handle and install materials in accordance with manufacturer's written recommendations.
- .2 Work shall not proceed if weather at time of installation, or in immediate forecast, is for weather which may result in damage to exposed wall elements, interior finishes or furnishings of building.
- .3 Glazing installation shall not be carried out at temperatures below 5°C. Should it become necessary to carry out the work at temperatures below 5°C, inform the Consultant and consult the glazing sealant manufacturer's representative. Proceed on their written instructions only.

1.3 Submittals

- .1 Submit manufacturer's information to the Consultant, to confirm conformance with specifications.
- .2 Submit 300mm x 300mm glazing unit samples, for the Owner's approval of unit appearance.
- .3 Provide a letter from the Contractor's Professional Engineer confirming that glazing has been designed to meet all applicable structural loads, including wind, snow, and guard loads, set out by the British Columbia Building Code.

1.4 Field Reviews and Testing

The Consultant will review the glazing on site. Glazing not manufactured in accordance with this Section shall be replaced at no cost to the Owner.

1.5 Design Requirements

- .1 Comply with the requirements of the following documents, latest edition:
 - .1 IGMA "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use"
 - .2 Glass Association of North America (GANA), "GANA Glazing Manual"
 - .3 CAN/CGSB-12.1, "Safety Glazing"
 - .4 CAN/CGSB-12.3-M, "Flat, Clear Float Glass"
 - .5 CAN/CGSB-12.8-M, "Insulating Glass Units"
 - .6 CAN/CGSB-12.9-M, "Spandrel Glass"
 - .7 CAN/CGSB-12.20-M, "Structural Design of Glass for Buildings"
- .2 In the case of a conflict between this specification and the above-noted standards, the more stringent shall apply.



- .3 Size glazing unit to provide a minimum edge clearance between edge of unit and window frame in accordance with IGMA recommendations.

PART 2 - MATERIALS AND PRODUCTS

2.1 Glass

- .1 Window Glass
 - .1 For windows where all glass is at least 1,070mm above the finished floor height: glass types and thicknesses to be designed by the Contractor's Professional Engineer to meet applicable structural loads set out by the British Columbia Building Code.
 - .2 For windows where part or all of the glass is within 1,070mm of the finished floor height: glass types and thicknesses to be designed by the Contractor's Professional Engineer to meet applicable structural loads, including guard loads, set out by the British Columbia Building Code.
- .2 Door Glass: Glass types and thickness shall be designed by the Contractor's Professional Engineer to meet applicable structural loads, set out by the British Columbia Building Code.

2.2 Insulating Glazing Units

- .1 Acceptable IGU manufacturers include:
 - .1 Cardinal Glass
 - .2 Garibaldi Glass
 - .3 Vitrum Glass
 - .4 Pre-approved alternate
- .2 Thermal Transmittance:
 - .1 Refer to Section 08 53 13 – Vinyl Windows and Sliding Doors Section for overall system thermal transmittance requirements.
 - .2 Thermal transmittance to be determined in accordance with *NFRC 100-2014 – Determining Fenestration Product U-Factors* or comparable simulation and/or physical testing standard.
- .3 IGUs shall be identified as required by the IGMA Certification Program with the IGMA trademark, company name, location of production facility, and year of manufacture.
- .4 Perimeter Sealant System: Two-stage perimeter seal, consisting of a primary and secondary seal, as recommended by the IGU manufacturer to meet the specified performance criteria.
- .5 Spacer and Desiccant Systems:
 - .1 Spacer Material: Warm-edge spacer complying with ASTM E2190, as recommended by the IGU manufacturer. Swiggle Seal IGUs by Truseal Technologies will not be considered as an alternate.



- .2 The spacer system shall be sized as required to be compatible with the existing framing system and engineered glass thickness. Unless otherwise specified, the nominal air space width between the inboard and outboard panes should be 12 ± 1 mm.
- .3 The spacer shall be continuous and fabricated with bent corners and fused butt joints. Assembly with connectors such as corner keys will only be considered if approved by IGMA.
- .4 The spacer system shall be suitable and tested for use in conjunction with argon gas.
- .5 The desiccant volume shall be designed as required to avoid inward deflection of glass and/or spacer and sealant system due to excessive adsorption of gases other than water vapour.
- .6 Inert Gas Fill: Use gas type and concentration as required to meet the specified thermal transmittance requirements and the minimum requirements of CAN/CGSB-12.8-M, "Insulating Glass Units".

2.3 Coatings

- .1 Low-e coating:
 - .1 Sputtered type coating, as recommended by the manufacturer to meet the specified thermal transmittance **and the following requirements:
 - .1 Maximum SHGC: 0.30
 - .2 Install low-e coating on surface #2. Low-e coatings on surface #4 are not permitted.

2.4 Glazing Components

- .1 Glazing Tapes and Gaskets:
 - .1 For wet seal between glass and window and door framing, use a pre-formed butyl tape incorporating continuous EPDM cord shim (minimum 3mm diameter cord), mounted on a paper backer, such as:

Manufacturer	Product	Colour
Tremco	Polyshim II	Black
Pre-approved alternate		
 - .2 For dry seal between glass and glazing stops, use EPDM, silicone or santoprene extruded gasket.
 - .3 For sealing around IGUs in sliding glass doors, use a marine wrap or boot glazing gasket with minimum 9mm weep holes at 150mm o/c along bottom of IGUs. Enclosing framing should be similarly drained.
 - .4 Thickness of glazing tapes and gaskets to be selected based on the manufacturer specifications to provide the recommended compression necessary to ensure a watertight seal of the glazing assembly.
- .2 Glazing Sealants:
 - .1 For corner toe beads, use:



Manufacturer	Product
Tremco	Tremco Butyl
Tremco	Tremco Dymonic
Approved alternate	

.3 Setting Blocks:

- .1 Use neoprene, PVC, EPDM, or silicone rubber setting blocks with Shore A Durometer hardness of 85±5.
- .2 If IGUs have silicone edge seals, use only silicone setting blocks or approved equivalent. Glazing and setting block manufacturers to confirm there is no material incompatibility between IGUs and setting blocks.
- .3 Minimum thickness of setting blocks shall be 6mm. Setting blocks shall be wide enough to fully support the full glazing width (inboard and outboard panes). Unless otherwise stated, the minimum setting block length shall be 25mm per square metre for larger units, but not less than 50mm.
- .4 Follow the recommendations listed in Section 5 of IGMA "Glazing Recommendations for Sealed Insulating Glass Units" regarding setting block size, thickness, etc.

PART 3 - EXECUTION

3.1 Tempering

Tempering is to be performed using the horizontal tongue-free method.

3.2 Assembly of Insulating Glazing Units

- .1 Fill spacer cavities with desiccant in accordance with desiccant manufacturer's instructions, and immediately assemble spacer frame.
- .2 If corner keys are used, seal each corner key individually with PIB by one of the following methods:
 - .1 Wrapping corner key legs with extruded PIB ribbon prior to insertion of key into spacer;
 - .2 Injection of PIB after insertion of key into spacer; or,
 - .3 Coating exposed portion of key with PIB after insertion into spacer.
- .3 Ensure the bond lines on the spacer and glass are free of debris, fingerprints, or other substances which may adversely affect the bond.
- .4 If required, edge delete coatings as per manufacturer's requirements.
- .5 After cleaning, place spacer frame with all sides parallel to edges of glass. All sides of frame shall be equal dimension from the glass edges.
- .6 Apply sufficient PIB around the entire spacer frame assembly perimeter on both sides of the spacer to achieve complete PIB wet out onto glass surfaces #2 and #3.
- .7 Once assembled and compressed, verify that:



- .1 The PIB is continuous and in contact with the glass and spacer around the entire perimeter of the assembly (on both glass surfaces).
- .2 The post-fabrication width of the PIB is at least 4 ± 1 mm as measured from the top of the bottom of the spacer.
- .8 Proceed with gas fill operation. Once filling procedures are complete, mechanically close the injection port and cover/seal with a layer of PIB.
- .9 Apply and tool structural secondary sealant around the full perimeter of the IGU as per the sealant manufacturer's recommendations. Verify that:
 - .1 The sealant is installed in a continuous operation around the entire perimeter of the assembly and to the full depth of the cavity created by the metal spacer in the cavity between glass panes.
 - .2 Once cured, the sealant is a minimum 4 ± 1 mm thick as measured from the centre of the spacer to the glass edges.
- .10 Store IGUs as per IGMA recommendations. IGUs shall not be stored in direct sunlight and shall not be stored outside during the curing period. Follow the sealant manufacturer's recommendations for curing and ensure that PIB and structural secondary sealants are thoroughly cured prior to shipping to site.

3.3 Site Examination

- .1 Verify that glass is correctly sized for the intended openings, and that the edges of the glass are free from nicks and other imperfections conducive to breakage.
- .2 Verify that the minimum required face and edge clearances will be achieved.
- .3 Notify Consultant of conditions which may prevent proper installation.

3.4 Glazing Installation

- .1 Preparation:
 - .1 Check that all surfaces to receive glazing, and the glazing cavities in existing framing components, are undamaged, free of obstructions and ready for preparation.
 - .2 Remove all protective coatings from the window frames and glass.
 - .3 Surfaces to receive glazing tape, including glass edges, shall be prepared in accordance with manufacturer's recommendations.
- .2 Glazing Tape Application:
 - .1 Apply tape flush to outside edge of interior fixed window stop. Butt tape at corners of openings (rather than overlapping or bending around corners), offsetting the joints in the tape from the joints in the window frame. Do not stretch tape during installation. Trim or otherwise adjust to accommodate frame joint seals.



- .2 Seal all joints in the glazing tape and install 50mm long corner toe beads on either side of the joint. Toe beads shall not interfere with window frame drainage holes.
- .3 Leave the release paper on the glazing tape until just before glazing.
- .3 Setting Block Placement:

Place each setting block at quarter points, but no closer than 150mm from the corners of the glazing.
- .4 Glazing Placement:
 - .1 Clean the glazing with a clean white cloth saturated with solvent using the two-rag method.
 - .2 Install glazing centered in the frame opening and resting on both setting blocks. Maintain a minimum edge clearance of 3mm. Ensure full contact of both outer and inner panes of glass on the setting blocks.
 - .3 Press glazing firmly against the glazing tape. Take care to avoid displacing the glazing tape during the glazing installation.
 - .4 Verify that the glazing tape is compressed as recommended by the manufacturer. Fill in depressions in the glazing tape at the sill with silicone sealant.
- .5 Cleaning and Adjustment:
 - .1 Remove protective elements and labels from glass and thoroughly clean vinyl surfaces with a solution of mild detergent and warm water. Take care in removing dirt from corners. Wipe surfaces dry using soft cloths. Glass to be cleaned in accordance with GANA International Bulletin GAA 01-0300, Proper Procedures for Cleaning Architectural Glass Products.
 - .2 Check the fit of all moveable sashes and operation of all hardware. Make adjustments as required to restore proper operation.

End of Section 08 80 00



PART 1 - GENERAL

1.1 Description

This section specifies the application of primer and finish paint to new window trim or interior gypsum wallboard installed as a result of damage due to the repairs.

1.2 Environmental Conditions

- .1 Do not apply if the air and surface temperatures are below 10°C or above 25°C.
- .2 Do not apply coatings while the relative humidity is greater than 80%. The substrate temperature must be at least 5°C above the dew point while painting and curing.

1.3 Submittals

Submit manufacturer's technical data for the products being used.

1.4 Delivery, Storage and Handling

- .1 Deliver materials in manufacturer's original packaging.
- .2 Store and protect products in accordance with manufacturer's instructions. Store with seals and labels intact and legible. Store inside a dry and temperature-controlled room.
- .3 Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 Quality Control

- .1 Perform work in conformance with premium grade requirements of the Master Painters and Decorators Association of BC, Architectural Painting Specification Manual.
- .2 All work shall meet or exceed the more stringent of the manufacturer's requirements or the requirements of this Specification.

PART 2 - MATERIALS AND PRODUCTS

Use materials in strict accordance with the manufacturer's specifications and requirements.

2.1 Primer and Finish Paint

- .1 Use one of the following acrylic finish paints with integral primer:

Manufacturer	Product
Benjamin Moore	Aura Series
Behr	Marquee
Pre-approved alternate	

- .2 Select colour and finish to match existing.



- .3 Select primer and finish paint products from the same manufacturer. Do not mix manufacturers.
- .4 Use materials in strict accordance with the manufacturer's specifications and requirements.

2.2 Repair Materials

- .1 Acrylic latex caulking shall be DAP Alex Plus, or approved alternative.

PART 3 - EXECUTION

3.1 Site Preparation

- .1 Mask off adjacent finishes, to prevent spilled primer on finishes outside of the work areas.
- .2 Tape down protection below work areas.
- .3 Install "WET PAINT" signs.

3.2 Surface Preparation

- .1 All surfaces must be sound, dry, clean and free of oil, grease, dirt, mildew, loose and flaking paint and other foreign substances.

3.3 Primer and Finish Paint Preparation

- .1 Mix well before using.
- .2 Withdraw from original container only as much material as can be used in one day. Do not return unused material to original container.
- .3 Maintain containers closed if not extracting paint.
- .4 For thinning, use only those materials permitted by the Consultant and approved by the manufacturer.

3.4 Primer and Finish Paint Application

- .1 Products may be applied by brush, roller or airless spray. Comply with manufacturer's recommendations for airless spray application.
- .2 Apply primer coats in thicknesses recommended by the manufacturer.
- .3 Provide adequate ventilation and warmth for drying. Protect primed areas until primer is dry to the touch, as per manufacturer's recommendations. Do not proceed with application of finish paint until primer has fully cured.
- .4 Apply two coats of finish paint over interior window trim.

3.5 Cleaning



- .1 Clean spills immediately with a damp cloth.
- .2 Remove waste materials and recycle empty containers and packaging.

End of Section 09 91 23



Carlton Park Gardens - Exterior Siding and Window Replacement

10851-10991 MORTFIELD ROAD, RICHMOND



DRAFT REVIEW
DECEMBER 15, 2023

PROJECT NUMBER: 23vR134A

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LINETYPE LEGEND:

----- EXISTING MEMBRANE

- . . - . . - NEW LIQUID APPLIED MEMBRANE

----- NEW SELF-ADHERED VAPOUR PERMEABLE SHEATHING MEMBRANE

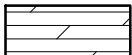
- . - . - NEW SELF-ADHESIVE MEMBRANE

HATCHING LEGEND:

 EXISTING CONCRETE

 NEW SEMI-RIGID INSULATION

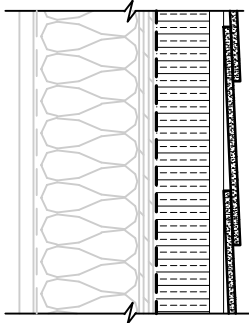
 NEW/EXISTING BATT INSULATION

 NEW / EXISTING PLYWOOD SHEATHING

ASSEMBLY LIST:

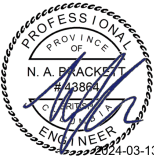
REHABILITATED WALL

- NEW FIBRE CEMENT LAPPED SIDING
- NEW VERTICALLY ORIENTED 13mmx50mm P.T. FURRING INSTALLED AT STUDS
- NEW 50mm SEMI-RIGID INSULATION
- NEW VAPOUR PERMEABLE SELF-ADHERED WEATHER RESISTIVE BARRIER (WRB)
- EXISTING SHEATHING
- EXISTING WOOD STUDS C/W INSULATION
- EXISTING POLYETHYLENE VAPOUR BARRIER
- EXISTING INTERIOR DRYWALL FINISH



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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24



2024-03-13
Permit to Practice No. 1002213



104 - 788 COPPING STREET
NORTH VANCOUVER, BC
V7M 3G6 604-365-3664

Project:

CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT

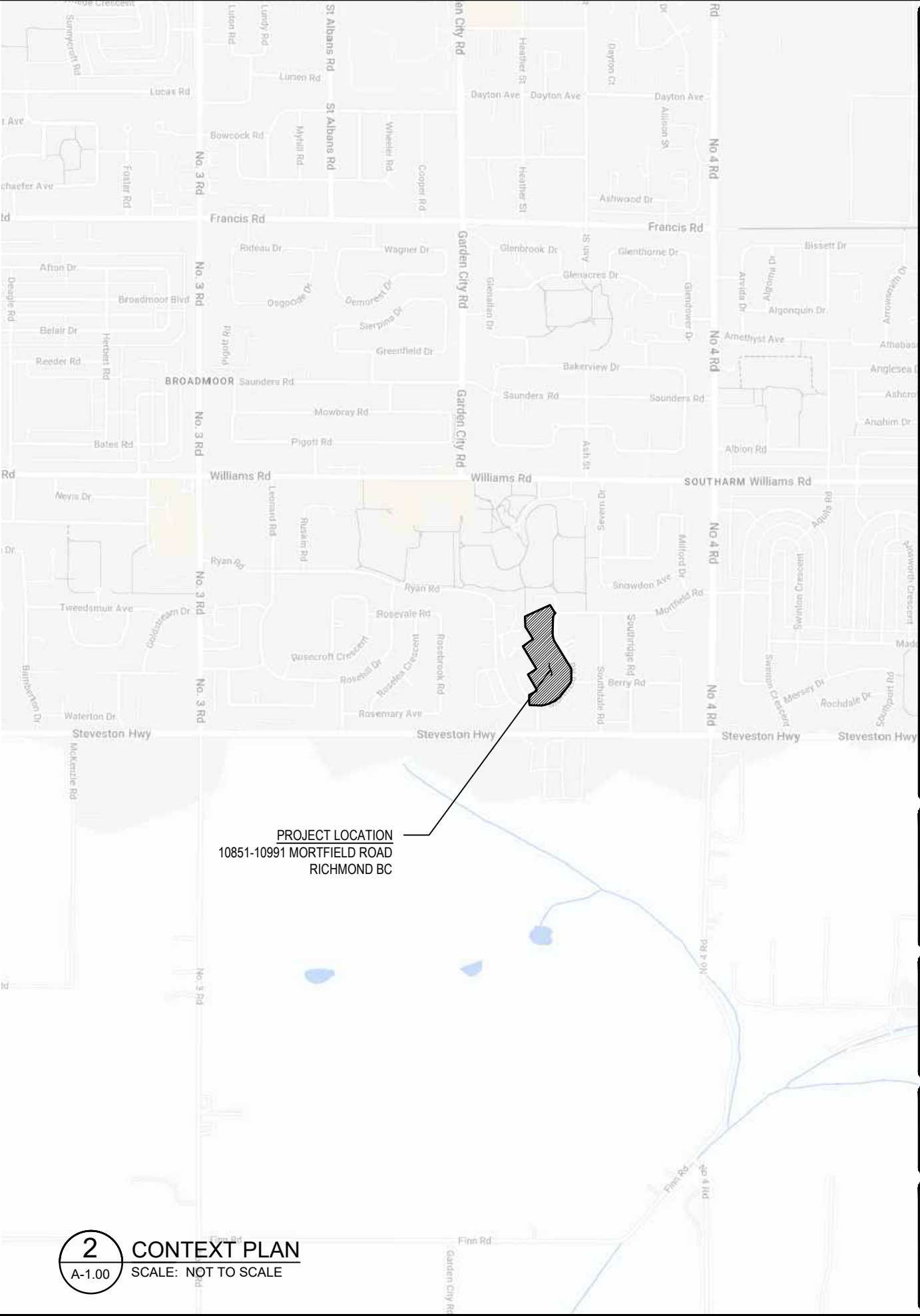
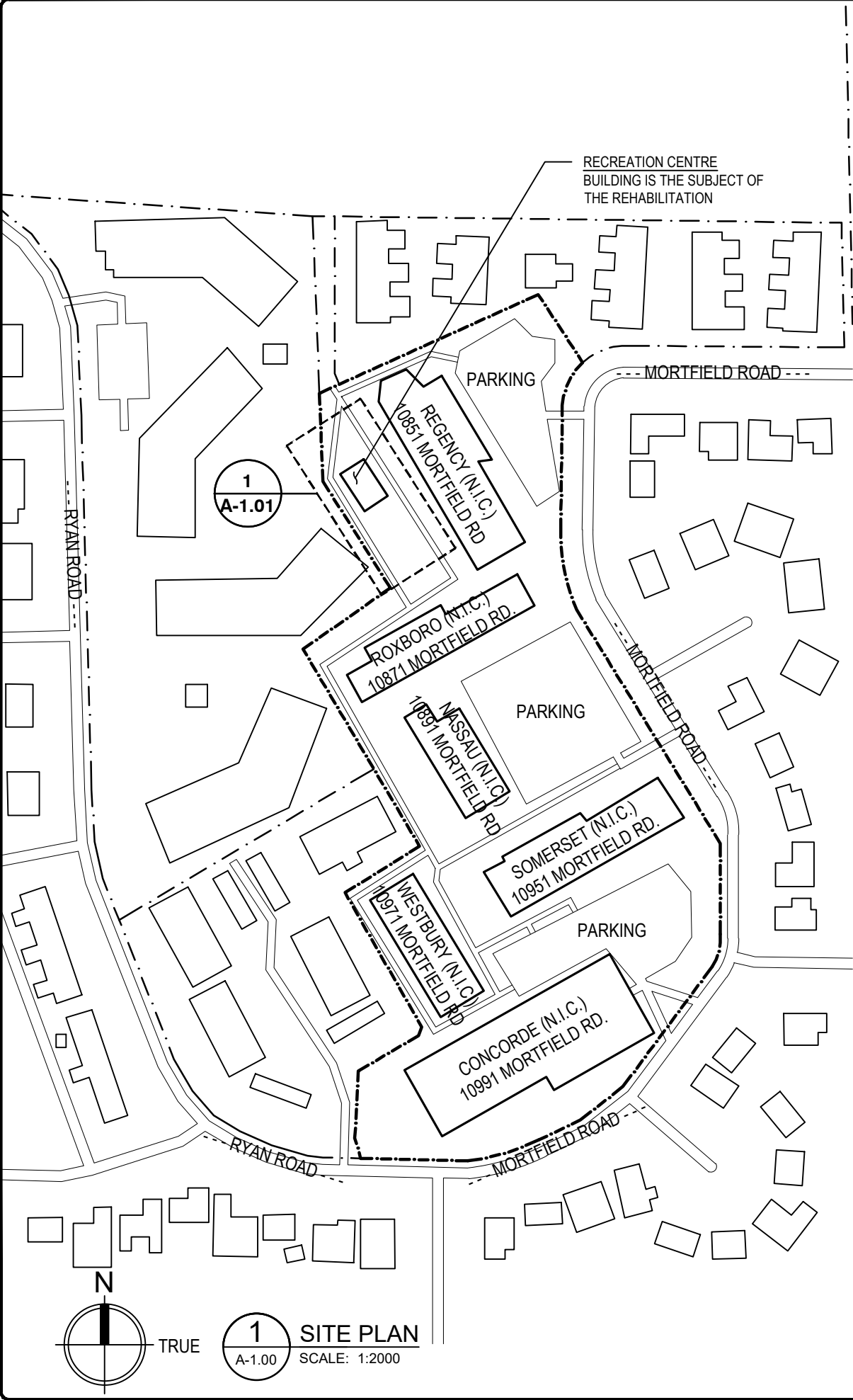
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

LEGENDS AND
ASSEMBLIES

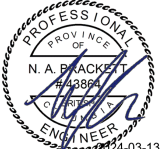
Drawn by:	MJI	Project Number:	23vR134A
Checked By:	NAB		
Scale:	AS NOTED	Drawing Number:	G-0.01
Date:	February 9, 2024		

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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

LEGAL DESCRIPTION:
PLAN LMS2859, SECTION 34, RANGE
6W, NEW WESTMINSTER LAND
DISTRICT
ZONING: RAL1
ZONING CATEGORY: LOW DENSITY
LOW RISE APARTMENTS
LAND SIZE: 25,080 sqm
BUILDING HEIGHT: 3.65m
YEAR BUILT: 1994



Permit to Practice No. 1002213

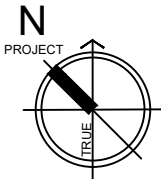
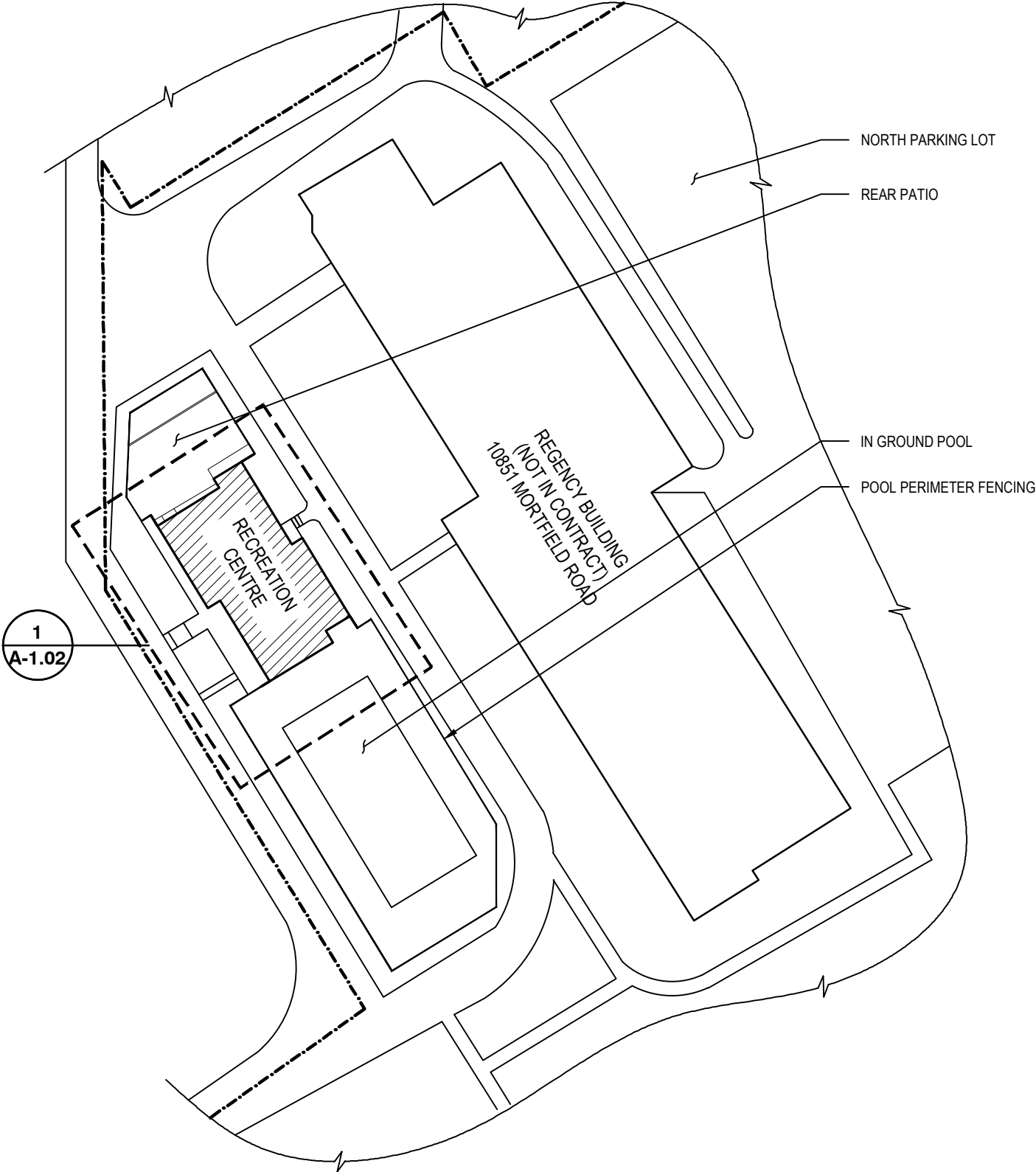


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Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

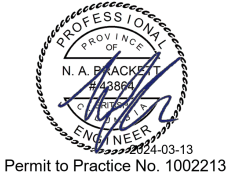
Drawing Title:
SITE AND CONTEXT PLAN

Drawn by: MJJ	Project Number: 23vR134A
Checked By: NAB	
Scale: AS NOTED	Drawing Number: A-1.00
Date: February 9, 2024	



1 PARTIAL SITE PLAN
A-1.01 SCALE: 1:500

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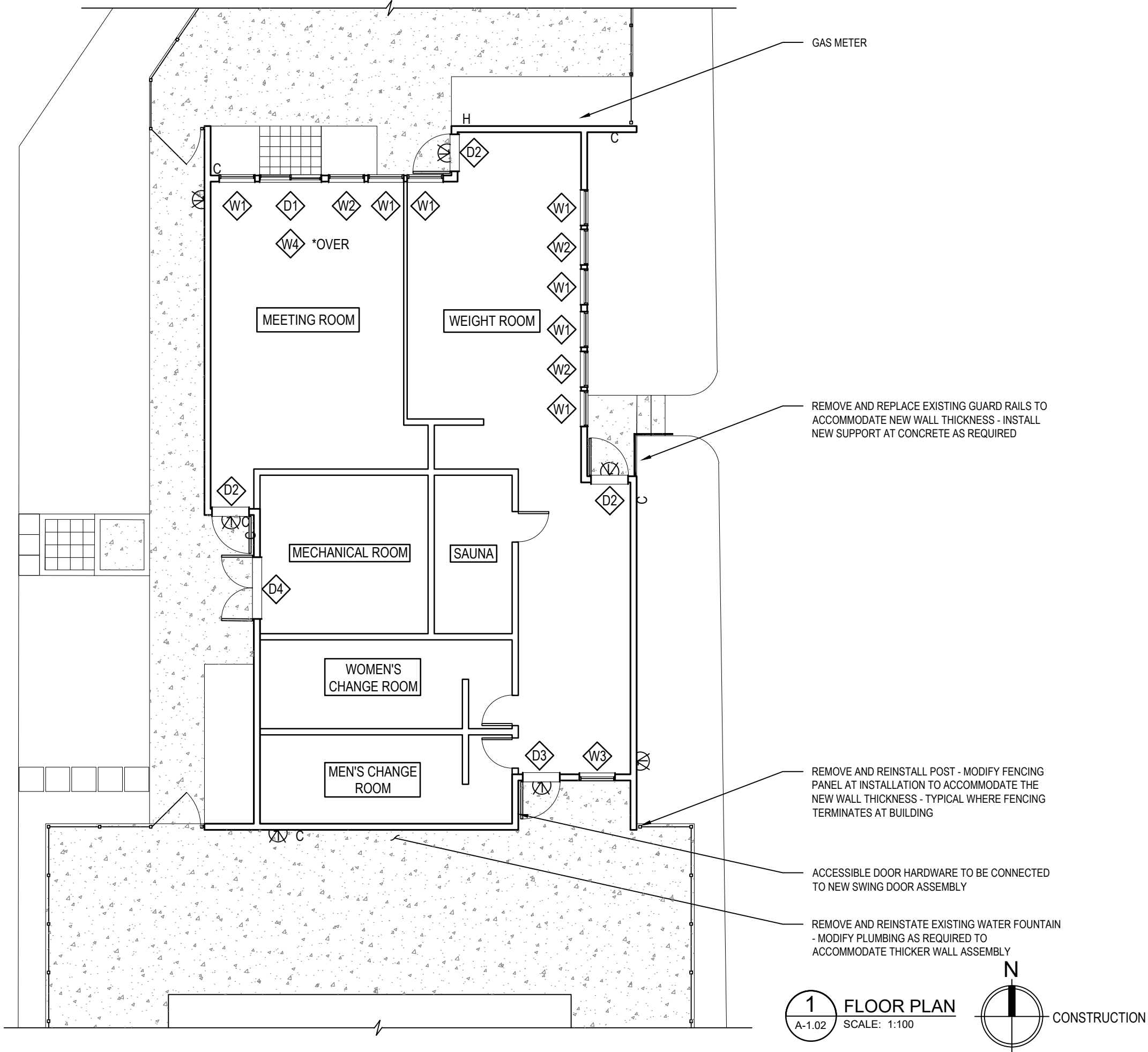
Project: CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

PARTIAL SITE PLAN

Drawn by: MJI	Project Number: 23vR134A
Checked By: NAB	A-1.01
Scale: AS NOTED	
Date: February 9, 2024	

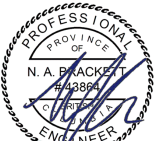
Use these drawings only for the purpose specifically noted in the revision column. Do not construct by these drawings unless indicated "Issued for Construction". The term "Issued for Building Permit" indicates that the drawings are complete for design of all key building envelope and/or structural design elements; however, final coordination and instructions for construction may not be fully complete.



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1	DRAFT REVIEW	12/15/23
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- LEGEND:
- ⊗ LIGHT FIXTURE
 - C EXTERIOR MOUNT CAMERA
 - H HOSE BIB

NOTES:



2024-03-13
Permit to Practice No. 1002213

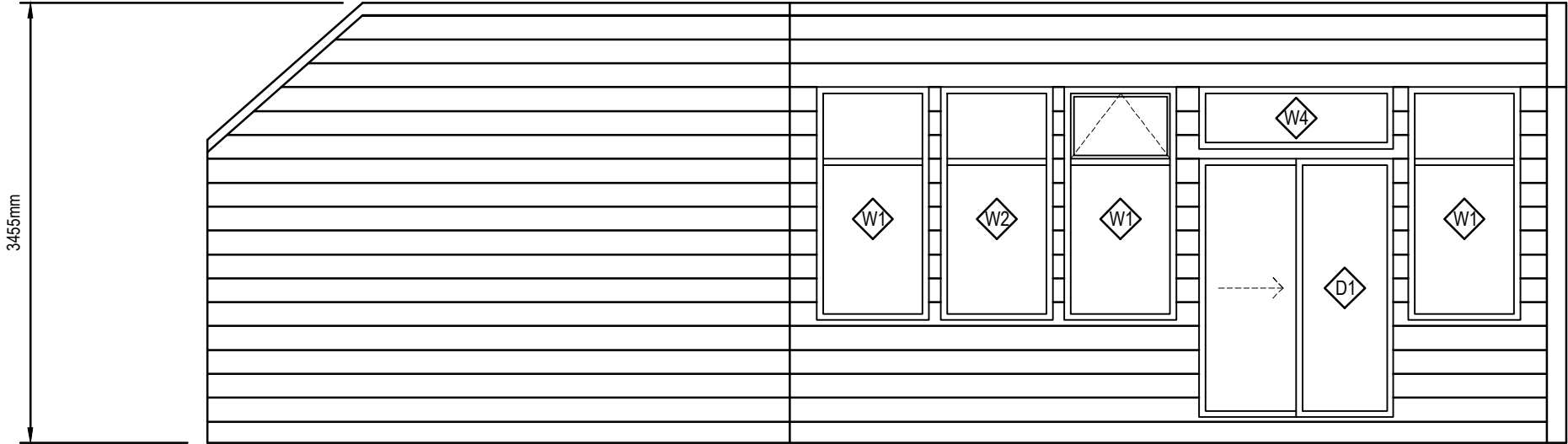


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V7M 3G6 604-365-3664

Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:
FLOOR PLAN

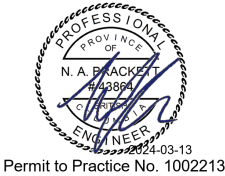
Drawn by: MJJ	Project Number: 23vR134A
Checked By: NAB	Drawing Number: A-1.02
Scale: AS NOTED	
Date: February 9, 2024	



1 NORTH ELEVATION
A-2.01 SCALE: 1:50

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No.	Revision/Issue	Date MM/DD/YY
1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

NOTES:
CONTRACTOR TO SITE VERIFY
DIMENSIONS OF THE BUILDING





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NORTH VANCOUVER, BC
V7M 3G6 604-365-3664

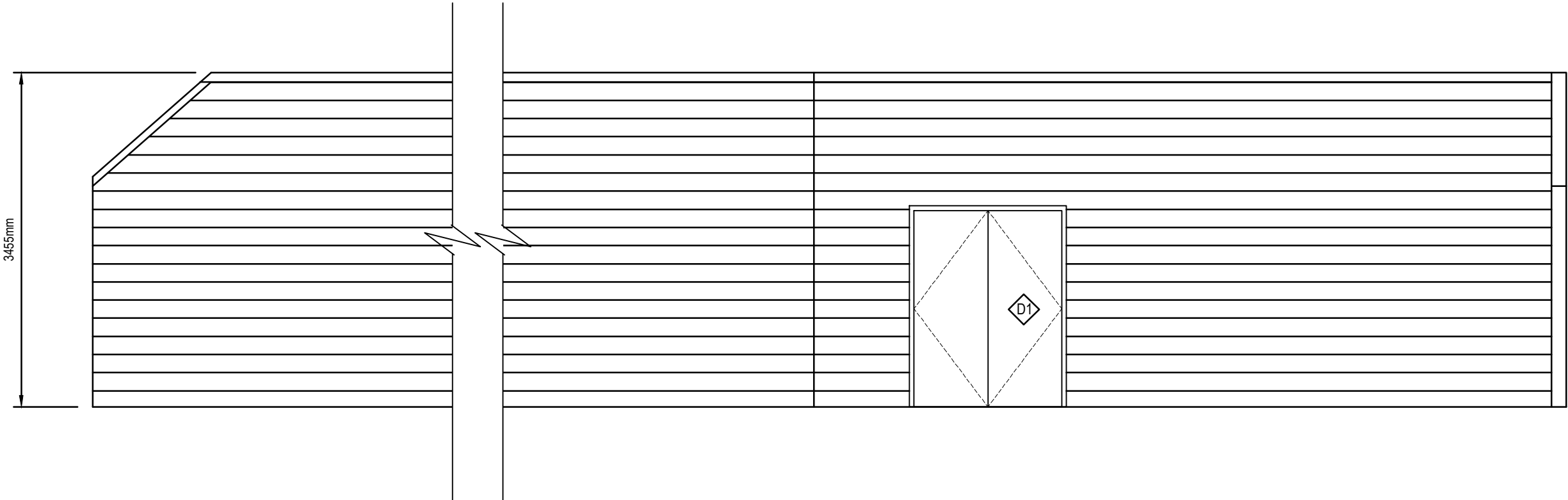
Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

NORTH ELEVATION

Drawn by: MJI	Project Number: 23vR134A
Checked By: NAB	A-2.01
Scale: AS NOTED	
Date: February 9, 2024	

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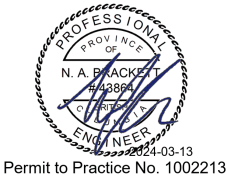
A-2.02

WEST ELEVATION

SCALE: 1:50

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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

NOTES:
CONTRACTOR TO SITE VERIFY
DIMENSIONS OF THE BUILDING



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NORTH VANCOUVER, BC

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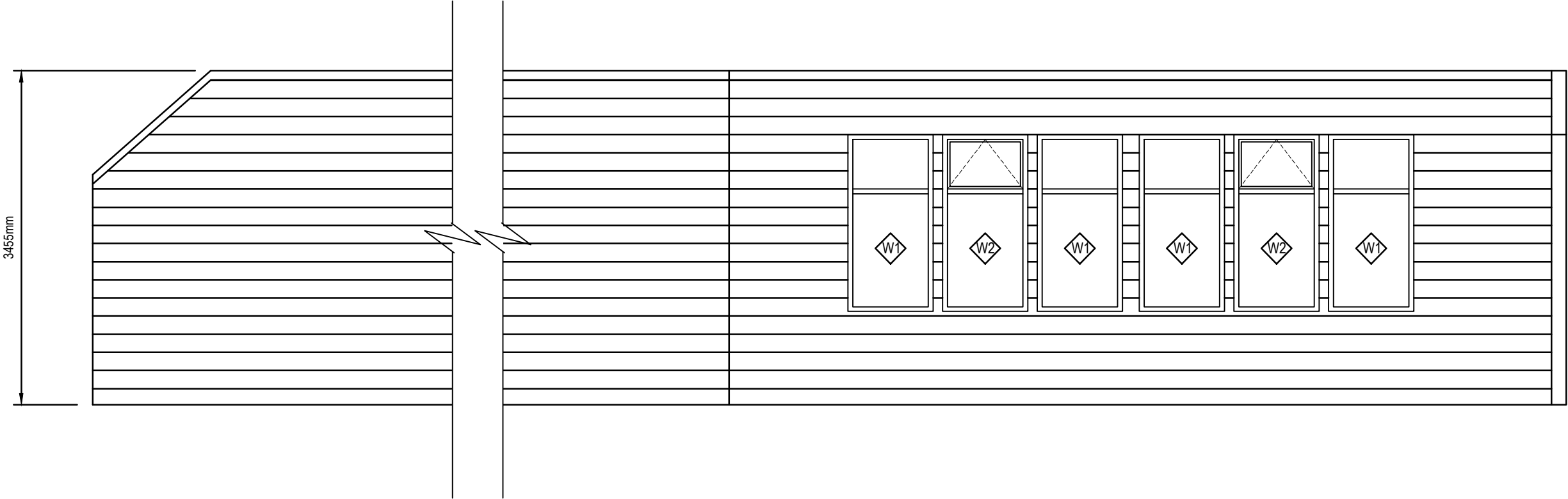
Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

WEST ELEVATION

Drawn by: MJI	Project Number: 23vR134A
Checked By: NAB	
Scale: AS NOTED	Drawing Number: A-2.02
Date: February 9, 2024	

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1

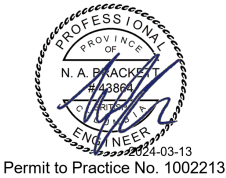
A-2.03

EAST ELEVATION

SCALE: 1:50

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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

NOTES:
CONTRACTOR TO SITE VERIFY
DIMENSIONS OF THE BUILDING



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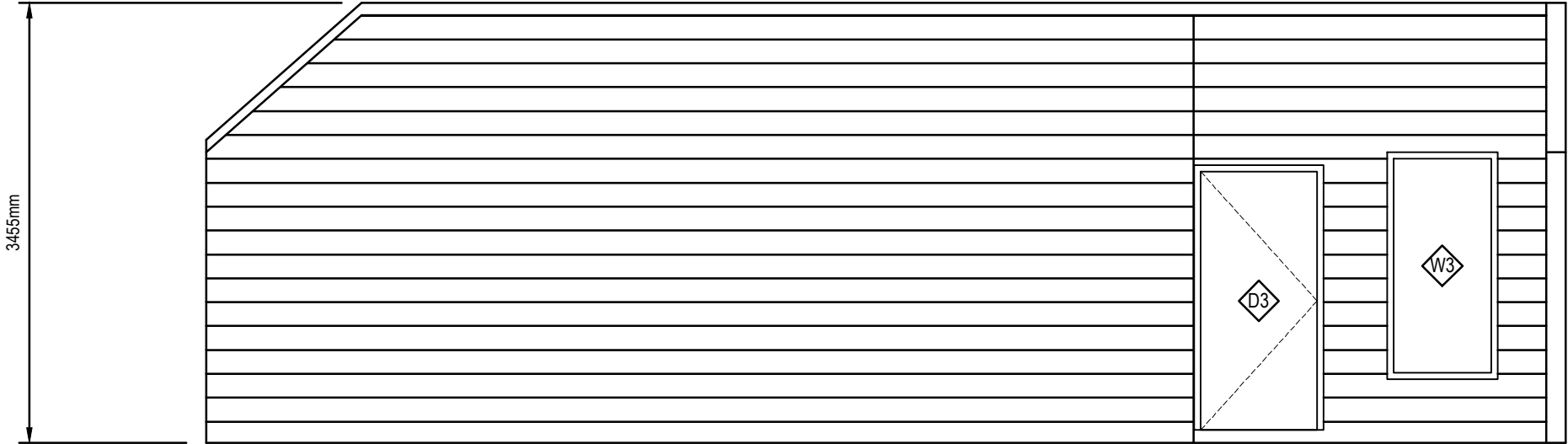
Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

EAST ELEVATION

Drawn by: MJJ	Project Number: 23vR134A
Checked By: NAB	
Scale: AS NOTED	Drawing Number: A-2.03
Date: February 9, 2024	

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1

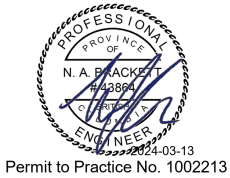
A-2.04

SOUTH ELEVATION

SCALE: 1:50

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2	ISSUED FOR TENDER	02/09/24

NOTES:
CONTRACTOR TO SITE VERIFY
DIMENSIONS OF THE BUILDING





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V7M 3G6 604-365-3664

Project:
CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT
10851-10991 MORTFIELD ROAD, RICHMOND

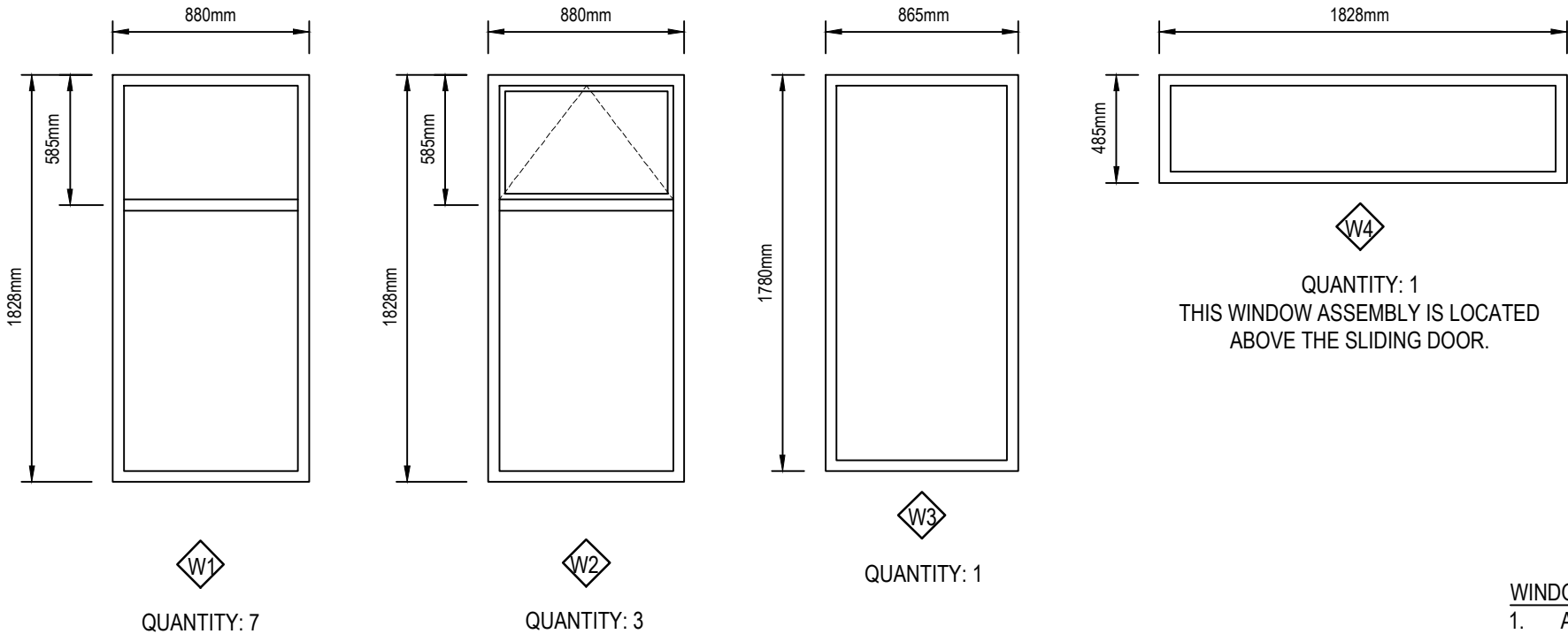
Drawing Title:

SOUTH ELEVATION

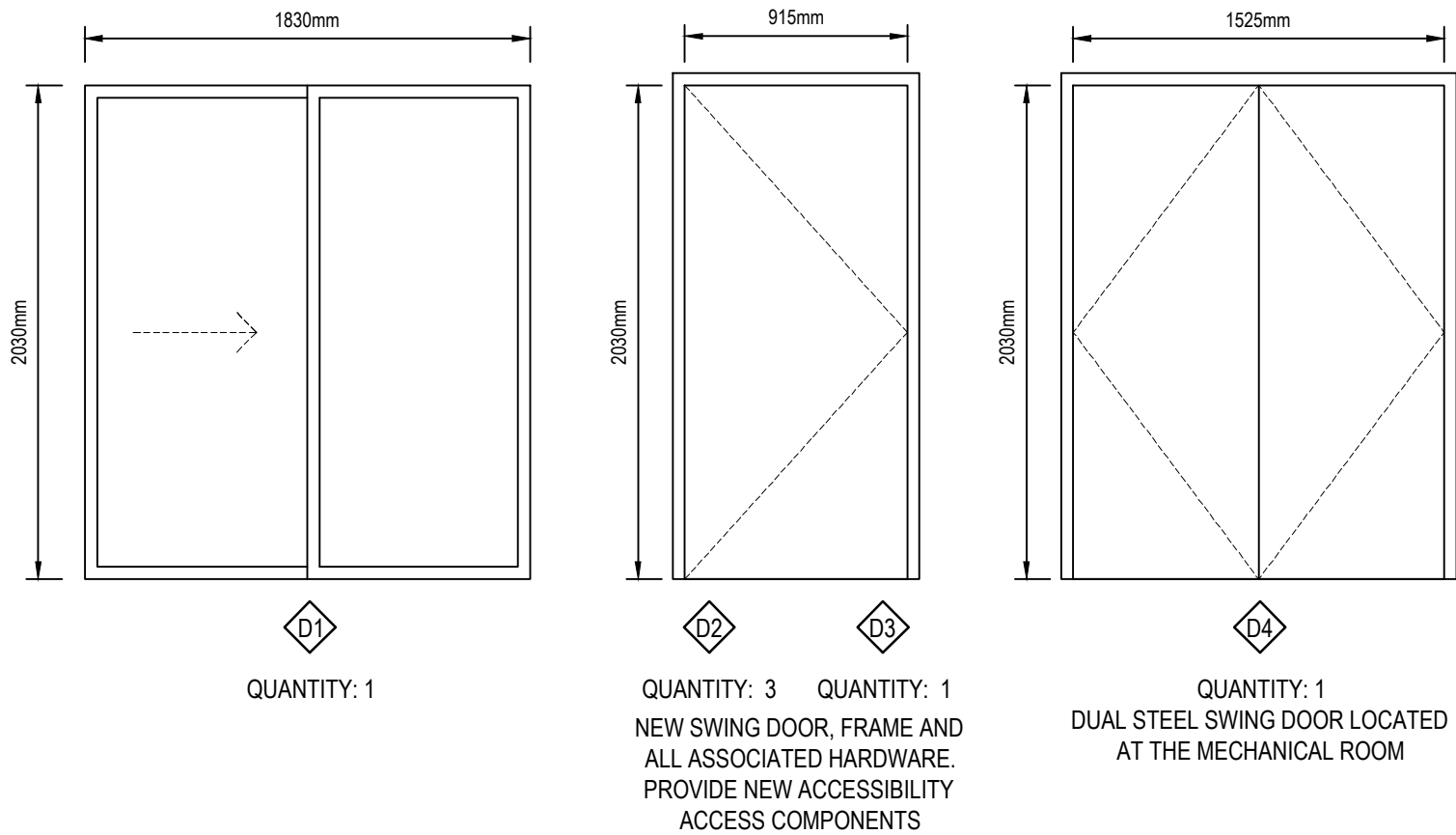
Drawn by: MJI	Project Number: 23vR134A
Checked By: NAB	A-2.04
Scale: AS NOTED	
Date: February 9, 2024	

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WINDOW SCHEDULE



DOOR SCHEDULE



WINDOW AND DOOR NOTES:

- ALL WINDOW AND DOOR OPENINGS, SIZES AND DIRECTIONS TO MATCH EXISTING.
- THE FINAL WINDOW AND DOOR OPENING ORIENTATION TO MATCH EXISTING.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM FINAL SIZES, QUANTITIES AND CONFIGURATIONS PRIOR TO ORDERING. THERE WILL BE NO ADDITIONAL COSTS TO THE OWNER FOR ERRORS IN MEASUREMENTS GIVEN ON THE DRAWINGS OR MADE ON SITE.
- REFER TO PLANS AND ELEVATIONS FOR WINDOW / DOOR LOCATIONS.
- ALL ASSEMBLIES SHOWN HEREIN ARE AS VIEWED FROM THE EXTERIOR.
- ALL OPERABLE WINDOW AND SLIDING GLASS DOORS ARE TO BE PROVIDED WITH BUG SCREENS.
- THESE DRAWINGS ARE A GUIDE ONLY TO SHOWN THE PROPOSED WINDOW CONFIGURATION AND APPROXIMATE WINDOW COUNT.
- ALL GLAZED DOORS TO HAVE LAMINATED GLASS. .
- WINDOW HARDWARE AND ACCESSORIES NOT SHOWN FOR CLARITY. CONTRACTOR TO FIELD VERIFY, PROVIDING ALL REQUIRED HARDWARE AND ACCESSORIES.
- ANY ALTERATION TO THE WINDOW DESIGN OR INTERFACING DETAILS MUST BE HIGHLIGHTED IN THE SHOP DRAWINGS, FOR CONSULTANT TO REVIEW.

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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

PROFESSIONAL
ENGINEER
N. A. BRACKLEY
124-03-13
Permit to Practice No. 1002213

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NORTH VANCOUVER, BC
V7M 3G6 604-365-3664

Project:

CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT

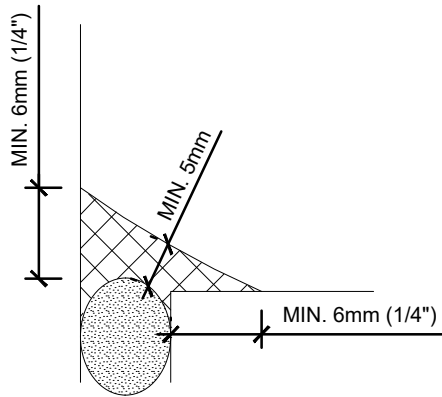
10851-10991 MORTFIELD ROAD, RICHMOND

Drawing Title:

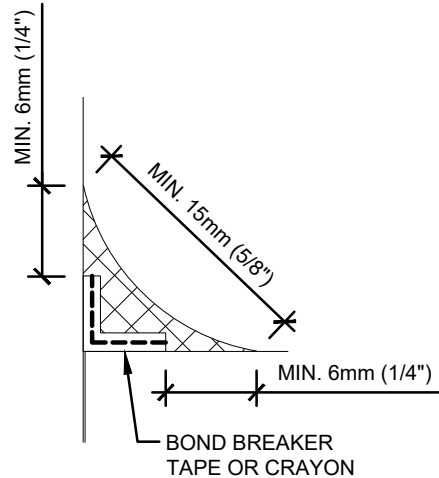
FLOOR PLAN

Drawn by:	MJI	Project Number:	23vR134A
Checked By:	NAB		
Scale:	AS NOTED	Drawing Number:	A-3.01
Date:	February 9, 2024		

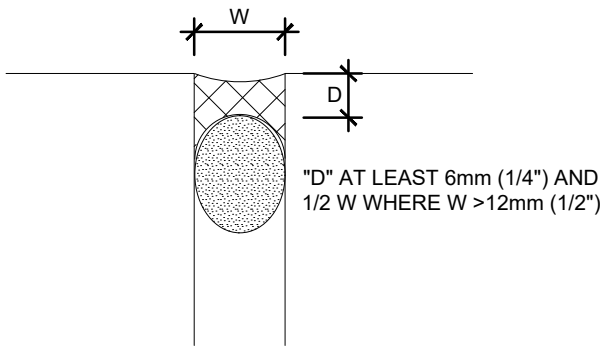
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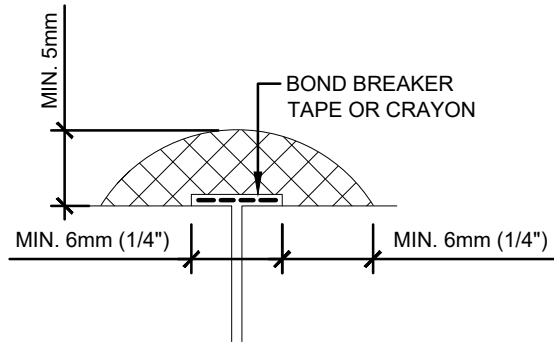
FILLET BEAD



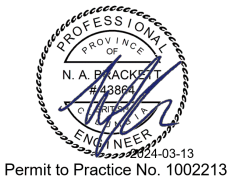
TIGHT FILLET BEAD



BUTT JOINT



CAP BEAD JOINT



- NOTE:
- ALL DIMENSIONS ARE IN mm
 - REFER TO ASSEMBLY SHEET (G-0.01) FOR WALL ASSEMBLY

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PROJECT NAME:

CARLTON PARK GARDENS - EXTERIOR SIDING AND WINDOW REPLACEMENT

ADDRESS:

10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:

SEALANT PROFILES

No.	Revision / Issue	Date mm/dd/yy
1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

DRAWN BY:

B2M

CHECKED BY:

NAB

DATE:

2024-02-09

SCALE:

2:1

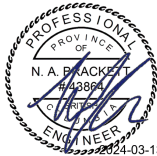
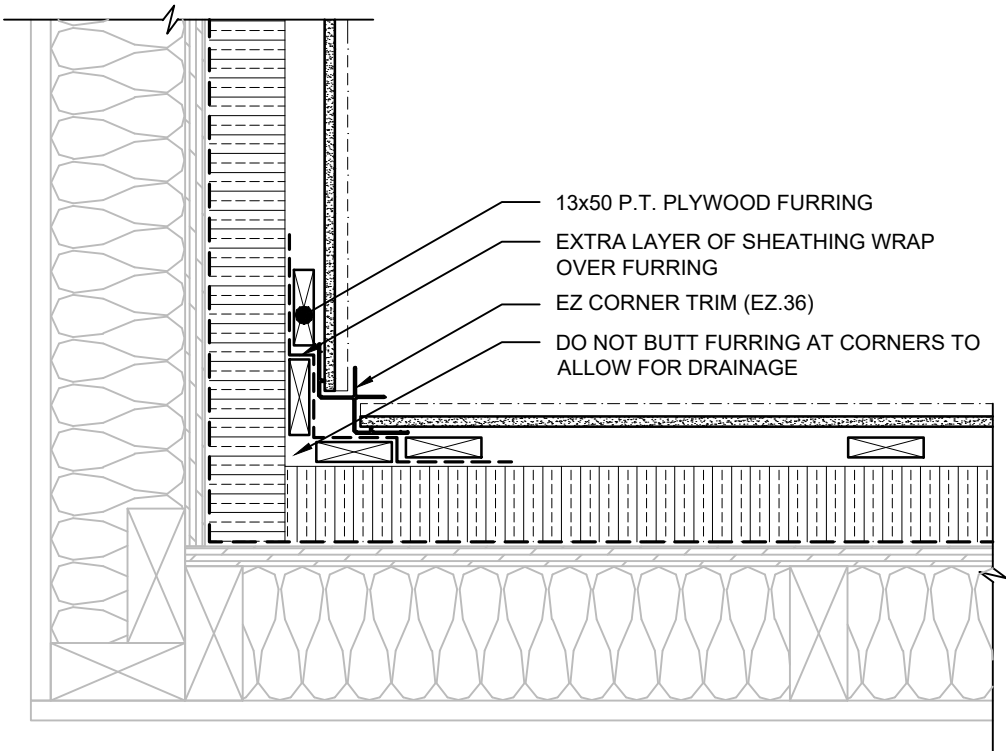
PROJECT NO:

23vR134A

DRAWING NO:

D-1.00

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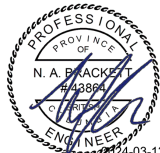
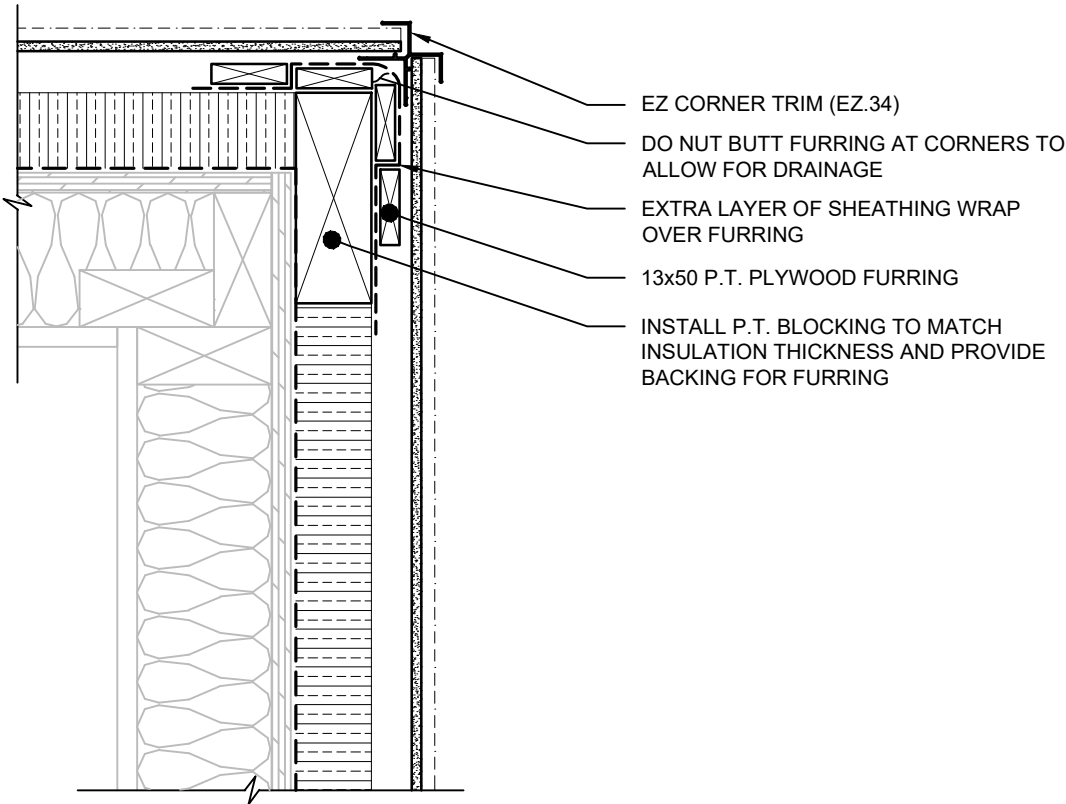
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
INSIDE CORNER

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	CHECKED BY: NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.01

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- NOTE:**
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 - REFER TO ASSEMBLY SHEET (G-0.01) FOR WALL ASSEMBLY



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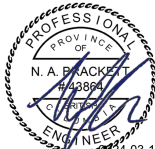
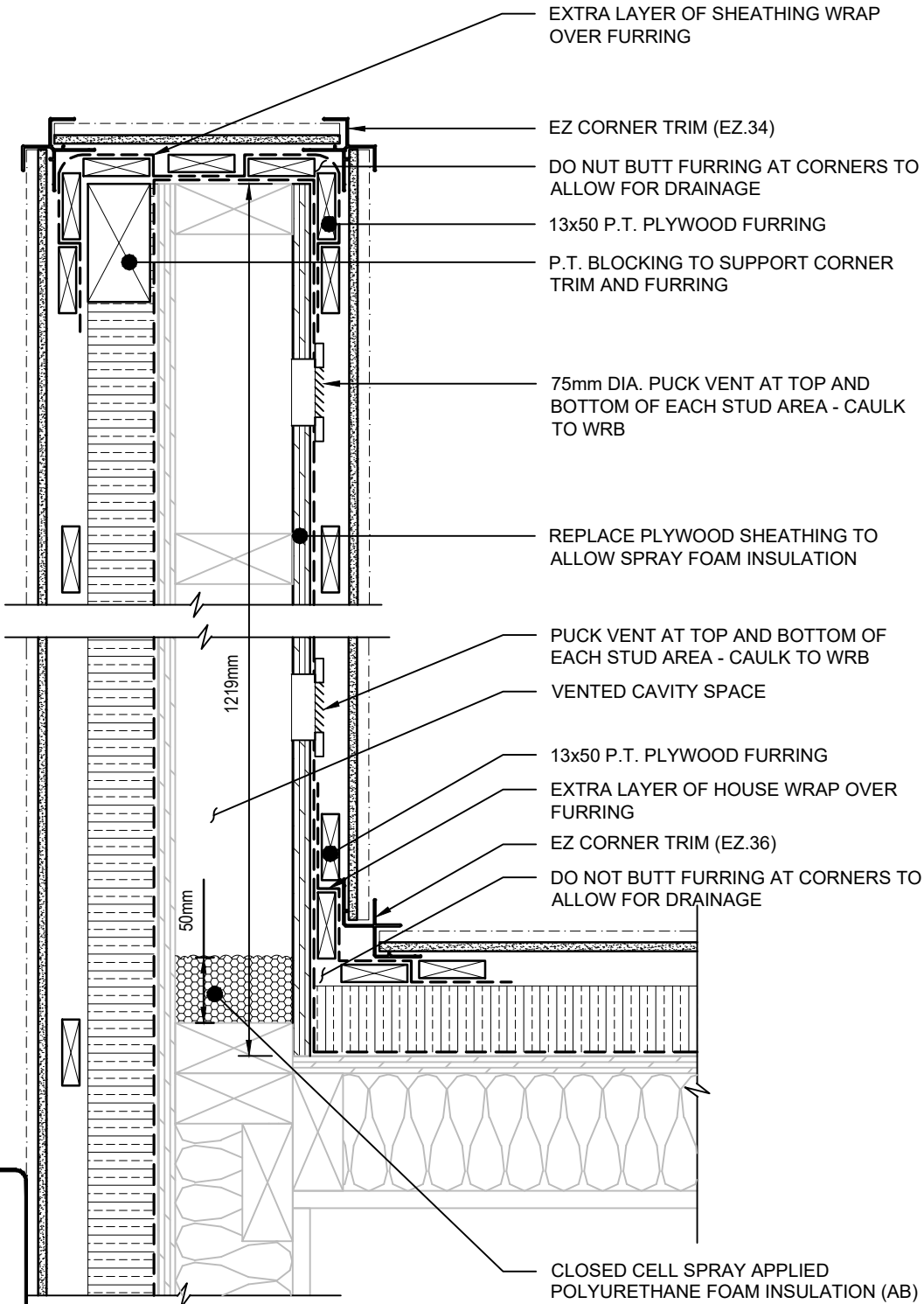
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
OUTSIDE CORNER

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.02

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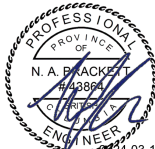
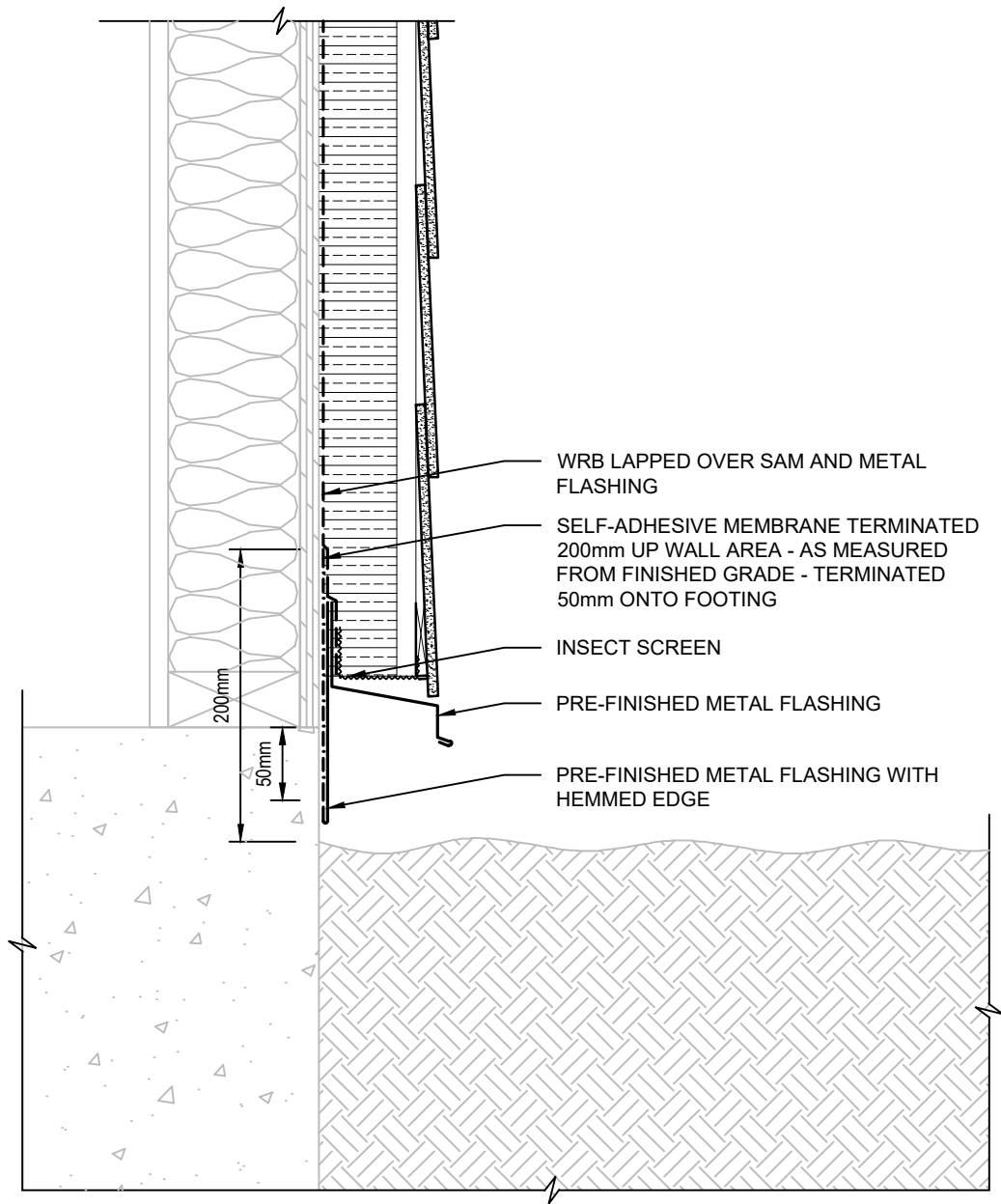
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
WING WALL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.03

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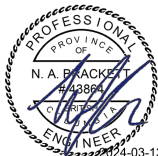
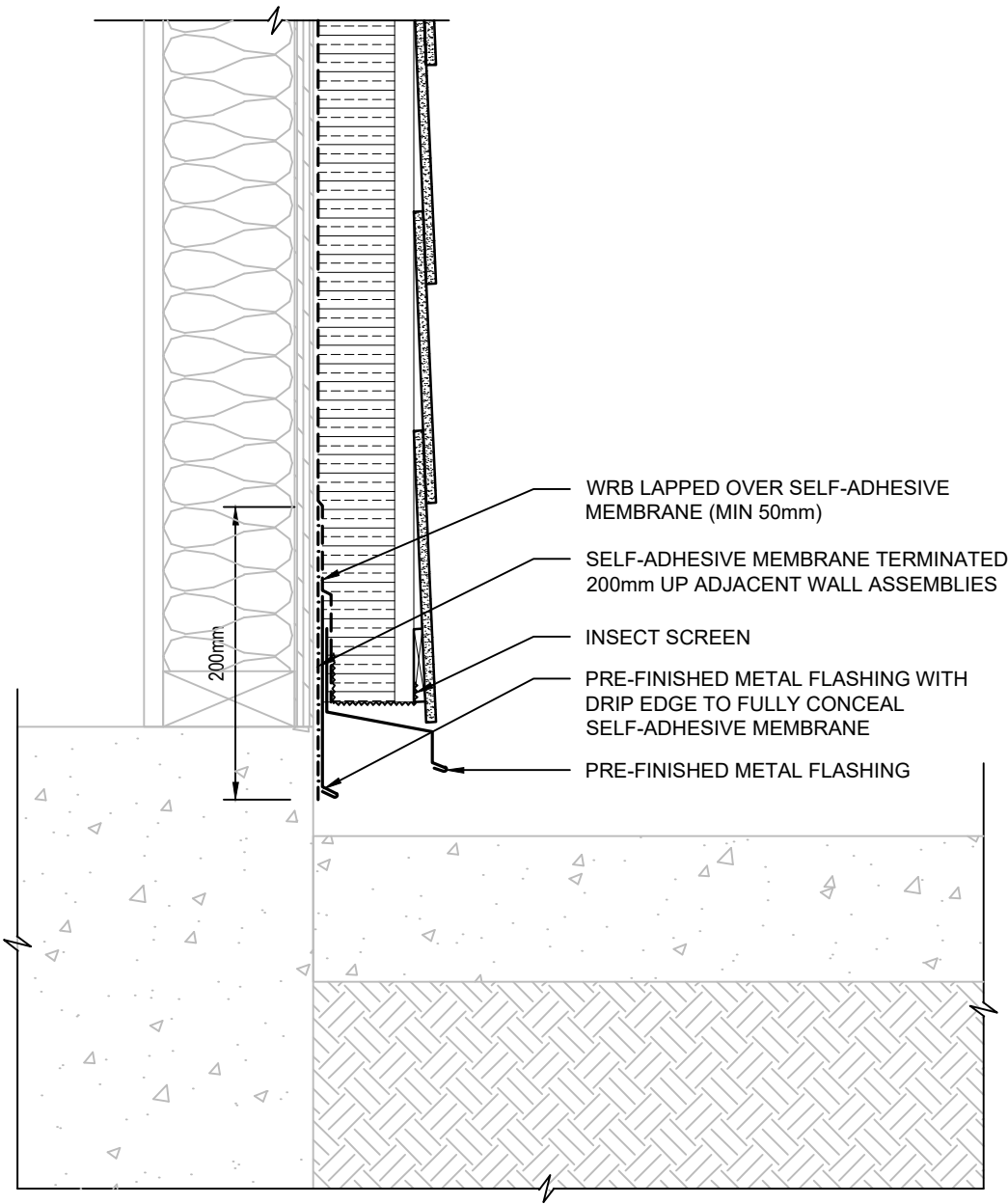
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
BASE OF WALL AT GRADE

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.04

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- NOTE:**
- ALL DIMENSIONS ARE IN mm
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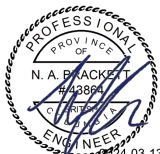
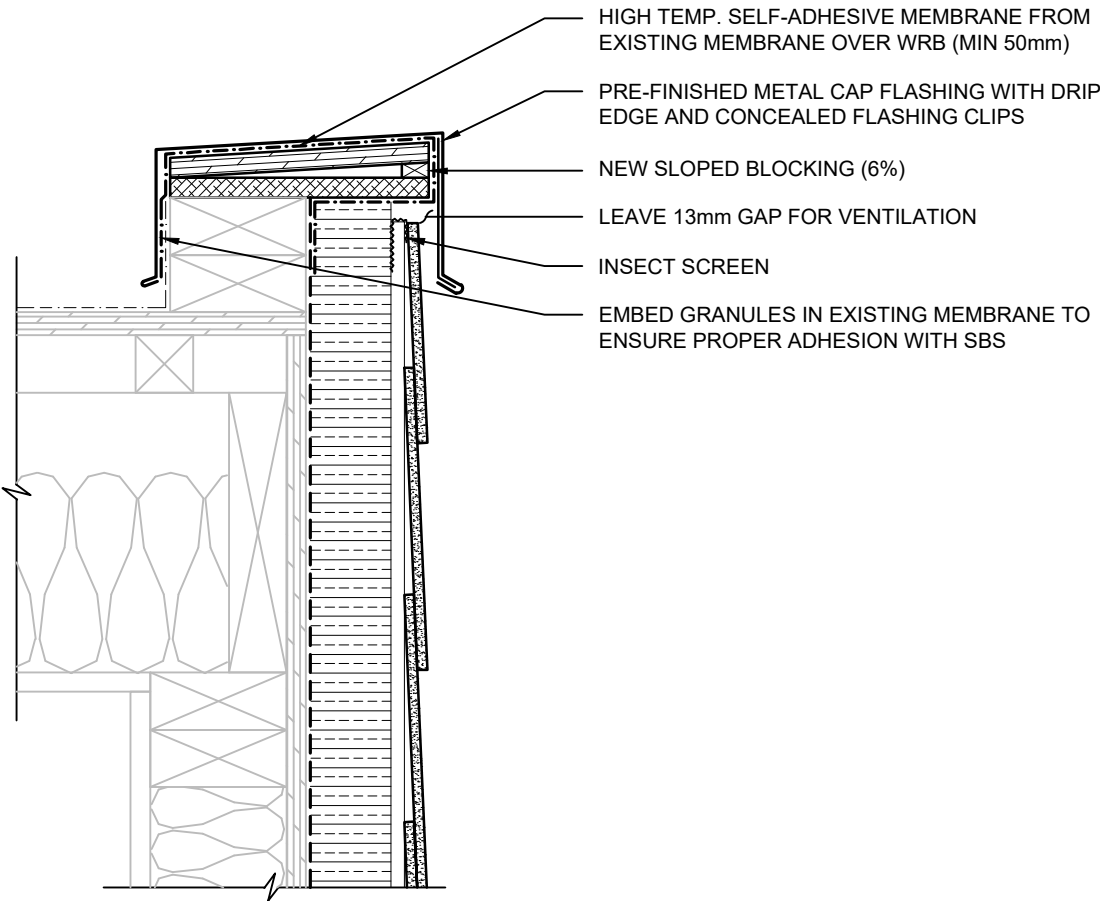
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PROJECT NAME:
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SIDING AND WINDOW REPLACEMENT**
ADDRESS:
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DRAWING:
BASE OF WALL AT PAVING

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.05

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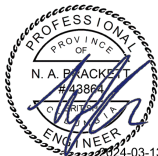
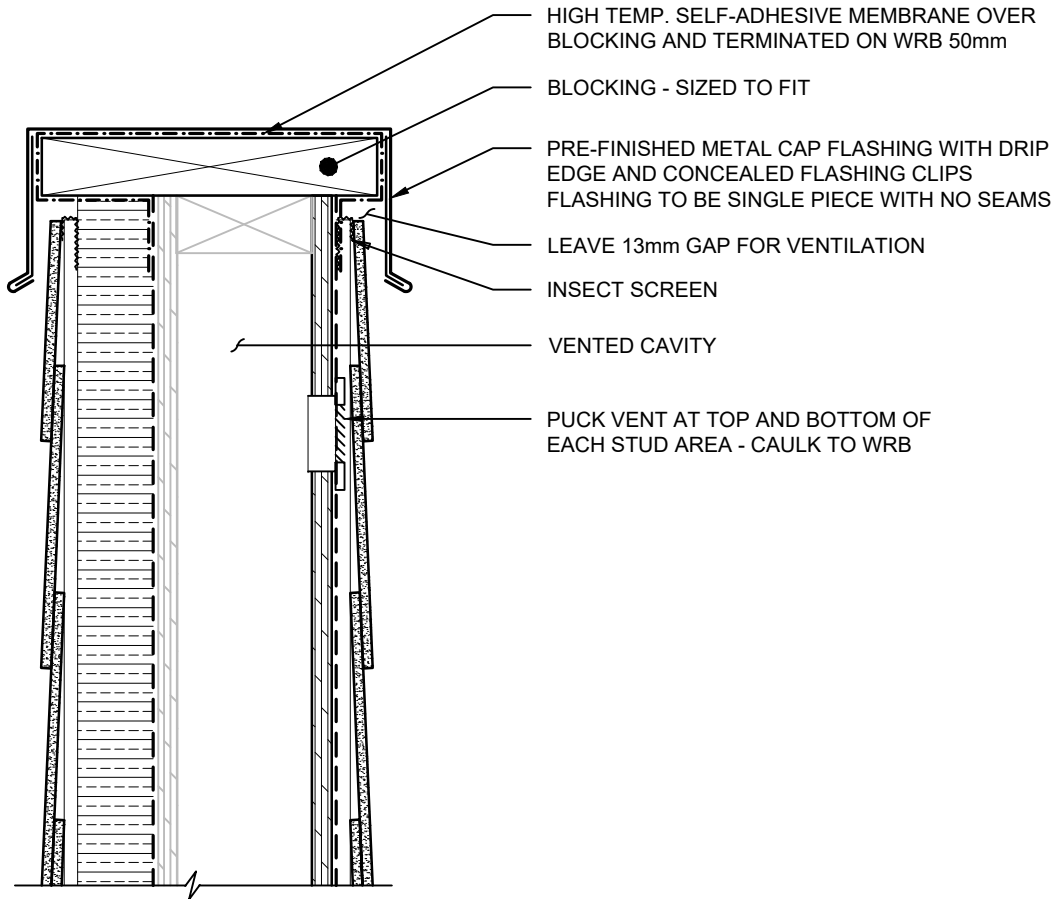
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
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DRAWING:
TYPICAL TOP OF WALL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.06

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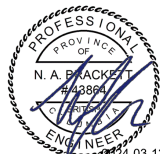
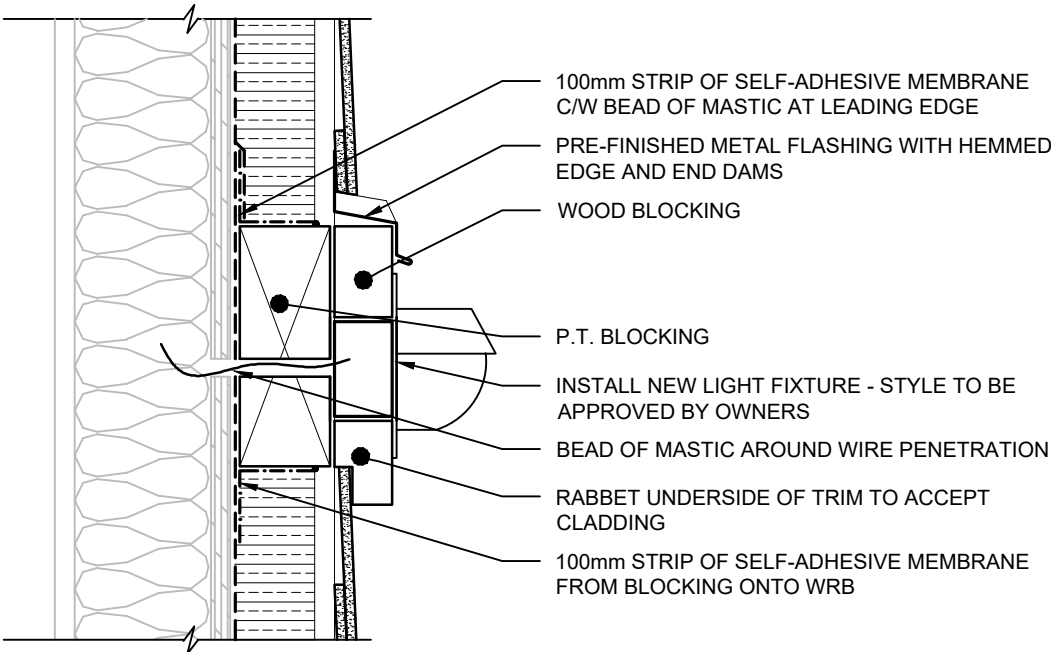
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PROJECT NAME:
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ADDRESS:
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DRAWING:
TOP OF WING WALL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.07

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- NOTE:**
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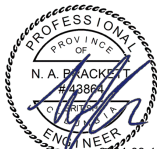
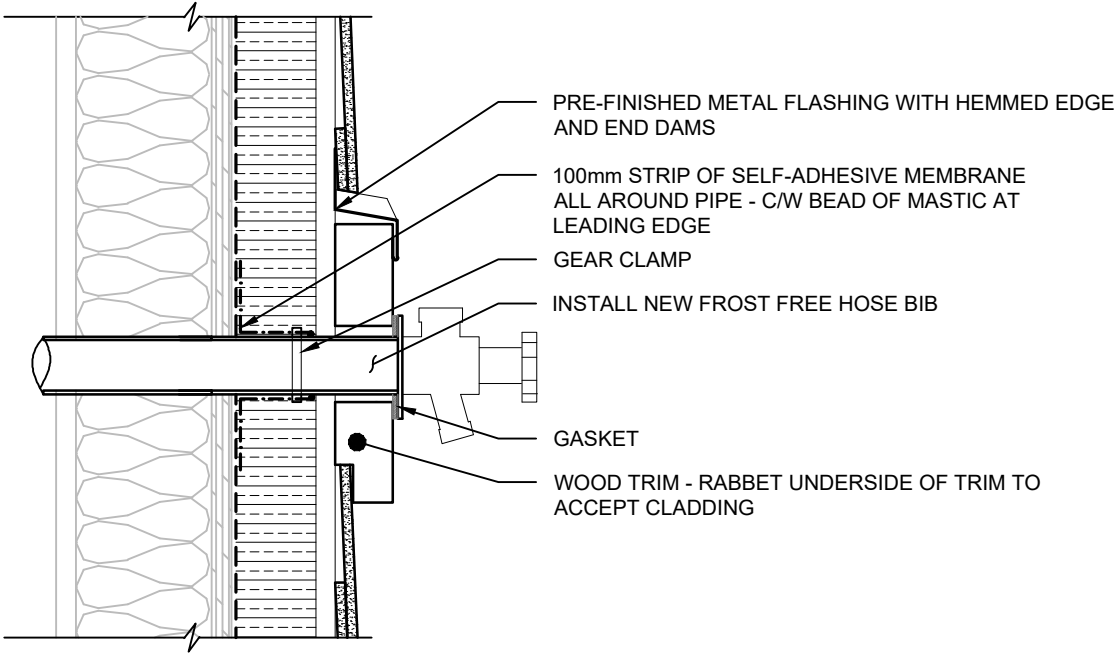
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PROJECT NAME:		CARLTON PARK GARDENS - EXTERIOR SIDING AND WINDOW REPLACEMENT	
ADDRESS:		10851-10991 MORTFIELD ROAD, RICHMOND	
DRAWING:		LIGHT FIXTURE	

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.08

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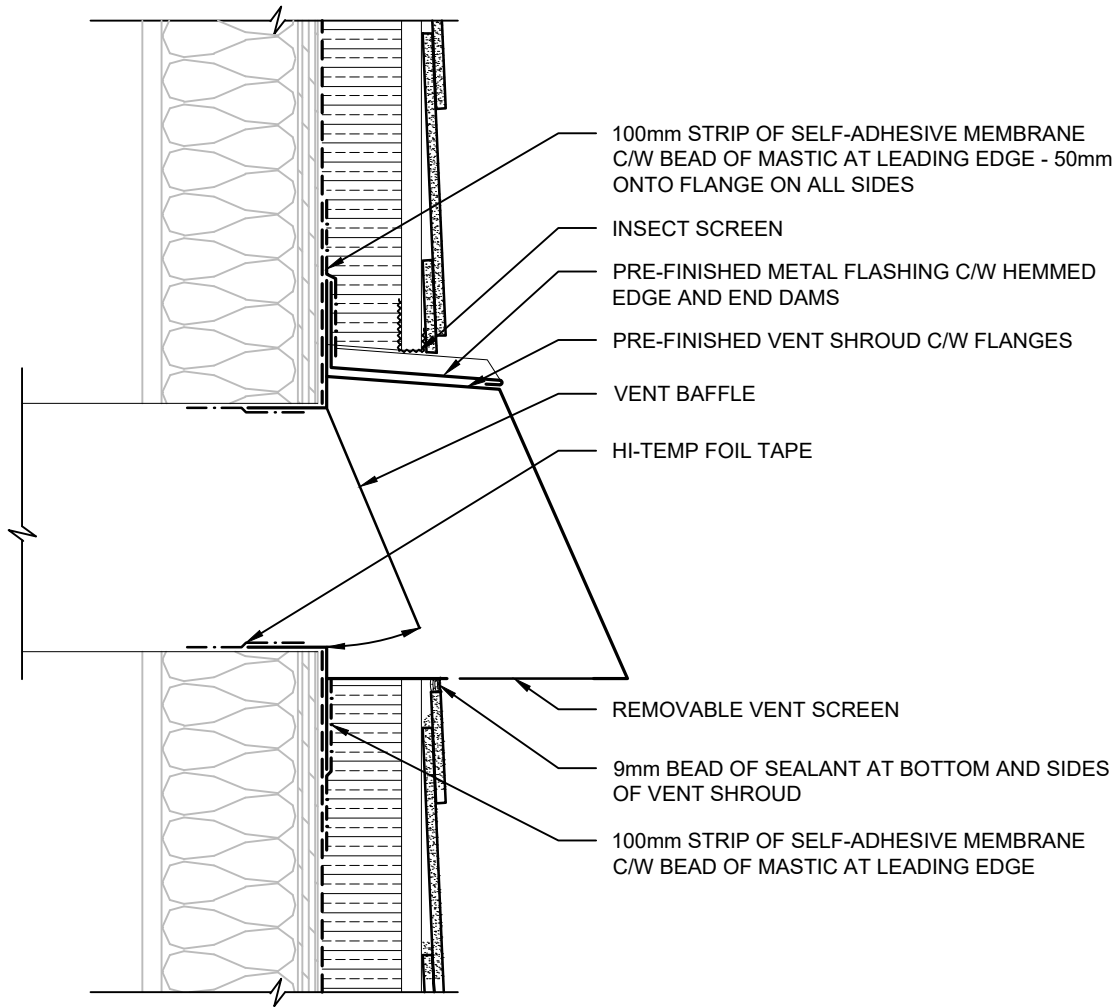
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
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ADDRESS:
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DRAWING:
HOSE BIB

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.09

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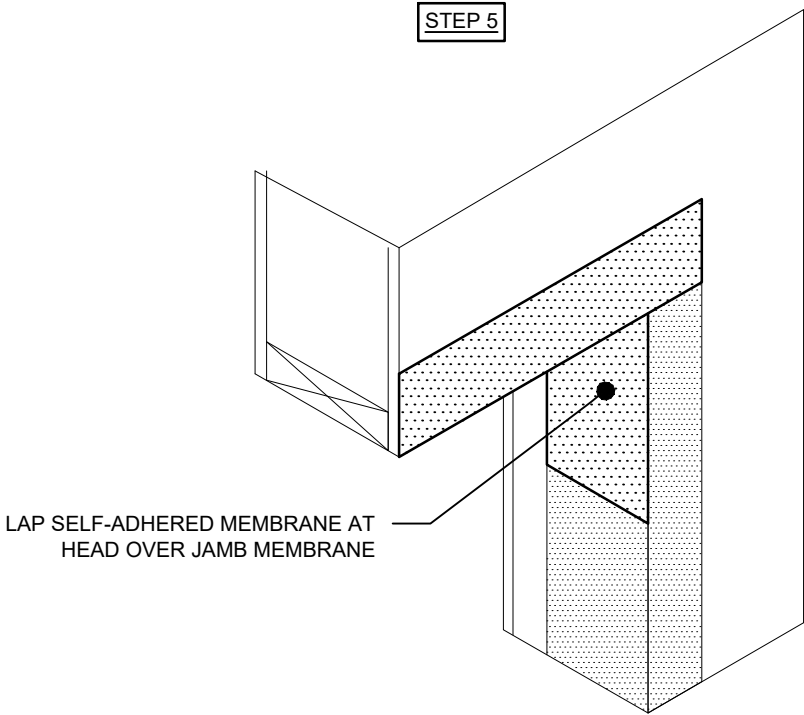
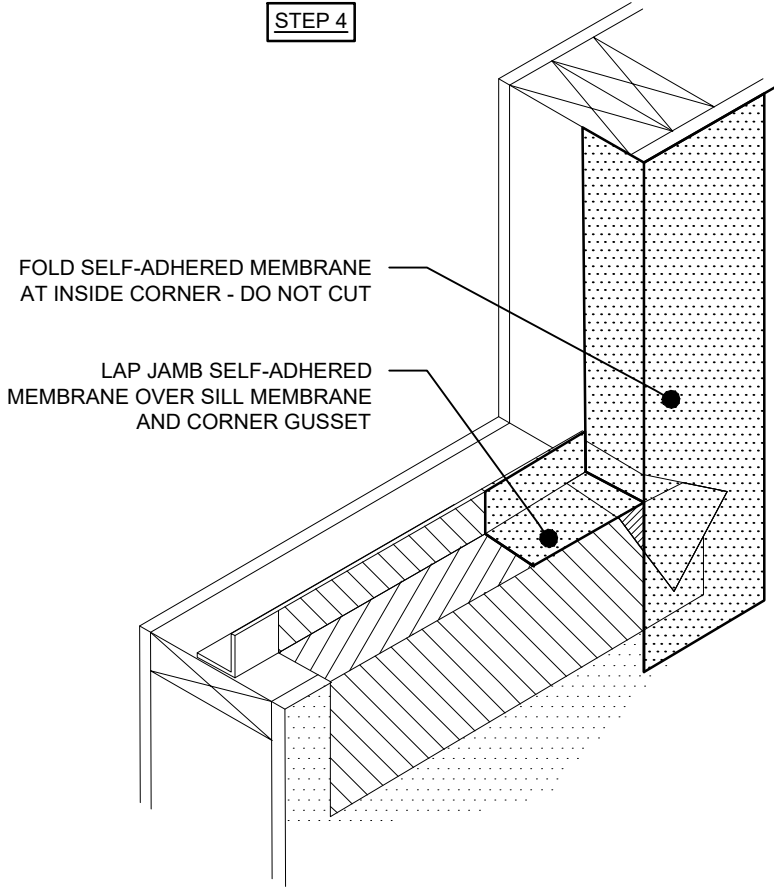
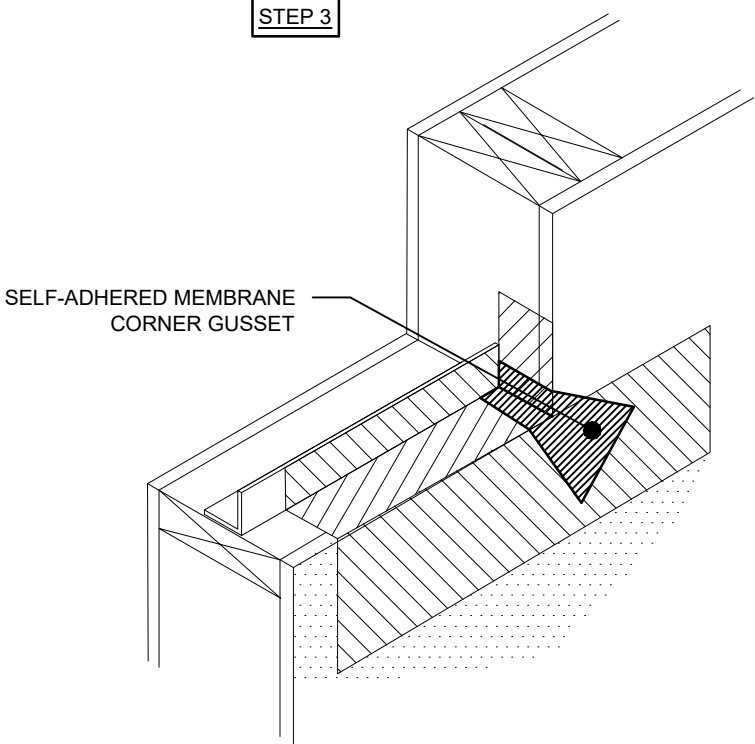
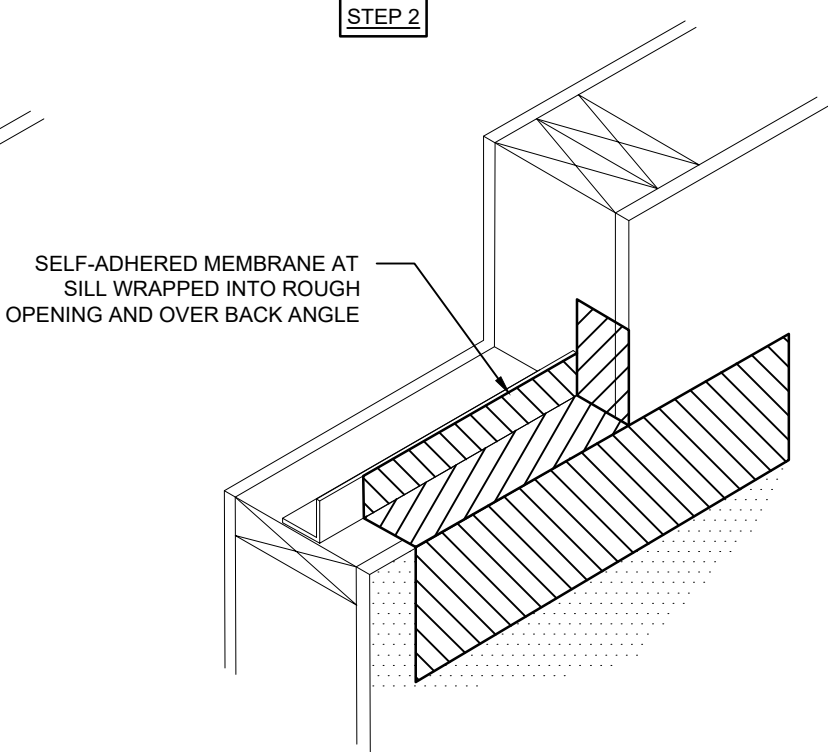
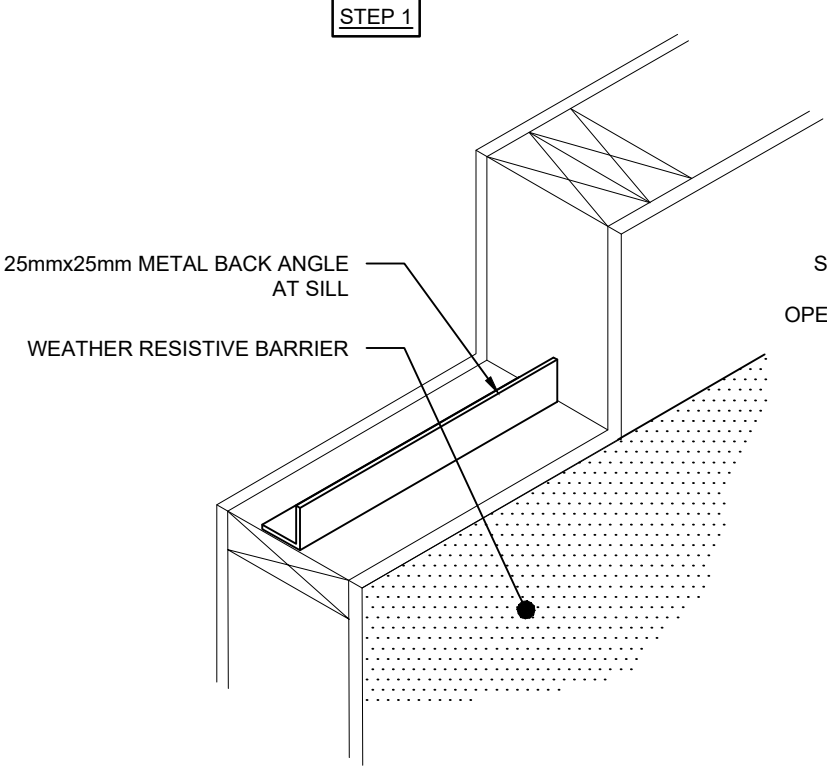
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DRAWING:
EXHAUST VENT

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:5
			PROJECT NO: 23vR134A
			DRAWING NO: D-1.10

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1	DRAFT REVIEW	12/15/23
2	ISSUED FOR TENDER	02/09/24

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Project:

CARLTON PARK GARDENS
EXTERIOR SIDING AND WINDOW
REPLACEMENT

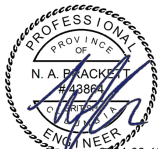
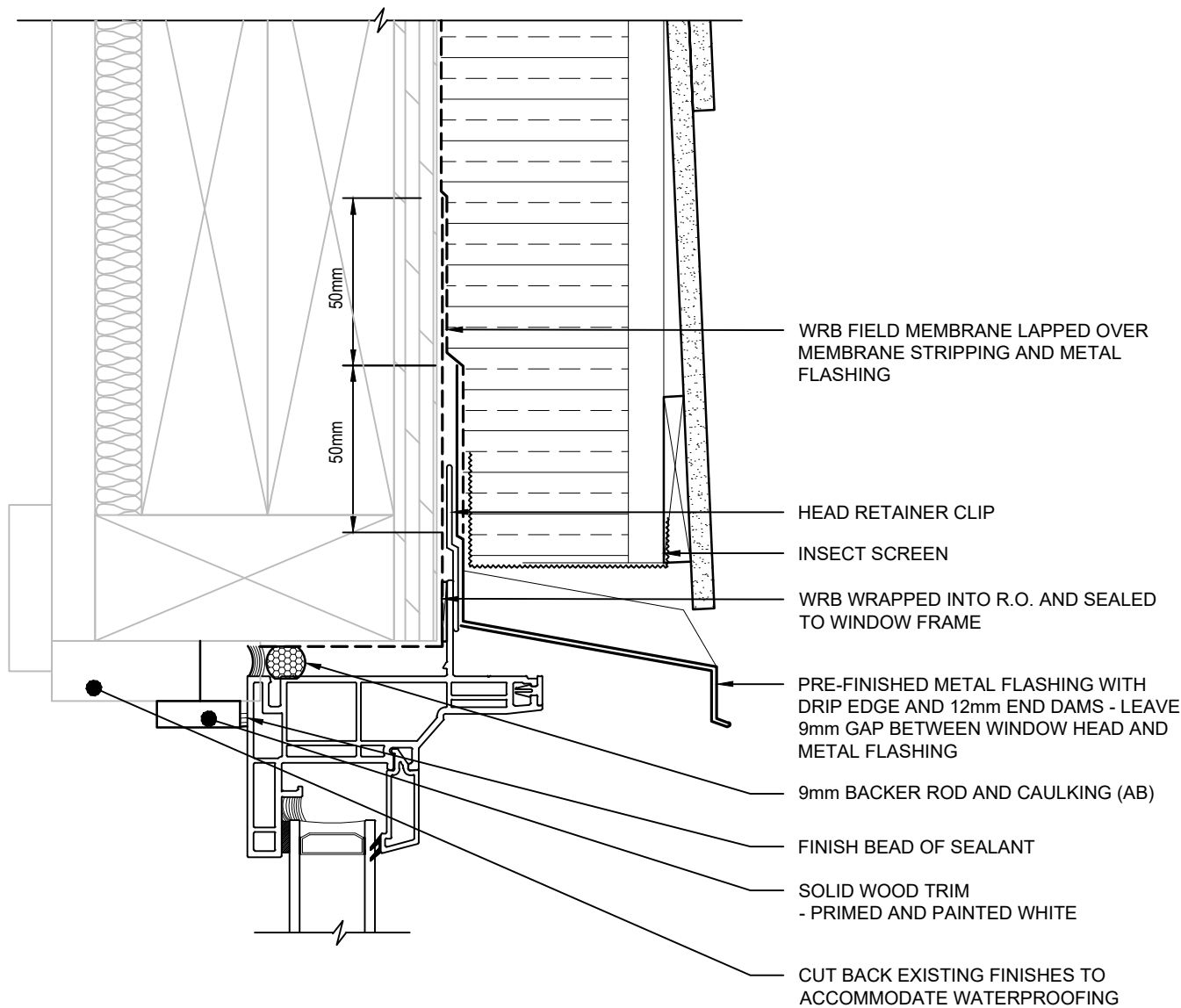
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Drawing Title:

WINDOW INSTALLATION
SEQUENCE

Drawn by:	MJI	Project Number:	23vR134A
Checked By:	NAB		
Scale:	AS NOTED	Drawing Number:	
Date:	February 9, 2024		

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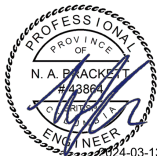
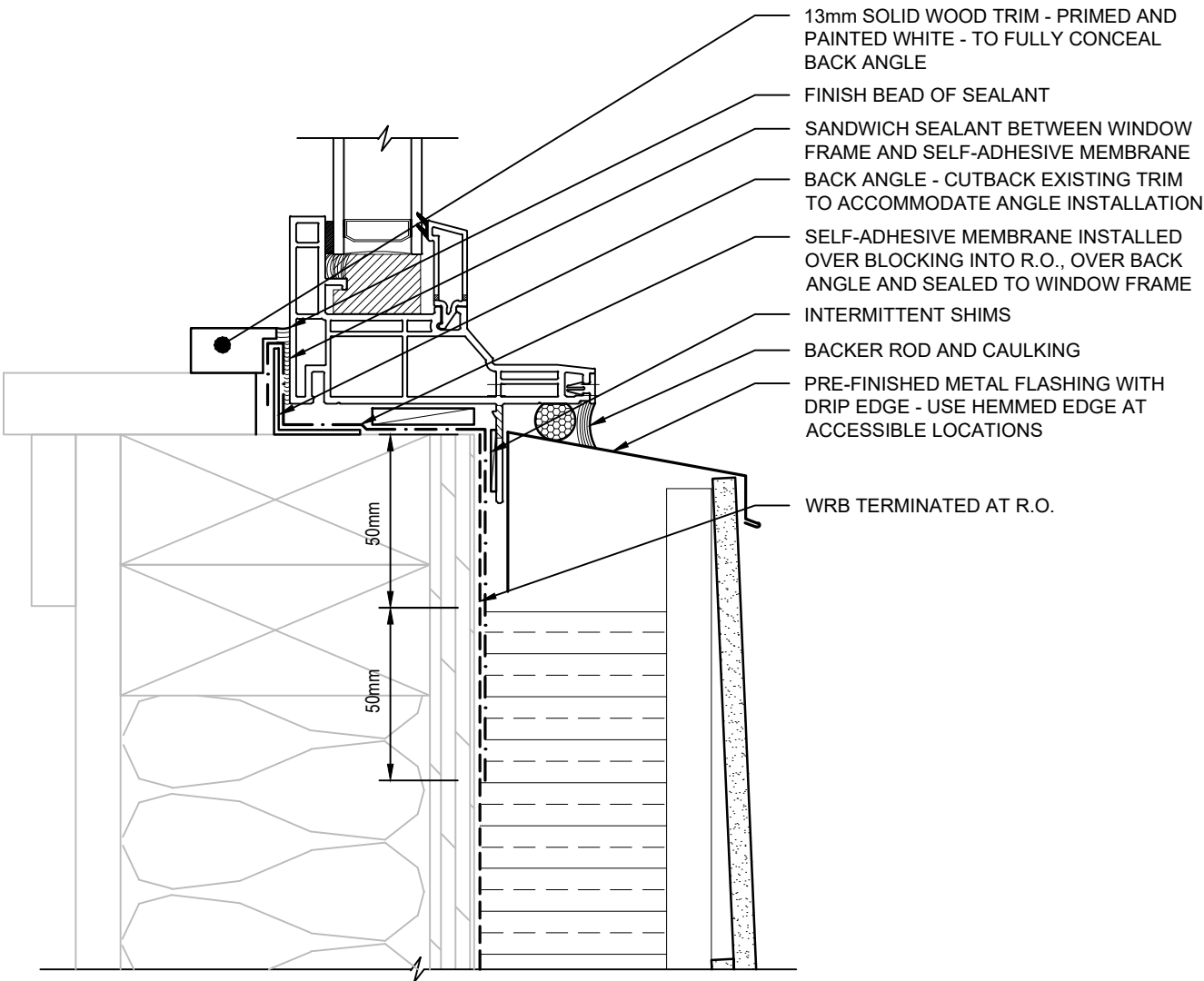
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PROJECT NAME:		CARLTON PARK GARDENS - EXTERIOR SIDING AND WINDOW REPLACEMENT	
ADDRESS:		10851-10991 MORTFIELD ROAD, RICHMOND	
DRAWING:		WINDOW HEAD	

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.01

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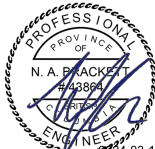
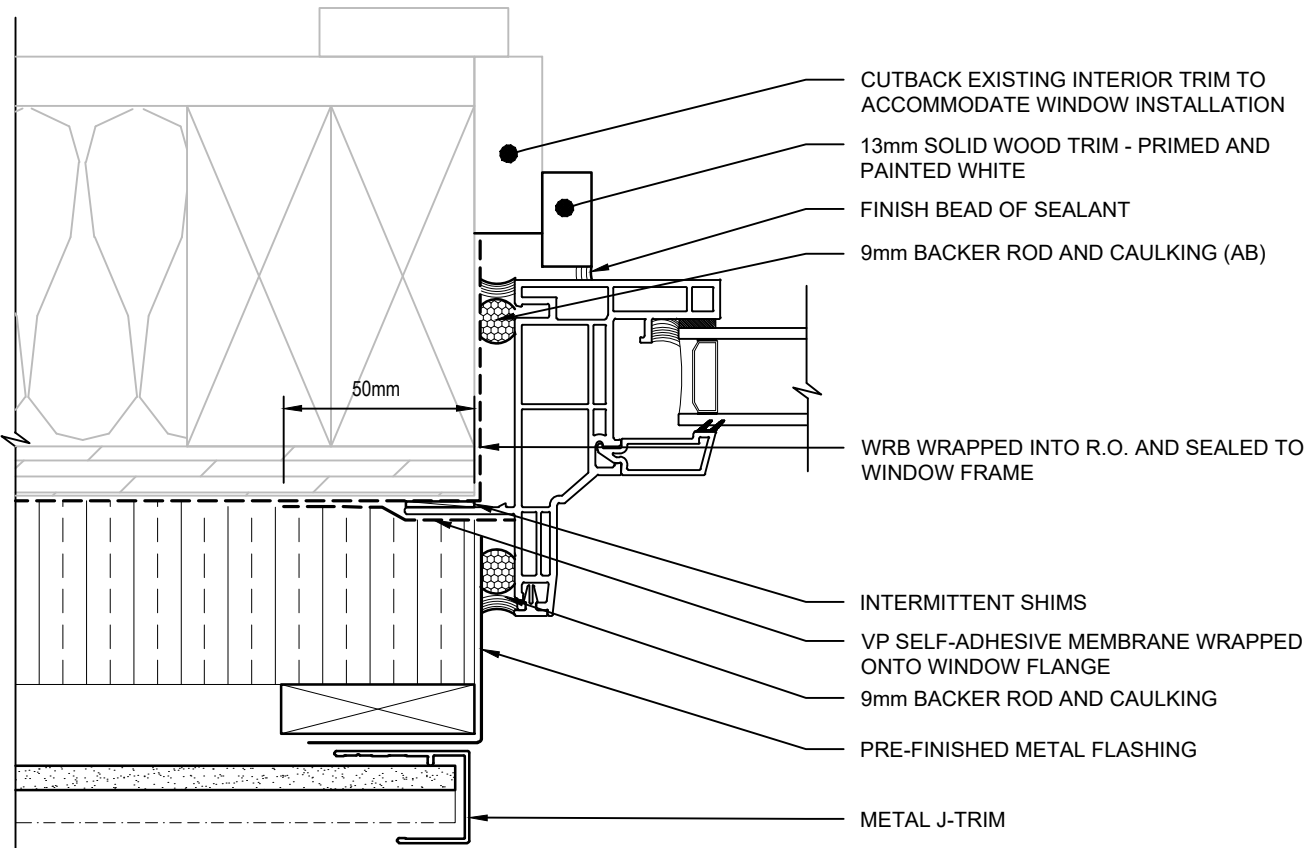
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PROJECT NAME:
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DRAWING:
WINDOW SILL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.02

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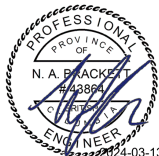
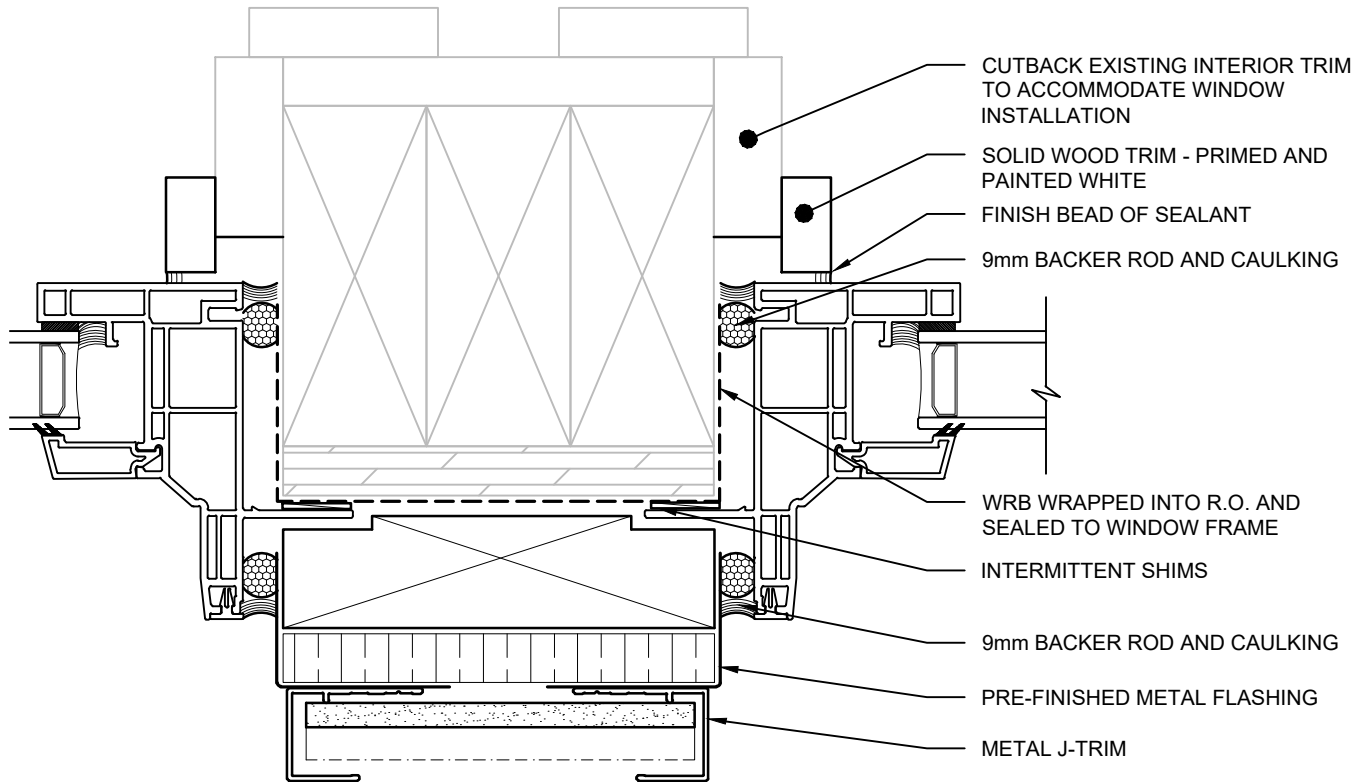
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DRAWING:
TYPICAL WINDOW JAMB

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.03

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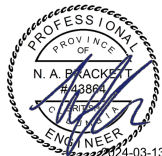
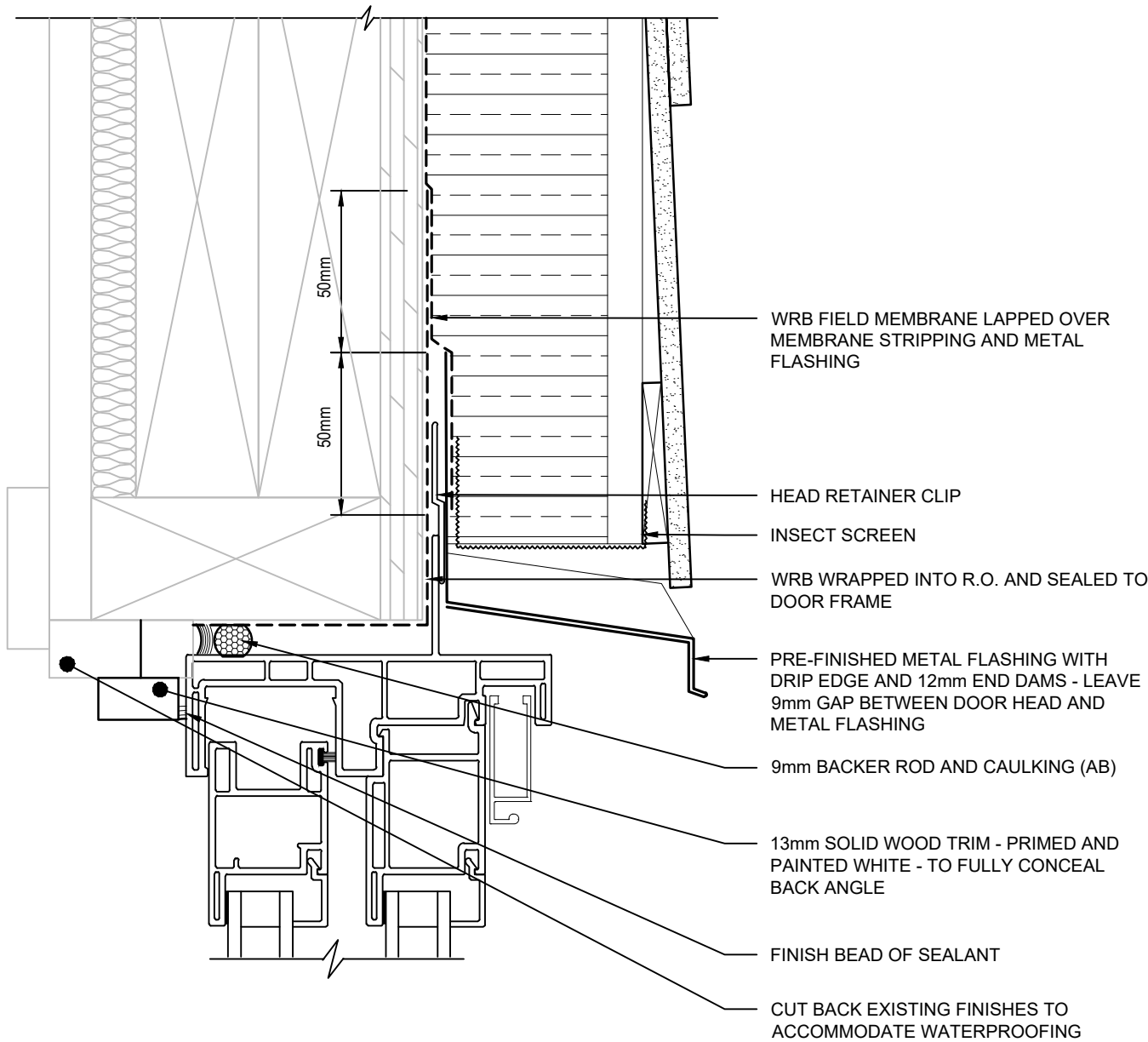
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PROJECT NAME:
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DRAWING:
WINDOW JAMB TO WINDOW JAMB

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.04

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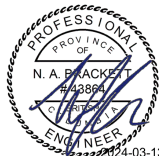
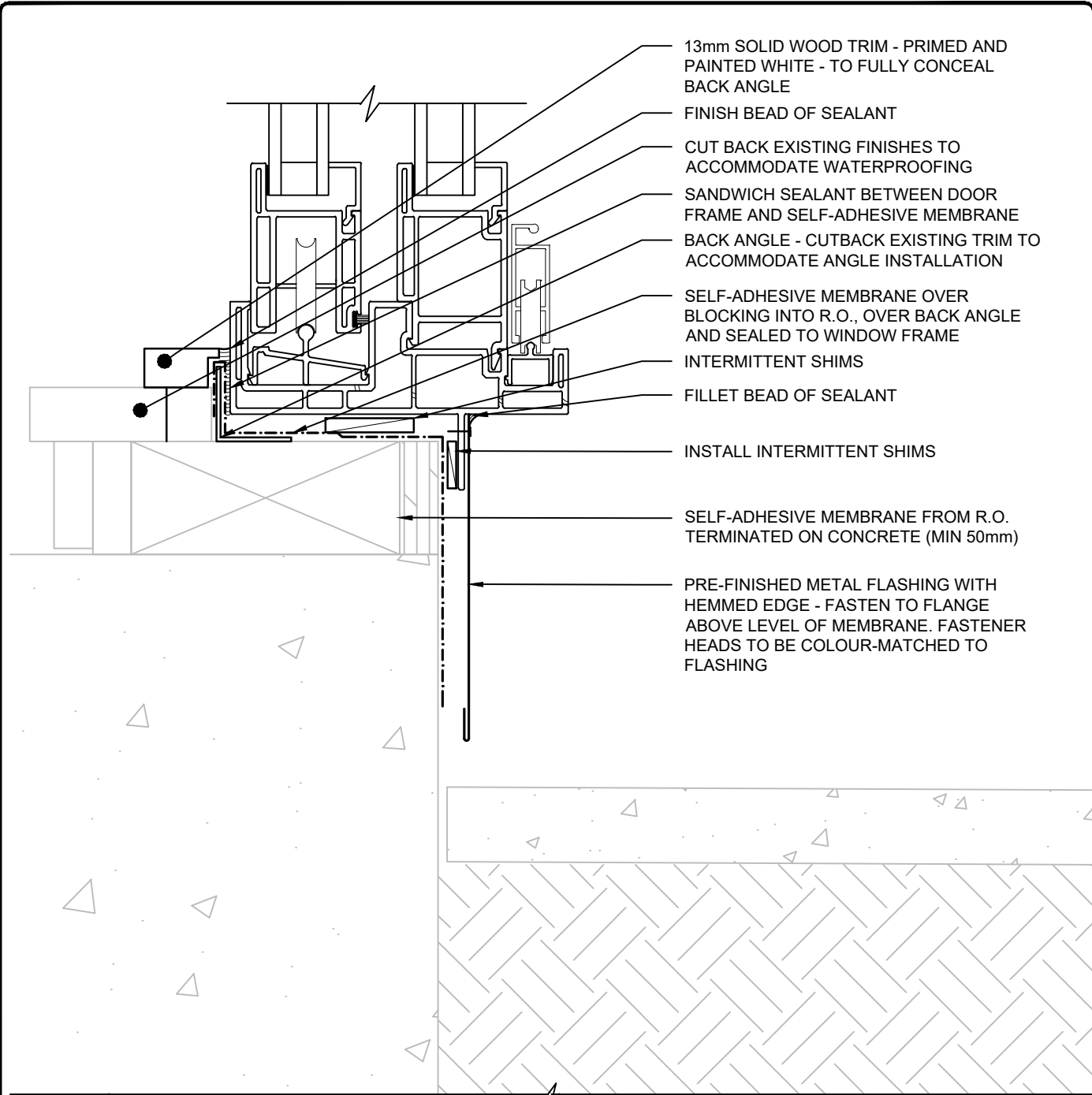
PROJECT NAME:
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SIDING AND WINDOW REPLACEMENT**

ADDRESS:
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DRAWING:
SLIDING DOOR HEAD

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.05

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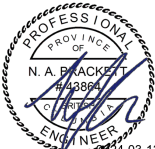
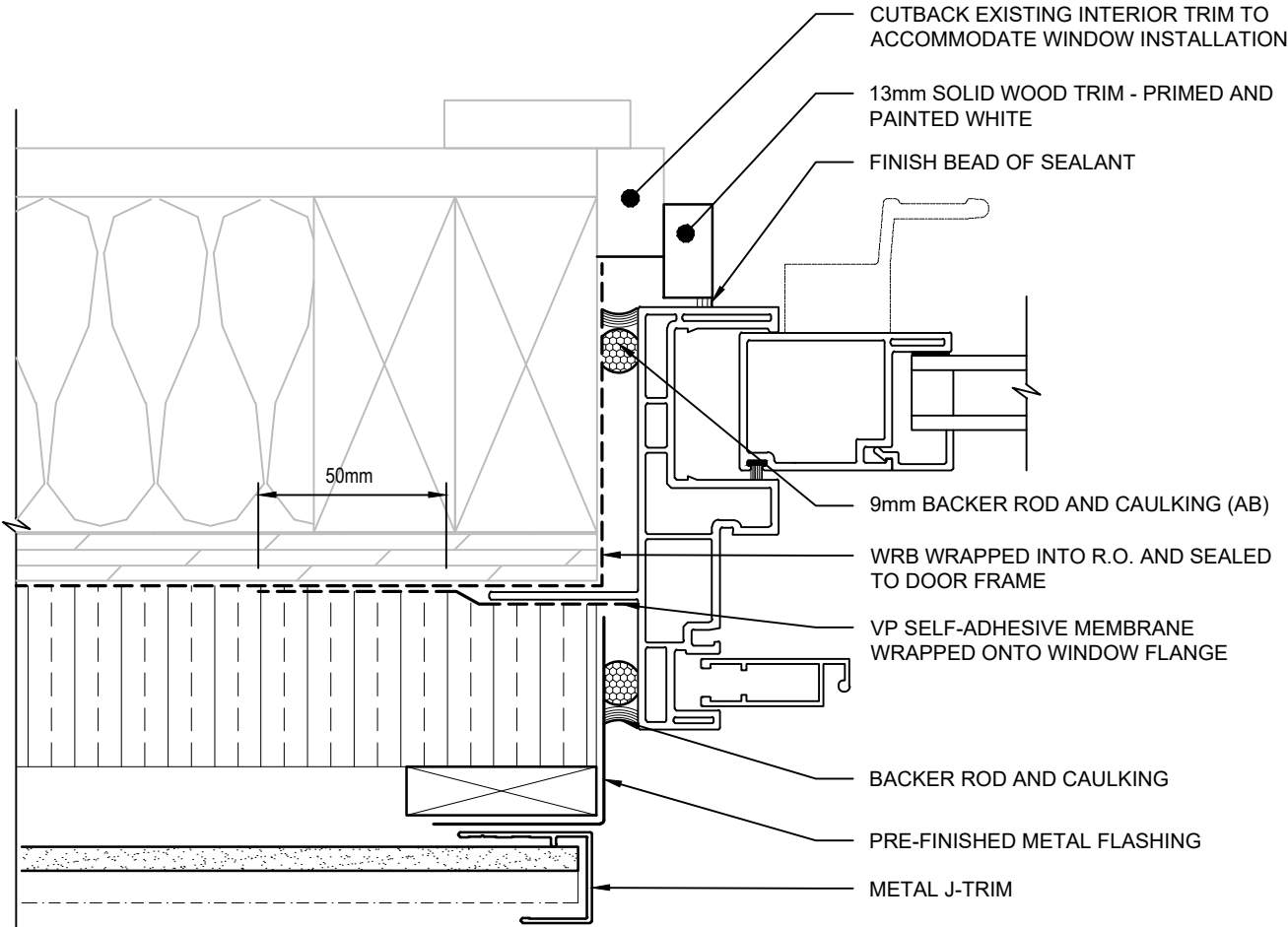
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PROJECT NAME:
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DRAWING:
SLIDING DOOR SILL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.06

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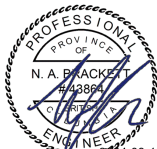
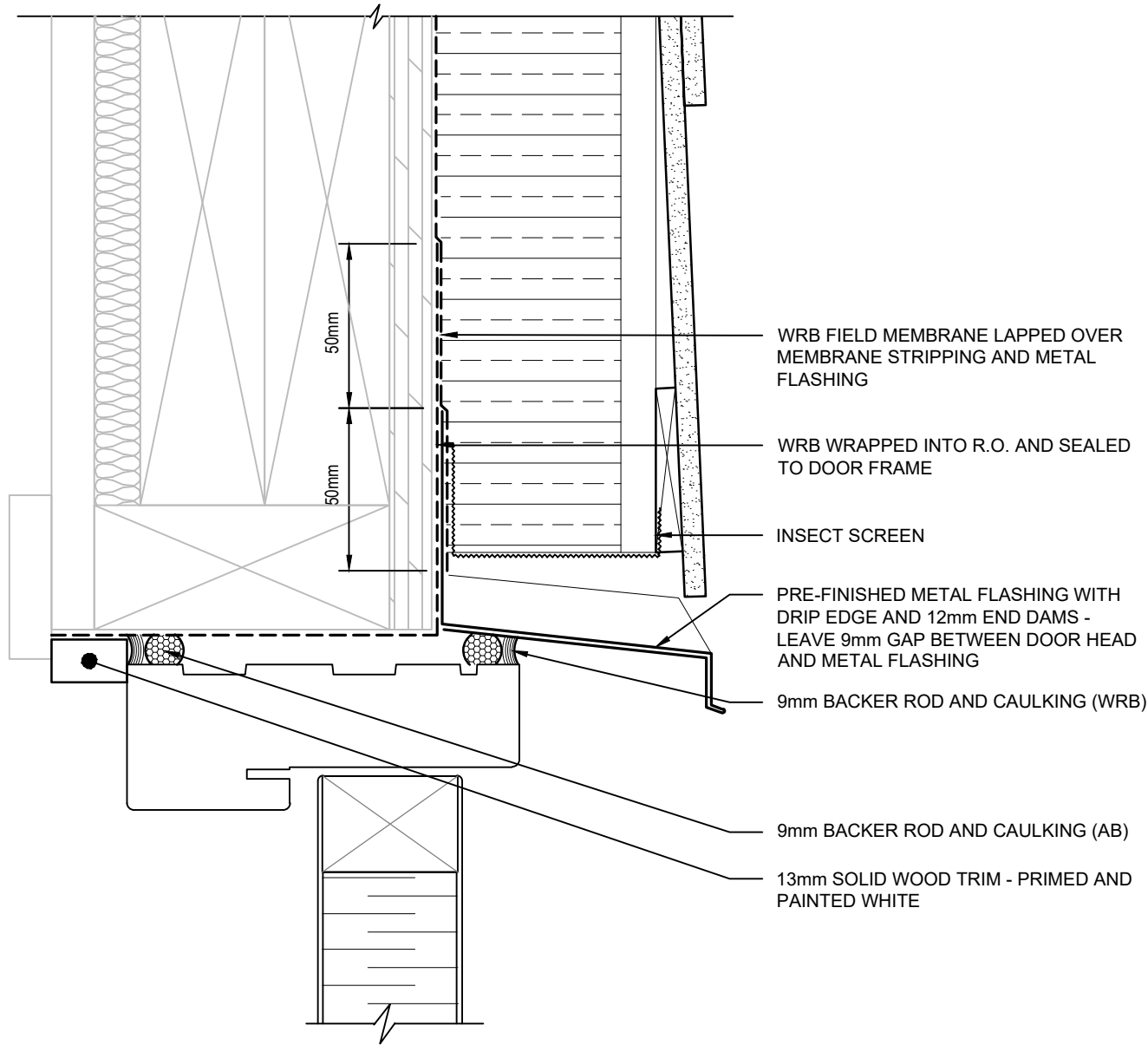
PROJECT NAME:
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DRAWING:
SLIDING DOOR JAMB

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.07

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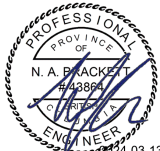
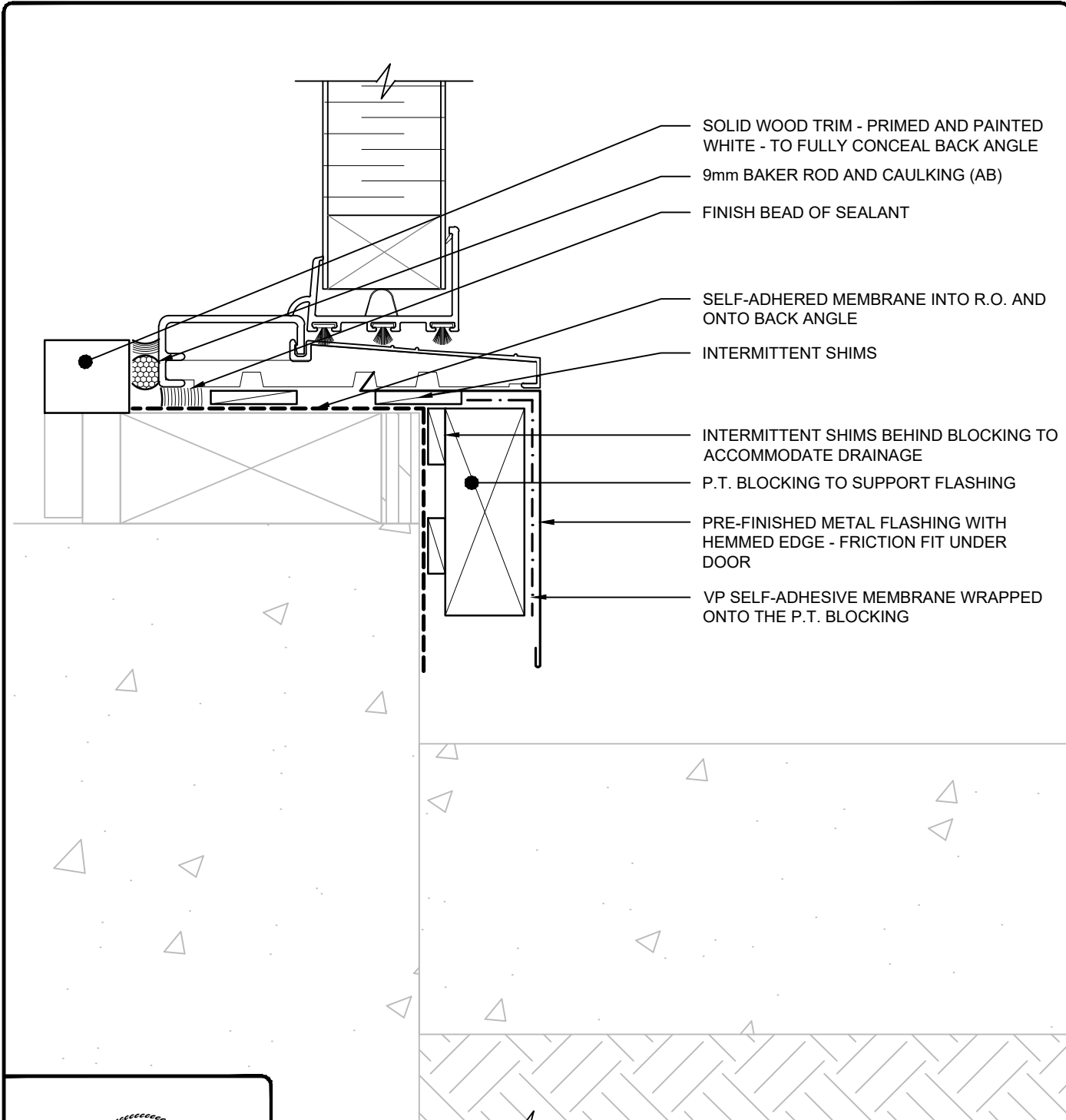
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
SWING DOOR HEAD

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.08

Use these drawings only for the purpose specifically noted in the revision column. Do not construct by these drawings unless indicated "Issued for Construction". The term "Issued for Building Permit" indicates that the drawings are complete for design of all key building envelope and/or structural design elements; however, final coordination and instructions for construction may not be fully complete.



Permit to Practice No. 1002213

- NOTE:**
- ALL DIMENSIONS ARE IN mm
 - REFER TO ASSEMBLY SHEET (G-0.01) FOR WALL ASSEMBLY



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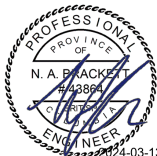
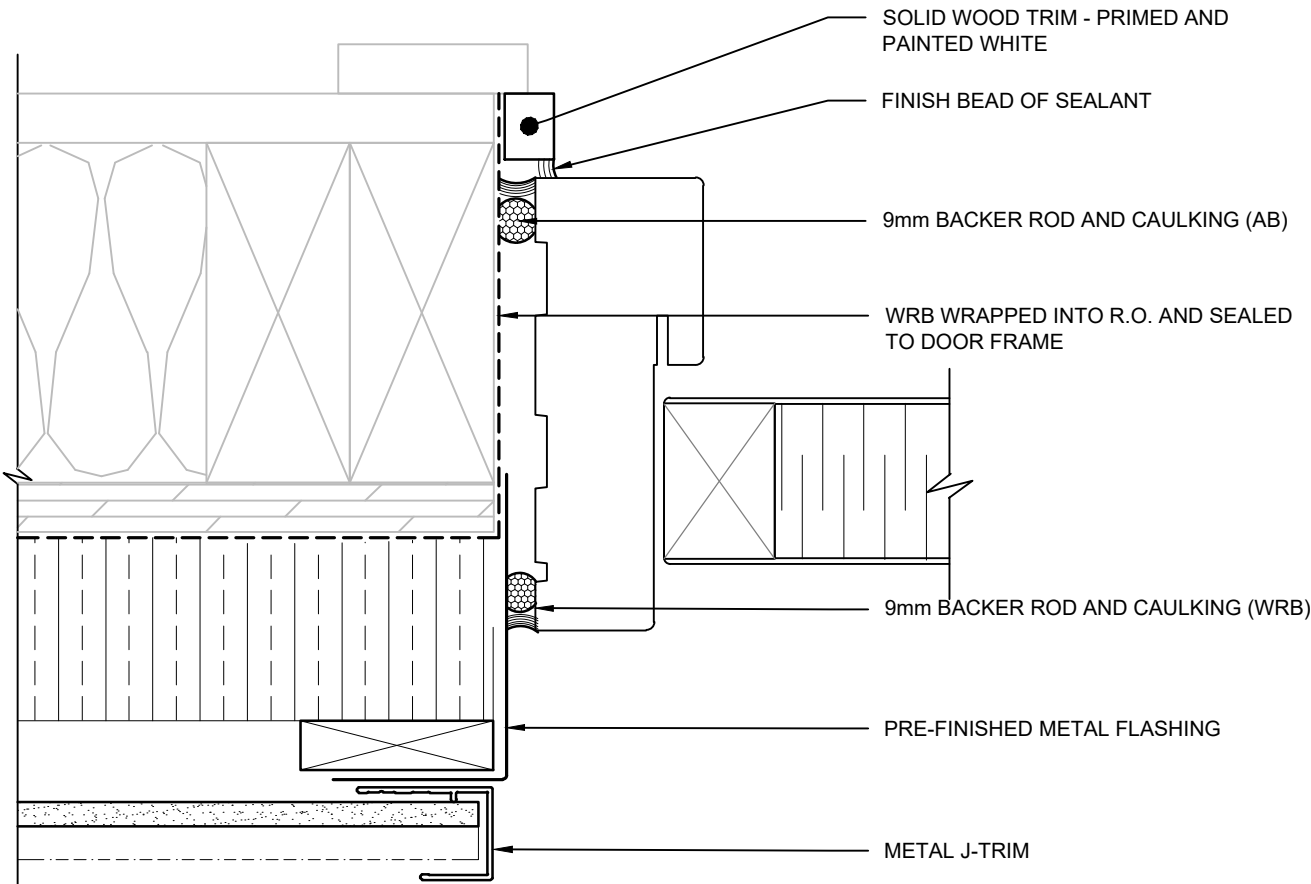
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
SWING DOOR SILL

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.09

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2024-03-13
Permit to Practice No. 1002213

NOTE:

- ALL DIMENSIONS ARE IN mm
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PROJECT NAME:
**CARLTON PARK GARDENS - EXTERIOR
SIDING AND WINDOW REPLACEMENT**
ADDRESS:
10851-10991 MORTFIELD ROAD, RICHMOND

DRAWING:
SWING DOOR JAMB

No.	Revision / Issue	Date mm/dd/yy	DRAWN BY:
1	DRAFT REVIEW	12/15/23	B2M
2	ISSUED FOR TENDER	02/09/24	NAB
			DATE: 2024-02-09
			SCALE: 1:2
			PROJECT NO: 23vR134A
			DRAWING NO: D-6.10

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APPENDIX A – REQUEST FOR SUBSTITUTION

PROJECT: CARLTON PARK GARDENS, 10851-10991 MORTFIELD ROAD, RICHMOND
PROJECT NO: 23VR134A

The following change to the Contract is proposed by the Contractor. Changes in price shall include all costs related to changes in overhead, profit, premiums for project bonding charged by the insurer, and applicable taxes (excluding GST/HST).

When submitting a Request for Substitution, the Contractor shall attach supporting information for both the originally specified material or product and the proposed substitution. The Contractor shall confirm with Sense Engineering if specific information is required.

Item	Description
Specified Material or Product	
Proposed Substitution	
Applicable Location(s)	
Performance Differences Between Specified Material or Product and Proposed Substitution	
Reason for Substitution	
Manufacturer Warranty (Years)	
Change in Price	
Change in Schedule	
Supporting Information Attached	☐ Technical Data Sheets ☐ Manufacturer Installation Instructions
	☐ Test Reports ☐ Manufacturer Specifications
	☐ Drawings (if required) ☐ Manufacturer Warranty
	☐ Photos (if required) ☐ Other _____

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The undersigned agrees to the following:

1. The proposed substitution does not affect dimensions shown on the drawings.
2. The proposed substitution has similar or better function, appearance, and quality to the originally specified material(s) or product(s).
3. No maintenance is required by the proposed substitution other than that required for the originally specified material(s) or product(s).

Submitted by

NameSignatureDate

For completion by *Sense Engineering*:

☐	Accepted	☐	Rejected
☐	Accepted as noted	☐	Incomplete information
☐	Accepted pending Owner approval	☐	No substitutions accepted for specified material or product

Comments:

Reviewed by *Sense Engineering*

NameSignatureDate





APPENDIX B – TIME SHEET TEMPLATE

PROJECT: CARLTON PARK GARDENS, 10851-10991 MORTFIELD ROAD, RICHMOND
PROJECT NO: 23VR134A

The Contractor shall include the following information when submitting invoices for work completed under contingency allowances. The Description of Work shall summarize the work completed and explain the reason the additional work was required. Custom time sheets may be used, provided the information below is included.

This information shall be submitted to Sense Engineering at the end of each work week to allow for proper evaluation and approval of the work completed.

Employee Name	
Employee Position (must match employee position listed in Bid Form)	
Project Allowance Name	

Date	Location (e.g. Suite No.)	Description of Work	Hours

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CANADIAN APARTMENT
PROPERTIES • REIT

23/04/2024

QUESTIONS & ANSWERS FOR RFP # WR-BC-2024-03-18Rev

Project: 10851-10991 Mortfield Rd. Richmond BC- Exterior Siding & Window Replacement

This document will provide responses to questions that have been brought up by invited participants:

Query 1: whether CAPREIT possesses a DSS report detailing the existing cladding and interior window opening locations, given that this project will involve modifications to these areas.

Clarification: HAZMAT Report will be shared with winning bidder

We hereby affirm that; we have read and understand the above and will submit bid accordingly.

Signed and submitted for and on behalf of Company: _____

Name of Company: ROMA BUILDING RESTORATION LTD

Email: joe@roma-restoration.ca Tel: 905 794 8174



CANADIAN APARTMENT
PROPERTIES • REIT

29/04/2024

QUESTIONS & ANSWERS FOR RFP # WR-BC-2024-03-18Rev

Project: 10851-10991 Mortfield Rd. Richmond BC- Exterior Siding & Window Replacement

This document will provide responses to questions that have been brought up by invited participants:

Query 1:

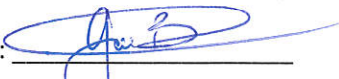
1. Do you have the contact information for the contractor who installed/supplied the fencing around the pool perimeter?

Clarification: We don't have any information on the existing fence panel system.

2. Are we expected to anchor the new fencing post to the building? Currently, at the top of the fencing post, it is anchored into the building. If so, is there a specific detail on how the post will be anchored to the building with the new siding?

Clarification: For the reinstallation the intent is to be secured through the corner trim back into the wall framing with fasteners to match the existing size.

We hereby affirm that; we have read and understand the above and will submit bid accordingly.

Signed and submitted for and on behalf of Company: 

Name of Company: Roma Building Restoration Ltd

Email: joe@roma-restoration.ca Tel: 905 794 8174

PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

BID FORM

PROJECT NAME: 10851-10991 Mortfield Road, Richmond
Carlton Park Gardens – Exterior Siding and Window Replacement

SUBMITTED BY:

ROMA BUILDING RESTORATION LTD.
Contractor Name

2054 KINGSWAY AVE, UNIT 2, PORT COQUITLAM BC
V3C 1S5
Contractor Address

Herein after called the Contractor

SUBMITTED TO:

Sense Engineering Ltd.
104 - 788 Copping Street
North Vancouver, BC V7M 3G6

Herein after called the Consultant

ON BEHALF OF:

Canadian Apartment Properties REIT
11 Church Street
Toronto, ON M5E 1W1

Hereinafter called the Owner

We the undersigned, have carefully examined the site, the conditions pertaining to the work, and the bid documents and specifications, including Addenda Nos. 1, 2. We offer to enter into a contract to complete the work described plus or minus any work identified by the Consultant in accordance with the requirements of the bid documents and specifications for the price given in the bid breakdown below.

By submitting this bid, the Contractor confirms that:

1. This bid is made without any connection, comparison of figures or arrangements with, or knowledge of, any other corporation, firm or person making a bid for the same Work except for prices submitted for sub-contracts, and is in all respects fair and without collusion or fraud.
2. This bid will be left open for acceptance for a period of 60 days from the date of closing.
3. The drawings and specifications have been examined and there are no materials or methods indicated to which the Bidder objects or for which the Bidder would be unwilling or unable to accept responsibility. The Bidder agrees that after signing the Contract, full responsibility for the performance of the Work will rest with the Bidder and the Owner is in no way to be held liable.



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

BID BREAKDOWN

Accurate quantities and allowances for parts of the Contract cannot be pre-determined and will only be established at the time of actual field work. The estimates shown below are approximate and shall serve as a guideline only to standardize quantities and allowances used when bidding. The prices submitted are for the completed work, excluding GST but including all other applicable taxes, overhead, profit and all other Contractor expenses.

All other items, whose quantities can be pre-determined, but not specifically itemized and described below, including items shown on drawings, discussed in the scope or other supporting documentation, or required to complete the work are to be quoted under "All Other Items".

1. BASE BID ITEMS

Item No.	Item Description	Estimated Quantity	Unit Price	Price for Item
1	General			
1.1	Access and Mobilization	-	Lump Sum	\$ 20,000. ⁰⁰
1.2	Site Protection	-	Lump Sum	\$ 7,500. ⁰⁰
1.3	Protection from Weather	-	Lump Sum	\$ 7,500. ⁰⁰
2	Exterior Walls			
2.1	Demolition	-	Lump Sum	\$ 18,750. ⁰⁰
2.2	Framing and Sheathing Repairs	-	Contingency Allowance	\$ 30,000
2.3	New Fibre Cement Siding	-	Lump Sum	\$ 73,750. ⁰⁰
3	Windows and Doors			
3.1	Window and Door Replacement	-	Lump Sum	\$ 67,405. ⁰⁰
3.2	Window Testing	-	Contingency Allowance	\$ 5,000
4	Miscellaneous Repairs			
4.2	Modify Existing Fencing	-	Lump Sum	\$ 12,000. ⁰⁰
4.3	Miscellaneous Repairs	-	Contingency Allowance	\$ 20,000



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

Item No.	Item Description	Estimated Quantity	Unit Price	Price for Item
5	All Other Items	-	Lump Sum	\$ 10,000. ⁰⁰
Estimated Total Contract Price (excluding taxes):				\$ 271,905. ⁰⁰

Proposed Start Date (day/month/year)	SPRING 2024
A: Construction Duration for Base Bid Lump Sum Items (weeks)	± 16
B: Construction Duration for Base Bid Contingency Allowance and Cash Allowance Items (weeks)	± 2
A + B: Total Estimated Construction Duration (weeks)	± 18
Method(s) of Exterior Access	LADDER / SCAFFOLD
Minimum Number of Workers on Site	2-3

NOTES :

- PRICES ABOVE EXCLUDE ANY ABATEMENT, IF REQUIRED.



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

2. OPTIONAL ITEMS

Optional items shall be priced as stand-alone items, including allowances for increases in bonding, access, mobilization and demobilization, supervision and permits. Optional items may be included at the time of award or may be included after award, by Change Order, if required.

For all optional items, indicate if inclusion of the optional item results in a price increase/decrease and schedule increase/decrease.

Item No.	Optional Item Description	Estimated Quantity	Unit Price	Price for Item (+ or -)	Schedule (+ or -)
O1	Tyvek CommercialWrap Sheathing Paper	-	Lump Sum	\$ - 2,000. ⁰⁰	0 wks
O2	Retain Existing Windows and Doors	-	Lump Sum	\$ - 32,500. ⁰⁰	- 4 wks



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

3. HOURLY RATES

The following hourly rates (which are to include overhead and profit) may be applicable for changes and work completed with allowances:

Rate No.	Trade Description	Rate
1	Labourer	90. ⁰⁰ / hr
2	Foreman	100. ⁰⁰ / hr
3	Superintendent	125. ⁰⁰ / hr
4	Carpenter	150. ⁰⁰ / hr
5	Other: _____	/ hr
6	Other: _____	/ hr



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

4. CONTRACTOR'S SITE REPRESENTATIVES

Provide the name and qualifications of the personnel who will be assigned to the project.

Project Personnel	Details
Site Foreman	Name: <u>HARDEEP DHALIWALL</u> Company: <u>ROMA BUILDING RESTORATION LTD</u> Years Applicable Experience as Foreman: <u>7 YEARS</u> Total Years' Experience: <u>10 YEARS</u>
Site Superintendent (if not the same as the foreman)	Name: <u>DANG SIHARATH</u> Company: <u>ROMA BUILDING RESTORATION LTD</u> Years Applicable Experience as Superintendent: <u>10 YEARS</u> Total Years' Experience: <u>15 YEARS</u>
Project Manager	Name: <u>HRITHIK BHANGU</u> Company: <u>ROMA BUILDING RESTORATION LTD</u> Years Applicable Experience as Project Manager: <u>5 YEARS</u> Total Years' Experience: <u>8 YEARS</u>

Backup information regarding personnel experience shall be provided upon request.

Substitute personnel will only be allowed upon approval by the Consultant.



PROJECT: CARLTON PARK GARDENS – EXTERIOR SIDING AND WINDOW REPLACEMENT
 PROJECT NO: 23VR134A

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BID FORM - SECTION 00 41 00

5. PROPOSED SUB-CONTRACTORS

The name of each proposed sub-contractor must be given in the following list. If the Bidder proposes to sublet a part of the work, which is not listed below, the sub-trade and the proposed sub-contractor's name shall be added to the list. Failure by a Bidder to comply with the foregoing requirements may result in default of the Contract.

Failure to supply the name of proposed sub-contractor at the time of the bid shall indicate that work will be performed by the bidding Contractor's own forces. Sub-contractors not proposed at the time of bid shall not be permitted to perform work in this Contract without the Owner's/Consultant's approval.

Preference may be given to contractors relying more on their own forces than sub-contractors.

Sub-Trade	Proposed Sub-Contractor
Demolition	OWN FORCES
Wood Framing	↓
Interior Finishes	
Carpentry	
Siding	
Windows and Doors Supply	ALL WEATHER WINDOWS
Windows and Doors Installation	OWN FORCES
Mechanical	OWN FORCES
Electrical	TBD
Sealant	OWN FORCES
Flashings	↓
Other: _____	



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PROJECT NO: 23VR134A

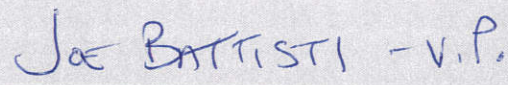
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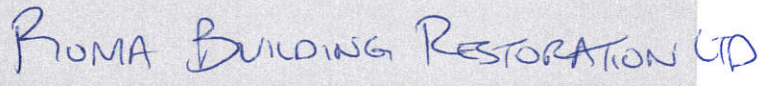
SIGNATURES



Signature



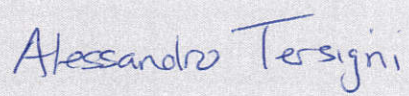
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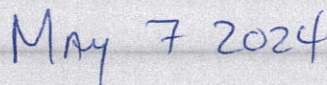
Company



Witness



Print Name



Date

End of Section 00 41 00

