RETURN BIDS TO:
RETOURNER LES SOUMISSIONS A:
Bid Receiving/Réception des sousmissions

RCMP / GRC
Procurement & Contracting Services
c/o Commissionaires, D Division
1091 Portage Avenue
Winnipeg, MB R3C 3K2

Facsimile Number for Amendments:

(204) 984-4253

INVITATION TO TENDER
APPPEL D'OFFRES

Tender to: Royal Canadian Mounted Police
We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services and construction listed herein and on any attached sheets at the price(s) set out therefore.

Soumission aux: Gendarmerie royale du Canada
Nous offrons par la présente de vendre à Sa Majesté l Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaries

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Facsimile No. - No de télécopieur:

Telephone No. - no de téléphone:

Title-Sujet: Building Envelope Upgrades in Fisher Branch, MB

Solicitation No. - No. de l'invitation	**Date**
M5000-16-6761/A	14 September 2016

Client Reference No. - No. De Référence du Client
M5000-16-6761/A

GETS Reference No. - No. de Référence de SEAG
PW-16-00747816

Solicitation Closes –L'invitation prend fin
at - à 2:00 p.m. **Central Daylight Savings Time**
on - le 06 October 2016

F.O.B. - F.A.B.
Destination

Address Enquiries to: - Adresser toutes questions à:
Cathi Johannson, Senior Contracting Officer
E-mail: cathi.johannson@rcmp-grc.gc.ca

Telephone No. - No de téléphone	**Fax No. - N° de FAX:**
(204) 984-1836	(204) 984-4253

Destination of Goods, Services, and Construction:
Destinations des biens, services et construction:

Royal Canadian Mounted Police
Fisher Branch RCMP Living Quarters
As detailed herein
Fisher Branch, MB R0C 0Z0

This document DOES contain a PERSONNEL SECURITY Clearance requirement

Delivery Required - Livraison exigée:	**Delivery Offered - Livraison proposée**
03 February 2017	

Name and title of person authorized to sign on behalf of Vendor/Firm
Nom et titre de la personne autorisée à signer au nom du fournisseur/de l'entrepreneur

INVITATION TO TENDER

IMPORTANT NOTICE TO BIDDERS

THIS DOCUMENT CONTAINS A SECURITY REQUIREMENT

CLAUSES REFERRED TO BY NUMBER (I.E. R2890D) CAN BE FOUND AT THE FOLLOWING WEB SITE
https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual (to proceed with a search select "Search SACC" and insert clause reference number in ID box)

All references to the Department of Public Works & Government Services Canada (PWGSC) in the instructions, general terms, conditions and clauses identified in the Invitation to Tender (ITT) by number, date and title, are set out in the Standard Acquisition Clauses and Conditions Manual (*https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual)* and are to be replaced with the Royal Canadian Mounted Police (RCMP).

BUY AND SELL

Buyandsell.gc.ca/tenders is the Government of Canada's Electronic Tendering Service Provider.

Buyandsell.gc.ca/tenders does not advise potential bidders of changes to any of the projects. It is the responsibility of potential bidders to ensure that they are frequenting the site, ensuring that they are in receipt of all amendments for projects.

Please include, as part of your bid package, copies of all amendments that have been duly signed/initialed verifying proof of receipt.

CONTRACT SECURITY

The required amount of a security deposit or a letter of credit is established at 20% of the contract amount with no maximum. See GC9.2 of R2890D – Contract Security. Please note that Security Deposits and Letters of Credit are no longer accepted in combination with Labour and Material Payment Bonds.

LIMITATION OF LIABILITY

PWGSC is limiting the Contractor's first party liability for work in Low Rise, High Rise and Heritage Buildings. See changes to GC1.6 "Indemnification by the Contractor" of R2810D in the Supplementary Conditions.

PROMOTION OF DIRECT DEPOSIT INITIATIVE

The following information is not related to the solicitation process:

An initiative within the Government of Canada called the Cheque Standardization Project has been established whereby eventually for all payments, cheque stubs will no longer be printed and, with few exceptions, will be processed via direct deposit. This option is only available when payment is made in Canadian dollars for deposit into a Canadian bank account. In an attempt to be proactive, RCMP Corporate Accounting is promoting the registration of RCMP suppliers for the upcoming change in the payment process.

If you are the successful bidder on this or any other RCMP requirement, you are encouraged to register with the RCMP for direct deposit. Please contact RCMP Corporate Accounting by email to receive a form entitled Recipient Electronic Payment Registration Request along with instructions for completion of the form.

Should you have any questions regarding the Cheque Standardization Project or if you want to register, please contact the following email: corporate_accounting@rcmp-grc.gc.ca

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ANNEXES AND APPENDICES:

Annex A - Basis of Payment and Selection
Annex B – Security Requirement Checklist
Annex C - RCMP CERTIFICATE ON INSURANCE/ATTESTATION D'ASSURANCE–GRC
Annex D - Bid Submission Check List

Appendix A – Building Envelope Upgrade Project Manual and drawings

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 BID DOCUMENTS

1) The following are the bid documents:

(a) Invitation to Tender - Page 1;
(b) Special Instructions to Bidders;
(c) General Instructions – Construction Services – Bid Security Requirements R2710T (2016-04-04);
(d) Clauses & Conditions identified in "Contract Documents";
(e) Drawings and Specifications;
(f) Bid and Acceptance Form and related Appendice(s); and
(g) Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2) General Instructions to Bidders are incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: *https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual*

3) **Bids must be submitted only to RCMP Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation. The RCMP will not assume responsibility for bids directed to any other location.**

Due to the nature of the bid solicitation, Original Bids transmitted by facsimile or e-mail to the RCMP will not be accepted.

4) Canada requests that Bidders follow the format instructions described below in the preparation of their Bid:

a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, Bidders should:

- use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

1) Enquiries regarding this bid must be submitted in writing to the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in the 'Approval of Alternative Materials' section of R2710T "General Instructions – Construction Services – Bid Security Requirements", enquiries should be received no later than five (5) calendar days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.

2) To ensure consistency and quality of the information provided to Bidders, the Contracting Officer shall examine the content of the enquiry and shall decide whether or not to issue an amendment.

3) All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI03 SITE VISIT

It is recommended that the Bidder or a representative of the Bidder visit the work site(s). Arrangements have been made for the site visits to be held on: September 21, 2016, at 11:00 a.m. Interested bidders are to meet at the RCMP Detachment, 34 Tache Street, Fisher Branch, Manitoba.

Bidders may be requested to sign an attendance sheet. Bidders who do not attend or do not send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid. Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation.

SI04 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with the 'Revision of Bid' section of R2710T "General Instructions – Construction Services – Bid Security Requirements". The facsimile number for receipt of revisions is (204) 984-4253.

SI05 BID RESULTS

1) A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" for the receipt of bids shortly after the time set for solicitation closing.

2) Following solicitation closing, bid results may be obtained by calling the bid receiving office at Telephone No. (204) 984-1836.

SI06 INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

a) cancel the solicitation; or

b) obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid; and/or

c) negotiate a reduction in the bid price and/or scope of work of not more than 15% with the Bidder submitting the lowest compliant bid. Should an agreement satisfactory to Canada not be reached, Canada shall exercise option (a) or (b).

SI07 BID VALIDITY PERIOD

1) Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.

2) If the extension referred to in paragraph 1) of SI07 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.

3) If the extension referred to in paragraph 1) of SI07 is not accepted in writing by all those who submitted bids then Canada shall, at its sole discretion, either

(a) continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or

(b) cancel the invitation to tender.

4) The provisions expressed herein do not in any manner limit Canada's rights in law or under the 'Rejection of Bid' section of R2710T "General Instructions – Construction Services – Bid Security Requirements".

SI08 CONSTRUCTION DOCUMENTS

The successful contractor will be provided with one paper copy of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. Additional copies, up to a maximum of one (1), will be provided free of charge upon request by the contractor. Obtaining more copies shall be the responsibility of the contractor including costs.

SI09 SECURITY CLEARANCE

This document contains a mandatory security requirement for the performance of the subsequent contract (refer to clause SC01 of the Supplementary Conditions included herein).

1) The Successful Bidder's personnel, as well as any subcontractor and its personnel, who are required to perform any part of the work pursuant to the subsequent contract must meet the mandatory security requirement as indicated in section SC01 of the Supplementary Conditions. **Individuals who do not have the required level of security will not be allowed on site**. It is the responsibility of the successful bidder to ensure that the security requirements are met throughout the performance of the contract. Canada will not be held liable or accountable for any delays or additional costs associated with the successful bidder's non-compliance with the mandatory security requirement.

2) For any enquiries concerning the project security requirement, during the bidding period, the Bidder must follow the instructions as detailed in SI02 "Enquiries during the Solicitation Period".

SI10 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame specified will render the bid non-responsive.

1) INTEGRITY PROVISIONS

In accordance with the Ineligibility and Suspension Policy (http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process:

- Declaration of Convicted Offences (as applicable)
- Required Documentation

SI11 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies
http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494&section=text#appL

Contracts Canada (Buy and Sell)
https://buyandsell.gc.ca/for-businesses

Canadian economic sanctions
http://www.international.gc.ca/sanctions/index.aspx?lang=eng

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913)

http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf

Bid Bond (form PWGSC-TPSGC 504)
http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf

Performance Bond (form PWGSC-TPSGC 505)
http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf

Labor and Material Payment Bond (form PWGWSC-TPSGC 506)
http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf

SACC Manual
https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/all

Schedules of Wage Rates for Federal Construction Contracts
http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml

PWGSC, Industrial Security Services
http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html

SUPPLEMENTARY CONDITIONS (SC)

SC01 SECURITY REQUIREMENT FOR CANADIAN CONTRACTORS

1. All persons working on site must hold a Facility Access with Escort Security Clearance, this includes persons working to correct deficiencies or do warranty work, issued by RCMP Departmental Security. Refer to Annex D.

SC02 INSURANCE TERMS

1) Insurance Contracts

(a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.

(b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

(a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.

(b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

3) Proof of Insurance

(a) Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.

(b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

Exception to SC02 – Insurance Terms; Proof of Insurance:

All references to the Certificate of Insurance (form PWGSC-TPSGC 357) in the instructions, general terms, conditions and clauses identified in the Invitation to Tender (ITT) by number, date and title, and set out in the Standard Acquisition Clauses and Conditions Manual (http://publiservice-app.pwgsc.gc.ca/forms/pdf/357.pdf,) are to be replaced with **"Appendix 1 – RCMP CERTIFICATE OF INSURANCE / ATTESTATION D'ASSURANCE - GRC"**

SC03 SUBMISSION OF BID

1. Addition to R2710T General Instructions – Construction Services – Bid Security Requirements; GI09 Submission of Bid.

2. Copies of first page of amendment(s) to be submitted with bid, duly signed/initialed, verifying proof of receipt.

SC04 MANDATORY HEALTH & SAFETY

FOR WORK IN MANITOBA

1. EMPLOYER/PRIME CONTRACTOR

1.1. The Contractor shall, for the purposes of the Occupational Health and Safety Act - Manitoba, and for the duration of the Work of the Contract:

1.1.1. act as the Employer, where there is only one employer on the work site, in accordance with the Authority Having Jurisdiction;

1.1.2. accept the role of Contractor/Principal Contractor/Constructor, where there are two or more employers involved in work at the same time and space at the work site, in accordance with the Authority Having Jurisdiction; and

1.1.3.. agree, in the event of two or more Contractors working at the same time and space at the work site, without limiting the GC3 - Execution and Control of Work GC 3.7, to the Project Managers order * to:

1.1.3.1. assume, as the Principal Contractor, the responsibility for the Canada's other Contractor(s); or

1.1.3.2. accept that Canada's other Contractor is Principal Contractor and conform to that Contractor's Site Specific Health and Safety Plan.

** "order definition": after contract award, Contractor is ordered by a Change Order*

2. WORKERS COMPENSATION BOARD AND SAFETY PROGRAM

2.1. The recommended Tenderer shall provide to the Contracting Authority, prior to Contract Award:

2.1.1. A Workers Compensation Board Claims Cost Summary - Manitoba

2.1.2. a Workers Compensation Board letter of good standing, also listing covered Directors, Principals, Proprietor(s) or Partners who will be or will be or who are anticipated to be present on the work site(s); and

2.1.3. a Certificate of Recognition (COR) or Registered Safety Plan (RSP) acceptable to the Authority Having Jurisdiction (AHJ). A health and safety policy and program, as required by the respective provincial/territorial Occupational Health and Safety Act, will be acceptable in lieu of a COR or RSP. If none is required by law, a copy of a health and safety policy and program that has been sent to the AHJ for review will also be acceptable, provided that the recommended Tenderor certifies that it has been sent to the AHJ.

2.2 The recommended Tenderer shall deliver all of the above documents to the Contracting Authority on or before the date stated (usually 3-5 days after notification) by the Contracting Authority. Failure to comply will result in a breach of promise/disqualification from the project,

at which time the Contracting Authority will be free to approach the next lowest responsive/another Tenderer.

3. PERMITS, NOTIFICATIONS AND SAFETY PLAN

2.1. The Contractor shall provide to the Project Manager:

3.1.1. prior to the pre-construction meeting, a transmittal and copy of the Advance Notification of Project form, contained herein, as sent to the Authority Having Jurisdiction (AHJ), unless this requirement is waived by the Project Manager; and

3.1.2. prior to commencement of work and without limiting the terms of General Instructions to Bidders GI14 and GC4 - Protective Measures GC 4.2

3.1.2.1. copies of all other necessary permits, notifications and related documents as called for in the scope of work/specifications and/or (AHJ); and

3.1.2.2. a site specific Health and Safety Plan which is acceptable to the AHJ, unless this requirement is waived by the Project Manager.

ADVANCE NOTIFICATION OF CONSTRUCTION PROJECT

To Provincial Labour Authority:
This Advance Notification is to advise you that we, the listed contractor, will be undertaking a Federal Construction Project within your jurisdiction for which we are designated the Prime/Principal/General Contractor and that we will be the party responsible for the overall coordination of safety on the construction site.

A pre-construction meeting for this project will be held at (Location) _____ on (Date) _____ at (Time) _____. An invitation for a representative of the provincial/territorial authority to attend this meeting is extended. The Site Specific Safety Plan will be reviewed at this meeting. Should you wish to attend please contact the name listed below.

Date:		File Number:	
Contract Amount:		Project Number:	
Business/Legal Name of Employer/Prime Contractor (AB)(BC); Employer/Contractor (SK); Employer/Principal Contractor (MB)(QC)(NF&Labrador)(NT & Nunavet); Employer/Constructor (ON)(NS)(NB)(PE)(YT)			
Mailing Address:		Telephone: Fax Number: Contact Name:	

PROJECT DETAILS

Location of Project	
Nature of Work/Process Undertaken	
Name of Site Superintendant	
Contact Number for Superintendant	
Estimated Start Date of Project	
Estimated Project Duration	
Number of Workers to be Employed	

List of Sub-Contractors to be Employed (Use additional Space if Required)

Company Name	Business Address/Location

OWNER INFORMATION

Project Owner:	Royal Canadian Mounted Police
Owners Representative:	
Owner Representative Contact Number:	

Hazardous Regulated Activities

This is a notification to the Provincial/Territorial Labour Authority of the Hazardous Regulated Activities that are to be undertaken during the project by the Prime/Principal Contractor or Constructor or any sub-contractors. This list may not be inclusive and may be amended from time to time.

Note to Prime/Principal Contractor or Constructor:

Any Hazardous Regulated Activities which are listed must also have elements included in the Site Specific Safety Plan Listing working Procedures for those activities.

Check Box for activities to be undertaken and provide estimated duration of activities in hours/days.

Check	Activity	Estimated Duration
	Working in or with Trenching/Excavation/Tunnels	
	Use of Scaffolding/Swing Stages	
	Working from Heights requiring fall protection systems	
	Crane Operations	
	Working from Heights requiring fall protection systems	
	Crane Operations	
	Work in Confined Spaces	
	Blasting and/or use of explosives	
	Use and or exposure to high voltage electrical	
	Hot Work	
	Demolition	
	Use of temporary structures, stairs, ramps or landings, and constructed ladders	
	Use of Heavy Equipment which may/may not require traffic control	
	Working on or near water	
	Working with hazardous substances/regulated products *	
	Working with radiation emitting devices	
	Working with or exposure to Asbestos, PCBs or Lead	

Please list any other hazardous regulated activities, which are not listed, below:

_____

_____

_____

_____

* If the work is to occur in an occupied space, as a renovation or a lease fit-up, the Prime/Principal Contractor or Constructor is required to provide copies of MSDSs for all controlled products to the Owner's Representative and to maintain copies on site.

DISTRIBUTION

The Prime/Principal Contractor or Constructor is responsible to ensure proper distribution of this form and must provide proof that the form was sent to the Labour Authority. Work activities cannot commence until such proof has been provided. Proof can be by registered mail receipt, or by providing a copy of a fax transmittal notice, or any other means providing indication that the Labour Authority has received this document:

Original: to applicable provincial/territorial labour authority
Copies to: RCMP Project Manager

A copy of this form is to be posted at the project site prior to the commencement of work.

NOTE:
Please do not include any forms that include personal 3rd party information such as the names of the contractor's employees and their related claims information

LABOUR AUTHORITY CONTACTS

The contacts below represent the Labour Authority in the various jurisdictions. They are not representatives of the Workers Compensation. Do not contact the people referenced below for issues pertaining to WCB or WCB Clearances. Those queries must be directed specifically to the WCB, and where the WCB has both a Labour and Compensation component, WCB issues must be directed to the Compensation/Employer Services sections.

Manitoba Labour:

Workplace Safety and Health Branch
200 - 401 York Avenue
Winnipeg, MB R3C 0P8

Attention: Ron Humeniuk, Client Services

Telephone: 204-945-6848
Facsimile: 204-945-4556

CONTRACT DOCUMENTS (CD)

1) The following are the contract documents:

(a) Contract Page when signed by Canada;

(b) Duly completed Bid and Acceptance Form and any Appendices attached thereto;

(c) Drawings and Specifications;

(d) General Conditions and clauses:

GC1	General Provisions	R2810D	(2016-04-04);
GC2	Administration of the Contract	R2820D	(2016-01-28);
GC3	Execution and Control of the Work	R2830D	(2015-02-25);
GC4	Protective Measures	R2840D	(2008-05-12);
GC5	Terms of Payment	R2850D	(2016-01-28);
GC6	Delays and Changes in the Work	R2865D	(2016-01-28);
GC7	Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8	Dispute Resolution	R2880D	(2016-01-28);
GC9	Contract Security	R2890D	(2014-06-26);
GC10	Insurance	R2900D	(2008-05-12);

Supplementary Conditions:

Allowable Costs for Contract Changes Under GC6.4.1 R2950D (2015-02-15);
Schedules of Wage Rates for Federal Construction Contracts;

(e) Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;

(f) Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and

(g) Any amendment or variation of the contract documents that is made in accordance with the General Conditions.

2) The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual

3) Schedules of Wage Rates for Federal Construction Contracts is included by reference and may be accessed from the Web site: http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml.

4) The language of the contract documents is the language of the Bid and Acceptance Form submitted.

5) **Authorities:**

Contracting Authority:

The Contracting Authority for the Contract is:

Cathi Johannson
Royal Canadian Mounted Police
Senior Contracting Officer
1091 Portage Avenue
Winnipeg, MB R3C 3K2

Telephone: (204) 984-1836
Facsimile: (204) 984-4253
E-mail: cathi.johannson@rcmp-grc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

Project Authority:

The Project Authority for the Contract is: (to be completed upon contract award)

Name: _____
Title: _____
Organization: _____
Address: _____
_____
_____

Telephone: _____
Facsimile: _____
E-mail: _____

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

Supply all labour, materiel, tools, equipment, transportation, accommodations and supervision necessary to complete Building Envelope Upgrades for seven (7) RCMP Living Quarter units located in Fisher Branch, Manitoba, in accordance with the Invitation to Tender package.

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

_____

Telephone: _____

Fax: _____

E-mail: _____

GST #: _____

PBN: _____

BA03 THE OFFER

The Bidder offers to Her Majesty the Queen in right of Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the Firm Lot Price indicated in Annex A excluding HST/GST.

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of (60) days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the Work by February 3, 2017.

BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions – Construction Services – Bid Security Requirements.

BA08 SIGNATURE

_____

Name and title of person authorized to sign on behalf of Bidder (Type or print)

_____ _____

Signature Date

ANNEX A

BASIS OF PAYMENT AND SELECTION

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price for a cost of $_____ (insert the amount at contract award). Customs duties are included and Applicable Taxes are extra. Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

ITEM	LOCATION OF WORK	UNIT OF ISSUE	EST. QTY.	UNIT PRICE
1	2 Moyer Street, Fisher Branch, MB	Lot	1	$_____
2	3 Moyer Street, Fisher Branch, MB	Lot	1	$_____
3	4 Moyer Street, Fisher Branch, MB	Lot	1	$_____
4	5 Moyer Street, Fisher Branch, MB	Lot	1	$_____
5	6 Moyer Street, Fisher Branch, MB	Lot	1	$_____
6	7 Moyer Street, Fisher Branch, MB	Lot	1	$_____
7	8 Moyer Street, Fisher Branch, MB	Lot	1	$_____
	Firm Lot Price			$_____

BASIS OF SELECTION

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

ANNEX 'B'

SRCL #2014-1111983

Government of Canada / Gouvernement du Canada

Contract Number / Numéro du contrat

Security Classification / Classification de sécurité

SECURITY REQUIREMENTS CHECK LIST (SRCL)
LISTE DE VÉRIFICATION DES EXIGENCES RELATIVES À LA SÉCURITÉ (LVERS)

PART A - CONTRACT INFORMATION / PARTIE A - INFORMATION CONTRACTUELLE

1. Originating Government Department or Organization / Ministère ou organisme gouvernemental d'origine: D DIV	2. Branch or Directorate / Direction générale ou Direction: D Division - Asset Management
3. a) Subcontract Number / Numéro du contrat de sous-traitance	3. b) Name and Address of Subcontractor / Nom et adresse du sous-traitant

4. Brief Description of Work / Brève description du travail

This project is to provide tender ready documents for exterior wrap projects , Roof , Windows, Shingles , siding
Fisher Branch DBU 313 , 314 ,315,316,287,317,318
Whitemouth DBU 277, 278 , 353
Construction for fiscal year 2015-16

5. a) Will the supplier require access to Controlled Goods? Le fournisseur aura-t-il accès à des marchandises contrôlées?	☑ No Non	☐ Yes Oui
5. b) Will the supplier require access to unclassified military technical data subject to the provisions of the Technical Data Control Regulations? Le fournisseur aura-t-il accès à des données techniques militaires non classifiées qui sont assujetties aux dispositions du Règlement sur le contrôle des données techniques?	☑ No Non	☐ Yes Oui
6. Indicate the type of access required / Indiquer le type d'accès requis		
6. a) Will the supplier and its employees require access to PROTECTED and/or CLASSIFIED information or assets? Le fournisseur ainsi que les employés auront-ils accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS? (Specify the level of access using the chart in Question 7. c) (Préciser le niveau d'accès en utilisant le tableau qui se trouve à la question 7. c)	☑ No Non	☐ Yes Oui
6. b) Will the supplier and its employees (e.g. cleaners, maintenance personnel) require access to restricted access areas? No access to PROTECTED and/or CLASSIFIED information or assets is permitted. Le fournisseur et ses employés (p. ex. nettoyeurs, personnel d'entretien) auront-ils accès à des zones d'accès restreintes? L'accès à des renseignements ou à des biens PROTÉGÉS et/ou CLASSIFIÉS n'est pas autorisé.	☑ No Non	☐ Yes Oui
6. c) Is this a commercial courier or delivery requirement with **no** overnight storage? S'agit-il d'un contrat de messagerie ou de livraison commerciale **sans** entreposage de nuit?	☑ No Non	☐ Yes Oui

7. a) Indicate the type of information that the supplier will be required to access / Indiquer le type d'information auquel le fournisseur devra avoir accès

Canada ☐	NATO / OTAN ☐	Foreign / Étranger ☐
7. b) Release restrictions / Restrictions relatives à la diffusion		
No release restrictions / Aucune restriction relative à la diffusion ☐	All NATO countries / Tous les pays de l'OTAN ☐	No release restrictions / Aucune restriction relative à la diffusion ☐
Not releasable / À ne pas diffuser ☐		
Restricted to: / Limité à : ☐	Restricted to: / Limité à : ☐	Restricted to: / Limité à : ☐
Specify country(ies): / Préciser le(s) pays :	Specify country(ies): / Préciser le(s) pays :	Specify country(ies): / Préciser le(s) pays :

7. c) Level of information / Niveau d'information

PROTECTED A / PROTÉGÉ A ☐	NATO UNCLASSIFIED / NATO NON CLASSIFIÉ ☐	PROTECTED A / PROTÉGÉ A ☐
PROTECTED B / PROTÉGÉ B ☐	NATO RESTRICTED / NATO DIFFUSION RESTREINTE ☐	PROTECTED B / PROTÉGÉ B ☐
PROTECTED C / PROTÉGÉ C ☐	NATO CONFIDENTIAL / NATO CONFIDENTIEL ☐	PROTECTED C / PROTÉGÉ C ☐
CONFIDENTIAL / CONFIDENTIEL ☐	NATO SECRET / NATO SECRET ☐	CONFIDENTIAL / CONFIDENTIEL ☐
SECRET / SECRET ☐	COSMIC TOP SECRET / COSMIC TRÈS SECRET ☐	SECRET / SECRET ☐
TOP SECRET / TRÈS SECRET ☐		TOP SECRET / TRÈS SECRET ☐
TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) ☐		TOP SECRET (SIGINT) / TRÈS SECRET (SIGINT) ☐

TBS/SCT 350-103(2004/12)

Security Classification / Classification de sécurité

Canada

ANNEX 'B' (cont'd)

Government of Canada / Gouvernement du Canada

Contract Number / Numéro du contrat
Security Classification / Classification de sécurité

PART A *(continued)* / PARTIE A *(suite)*

8. Will the supplier require access to PROTECTED and/or CLASSIFIED COMSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur aura-t-il accès à des renseignements ou à des biens COMSEC désignés PROTÉGÉS et/ou CLASSIFIÉS?
If Yes, indicate the level of sensitivity:
Dans l'affirmative, indiquer le niveau de sensibilité :

9. Will the supplier require access to extremely sensitive INFOSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur aura-t-il accès à des renseignements ou à des biens INFOSEC de nature extrêmement délicate?

Short Title(s) of material / Titre(s) abrégé(s) du matériel :
Document Number / Numéro du document :

PART B - PERSONNEL (SUPPLIER) / PARTIE B - PERSONNEL (FOURNISSEUR)

10. a) Personnel security screening level required / Niveau de contrôle de la sécurité du personnel requis

☐ RELIABILITY STATUS / COTE DE FIABILITÉ	☐ CONFIDENTIAL / CONFIDENTIEL	☐ SECRET / SECRET	☐ TOP SECRET / TRÈS SECRET
☐ TOP SECRET– SIGINT / TRÈS SECRET – SIGINT	☐ NATO CONFIDENTIAL / NATO CONFIDENTIEL	☐ NATO SECRET / NATO SECRET	☐ COSMIC TOP SECRET / COSMIC TRÈS SECRET
☑ SITE ACCESS / ACCÈS AUX EMPLACEMENTS			

Special comments:
Commentaires spéciaux : Facilty Access - Escort Required by Detachment NCO

NOTE: If multiple levels of screening are identified, a Security Classification Guide must be provided.
REMARQUE : Si plusieurs niveaux de contrôle de sécurité sont requis, un guide de classification de la sécurité doit être fourni.

10. b) May unscreened personnel be used for portions of the work? ☑ No / Non ☐ Yes / Oui
Du personnel sans autorisation sécuritaire peut-il se voir confier des parties du travail?
If Yes, will unscreened personnel be escorted? ☑ No / Non ☐ Yes / Oui
Dans l'affirmative, le personnel en question sera-t-il escorté?

PART C - SAFEGUARDS (SUPPLIER) / PARTIE C - MESURES DE PROTECTION (FOURNISSEUR)

INFORMATION / ASSETS / RENSEIGNEMENTS / BIENS

11. a) Will the supplier be required to receive and store PROTECTED and/or CLASSIFIED information or assets on its site or premises? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu de recevoir et d'entreposer sur place des renseignements ou des biens PROTÉGÉS et/ou CLASSIFIÉS?

11. b) Will the supplier be required to safeguard COMSEC information or assets? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu de protéger des renseignements ou des biens COMSEC?

PRODUCTION

11. c) Will the production (manufacture, and/or repair and/or modification) of PROTECTED and/or CLASSIFIED material or equipment occur at the supplier's site or premises? ☑ No / Non ☐ Yes / Oui
Les installations du fournisseur serviront-elles à la production (fabrication et/ou réparation et/ou modification) de matériel PROTÉGÉ et/ou CLASSIFIÉ?

INFORMATION TECHNOLOGY (IT) MEDIA / SUPPORT RELATIF À LA TECHNOLOGIE DE L'INFORMATION (TI)

11. d) Will the supplier be required to use its IT systems to electronically process, produce or store PROTECTED and/or CLASSIFIED information or data? ☑ No / Non ☐ Yes / Oui
Le fournisseur sera-t-il tenu d'utiliser ses propres systèmes informatiques pour traiter, produire ou stocker électroniquement des renseignements ou des données PROTÉGÉS et/ou CLASSIFIÉS?

11. e) Will there be an electronic link between the supplier's IT systems and the government department or agency? ☑ No / Non ☐ Yes / Oui
Disposera-t-on d'un lien électronique entre le système informatique du fournisseur et celui du ministère ou de l'agence gouvernementale?

ANNEX 'B' (cont'd)

Government of Canada | Gouvernement du Canada

Contract Number / Numéro du contrat
Security Classification / Classification de sécurité

PART C - *(continued)* / PARTIE C - *(suite)*

For users completing the form **manually** use the summary chart below to indicate the category(ies) and level(s) of safeguarding required at the supplier's site(s) or premises.
Les utilisateurs qui remplissent le formulaire **manuellement** doivent utiliser le tableau récapitulatif ci-dessous pour indiquer, pour chaque catégorie, les niveaux de sauvegarde requis aux installations du fournisseur.

For users completing the form **online** (via the Internet), the summary chart is automatically populated by your responses to previous questions.
Dans le cas des utilisateurs qui remplissent le formulaire **en ligne** (par Internet), les réponses aux questions précédentes sont automatiquement saisies dans le tableau récapitulatif.

SUMMARY CHART / TABLEAU RÉCAPITULATIF

Category / Catégorie	PROTECTED / PROTÉGÉ			CLASSIFIED / CLASSIFIÉ			NATO				COMSEC					
	A	B	C	CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET	NATO RESTRICTED / NATO DIFFUSION RESTREINTE	NATO CONFIDENTIAL / NATO CONFIDENTIEL	NATO SECRET	COSMIC TOP SECRET / COSMIC TRÈS SECRET	PROTECTED / PROTÉGÉ A	PROTECTED / PROTÉGÉ B	PROTECTED / PROTÉGÉ C	CONFIDENTIAL / CONFIDENTIEL	SECRET	TOP SECRET / TRÈS SECRET
Information / Assets / Renseignements / Biens																
Production																
IT Media / Support TI																
IT Link / Lien électronique																

12. a) Is the description of the work contained within this SRCL PROTECTED and/or CLASSIFIED?
La description du travail visé par la présente LVERS est-elle de nature PROTÉGÉE et/ou CLASSIFIÉE?

☑ No / Non ☐ Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification".
Dans l'affirmative, classifier le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire.

12. b) Will the documentation attached to this SRCL be PROTECTED and/or CLASSIFIED?
La documentation associée à la présente LVERS sera-t-elle PROTÉGÉE et/ou CLASSIFIÉE?

☑ No / Non ☐ Yes / Oui

If Yes, classify this form by annotating the top and bottom in the area entitled "Security Classification" and indicate with attachments (e.g. SECRET with Attachments).
Dans l'affirmative, classifier le présent formulaire en indiquant le niveau de sécurité dans la case intitulée « Classification de sécurité » au haut et au bas du formulaire et indiquer qu'il y a des pièces jointes (p. ex. SECRET avec des pièces jointes).

ANNEX C

Royal Canadian Mounted Police
Gendarmerie royale du Canada

CERTIFICATE OF INSURANCE

Description and Location of Work	Contract No.
	Project No.

Name of Insurer, Broker or Agent	Address (No., Street)	City	Province	Postal Code
Name of Insured (Contractor)	**Address (No., Street)**	**City**	**Province**	**Postal Code**

Additional Insured - **Her Majesty the Queen in Right of Canada as represented by the Royal Canadian Mounted Police (RCMP)**

Type of Insurance (Required when Checked)	Insurer Name and Policy Number	Inception Date D / M / Y	Expiry Date D / M / Y	Limits of Liability		
				Per Occurrence	Annual General Aggregate	Completed Operations Aggregate
☐ **Commercial General Liability**				$	$	$
☐ **Umbrella/Excess Liability**				$	$	$
☐ **Builder's Risk / Installation Floater**				$		
☐ **Pollution Liability**				☐ Per Incident ☐ Per Occurrence $		Aggregate $
☐ **Marine Liability**				$		
☐ **Aviation Liability**				☐ Per Incident ☐ Per Occurrence $		Aggregate $
☐ **Other Liability**				$		

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverages stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker) — Telephone Number

Signature — Date D / M / Y

ANNEX C (cont'd)

Royal Canadian Mounted Police
Gendarmerie royale du Canada

General The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverages listed under the corresponding type of insurance on this page. The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Royal Canadian Mounted Police (RCMP). The insurance policies must be endorsed to provide Canada with not less than thirty (30) days notice in writing in advance of a cancellation of insurance or any reduction in coverage. Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.	**Commercial General Liability** The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100. The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto: Blasting. Pile driving and caisson work. Underpinning. Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor. The policy must have the following minimum limits: **$2,000,000** Each Occurrence Limit; **$5,000,000** General Aggregate Limit per policy year if the policy contains a General Aggregate; and **$2,000,000** Products/Completed Operations Aggregate Limit. Umbrella or excess liability insurance may be used to achieve the required limits.	**Builder's Risk / Installation Floater** The insurance coverage provided must not be less than that provided by the latest edition of IBC Forms 4042 and 4047. The policy must permit use and occupancy of any of the projects, or any part thereof, where such use and occupancy is for the purposes for which a project is intended upon completion. The policy may exclude or be endorsed to exclude coverage for loss or damage caused by asbestos, fungi or spores, cyber and terrorism. The policy must have a limit that is **not less than the sum of the contract value** plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Canada at the site of the project to be incorporated into and form part of the finished Work. If the value of the Work is changed, the policy must be changed to reflect the revised contract value. The policy must provide that the proceeds thereof are payable to Canada or as Canada may direct in accordance with GC10.2, "Insurance Proceeds" (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2900D/2).
Contractors Pollution Liability The policy must have a limit usual for a contract of this nature, but not less than **$1,000,000** per incident or occurrence and in the aggregate.	**Marine Liability** The insurance coverage must be provided by a Protection & Indemnity (P&I) insurance policy and must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection & Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the *Marine Liability Act*, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by the statutory requirements of the Territory or Province having jurisdiction over such employees. The policy must waive all rights of subrogation against Canada as represented by Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.	**Aviation Liability** The insurance coverage shall include Bodily Injury (including passenger Bodily Injury) and Property Damage, in an amount of not less than **$5,000,000** per incident or occurrence and in the aggregate.

ANNEX D

BID SUBMISSION CHECK LIST

Submission of Bid, as per R2710T, GI09 and SC03:

□	**Front page of ITT**	**- Completed and signed**
□	**BID AND ACCEPTANCE FORM (BA)**	**- Completed and signed**
□	**Front page of Amendment(s)**	**- Signed or initialed verifying proof of receipt**
□	**Bid Bond**	
□	**Outside of Envelope**	**- Solicitation Number, Bidder Name, Return Address, Closing Date and Time.**

Refer to SI10 to ensure compliance with Certifications Precedent to Contract award.

To be submitted to the 'RETURN BIDS TO:' address identified on Page 1 of this Invitation to Tender, on or before the solicitation closing date and time.

APPENDIX "A"

Architecture49 Inc.
1600 Buffalo Place
Winnipeg MB
R3T 6B8

T 1.204.477.1260
F 1.204.477.6346
architecture49.com

PROJECT MANUAL
Issued for Bid Documents

Building Envelope Upgrade

Fisher Branch, Manitoba

Date: February 4, 2015

A|49 Project No. 149-12549-02 Set No:

TABLE OF CONTENTS

Pages

END OF TABLE

Part 1 General

1.1 TAXES

.1 Pay all taxes properly levied by law (including Federal, Provincial and Municipal).

1.2 FEES, PERMITS and CERTIFICATES

.1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificates. Provide inspection certificates as evidence that work conforms to requirements of Authority having jurisdiction.

1.3 CONSTRUCTION PROGRESS SCHEDULE

.1 Schedule and execute work with least possible interference or disturbance to the normal use of premises.

.2 On award of contract submit bar chart construction schedule for work, indicating anticipated progress stages within time of completion. When the Departmental Representative has reviewed schedule, take necessary measures to complete work within scheduled time. Do not change schedule without notifying Departmental Representative.

.3 Carry out work during "regular hour", Monday to Friday from 07:00 to 18:00 hours.

.4 Give the Departmental Representative 48 hours notice for work to be carried out during "off hours".

1.4 SUBMITTAL PROCEDURES

.1 Submit promptly to Departmental Representative submittals listed for review, in orderly sequence to not cause delay in work.

.2 Do not proceed with work affected by submittals until review is complete.

.3 Shop Drawings:

.1 Submit electronic (PDF) copies of shop drawings.

.2 The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.

.4 Product Data:

.1 Submit electronic (PDF) copies of product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.

.2 Cross reference product data information to applicable portions on Contract Documents.

.5 Samples:

.1 Submit samples: examples of materials, equipment, quality, finishes and workmanship.

.2 Where colour, pattern or texture is criterion, submit full range of samples.

.3 Reviewed and accepted samples will become standard of material and workmanship, against which installed work will be verified.

.6 Submit photographs of interiors, surrounding properties, objects and structures liable to be damaged or be the subject of subsequent claims.

1.5 REGULATORY REQUIREMENTS

.1 References and Codes:

.1 Materials shall be new and work shall conform to the minimum applicable standards of the "References" indicated in the specification sections, the National Building Code of Canada (NBC), including all amendments up to tender closing date, and all applicable Provincial and Municipal codes. In the case of conflict or discrepancy the most stringent requirement shall apply.

.2 Building Smoking Environment:

.1 Smoking is not permitted in the Building. Obey smoking restrictions on building property.

1.6 FIRE SAFETY REQUIREMENTS

.1 Comply with both the National Building Code of Canada and the National Fire Code of Canada for safety of persons in buildings in the event of a fire and the protection of buildings from the effects of fire, as follows;

.1 The National Building Code (NBC): for fire safety and fire protection features that are required to be incorporated in a building during construction.

.2 The National Fire Code (NFC):

.1 The on-going maintenance and use of the fire safety and fire protection features incorporated in buildings.

.2 The conduct of activities that might cause fire hazards in and around buildings.

.3 Limitations on hazardous contents in and around buildings.

.4 The establishment of fire safety plans.

.5 Fire safety at construction and demolition sites.

.2 Where work requires interruption or cause activation of fire alarms or fire suppression, extinguishing or protection systems:

.1 Provide "Watchman Service". In general, watchman service is defined as an individual conversant with "Fire Emergency Procedures", performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.

.2 Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational.

.3 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

1.7 QUALITY CONTROL

.1 Review and Inspection of the Work:

.1 Allow Consultant and Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.

.2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Consultant instructions, or law of Place of Work. Coordinate date and time with regularly scheduled site visits performed by the Consultant and Departmental Representative.

.3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

.4 Consultant or Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

.2 Rejected Work:

.1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Consultant or Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

.2 Make good other Contractor's work damaged by such removals or replacements promptly.

.3 If in opinion of Consultant or Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Departmental Representative will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Consultant and Departmental Representative.

1.8 HAZARDOUS MATERIALS

.1 Hazardous Materials: product, substance, or organism that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.

.2 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and the provision of Material Safety Data Sheets (MSDS) acceptable to Human Resources and Skills Development Canada (HRSDC), Labour Program.

.3 For work in occupied buildings, give the Department Representative 48 hours notice for work involving hazardous substances (Canada Labour Code Part II Section 10), and before painting, caulking or using adhesives and other materials, that cause off gassing.

1.9 TEMPORARY UTILITIES

.1 Existing services required for work, excluding power required for space temporary heating, may be used by the Contractor without charge. Ensure capacity is adequate prior to imposing additional loads. Connect and disconnect at own expense and responsibility.

.2 Connect to existing power supply in accordance with Canadian Electrical Code.

.3 Notify the Departmental Representative and utility companies of intended interruption of services and obtain requisite permission.

.4 Give the Departmental Representative 48 hours notice related to each necessary interruption of any mechanical or electrical service throughout the course of the work. Keep duration of these interruptions to a minimum. Carry out all interruptions after normal hours of the occupants.

1.10 CONSTRUCTION FACILITIES

.1 Installation and Removal

.1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation.

.2 Identify areas which have to be gravelled to prevent tracking of mud.

.3 Indicate use of supplemental or other staging area.

.4 Provide construction facilities in order to execute work expeditiously.

.5 Remove from site all such work after use.

.2 Access Scaffold:

.1 Scaffolding: in accordance with CSA Z797 – Code of Practice for Access Scaffold.

.2 Provide and maintain scaffolding, ladders and platforms.

.3 Site Storage:

.1 The Departmental Representative will assign storage space that shall be equipped and maintained by the Contractor.

.2 Do not unreasonably encumber site with materials or equipment.

.3 Move stored products or equipment that interferes with operations of Departmental Representative or other contractors.

.4 Obtain and pay for use of additional storage or work areas needed for operations.

.5 Do not load or permit to load any part of work with weight or force that will endanger work.

.4 Where security is reduced by work provide temporary means to maintain security.

.5 Sanitary facilities:

.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

.2 Others shall not be used.

.3 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

.6 Signage:

.1 Provide common-use signs related to traffic control, information, instruction, use of equipment, public safety devices, etcetera, in both official languages or by the use of commonly understood graphic symbols and to approval of the Departmental Representative.

.2 No advertising will be permitted on this project.

.7 Construction Parking

.1 Parking will be permitted on site provided it does not disrupt performance of Work or access to private parking.

.2 Provide and maintain adequate access to project site.

.8 Protection and Maintenance of Traffic

.1 Provide access and temporary relocated roads as necessary to maintain traffic.

.2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative.

.3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs

.4 Protect travelling public from damage to person and property.

.5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.

.6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.

.7 Construct access roads necessary.

.8 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.

.9 Dust control: adequate to ensure safe operation at all times.

.10 Location, grade, width, and alignment of access roads: subject to approval by Departmental Representative.

.11 Lighting: to assure full and clear visibility for full width of access road and work areas during night work operations.

.12 Provide snow removal during period of Work.

.13 Remove, upon completion of work, access roads designated by Departmental Representative.

1.11 TEMPORARY BARRIERS AND ENCLOSURES

.1 Maintain existing services to building and provide for personnel and vehicle access.

.2 Hoarding:

.1 Design, erect and maintain temporary site enclosure, pedestrian walkways and provide protection, complete with signs and electrical lighting as required by authority having jurisdiction.

.3 Weather Enclosures: protect work temporarily until permanent enclosures completed.

.4 Dust Control:

.1 Provide dust tight screens or partitions to localize dust-generating activities, and for protection of workers, finished areas of work and public.

.2 Maintain and relocate protection until such work is complete.

.3 Protect all furnishings within work area with 0.102¦mm thick polyethylene film during construction. Remove film during non-construction hours and leave premises in clean, unencumbered and safe manner for normal daytime function.

.5 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

.6 Protection:

.1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.

.2 Provide necessary screens, covers, and hoardings.

.3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.

.4 Be responsible for damage incurred due to lack of or improper protection.

.5 Protect work against damage until take-over.

.6 Protect adjacent work against the spread of dust and dirt beyond the work areas.

.7 Protect operatives and other users of site from all hazards.

1.12 COMMON PRODUCT REQUIREMENTS

.1 Quality of Work:

.1 Carry out work using qualified licenced workers or apprentices in accordance with Provincial Act respecting manpower vocational training and qualification.

.2 Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licenced workers.

.3 Determine permitted activities and tasks by apprentices, based on level of training attended and demonstration of ability to perform specific duties.

.2 Storage, Handling and Protection:

.1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions.

.2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove packaging or bundling until required in work.

.3 Manufacturer’s Instructions: unless otherwise indicated in specifications install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers

.4 Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

.1 Include data to indicate compliance with the requirements specified in "Comparable Products" Article.

.2 Consultant’s Action: If necessary, Consultant will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Consultant will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

.1 Use product specified if Consultant does not issue a decision on use of a comparable product request within time allocated.

.5 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, unless indicated otherwise, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.

.6 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.

.7 Should disputes arise as to quality or fitness of products, decision rests strictly with Consultant based upon requirements of Contract Documents.

.8 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

.9 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

.10 Availability:

.1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.

.2 In event of failure to notify Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.13 EXAMINATION AND PREPARATION

.1 Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.

.2 Before commencing work, establish location and extent of services lines in area of work and notify Departmental Representative of findings.

.3 Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

.1 Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before work begins.

.2 Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

.3 Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

.4 Preparation:

.1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

.2 After uncovering, inspect conditions affecting performance of Work.

.3 Beginning of cutting or patching means acceptance of existing conditions.

.4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

.5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

.5 Start of construction or any part thereof constitutes acceptance of existing conditions and implies dimensions have been considered, verified and are acceptable.

1.14 EXECUTION

.1 Cut, Patch and Make Good:

.1 Cut existing surfaces as required to accommodate new work.

.2 Remove all items so shown or specified.

.3 Patch and make good surfaces cut, damaged or disturbed, to Departmental Representative's approval. Match existing material, colour, finish and texture.

.4 Submit written request in advance of cutting or alteration which affects:

.1 Structural integrity of elements of project.

.2 Integrity of weather-exposed or moisture-resistant elements.

.3 Efficiency, maintenance, or safety of operational elements.

.4 Visual qualities of sight-exposed elements.

.5 Include in request:

.1 Identification of project.

.2 Location and description of affected Work.

.3 Statement on necessity for cutting or alteration.

.4 Description of proposed Work, and products to be used.

.5 Alternatives to cutting and patching.

.6 Effect on Work of Owner or separate contractor.

.7 Written permission of affected separate contractor.

.8 Date and time work will be executed.

.2 Sleeves, Hangers and Inserts: co-ordinate setting and packing of sleeves and supply and installation of hangers and inserts. Obtain Departmental Representative's approval before cutting into structure.

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

.4 Execution:

.1 Execute cutting, fitting, and patching to complete Work.

.2 Fit several parts together, to integrate with other Work.

.3 Uncover Work to install ill-timed Work.

.4 Remove and replace defective and non-conforming Work.

.5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.

.6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

.7 Fit Work airtight and watertight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

.8 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.

.9 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

1.15 WASTE MANAGEMENT

.1 Do not bury rubbish or waste materials.

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

1.16 CLOSEOUT SUBMITTALS

.1 Submittals:

.1 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.

.2 Furnish evidence, if requested, for type, source and quality of products provided.

.3 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.

.4 Pay costs of transportation.

.2 Operational and Maintenance Manuals:

.1 Two (2) weeks prior to final inspection of the work, submit to Departmental Representative four (4) copies of approved Operations Data and Maintenance Manual in both official languages, compiled as follows:

.1 Bind data in vinyl hard cover 3 "D" ring type loose-leaf binders for 212 x 275¦mm size paper. Binders must not exceed 75¦mm thick or be more than 2/3 full.

.2 Enclose title sheet labelled "Operation Data and Maintenance Manual," project name, date and list of contents. Project name must appear on binder face and spine.

.3 Organize contents into applicable sections of work to parallel project specifications breakdown. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.

.2 Include following information plus data specified:

.1 Maintenance instruction for finished surface and materials.

.2 Copy of hardware schedules.

.3 Maintenance: use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:

.1 lubrication products and schedules;

.2 trouble shooting procedures;

.3 adjustment techniques; and

.4 operational checks.

.4 Suppliers' names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.

.5 Guarantees showing:

.1 name and address of projects;

.2 guarantee commencement date (date of Interim Certificate of Completion);

.3 duration of guarantee;

.4 clear indication of what is being guaranteed and what remedial action will be taken under guarantee; and

.5 signature and seal of Guarantor.

.6 Additional material used in project listed under various Sections showing name of manufacturer and source of supply.

.3 Spare parts: list all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed must be identified as to manufacturer, manufacturer part number and supplier (including address).

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

.3 Records:

.1 As work progresses, maintain accurate records to show deviations from contract drawings. Just prior to Departmental Representative's inspection for issuance of final certificate of completion, supply to the Departmental Representative one (1) set of white prints and one (1) copy of project manual with all deviations neatly inked in. The Departmental Representative will provide two sets of clean white prints for this purpose.

.4 Guarantees and Warranties:

.1 Before completion of work collect all manufacturer's guarantees or warranties and submit to Departmental Representative.

1.17 CLEANING

.1 Clean up as work progresses. At the end of each work period, and more often if ordered by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up generally.

.2 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.3 Upon completion remove scaffolding, temporary protection and surplus materials. Make good defects noted at this stage.

.4 Clean and polish glass, mirrors, ceramic tile, aluminum, chrome, stainless steel, baked or porcelain enamel, plastic laminate and other plastic surfaces, floors, hardware and washroom fixtures. Clean manufactured articles in accordance with manufacturer's written instructions.

.5 Clean areas under contract to a condition equal to what previously existed and to approval of Departmental Representative.

.6 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.

1.18 SECURITY CHECK

.1 All personnel employed on this project will be subject to security check. Obtain requisite clearance, as instructed, for each individual required to enter the premises.

.2 Personnel will be checked daily at start of work shift and given a pass, which must be worn at all times. Pass must be returned at end of work shift and personnel checked out.

1.19 SECURITY CLEARANCE

.1 Contractor's personnel will require satisfactory RCMP initiated security screening in order to complete Work in premises and on site.

.2 Obtain requisite clearance, as instructed, for each individual required to enter premises.

1.20 COST BREAKDOWN

.1 Before submitting first progress claim, submit breakdown of Contract Amount in detail as directed by Departmental Representative and aggregating the Contract Amount. After approval by Departmental Representative cost breakdown will be used as the basis of progress payments.

1.21 PRECEDENCE

.1 For Federal Government projects, Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual

Part 2 Products

2.1 NOT USED

Part 3 Execution

3.1 NOT USED

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Section Includes:

.1 Selective demolition, removal, and disposal of exterior parts of structures and finishes, both above and below grade, related mechanical and electrical services and fixtures to accommodate incorporation of new building envelope.

.2 Salvage of designated materials.

.2 Related Requirements:

.1 Individual product Sections: cutting and patching incidental to work of section. Advance notification to other sections required.

1.2 DEFINITIONS

.1 Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

.2 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: asbestos, PCB's, CFC's, HCFC's, poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well being or environment if handled improperly.

.3 Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged.

.4 Selective Demolition: removal of a portion of an existing structure involving the systematic removal of some construction elements.

1.3 REFERENCES

.1 Comply with National Building Code of Canada, Part 8, "Safety Measures at Construction and Demolition Sites", and Provincial requirements.

.2 National Fire Protection Association (NFPA)

.1 NFPA 241-13, Standard for Safeguarding Construction, Alteration, and Demolition Operations.

1.4 ADMINISTRATIVE REQUIREMENTS

.1 Pre-demolition Conference: Conduct conference at Project site.

- .1 Review communication protocols between Contractor and Departmental Representative.
- .2 Inspect and discuss condition of construction to be selectively demolished.
- .3 Review structural load limitations of existing structures.
- .4 Review and finalize selective demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
- .5 Review and finalize protection requirements.
- .6 Review procedures for noise control and dust control.
- .7 Review procedures for protection of existing structure and materials.
- .8 Review procedures for protection of occupied space.
- .9 Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
- .10 Review areas where existing construction is to remain and requires protection.

1.5 SUBMITTALS

.1 Provide demolition drawings in accordance with Section 01 00 10 – General Instructions.

.2 Action Submittals:

- .1 Schedule of Selective Demolition Activities: Indicate the following:
  - .1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
  - .2 Interruption of utility services. Indicate how long utility services will be interrupted.
  - .3 Coordination for shutoff, capping, and continuation of utility services.
  - .4 Coordination of continuing occupancy of residence.

.3 Informational Submittals:

- .1 Demolition Drawings:
  - .1 Provide demolition drawing including proposed protection measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property, for dust control and for noise control. Indicate proposed locations and construction of barriers.

1.6 QUALITY ASSURANCE

.1 Selective demolition work shall be performed by specialists familiar with the materials affected.

.2 Do not damage or endanger any portion of the Work during demolition work.

1.7 DELIVERY, STORAGE AND HANDLING

.1 Storage and Protection:

.1 Protect existing items designated to remain. In event of damage to such items, immediately replace or make repairs to approval of Departmental Representative and at no cost to Owner.

1.8 SITE CONDITIONS

.1 Site Environmental Requirements:

.1 Ensure that selective demolition work does not adversely affect groundwater, or contribute to excess air and noise pollution.

.2 Do not dispose of waste of volatile materials including but not limited to, mineral spirits, oil, petroleum based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers.

.1 Ensure proper disposal procedures are maintained throughout the project.

.3 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers or onto adjacent properties.

.4 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.

.5 Protect trees, plants and foliage on site and adjacent properties.

.2 Existing Conditions:

.1 Should material resembling spray or trowel-applied asbestos or other designated substance be encountered, stop work, take preventative measures, and notify Consultant immediately.

.2 Do not proceed until written instructions have been received from Departmental Representative.

.3 Do not close or obstruct walkways, exits, or other facilities used by occupants of school without written permission from authorities having jurisdiction.

.4 Provide temporary exiting requirements as required by authorities having jurisdiction.

.5 Notify Departmental Representative before disrupting building access or services.

Part 2 Products

2.1 EQUIPMENT

.1 Equipment: Wherever possible use equipment driven by an electric motor. Pneumatic and gas driven equipment are not permitted.

.2 Do not use vibrating equipment for removal of concrete.

Part 3 Execution

3.1 EXAMINATION

.1 Examine existing conditions to ascertain full extent of work and determine existing conditions as well as requirements for protection of adjacent work.

.2 Review record documents of existing construction provided by Departmental Representative. Departmental Representative does not guarantee that existing conditions are same as those indicated in record documents.

.3 Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

.4 When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Departmental Representative.

3.2 PROTECTION

.1 Prevent movement, settlement, or damage to adjacent structures, utilities, and parts of building to remain in place. Provide bracing and shoring required.

.2 Areas adjacent to demolition areas may be occupied. Keep noise and vibration levels to a minimum. Schedule demolition times with Department Representative.

.3 Protect building systems, services and equipment.

.4 Provide temporary dust screens, covers, railings, supports and other protection as required.

.5 Do not damage or deface existing construction, equipment or finishes indicated to remain.

3.3 PREPARATION

.1 Inspect building with Department Representative and verify extent and location of items designated for removal, disposal, salvage and items to remain.

.2 Check conditions, obtain and confirm actual site dimensions, examine conditions, services, etc., as required to ensure correct execution of Work. Notify Departmental Representative in writing of matters, discrepancies between actual site conditions and Contract Documents that may hinder proper execution of Work.

.3 Arrange for temporary disruption of existing services with Departmental Representative.

.4 Locate and protect utilities in operating condition.

.5 Notify and obtain approval of utility companies before starting demolition.

.6 Disconnect, cap, plug or divert, as required, existing utilities within the property where they interfere with the execution of the work, in conformity with the requirements of the authorities having jurisdiction. Mark location of these and previously capped or plugged services on the site and indicate location (horizontal and vertical) on the record drawings. Support, shore up and maintain pipes and conduits encountered.

.1 Immediately notify Departmental Representative and utility company concerned in case of damage to any utility or service, designated to remain in place.

.2 Immediately notify Departmental Representative should uncharted utility or service be encountered, and await instruction in writing regarding remedial action.

3.4 SELECTIVE DEMOLITION

.1 General: Demolish and remove existing construction only to the extent required by new construction and as indicated.

.2 Departmental Representative to be given first right of refusal on all materials salvageable from the demolition process. Except for items claimed by the Departmental Representative, waste and abandoned materials and equipment are the Contractor's property. Promptly remove from site.

.3 Remove parts of existing walls, roofs, electrical and mechanical services and fixtures as required to permit new construction.

.4 Demolition work indicated on drawings is schematic only. Verify conditions and dimensions on site.

.5 Removed and Salvaged Items:

.1 Refer to demolition drawings and specifications for items and materials to be salvaged for reuse or to be turned over to Departmental Representative.

.2 Remove items designated for salvage before start of demolition work.

.3 Process salvaged items as indicated in other technical specification sections.

.6 Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Departmental Representative, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

.7 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

.8 Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

.9 Notify Departmental Representative minimum seven (7) working days prior to removal, cutting, drilling or sleeving of structural or load-bearing members including foundation walls. Mark out exact locations and dimensions to allow review. Do not proceed with work until Departmental Representative (Professional Engineer) has reviewed and approved proposed work.

.10 Trim edges of partially demolished building elements to suit future use.

.11 Remove and dispose existing fixtures, accessories, fitments, equipment as indicated, required.

.12 At end of each day's work, leave Work in safe and stable condition.

.13 Protect interiors of parts not to be demolished from exterior elements at all times.

.14 Demolish to minimize dusting. Keep materials wetted as directed by Departmental Representative.

.15 Contain fibrous materials (e.g. Insulation) to minimize release of airborne fibres while being transported within facility.

3.5 REMOVAL FROM SITE

.1 Remove and dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

.2 Transport material designated for alternate disposal in accordance with applicable regulations.

.3 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Section includes:

.1 Rough carpentry materials and accessories.

1.2 REFERENCES

.1 ASTM International

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

.2 CSA International

.1 CSA B111, Wire Nails, Spikes and Staples.

.2 CSA O112.9, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).

.3 CSA O121, Douglas Fir Plywood.

.4 CSA O141, Softwood Lumber.

.5 CSA O151, Canadian Softwood Plywood.

.6 CSA O325, Construction Sheathing.

.3 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber 2010.

1.3 SUBMITTALS

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

.2 Action Submittals:

.1 Product Data:

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

.3 Informational Submittals:

.1 Certificates:

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

.1 Information listed in AWPA M2 and revisions specified in CSA O80 Series, Supplementary Requirement to AWPA M2 applicable to specified treatment.

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

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

1.4 QUALITY ASSURANCE

.1 Provide quality control in accordance with Section 01 00 10 – General Instructions.

.2 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.3 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

.4 Protect building materials from damage by:

.1 Fully covering stored materials.

.2 Elevating stored materials off ground.

.3 Disposing of materials with evidence of moisture damage.

1.5 DELIVERY, STORAGE AND HANDLING

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

.2 Storage and Handling Requirements:

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

.2 Store and protect wood from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

.3 Provide construction waste management in accordance with best practice.

Part 2 Products

2.1 SUSTAINABILITY REQUIREMENTS-

.1 Composite wood products must not contain added urea-formaldehyde or resins containing urea-formaldehyde.

2.2 LUMBER MATERIAL

.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:

.1 CAN/CSA-O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.2 Dimension lumber:

.1 Light framing: S4S, species SPF, No. 1/No. 2 grade.

.2 Stud: S4S, species group Hem-Fir, stud grade.

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

.1 S2S is acceptable.

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

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

2.3 PANEL MATERIAL

.1 Plywood, OSB and wood based composite panels: to CSA O325.

.2 Douglas fir plywood (DFP): to CSA O121, standard construction,

.1 Grade indicated.

.2 Good two side (Exterior Wood type EW3)

.3 Canadian softwood plywood (CSP): to CSA O151, standard construction, grade indicated.

.4 Fire-retardant: for plywood, to CSA O80.27, to provide:

.1 Flame Spread Classification: FSC 25 or less.

.2 Smoke developed of not more than: 25.

2.4 ACCESSORIES

.1 Sealants: in accordance with Section 07 92 00 - Joint Sealants.

.2 General purpose adhesive: to CSA O112.9.

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

.4 Bolts: 12.5 mm diameter unless otherwise indicated, complete with nuts and washers.

.5 Air seal: closed cell polyurethane or polyethylene.

.6 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.

.7 Joist hangers: minimum 1 mm thick sheet steel, galvanized ZF001coating designation.

.8 Nailing discs: flat caps, minimum 25 mm diameter, minimum 0.4 mm thick, sheet metal, formed to prevent dishing. Bell or cup shapes not acceptable.

.9 Fastener Finishes

.1 Galvanizing: to ASTM A653, use galvanized fasteners for exterior work and pressure-preservative treated lumber.

Part 3 Execution

3.1 INDOOR AIR QUALITY

.1 Reduce dust contamination by:

.1 Ensuring adjacent HVAC ducts are sealed prior to cutting. Provide cutting and patching in accordance with Section 01 00 10 – General Instructions.

.2 Collecting and bagging dust from tools

.3 Isolating cutting areas from adjacent workspaces

.4 Sweeping and/or vacuuming daily

3.2 EXAMINATION

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

.1 Visually inspect substrate in presence Departmental Representative.

.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied.

3.3 PREPARATION

.1 Treat surfaces of material with wood preservative, before installation.

.2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.

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

.4 Treat material as follows:

.1 Wood cants, fascia backing, curbs, nailers, sleepers on roof deck.

.2 Wood furring on outside surface of concrete walls.

3.4 INSTALLATION

.1 Comply with requirements of NBC, supplemented by the following paragraphs.

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

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

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

.5 Install furring and blocking as required to space-out work as required.

.6 Align and plumb faces of furring and blocking to tolerance of 1:600.

.7 Install furring and blocking as required to space-out and support facings, fascia, soffit, siding, electrical equipment mounting boards, and other work as required.

.8 Install furring to support siding applied vertically where there is no blocking and where sheathing is not suitable for direct nailing. Align and plumb faces of furring and blocking to tolerance of 1:600.

.9 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.

.10 Install fascia backing, nailers, curbs and other wood supports as required and secure using galvanized fasteners.

.11 Install sleepers as indicated.

.12 Use dust collectors and high quality respirator masks when cutting or sanding wood siding.

3.5 ERECTION

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

.2 Countersink bolts where necessary to provide clearance for other work.

.3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.6 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 00 10 – General Instructions.

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

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 – General Instructions.

3.7 PROTECTION

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

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Section Includes:

.1 Polystyrene insulation

.2 Related Requirements

.1 Section 07 21 19 – Foamed-In-Place Insulation, for spray-foam sealant.
.2 Section 07 27 00 - Air Barriers
.3 Section 07 42 43 - Composite Wall Panels
.4 Section 08 50 00 - Windows

1.2 REFERENCES

.1 Underwriters Laboratories of Canada (ULC)

.1 CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Coverings
.2 CAN/ULC-S702, Standard for Thermal Insulation Mineral Fibre for Buildings

1.3 ADMINISTRATIVE REQUIREMENTS

.1 Convene pre-installation meeting prior to beginning work of this Section and on-site installations

.1 Verify project requirements.
.2 Review installation and substrate conditions.
.3 Co-ordinate with other building subtrades.
.4 Review manufacturer's installation instructions and warranty requirements.

1.4 SUBMITTALS

.1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

.2 Action Submittals:

.1 Product Data: For each insulation or foam sealant product indicated.

.3 Informational Submittals:

.1 Submit test reports in accordance with Section 01 00 10 – General Instructions, verifying properties of foamed-in-place insulation meet or exceed the requirements of this specification.
.2 Qualification data.

1.5 QUALITY ASSURANCE

.1 Provide quality control in accordance with Section 01 00 10 – General Instructions.

.2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

.3 Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum 10 years documented experience.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Provide construction waste management in accordance with best practice.

Part 2 Products

2.1 INSULATION

.1 Wall Insulation - Extruded polystyrene: to CAN/ULC-S701, thickness indicated.

.1 Type: 3.

.2 Compressive strength: minimum 170 kPa (25 psi).

.3 Thickness: indicated.

.4 Thermal Resistance per 25 mm thickness: 0.87 m^2 c/w (R-5 per inch).

.5 Edges: square.

2.2 ACCESSORIES

.1 Insulation Fasteners:

.1 For use with insulation with plywood sheathing on wood stud substrates: impale type fasteners constructed of corrosion-resistant metal spindle and base. Spindle length to suit insulation thickness.

.2 Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates without damaging insulation and substrates, approved by waterproofing and air vapour barrier manufacturer.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 EXAMINATION

.1 Examine substrates and immediately inform Departmental Representative in writing of defects.

.2 Prior to commencement of work ensure:

.1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.

.2 Provide cleaning during construction in accordance with Section 01 00 10 – General Instructions.

3.3 INSTALLATION GENERAL

.1 Install board insulation in accordance with Section 01 00 10 – General Instructions.

.2 Install insulation after building substrate materials are dry.

.3 Install insulation to maintain continuity of thermal protection to building elements and spaces.

.4 Fit insulation tight around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.

.5 Keep combustible insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN4-S604 type A chimneys and CAN/CGA-B149.1 and CAN/CGA-B149.2 type B and L vents.

.6 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.

.7 Fasten insulation in place using type of fastener applicable to substrate. Follow manufacturers written installation instructions for minimum fasteners per insulation board.

.1 For impale type fastener, adhere backing plate to substrate with fastener manufacturer’s recommended adhesive.

.8 Offset both vertical and horizontal joints in multiple layer applications.

.9 Leave insulation board joints unbonded over line of expansion and control joints. Bond continuous 150 mm wide 0.15 mm polyethylene strip over expansion and control joints using compatible adhesive before application of insulation.

.10 Apply continuous 6mm beads of adhesive at 150 mm on centre in a horizontal serpentine pattern full width of board, and at top and bottom edges. Apply adhesive fully around protrusions.

.11 Butt insulation tightly together at side and end laps and fill voids entirely with spray-foam sealant to provide complete thermal barrier.

.12 Do not enclose insulation until it has been observed by Departmental Representative.

3.4 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Section includes, but is not limited to:

- .1 Foamed-in-place insulation.
- .2 Foamed-in-place sealant.

.2 Related Requirements:

- .1 Section 07 21 13 - Board Insulation
- .2 Section 07 27 10 - Air/Vapour Barrier
- .3 Section 08 50 00 - Windows

1.2 REFERENCES

.1 ASTM International (ASTM)

- .1 ASTM E84, Standard Test Method for Surface Burning Characteristics of Building Materials

.2 Underwriters Laboratories of Canada (ULC)

- .1 CAN/ULC-S701, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Coverings
- .2 CAN/ULC-S705.1, Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Material – Specifications, Includes Amendments 1, 2
- .3 CAN/ULC-S705.2, Standard for Thermal Insulation – Spray Applied Rigid Polyurethane Foam, Medium Density – Application

1.3 SUBMITTALS

.1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

.2 Action Submittals:

- .1 Product Data: For each insulation or foam sealant product indicated.

.3 Informational Submittals:

- .1 Submit test reports in accordance with Section 01 00 10 – General Instructions, verifying properties of foamed-in-place insulation meet or exceed the requirements of this specification.
- .2 Qualification data.

1.4 QUALITY ASSURANCE

.1 Provide quality control in accordance with Section 01 00 10 – General Instructions.

.2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

.3 Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum 10 years documented experience.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Store products in strict accordance to manufacturer's instructions in temperature controlled, dry and ventilated area.

.2 Minimize construction waste sent to the landfill, separate and recycle materials in accordance with best practice.

1.6 ENVIRONMENTAL REQUIREMENTS

.1 Apply foamed-in-place insulation and sealants only when substrate and ambient temperatures are within prescribed limits.

.2 Ensure temperature is maintained throughout curing period.

Part 2 Products

2.1 MATERIALS

.1 Use of insulation products manufactured with CFCs as blowing agents is prohibited.

.2 Spray Foam Insulation: to CAN/ULC S705.1, closed cell, spray applied rigid cellular polyurethane foam air barrier and thermal insulation, medium 29 kg/cu m density.

.1 Performance criteria:

.1 Fire Performance: less than 500 flame spread, less than 500 smoke developed to CAN/ULC S102.

.2 Water vapour permeance: 42ng/Pa-s-sq m to ASTM E96.

.3 Long term thermal resistance: RSI 1.95 at 50 mm thickness.

.2 Acceptable products: BASF Walltite ECO v2, CertainTeed CertaSpray Closed Cell Foam, Icynene MD-C-200 CDN, Johns Manville JM Corbond III.

.3 Locations: Around protrusions and penetrations through air seal, and other locations indicated.

□

.3 Spray Foam Sealant – General Purpose: one-component, semi-rigid polyurethane sealant, to CAN/ULC-S701, 16 to 24 kg/m^3, minimum RSI 0.67 per 25 mm thickness:

.1 Basis of Design: Great Stuff Pro Gaps and Cracks Insulating Foam Sealant by Dow Chemical, or comparable product by, but not limited to, RHH Foam Systems Inc., Handi-Foam, Tiger Foam Insulation, and Hilti.

.2 Locations: gaps and cracks up to 75 mm in size.

.4 Spray Foam Sealant – Low Pressure: one-component, semi-flexible polyurethane sealant, to CAN/ULC-S701, 27 kg/m^3:

.1 Basis of Design: Great Stuff Pro Window and Door Insulating Foam Sealant by Dow Chemical, or comparable product by, but not limited to, RHH Foam Systems Inc., Handi-Foam, Tiger Foam Insulation, and Hilti.

.2 Locations: gaps and cracks adjacent to door and window framing.

Part 3 Execution

3.1 PREPARATION

.1 Clean surfaces which are to receive insulation, of dirt, dust, grease, loose material or other foreign matter which may inhibit adhesion.

.2 Provide sufficient ventilation during and until insulation has cured, to ensure safe working conditions. Introduce fresh air and exhaust air continuously during the 24 hour period after application to maintain non-toxic, unpolluted, safe working conditions.

.3 Prior to application, slightly moisten surfaces to which foam in place insulation is being applied, to accelerate curing.

.4 Temporarily brace door frames as may be required to prevent possible bowing of frames due to over expansion of the foamed-in-place insulation.

3.2 PROTECTION

.1 Provide temporary enclosures to prevent spray and noxious vapour from contaminating air beyond application area.

.2 Protect workers as recommended by insulation manufacturer.

.3 Protect adjacent surfaces and equipment from damage by over spray, fall-out, and dusting of insulation materials.

.4 Dispose of waste foam daily in location designated by Departmental Representative and decontaminate empty drums in accordance with foam manufacturer's instructions.

□

3.3 INSTALLATION, GENERAL

.1 Where spray-foam insulation or sealant is used to maintain continuity of thermal barrier, and is installed in conjunction with membrane air seal/vapour barrier around frames or protrusions, ensure that foamed-in-place insulation is installed on exterior side of membrane air seal/vapour barrier.

.2 Apply materials in accordance with manufacturer's written instructions.

.3 Ensure finished surface is free of voids and imbedded objects.

.4 Apply primer when required to properly prepared substrates for special conditions required by foam insulation manufacturer's requirements.

3.4 INSTALLATION AROUND PROTRUSIONS THROUGH AIR SEAL

.1 Apply by spray method to uniform monolithic density without voids.

.2 Install spray-foam insulation around protrusions including mechanical and electrical protrusions, exhaust systems, heating and cooling ducts, sole plates, top plates, wall sections, and elsewhere as required to achieve and maintain continuity of thermal barrier around such protrusions.

.3 Conduct daily visual inspection, adhesion testing and density measurements as required by CAN/ULC S705.2 and manufacturer's application guidelines.

3.5 INSTALLATION AROUND WINDOWS AND DOOR FRAMING

.1 Install spray foam sealant around window frames, and door frames to maintain continuity of thermal barrier, after air/vapour barrier has been installed and sealed to framing as specified in Section 08 50 00.

.2 Install spray foam sealant around window openings to completely and continuously connect window frame to adjacent air/vapour barrier, to maintain continuity of air/vapour seal.

.3 Ensure that spray foam sealant completely fills spaces, without voids, and that foam is continuous at corners.

3.6 CLEAN-UP

.1 Remove masking materials and overspray from adjacent areas immediately after foam surface has hardened.

.2 Repair damaged areas in accordance with manufacturer's instructions.

END OF SECTION

□

Part 1 General

1.1 SUMMARY

.1 Section Includes:

.1 Primary air barrier materials and assemblies to provide continuous seal between components of building envelope and building penetrations.

.2 Related Requirements

.1 Section 07 46 26 – Hardboard Siding

1.2 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM E1186, Standard Practices for Air Leakage Site Detection in Building Envelopes and Air Retarder Systems

.2 National Building Code of Canada (NBCC)

.1 NBCC, Part 5 - Environmental Separation

1.3 ADMINISTRATIVE REQUIREMENTS

.1 Pre-Installation Meeting: Convene prior to commencing Work of this section.

.1 Review air barrier requirements including surface preparation, substrate condition and pretreatment, special details and flashings, installation procedures, testing and inspection procedures, and protection and repairs.

1.4 SUBMITTALS

.1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

.2 Informational Submittals:

.1 Submit manufacturer's installation instructions.

.2 Compatibility: Provide letter(s), provided and signed by manufacturer of membrane air/vapour barrier material(s), that products used on the project are compatible with adjacent materials, and materials with which the membrane will be in contact or sealed.

.3 Qualification Data: For Installer.

.4 Field quality control reports.

.5 Sample Warranties: For special warranties.

□

1.5 QUALITY ASSURANCE

.1 Provide quality control in accordance with Section 01 00 10 – General Instructions.

.2 Protect building materials from damage by:

.1 fully covering stored materials.

.2 elevating stored materials off ground.

.3 disposing of materials with evidence of moisture damage.

.3 Installer Qualifications: Company specializing in performing work of this section with minimum 5 years experience with installation of air/vapour barrier systems. Completed installation must be approved by the material manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 00 10 – General Instructions.

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

.3 Provide construction waste management in accordance with best practice.

1.7 ENVIRONMENTAL REQUIREMENTS

.1 Provide forced air circulation during installation and curing periods for enclosed applications.

.2 Exercise caution for proper adhesion, curing when temperature below 4 deg C.

.3 Do not install solvent curing sealants or vapour release adhesive materials in enclosed spaces without ventilation.

.4 Maintain temperature and humidity recommended by materials manufactures before, during and after installation.

1.8 SEQUENCING

.1 Sequence work to permit installation of materials in conjunction with related materials and seals.

.2 Follow construction schedule in accordance with Section 01 00 10 – General Instructions.

1.9 WARRANTY

.1 Extend warranty required by GC 12.3 to period 24 months from date of Substantial Performance.

.2 Forward copy of warranty to Departmental Representative upon Date of Substantial Performance.

□

Part 2 Products

2.1 PERFORMANCE CRITERIA

.1 Construct air/vapour barrier system of building to provide a continuous, structurally supported plane of materials to contain indoor air (exfiltration) and to prevent outdoor air from entering the building (infiltration) in accordance with the following requirements:

.1 Incorporate a continuous air/vapour barrier system, meeting or exceeding the requirements of the NBCC, Part 5.

.2 Maximum air leakage through the air barrier system within the areas of the exterior walls from the roof to grade is not to exceed 0.002 L/(s·m^2) at 75 Pa pressure differential.

.3 Maximum air leakage through joints between air barrier components of various assemblies (window frames, door frames, roof junction to walls, each other) is not to exceed 0.002 L/s·m at 75 Pa pressure differential.

2.2 MATERIALS

.1 Membrane air barrier: spunbonded polyolefin, non-woven, non-perforated.

.1 Basis of Design: “Tyvek CommercialWrap” as manufactured by DuPont.

.2 Jointing Tape: Air resistant pressure sensitive adhesive tape, type recommended by membrane air barrier manufacturer for sealing joints and penetrations.

.3 Foam Seal: in accordance with 07 21 19 – Foamed-in-Place Insulation.

.4 Sealant: butyl rubber base, single component, solvent release, non-skinning, as recommended by membrane manufacturer.

.5 Vapour Retarder: Polyethylene sheet to CAN/CGSB-51.34, 0.15 mm thick, lengths and widths required for least number of seams.

.6 Substrate cleaner: Non-corrosive type recommended by sealant manufacturer compatible with adjacent materials.

.7 Termination mastic: rubberized asphalt-based mastic.

.8 Adhesive: Compatible with sheet seal and substrate, permanently non-curing.

.9 Surface conditioner: Latex-based, water-dispersible liquid for substrate preparation, as required by project.

.1 Flash point: no flash to boiling point.

.2 Solvent type: water.

.3 Application temperature: -4 deg C and above.

□

Part 3 Execution

3.1 EXAMINATION

.1 Verify that surfaces and conditions are ready to accept the Work of this section.

.2 Ensure surfaces are clean, dry, sound, smooth, continuous, and comply with air barrier manufacturer's requirements.

.3 Report unsatisfactory conditions to Departmental Representative in writing.

.4 Do not start work until deficiencies have been corrected. Start of Work implies acceptance of conditions.

3.2 PREPARATION

.1 Remove loose or foreign matter.

.2 Ensure substrates are clean of oil or excess dust and open joints filled; and concrete surfaces free of large voids, spalled areas and sharp protrusions.

.3 Ensure substrates are free of surface moisture prior to application of membrane.

.4 Ensure metal closures are free of sharp edges and burrs.

3.3 INSTALLATION

.1 Install air barrier to dry surfaces at air and surface temperatures of -4 deg C and above in accordance with manufacturer's recommendations, to locations indicated.

.2 Precut pieces of membrane air barrier into easily-handled lengths.

.3 Begin installation at base of wall placing bottom edge of membrane over flashing as indicated.

.4 Overlap adjacent pieces 50 mm and tape seams.

.5 Apply subsequent sheets of membrane above, overlapping sheet below by 50 mm. Stagger vertical joints minimum 300 mm.

.6 Slit membrane to fit over, and around anchors, reinforcing wires, ties.

.7 Seal around all penetrations with termination mastic.

□

.8 Continue membrane into openings in walls, including but not limited to doors and windows. Terminate at points that will prevent visibility from interior. Continue membrane over junctions, at changes in wall construction, and other construction. Reinforce corners with additional piece of membrane cut and formed to seal corners. Caulk to ensure complete seal. Position lap seal over firm bearing.

.9 At end of each working day seal top edge of membrane air barrier to substrate with termination mastic.

.10 Do not expose membrane air barrier to sunlight for more than thirty days prior to enclosure.

.11 Inspect installation prior to enclosing. Repair punctures, damaged areas and inadequately lapped seams with a patch of membrane sized to extend 150 mm in all directions from perimeter of affected area.

3.4 FIELD QUALITY CONTROL

.1 Membrane air installation will be inspected by Departmental Representative.

.2 Coordinate with Departmental Representative to evaluate membrane air barrier after installation, prior to covering.

.3 Visual inspections will include:

.1 Review and report on the following:

.1 Continuity of membrane air barrier has been achieved throughout the wall and adjacent assemblies with no gaps or holes.

.2 Continuous structural support of membrane air barrier system has been provided.

.3 Site conditions for application temperature and dryness of substrates have been maintained.

.4 Maximum exposure time of materials to UV deterioration has not been exceeded.

.5 Laps in sheet materials have complied with minimum requirements and have been shingled in the correct direction (or mastic applied on exposed edges).

.6 Termination mastic has been applied on cut edges.

.7 Compatible materials have been used.

.8 Transitions at changes in direction and structural support at gaps have been provided.

.9 Connections between assemblies (membrane and sealants) have complied with requirements for cleanliness, surface preparation, structural support, integrity, and continuity of seal.

.10 All penetrations have been sealed.

.11 Interfaces between different assemblies, membrane air barrier and openings including door and window tie-in: report specifically on the tie-in methodology and installation between materials.

□

3.5 PROTECTION, REPAIR, AND CLEANING

.1 Protect work from damage and wear during remainder of construction period.

.2 Correct deficiencies in or remove work that does not comply with requirements; repair substrates, reapply membrane air barrier, and repair flashings.

.3 Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

.4 Provide cleaning during construction in accordance with Section 01 00 10 – General Instructions.

END OF SECTION

□

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 07 71 23 – Manufactured Gutters and Downspouts

1.2 REFERENCES

.1 Canadian General Standards Board (CGSB)

- .1 CAN/CGSB-37.4-M89, Fibrated, Cutback Asphalt, Lap Cement for Asphalt Roofing
- .2 CAN/CGSB-37.5-M89, Cutback Asphalt Plastic Cement
- .3 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type
- .4 CAN/CGSB-51.34-M86 AMD 1, Vapour Barrier Polyethylene Sheet, for Use in Building Construction

.2 Canadian Roofing Contractors' Association (CRCA)

- .1 CRCA Roofing Specification Manual - 2011

.3 CSA International

- .1 CSA A123.1/A123.5-05(R2010), Asphalt Shingles Made From Organic Felt and Surfaced With Mineral Granules/Asphalt Shingles Made From Glass Felt and Surfaced With Mineral Granules
- .2 CAN/CSA-A123.2-03(R2013), Asphalt-Coated Roofing Sheets.
- .3 CSA A123.51-14, Asphalt Shingle Application on Roof Slopes 1:6 and Steeper.
- .4 CSA B111-74(R2003), Wire Nails, Spikes and Staples.

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

- .1 Material Safety Data Sheets (MSDS).

.5 National Research Council Canada (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC)

- .1 CCMC-2011, Registry of Product Evaluations.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 00 10 – General Instructions.

.2 Product Data:

- .1 Submit manufacturer's instructions, printed product literature and data sheets for asphalt shingles and include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Submit proof of manufacturer's CCMC listing and listing number.

.3 Manufacturer's Instructions: provide to indicate special handling criteria, installation sequence and cleaning procedures.

.4 Submit 2 copies of WHMIS MSDS in accordance with Section 01 00 10 – General Instructions.

.3 Samples:

.1 Submit duplicate samples of full size specified shingles.

1.4 ENVIRONMENTAL AND PROJECT REQUIREMENTS

.1 Apply each part of the roofing system only when surfaces are clean and dry.

.2 Cover walls and other surfaces in the vicinity of hoisting apparatus (when used) with heavy canvas or other suitable protective material. Any damage caused by this contract shall be repaired to match the original materials and appearance at no cost to the owner.

.3 Conduct operations so as to leave deck exposed for the minimum period of time. Protect the work area as required to prevent water infiltration or environmental damage to building interior.

.4 Maintain all site equipment in good working order.

.5 Maintain one copy of manufacturers' application instructions at the project site.

1.5 QUALITY ASSURANCE

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

.2 Installer Qualifications: where required for extended limited warranty coverage, the installer must be approved or otherwise authorized by manufacturer to install all roofing products to be installed on this project. Work is to be executed only by those skilled to perform it expeditiously and who has been responsible for satisfactory installations similar to that specified during a period of at least the immediate three (3) years.

1.6 DELIVERY, STORAGE AND HANDLING

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

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

.3 Storage and Handling Requirements:

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

.2 Remove only in quantities required for same day use.

.3 Store and protect asphalt shingles from nicks, scratches, and blemishes.

.4 Replace defective or damaged materials with new.

1.7 EXTRA STOCK MATERIALS

.1 Submit maintenance materials in accordance with Section 01 00 10 – General Instructions.

.2 All unused shingles remain property of Departmental Representative.

1.8 WARRANTY

.1 Manufacturer's Warranty: Provide manufacturer's standard warranty document executed by authorized company official covering performance and finish, including wind uplift and algae.

.1 Warranty Period, Materials: lifetime from date of Substantial Completion.

.1 First 15 years: 100 percent of the material supply and installation labour.

.2 Warranty Period, Wind Uplift: 15 years from date of Substantial Completion.

.1 Wind speed to 177 k/h (110 m/h).

.3 Warranty Period, Algae: No growth for 10 years from date of Substantial Completion.

Part 2 Products

2.1 MANUFACTURERS

.1 Products of following manufacturers are acceptable subject to conformance to requirements of Drawings, Schedules and Specifications All roofing components shall be provided from a single manufacturer, unless otherwise noted.

.1 IKO

.2 Building Products of Canada

.3 GAF

.4 Certainteed

.5 Owens Corning

.2 This Specification is based on Products by IKO. Comparable Products from manufacturers listed herein will be accepted provided they meet requirements of this Specification.

2.2 MATERIALS

.1 Asphalt shingles: to CSA A123.1/A123.5.

.1 Type: Architectural, pattern rectangular, 2 sealant bands.

.2 Exposure: 152 mm.

.3 Colours: as selected from manufacturer's standard range by Departmental Representative.

.4 Texture: as selected from manufacturer's standard range by Departmental Representative.

.2 Underlayment: to CSA A123.22 and ASTM D1970, self-adhering, self-sealing bituminous membrane.

.3 Asphaltic Cement:

.1 Plastic cement: to CAN/CGSB-37.5 and ASTM D4586, Type I or II.

.2 Lap cement: to CAN/CGSB-37.4 and ASTM D3019, non-asbestos-fibered, Type III.

.4 Nails: to CSA B111, of galvanized steel, sufficient length to penetrate 19 mm into deck.

.5 Metal Flashing: Hot-dip galvanized steel sheet, complying with ASTM A 653/A 653M.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify that conditions of substrate are acceptable for asphalt shingles installation in accordance with manufacturer's written instructions.

.1 Visually inspect substrate in presence of Departmental Representative.

.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 REMOVAL OF EXISTING ROOFING

.1 Remove existing roofing, flashings and underlay, and expose sheathing of roof.

.2 Withdraw existing shingle and flashing nails, set those which break off. Leave surfaces free from dirt and loose material.

.3 Departmental Representative to inspect roof sheathing.

.4 Remove portion of sheathing affected by fungal or insect attack as directed by Departmental Representative.

.5 Replace cut out portions of sheathing with sheathing of equal sectional dimensions, and specified grade. Seat each end on rafter, with 25 mm bearing, and secure to rafter.

3.3 APPLICATION

.1 Install drip edge along eaves, overhanging 12 mm, with minimum 50 mm flange extending onto roof decking.

.1 Nail to deck at 400 mm on centre.

.2 Install bottom step flashing (soaker base flashing) interleafed between shingles at vertical junctions.

.3 Install asphalt shingles on roof slopes 1:6 and steeper in accordance with CSA-A123.51 supplemented as follows:

3.4 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 00 10 – General Instructions.

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

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 – General Instructions.

.3 Waste Management: Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.5 PROTECTION

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

.2 Repair damage to adjacent materials caused by asphalt shingles installation.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 06 10 00 – Rough Carpentry

.2 07 21 13 – Board Insulation

.3 07 21 19 – Foamed-in-Place Insulation

.4 07 27 00 – Air Barriers

.5 07 92 00 – Joint Sealants

1.2 REFERENCES

.1 American Hardboard Association (AHA):

.1 AHA A135.6; Hardboard Siding.

.2 Canadian General Standards Board (CGSB):

.1 CGSB 11.3 - M87; Hardboard

.2 CGSB 11.5 - M87; Hardboard, Precoated, Factory Finished for Exterior Cladding

.3 CGSB 11.6 - M87; Installation of Exterior Hardboard Cladding

.4 CGSB 51.32 - M77; Sheathing, Membrane, Breather Type

1.3 DESIGN PERFORMANCE REQUIREMENTS

.1 Design hardboard siding assemblies capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under condition indicated:

.1 Wind Loads: Assemblies to withstand maximum wind pressure, suction loads acting normal to plane of surface in accordance with National Building Code of Canada 2010 to loads as follows:

.2 Defection Limits: Assemblies to withstand test pressures with deflection no greater than 1/240 of the span and no evidence of material failure, structural distress, or permanent deformation exceeding 0.2 percent of the clear span.

.1 Test Pressures: 150 percent of inward and outward, upward and downward wind-load design pressures.

.2 General Performance: Hardboard siding assemblies shall comply with performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction.

.3 Design hardboard siding assemblies to allow for thermal movement of component materials caused by variation in ambient temperature range of 80 degrees C without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.

.4 Maximum deviation from vertical and horizontal alignment of erected panels: 1 to 1000.

1.4 SUBMITTALS

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

.2 Product Data:

.1 Submit manufacturer's printed product literature for hardboard siding materials, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Shop Drawings:

.1 Indicate dimensions and thickness of siding, fastening and anchoring methods, detail and location of joints and gaskets, thermal movement provision, wall openings, head, jamb and sill details, materials and finish, compliance with design criteria and requirements of related work.

.4 Samples:

.1 Submit duplicate 100 x 100 mm samples of siding, representative of materials, finishes and colours.

1.5 QUALIFICATION

.1 Manufacturer: company specializing in producing hardboard siding with 5 years documented experience with sufficient capacity to produce and deliver required units without causing delay in work.

.2 Installer: person specializing in hardboard siding installations with 5 years documented experience approved by manufacturer.

.3 Pre-Installation Meetings: convene pre-installation meeting one week prior to beginning work of this Section and on-site installation, with contractor's representative to:

.1 Verify project requirements.

.2 Review installation and substrate conditions.

.3 Co-ordination with other building subtrades.

.4 Review manufacturer's installation instructions and warranty requirements.

1.6 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 00 10 – General Instructions.

.2 Deliver, store and protect material in accordance with panel manufacturer's recommendations.

.3 Store in an unheated structure or under cover until application. Siding may be temporarily stored outside if at least 4 inches off the ground and on a flat, well drained surface protected from moisture with a shed pack or waterproof cover.

1.7 WARRANTY

.1 Manufacturer's Warranty: Provide manufacturer's standard warranty document executed by authorized company official covering performance and finish, including color, fading, and chalking.

.1 Warranty Period, Siding Material: 25 years from date of Substantial Completion

.1 First 5 years: 100 percent of the purchase price of the damaged siding exclusive of installation labor.

.2 Warranty Period, Paint Finish: 15 years from date of Substantial Completion

.1 First 5 years: 100 percent of the cost of labor and materials required to refinish the affected siding or supply replacement material exclusive of installation labor.

Part 2 Products

2.1 MATERIALS

.1 Hardboard Siding: in accordance with CGSB 11.3:

.1 Thickness: 13 mm.

.2 Core: high density fiberboard, 760 kg/m^3.

.3 Joinery: manufactured interlock system.

.4 Size: 303 mm high, simulating 2 – 140 mm planks x maximum possible length.

.5 Front Surface: factory painted, baked on finish coat.

.6 Colour: as selected by Departmental Representative from manufacturer’s complete range.

.7 Acceptable Products: “Naturetech – Prestige Double 5” Dutchlap” as manufactured by KWP Products, “Ridgewood D-5” as manufactured by LP CanExel Products.

.2 Exterior Air Barrier: in accordance with Section 07 27 00 – Air Barriers.

.3 Accessories:

.1 Trim Boards: prefabricated, 19 mm x 101 mm to match siding.

.2 Nails: Mechanically galvanized, to securely and rigidly retain the work permanently in position, pre-finished baked on coating to match siding finish.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

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

3.2 EXAMINATION

.1 Before installation examine alignment of substrate and notify Departmental Representative in writing if substrate does not comply with requirements of panel installer.

3.3 INSTALLATION

.1 Install siding in accordance with manufacturer's written instructions and shop drawings.

.1 Allow for thermal movement.

.2 Maintain following installation tolerances:

.1 Maximum variation from plane or location shown on shop drawings: 10 mm/10 m of length and up to 20 mm/100 m.

.2 Maximum deviation for vertical member: 3 mm in an 8.5 m run.

.3 Maximum deviation for a horizontal member: 3 mm in an 8.5 m run

.4 Maximum offset from true alignment between two adjacent members abutting end to end, in line: 0.75 mm.

.3 Erect siding plumb, level, and true.

.4 Do not install component parts that are observed to be defective, including warped, bowed, dented, and broken members.

.5 Anchor panels securely per engineering recommendations and in accordance with approved shop drawings to allow for necessary thermal movement and structural support.

3.4 INCIDENTAL SITE FINISHING

.1 Carefully set exposed nails flush with siding coating.

.2 Touch-up blemished siding materials to match siding color.

3.5 CLEANING

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

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

.3 Make sure weep holes and drainage channels are unobstructed and free of dirt and sealants.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 07 31 13 – Asphalt Shingles

.2 Section 07 46 26 – Hardboard Siding

1.2 REFERENCES

.1 American Aluminum Manufacturers Association (AAMA)

.1 AAMA 621-02, Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) and Zinc-Aluminum Coated Steel Substrates

.2 ASTM International (ASTM)

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

.3 Canadian Roofing Contractors Association (CRCA)

.1 Roofing Specifications Manual

.4 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-37.29, Rubber-Asphalt Sealing Compound

.5 Canadian Standards Association (CSA International)

.1 CSA B111, Wire Nails, Spikes and Staples

1.3 SUBMITTALS

.1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

.2 Action Submittals:

.1 Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.

.2 Shop Drawings: Show fabrication and installation layouts of gutters, downspouts, flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work. Include the following:

.1 Identification of material, thickness, weight, and finish for each item and location in Project.

.2 Details for forming gutters, downspouts, flashing and trim, including profiles, shapes, seams, and dimensions.

.3 Details for joining, supporting, and securing all components, including layout of fasteners, cleats, clips, and other attachments. Include pattern of seams.

.4 Details of termination points and assemblies, including fixed points.

.5 Details of edge conditions.

.6 Details of special conditions.

.7 Details of connections to adjoining work.

.8 Detail formed flashing and trim at a scale of not less than 1:10.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Do not store materials in contact with other materials that might cause staining, denting, or other surface damage. Store materials away from uncured concrete and masonry.

.2 Protect strippable protective covering on gutters, downspouts, flashing and trim from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing and trim installation.

.3 Minimize construction waste sent to the landfill, separate and recycle materials in accordance with best practice.

Part 2 Products

2.1 METAL MATERIALS

.1 Zinc coated steel sheet: minimum 0.60 mm thickness, commercial quality to ASTM A653/A653M, hot-dip galvanized with Z275 designation zinc coating. Surface: smooth, flat.

.2 Prefinished sheet steel: coated by the hot-dip process and precoated with Liquid Polyvinlidene Fluoride Steel Sheet Coil Coatings, AAMA 621: 70 percent PVF2 resin, by weight in colour coat. Colour to match existing.

2.2 GUTTER AND DOWNSPOUTS

.1 Continuous roll formed prefinished sheet steel. Free floating design, supported without penetration by suspension from a gutter cleat.

.1 Zinc coated steel sheet: to ASTM A653/A653M, 0.76mm (0.030”) minimum base metal thickness.

.2 Exterior Finish: Polyvinlidene Flouride (PVF2) minimum 70% Kynar, dry film thickness 0.8 mils minimum. Primer: Baked on epoxy primer coat dry film thickness 0.2 mils minimum. Total exterior dry film thickness: 1.0 mils minimum.

.3 Interior finish: Factory standard prime-coat, dry film thickness 0.5 mils minimum.

.4 Bottom 2 m section of downspout to be hinged.

.5 Color: to match hardboard siding.

.2 Galvanized steel brackets: 50 mm wide at 600 mm o/c maximum.

.3 Eave Metal: Metal to match gutter colour and gauge. Profile to interlock between from roof to gutter assembly.

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.4 Provide goosenecks, outlets, strainer baskets and necessary fastenings matching gutter.

2.3 ACCESSORIES

.1 Isolation coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

.1 Isolate aluminum from following components, by means of bituminous paint:

.1 Dissimilar metals except stainless steel, zinc, or white bronze of small area.

.2 Wood.

.2 Mastic: solvent based, containing SBS modified bitumen, fibres and mineral fillers.

.3 Sealing compound: to CAN/CGSB-37.29, rubber asphalt type. Underlay for metal flashing: dry sheathing to CAN/CGSB-51.32.

.4 Sealants: as specified in Section 07 92 00 – Joint Sealants.

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

2.4 FABRICATION

.1 Form individual pieces in longest practical lengths. Make allowances for expansion at joints.

.2 Hem exposed edges on underside 12 mm, mitre and seal.

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

.4 Fabricate flashings, closures, trims, etc. required for application in accordance with recommendations in SMACNA's Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

.1 End Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

.2 Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.

.3 Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.

Part 3 Execution

3.1 EXAMINATION

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

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3.2 INSTALLATION

.1 Install sheet metal work in accordance with manufacturer's instructions, and as detailed.

.1 Install gutters, downspouts, flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.

.2 Install gutters, downspouts, flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

.3 Install exposed gutters, downspouts, flashing and trim without excessive oil canning, buckling, and tool marks.

.4 Torch cutting is not permitted.

.5 Do not use graphite pencils to mark metal surfaces.

.2 Use concealed fastenings except where approved before installation.

.3 Lock end joints and caulk with sealant.

.4 Metal protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.

.5 Expansion Provisions: Provide for thermal expansion of exposed gutters, flashing and trim. Space movement joints at a maximum of 3 m with no joints allowed within 600 mm of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 25 mm deep, filled with sealant concealed within joints.

.6 Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 38 mm, except reduce pre-tinning where pre-tinned surface would show in completed Work.

.1 Do not solder metallic-coated steel and aluminum sheet.

.2 Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

.7 Where dissimilar flashing materials meet in coplanar arrangement, coordinate material thickness, and profiles to match ensuring a smooth, flat transition.

3.3 CLEANING AND PROTECTION

.1 Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

.2 Clean and neutralize flux materials. Clean off excess solder.

.3 Clean off excess sealants.

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.4 Remove temporary protective coverings and strippable films as gutters, downspouts, flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.

.5 Replace gutters, downspouts, flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

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Part 1 General

1.1 SUMMARY

.1 Section Includes:

.1 Materials, preparation and application for caulking and sealants.

.2 Related Requirements:

.1 Section 07 27 00 – Air Barriers
.2 Section 07 31 13 – Asphalt Shingles
.3 Section 07 46 26 – Hardboard Siding
.4 Section 07 71 23 – Manufactured Gutters and Downspouts
.5 Section 08 50 00 – Windows

1.2 REFERENCES

.1 ASTM International (ASTM)

.1 ASTM C834, Standard Specification for Latex Sealants
.2 ASTM C920, Standard Specification for Elastomeric Joint Sealants
.3 ASTM C1193, Standard Guide for Use of Joint Sealants
.4 ASTM C1248, Standard Test Method for Staining of Porous Substrate by Joint Sealants
.5 ASTM C1330, Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants

.2 Canadian General Standards Board (CGSB)

.1 CGSB 19-GP-5M-84, Sealing Compound, One Component, Acrylic Base, Solvent Curing (Issue of 1976 reaffirmed, incorporating Amendment No. 1)
.2 CAN/CGSB-19.13-M87, Sealing Compound, One-component, Elastomeric, Chemical Curing

1.3 SUBMITTALS

.1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

.2 Action Submittals:

.1 Product Data: describing.

.1 Sealant compound.
.2 Primers.
.3 Sealing compound, each type, including compatibility when different sealants are in contact with each other, and in contact with laminated glass.

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.2 Samples:

.1 Submit duplicate colour samples of each type of material and colour.

.2 Provide Samples with joint sealants in 13-mm- wide joints formed between two 150-mm- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

.3 Where custom colours are requested, submit colour samples of actual product for review by Departmental Representative.

.3 Informational Submittals:

.1 Manufacturer's instructions for installation of each product specified.

1.4 QUALITY ASSURANCE

.1 Testing: Test sealants in contact with samples of porous materials to be sealed to ensure no staining of material will result in accordance with ASTM C1248.

1.5 DELIVERY, STORAGE, AND HANDLING

.1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. Protect from freezing, moisture, water and contact with ground or floor.

1.6 PROJECT CONDITIONS

.1 Environmental Limitations:

.1 Do not proceed with installation of joint sealants under following conditions:

.1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C.

.2 When joint substrates are wet.

1.7 ENVIRONMENTAL REQUIREMENTS

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

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

.3 Ventilate area of work by use of approved portable supply and exhaust fans.

.1 For work within existing buildings, arrange with Departmental Representative for ventilation system to be operated on maximum outdoor air and exhaust during installation of caulking and sealants.

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Part 2 Products

2.1 GENERAL

.1 Do not use caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant in air handling units.

.2 When low toxicity caulks are not possible, confine usage to areas which offgas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize offgas time.

.3 Where sealants are qualified with primers use only those primers.

.4 Stain-Test-Response Characteristics: Where sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

.5 Colours: match sealant colour to adjacent materials, as selected and approved by the Departmental Representative.

.6 Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant, including those referencing ASTM C920 classifications for type, grade, class and uses.

.7 Compatibility: Provide joints sealants, primers and backings that are compatible with one another, and with joint substrates under conditions of service and application as demonstrated by joint sealant manufacturer based on proven test results and field experience.

.8 Sealants: not exude materials that travel into or onto adjacent materials, causing damage, or attracting soiling, which becomes apparent during service life of building.

2.2 SEALANTS

.1 Neutral cure, one part, low modulus silicone, movement range to ±50%, for exterior and interior use on concrete, masonry, stone, metals, glass, porcelain, control joints, expansion joints, between insulating glass units of curtain wall assembly, to ASTM C920, Type S, Grade NS, Class 50 (and inactive CAN/CGSB 19.13), colour selected by Consultant. Test for staining for use with limestone cladding.

.1 Acceptable products: GE SCS2000 Silpruf, Dow Corning 790, Tremco Spectrum 1, Precora 890.

.2 One component, polyurethane, for interior, exterior use in aluminum, wood, glazing, curtain wall joints, heel beads, toe beads, air seals, to CAN/CGSB 19.13, colour selected by Consultant.

.1 Acceptable products: Tremco “Vulkem 116”, Sika Canada “Sikaflex 1-a”, Tremco “Dymonic”.

.3 Acrylics One Part: general purpose, one part, paintable translucent acrylic to CGSB 19-GP-5M, movement range ±10%, for interior use in dry areas around windows, door frames, interior caulking to gypsum board, masonry, and metals.

.1 Acceptable products: Tremco Mono 555, Franklin International Titebond Painters Plus Caulk, GE RCS20 Siliconized Acrylic Sealant.

.4 Joint Cleaner: Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.

.5 Primer: as recommended by manufacturer, meeting maximum VOC requirements.

.6 Back-up Materials:

.1 Backer rod: polyethylene, closed cell foam backer rod, compatible with sealant, recommended by manufacturer, diameter oversize 30 to 50% to suit joint.

.1 Acceptable products: Dow Chemical “Ethafoam”, Tremco “Sof Rod”.

.2 Bond breaker tape: polyethylene, pressure sensitive bond breaker tape which will not bond to sealant.

.3 Expanding Foam Sealant: Precompressed, open cell, chemically stabilized acrylic impregnation, adhesive backed, high density polyurethane foam, precompressed size indicated, width indicated, grey colour.

.1 Acceptable products: Emseal Joint Systems Ltd. “Backerseal”.

Part 3 Execution

3.1 EXAMINATION

.1 Joint-Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.

.2 Joint-Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

3.2 PROTECTION

.1 Protect installed Work of other trades from staining or contamination.

3.3 SURFACE PREPARATION

.1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.

.2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair Work.

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

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.4 Ensure joint surfaces are dry and frost free.

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

.6 Test materials being sealed, caulked for staining, adhesion.

3.4 PRIMING

.1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.

.2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.5 BACKUP MATERIAL

.1 Apply bond breaker tape where required to manufacturer's instructions.

.2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.

3.6 APPLICATION

.1 Sealant:

.1 Apply sealant in accordance with manufacturer's written instructions.
.2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.
.3 Apply sealant in continuous beads.
.4 Apply sealant using gun with proper size nozzle.
.5 Use sufficient pressure to fill voids and joints solid.
.6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
.7 Tool exposed surfaces before skinning begins to give slightly concave shape.
.8 Remove excess compound promptly as work progresses and upon completion.
.9 Apply non-paintable silicone sealants after wall surfaces have been painted.

.2 Curing:

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

.3 Cleanup:

.1 Clean adjacent surfaces immediately and leave Work neat and clean.
.2 Remove excess and droppings, using recommended cleaners as work progresses.
.3 Remove masking tape after initial set of sealant.

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END OF SECTION

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Part 1 General

1.1 SUMMARY OF WORK

.1 Work Included: The work of this Section includes the provision of all labour, materials, equipment and services required to fabricate and install windows, as indicated on the drawings, as specified herein and as required for a complete project.

1.2 Related Sections:

.1 Section 07 27 00 - Air Barrier

.2 Section 07 92 00 - Joint Sealants

.3 Section 08 80 50 - Glazing

1.3 REFERENCES

.1 ASTM International

.1 ASTM D2240, Test Method for Rubber Property - Durometer Hardness

.2 ASTM E283-09(R2012), Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

.3 ASTM E547-00(R2009), Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference.

.4 ASTM E330/E330M-14, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.

.5 ASTM E1748-95(2009), Standard Test Method for Evaluating the Engagement Between Windows and Insect Screens as an Integral System.

.6 ASTM F588-14, Standard Test Method for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact.

.2 CSA Group

.1 CSA A440-11, NAFS - North American Fenestration Standard for Windows, Doors, and Skylights.

.2 CSA A440S1-09, Canadian Supplement to AAMA/WDMA/CSA 101/1.S.2/A440, NAFS - North American Fenestration Standard for Windows, Doors, and Skylights.

.3 CAN/CSA-A440.4-07(R2012), Window, Door, and Skylight Installation

.4 CAN/CSA-A440.2/A440.3-09, Fenestration energy performance/User guide to CSA A440.2, Fenestration energy performance.

.3 Flat Glass Manufacturers Association (FGMA)

.1 FGMA Glazing Manual

.4 Screen Manufacturers Association (SMA)

.1 SMA 1201R-2002 Specification for Insect Screens for Windows, Sliding Doors and Swinging Doors.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

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

.2 Product Data:

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

.2 Submit WHMIS MSDS - Material Safety Data Sheets. Indicate VOC's for glazing materials during application and curing.

.3 Shop Drawings:

.1 Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim, junction between combination units, elevations of unit, anchorage details, and description of related components, exposed finishes, fasteners, and caulking. Indicate location of manufacturer's nameplates.

.4 Samples:

.1 Submit for review and acceptance of each unit.

.2 Samples will be returned for inclusion into work.

.3 Submit one representative model of each type window.

.4 Include frame, sash, sill, glazing and weatherproofing method, insect screens, surface finish and hardware. Show location of manufacturer's nameplates.

.5 Include 300 mm long samples of head, jamb and sill to indicate profile.

.5 Manufacturer's instructions:

.1 Submit manufacturer's installation instructions.

1.5 CLOSEOUT SUBMITTALS

.1 Submit in accordance with Section 01 00 10 – General Instructions.

.2 Operation and Maintenance Data: submit operation and maintenance data for windows for incorporation into manual.

1.6 QUALITY ASSURANCE

.1 Certifications: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.7 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 00 10 – General Instructions.

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

.3 Storage and Handling Requirements:

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

.2 Store and protect windows from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

1.8 WARRANTY

.1 Provide manufacturer’s written guarantee for sealed units against failure of hermetic seal for period 20 years from date of Substantial Performance.

.2 Provide manufacturer’s written guarantee that polyvinyl chloride windows will remain leak proof including coverage for complete system failure in accordance with GC 32, but for 25 years from date of Substantial Performance.

.3 Provide manufacturer’s written guarantee that polyvinyl chloride finish, coatings will not develop excessive fading, non-uniformity of colour, shade, will not crack, peel, pit, corrode for period 5 years from date of Substantial Performance.

.1 Excessive fading: change in appearance which is perceptibly objectionable, determined by Consultant when viewed visually in comparison with original colour range standards.

.2 Excessive non-uniformity: non-uniform fading during period of guarantee to extent adjacent panels have colour difference greater than original acceptable colour range.

.3 Will not crack, peel, pit or corrode: no cracking, peeling, pitting, other type of corrosion discernable from distance 3 metres, resulting from natural elements in atmosphere.

Part 2 Products

2.1 SYSTEM DESCRIPTION

.1 Performance requirements:

.1 Provide continuity of building enclosure air and vapour barrier using glass and glazing materials as follow:

.1 Utilize inner light of multiple light sealed units for continuity of air and vapour seal.

.2 Size glass to withstand wind loads, dead loads and positive and negative live loads as measured in accordance with ANSI/ASTM E330.

.3 Limit glass deflection to 1/200 with full recovery of glazing materials.

2.2 MATERIALS

.1 Materials: to CSA A440, supplemented as follows:

.1 All windows by same manufacturer.

.2 Sash: polyvinyl chloride, thermally broken.

.3 Main frame: polyvinyl chloride, thermally broken.

.4 Glass: in accordance with Section 08 80 50 - Glazing.

.5 Bug Screens: to SMA 1201R on the ventilating portion of the windows.

.1 Material: non glare fibreglass mesh.

.2 Insect screening mesh: count 18 x 14.

.3 Fasteners: tamper proof.

.4 Screen frames: aluminum, colour to match window frames.

.5 Mount screen frames for interior replacement.

.6 Isolation coating: alkali resistant bituminous paint.

.7 Sealants:

.1 VOC limit 250 g/L maximum.

.8 Setting blocks: Neoprene, 80-90 Shore A durometer hardness to ASTM D2240, length of 25mm for each square meter of glazing.

.9 Spacer shims: Neoprene, 50-60 Shore A durometer hardness to ASTM D2240, 75mm long x one half height of glazing stop x thickness to suit application. Self-adhesive on one face.

.10 Flashing: zinc coated steel sheet: minimum 0.60 mm thickness, commercial quality to ASTM A653/A653M, hot-dip galvanized with Z275 designation zinc coating. Surface: smooth, flat.

.2 Accessories:

.1 Air Conditioner Window / Panel / Tray System: as per information sheet attached to this Section.

2.3 WINDOW TYPE AND CLASSIFICATION

.1 Window types: as indicated on the drawings.

.2 Classification rating: to CSA A440.

.1 Air Tightness: ASTM E283, maximum A3.

.2 Water Tightness: ASTM E547, maximum B7.

.3 Wind Load Resistance: ASTM E330, maximum C5.

.4 Surface condensation control: compliant with standard CAN/CSA-A440.2/A440.3.

.5 Forced Entry: ASTM F588, maximum F10.

.3 Basis of Design: PVC Freedom Series as manufactured by Paramount Windows.

2.4 FABRICATION

.1 Fabricate in accordance with CSA A440 supplemented as follows:

.2 Fabricate units square and true with maximum tolerance of plus or minus 1.5 mm for units with a diagonal measurement of 1800 mm or less and plus or minus 3 mm for units with a diagonal measurement over 1800 mm.

.3 Face dimensions detailed are maximum permissible sizes.

.4 Brace frames to maintain squareness and rigidity during shipment and installation.

.5 Finish steel clips and reinforcement with 380g/m^2 zinc coating to ASTM A123/A123M.

2.5 VINYL FINISHES

.1 Vinyl finishes: in accordance with CSA A440, including appendices, supplemented as follows:

.1 Colour: as selected by Departmental Representative from complete line.

2.6 ISOLATION COATING

.1 Coatings: in accordance with manufacturer's recommendations for surface conditions.

.1 Coating: VOC limit 250 g/L maximum.

.2 Isolate aluminum from following components, by means of isolation coating:

.1 Dissimilar metals except stainless steel, zinc, or white bronze of small area.

.2 Concrete, mortar and masonry.

.3 Wood.

2.7 GLAZING

.1 Glaze windows in accordance with CSA A440.

.2 Glass: sealed insulating units in accordance with Section 08 80 50 Glazing.

2.8 HARDWARE

.1 Hardware: white sash locks and handles to provide security and permit easy operation of units.

.2 Operators:

.1 Awning units: underscreen stay bar assembly.

.2 Casement units: roto operators with locking handle.

.3 Locks: multipoint designed to assist with positive seal.

.4 Hinges: concealed.

Part 3 Execution

3.1 EXAMINATION

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

.1 Visually inspect substrate in presence of Departmental Representative.

.2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 INSTALLATION

.1 Window installation:

.1 Install in accordance with CSA A440.

.2 Arrange components to prevent abrupt variation in colour.

.3 Perform work in accordance with manufacturer’s instructions. Coordinate work with other Sections to ensure proper sequence of construction.

.4 Ensure installed assemblies are plumb, level and free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

.5 Use sufficient corrosion-resistant anchorage devices to securely and rigidly fasten windows to building, without causing detrimental effects to shape or performance.

.6 Place foamed-in-place insulation in shim spaces around full perimeter, to maintain continuity of thermal barrier.

.2 Sill installation:

.1 Install sills with uniform wash to exterior, level in length, straight in alignment with plumb upstands and faces. Use one piece lengths at each location.

.2 Cut sills to fit window opening.

.3 Secure sills in place with anchoring devices located at ends and evenly spaced 600 mm on centre in between.

.3 Caulking:

.1 Seal joints between windows and window sills with sealant. Caulk between sill upstand and window-frame. Caulk butt joints in continuous sills.

.2 Apply sealant in accordance with Section 07 92 00 - Joint Sealants. Conceal sealant within window units except where exposed use is permitted by Departmental Representative.

.3 Seal joints between frame assemblies and adjacent construction and within glazed assemblies (where required) to maintain weather tightness and integrity of air/vapour barrier.

3.3 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 00 10 – General Instructions.

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

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 00 10 – General Instructions.

3.4 PROTECTION

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

.2 Repair damage to adjacent materials caused by window installation.

.3 Remove all protection and labels on completion of the Work. Make good all damage and broken glass due to failure of such protection.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 08 50 00 – Windows

1.2 REFERENCES

.1 American National Standards Institute (ANSI) / American Society for Testing and Materials International (ASTM)

.1 ANSI/ASTM E330, Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

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

.1 ASTM D 2240, Test Method for Rubber Property - Durometer Hardness

.3 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-12.1, Tempered or Laminated Safety Glass
.2 CAN/CGSB-12.3, Flat, Clear Float Glass
.3 CAN/CGSB-12.8, Insulating Glass Units
.4 CAN/CGSB-12.11, Wired Safety Glass
.5 CAN/CGSB-12.12, Plastic Safety Glazing

.4 Canadian Standards Association (CSA International)

.1 CSA A440.2, Energy Performance Evaluation of Windows and Sliding Glass Doors
.2 CSA Certification Program for Windows and Doors

.5 Flat Glass Manufacturers Association (FGMA)

.1 FGMA Glazing Manual

.6 Laminators Safety Glass Association (LSGA)

.1 LSGA Laminated Glass Design Guide

1.3 SYSTEM DESCRIPTION

.1 Performance requirements:

.1 Provide continuity of building enclosure vapour and air barrier using glass and glazing materials as follow:

.1 Utilize inner light of multiple light sealed units for continuity of air and vapour seal.

.2 Size glass to withstand wind loads, dead loads and positive and negative live loads as measured in accordance with ANSI/ASTM E330.

.3 Limit glass deflection to 1/200 with full recovery of glazing materials.

□

1.4 QUALITY ASSURANCE

.1 Test reports: certified test reports showing compliance with specified performance characteristics and physical properties.

.2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 SUBMITTALS

.1 Submit shop drawings, product data and instructions in accordance with Section 01 00 10 – General Instructions.

.2 Product data:

.1 Submit manufacturer's printed product literature, specifications and data sheets.

.2 Submit WHMIS MSDS - Material Safety Data Sheets. Indicate VOC's for glazing materials during application and curing.

.3 Shop drawings:

.1 Submit shop drawings indicating locations of coloured glazing units.

.4 Manufacturer's instructions:

.1 Submit manufacturer's installation instructions.

1.6 CLOSEOUT SUBMITTALS

.1 Provide maintenance data including cleaning instructions for incorporation into manual specified in Section 01 00 10 – General Instructions.

Part 2 Products

2.1 MATERIALS: FLAT GLASS

.1 Float glass: to CAN/CGSB-12.3, Glazing quality, clear, 4 mm thick.

.2 Tempered safety glass: to CAN/CGSB-12.1, clear, tempered, 4 mm thick.

.1 Type 2 – tempered.

.2 Class B – float.

.3 Category II – 540J impact resistance.

.3 Silvered mirror glass: 6 mm thick.

.1 Type 3C film reinforced.

.4 Low emissivity coating (Low E): AGC Energy Select 40. Other manufacturers acceptable upon compliance with thermal property requirements.

□

2.2 SEALED INSULATING GLASS

.1 Windows (IGU1): insulating glass units to CAN/CGSB-12.8, triple unit, 38 mm overall thickness.

.1 Outer light - minimum 4 mm, clear float, low E #2.

.2 Middle light – minimum 4 mm, clear float.

.3 Inner light – minimum 4 mm, clear tempered, low E #5.

.4 Cavity spaces: 13 mm.

.5 Inert gas fill: Argon 90%.

.6 Visible transmittance (VT): 47%.

.7 Solar heat gain coefficient (SHGC): 0.24.

.8 Overall coefficient of heat transfer (U-factor): 0.68 W/(m^2.K).

.2 Primer, sealers and cleaners: to manufacturer's standard.

.3 Setting blocks: Neoprene, 70-90 Shore A durometer hardness to ASTM D 2240, 100mm long x 6mm high x width to suit glass thickness.

.4 Spacer shims: Neoprene or silicone, 50-60 Shore A durometer hardness to ASTM D 2240, 75 mm long x one half height of glazing stop x thickness to suit application. Self-adhesive on one face.

.5 Glazing tape:

.1 Preformed butyl compound, paper released backed, Tremco manufacturer, "Tremco 440 tape", colour matched to frame.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 EXAMINATION

.1 Verify that openings for glazing are correctly sized and within tolerance.

.2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

3.3 PREPARATION

.1 Clean contact surfaces with solvent and wipe dry.

.2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.

□

.3 Prime surfaces scheduled to receive sealant.

3.4 INSTALLATION: EXTERIOR - DRY METHOD (PREFORMED GLAZING)

.1 Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

.2 Cut glazing tape to length; install on glazing light. Seal corners by butting tape and sealing junctions with sealant.

.3 Place setting blocks at 1/4 points, with edge block maximum 150mm from corners.

.4 Rest glazing on setting blocks and push against fixed stop with sufficient pressure to attain full contact.

.5 Install removable stops without displacing glazing tape. Exert pressure for full continuous contact.

.6 Trim protruding tape edge.

3.5 CLEANING

.1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

.2 Remove traces of primer, caulking.

.3 Remove glazing materials from finish surfaces.

.4 Remove labels after work is complete.

.5 Clean glass using approved non-abrasive cleaner in accordance with manufacturer's instructions.

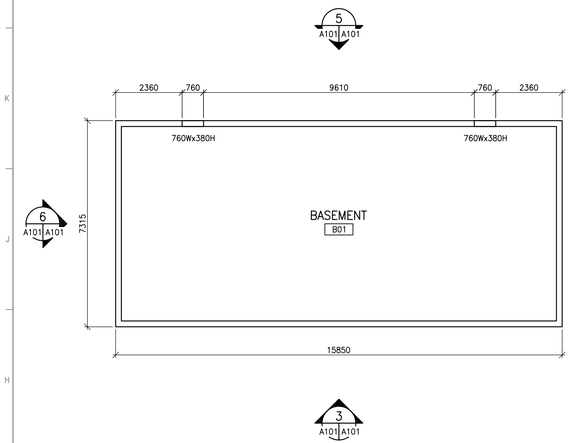
.6 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.6 PROTECTION OF FINISHED WORK

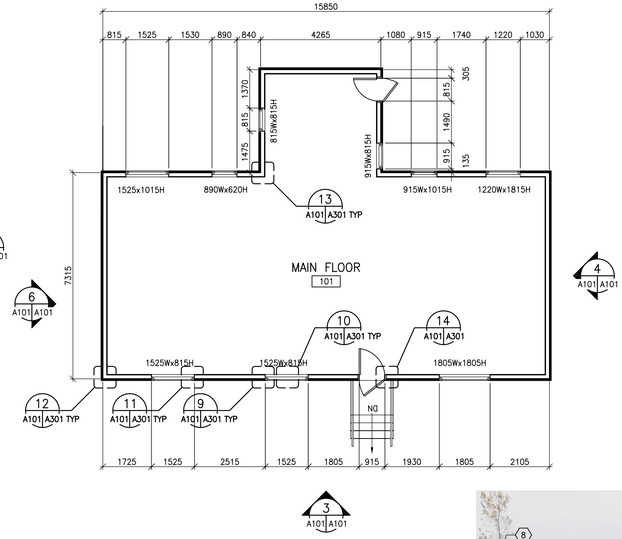
.1 After installation, mark light with an "X" by using removable plastic tape or paste.

END OF SECTION

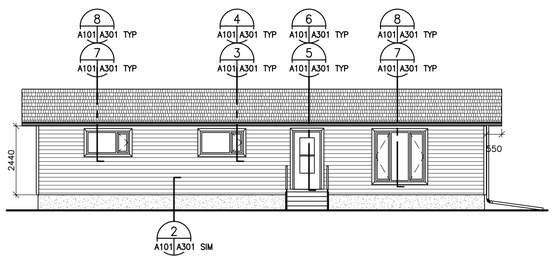
□



1 BASEMENT FLOOR PLAN
A101 1:100

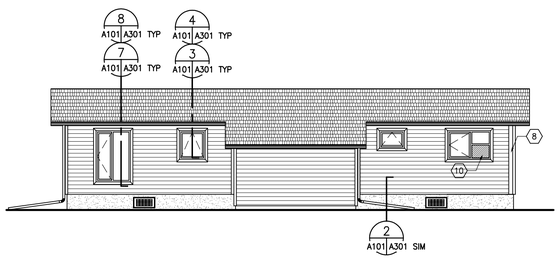


2 MAIN FLOOR PLAN
A101 1:100

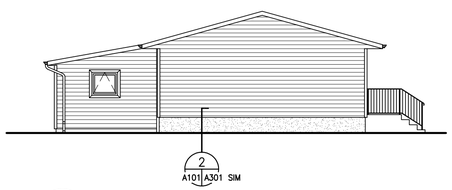


3 FRONT BUILDING ELEVATION
A101 A101 1:100

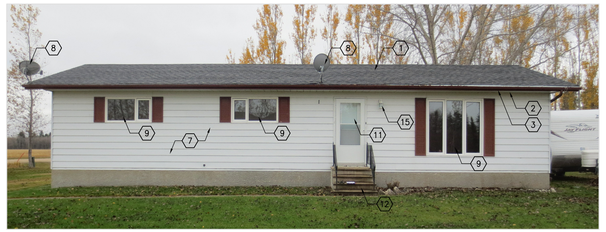
4 RIGHT BUILDING ELEVATION
A101 A101 1:100



5 REAR BUILDING ELEVATION
A101 A101 1:100

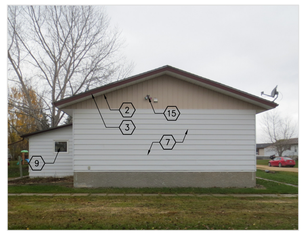


6 LEFT BUILDING ELEVATION
A101 A101 1:100

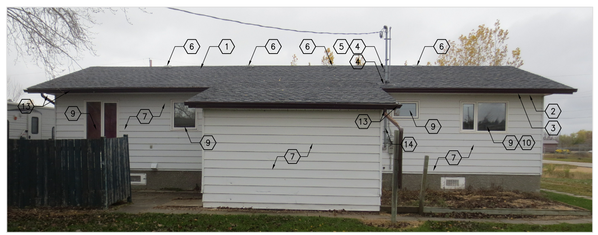


7 FRONT BUILDING ELEVATION
A101 NO SCALE

8 RIGHT BUILDING ELEVATION
A101 NO SCALE



9 LEFT BUILDING ELEVATION
A101 NO SCALE



10 REAR BUILDING ELEVATION
A101 NO SCALE

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE-INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE-INSTALL DRAINAGE PIPE.

(1) DRAWING KEYNOTES:

1. EXISTING SHINGLES TO REMAIN.
2. EXISTING SOFFITS TO REMAIN.
3. REMOVE EXISTING FASCIA AND REPLACE WITH NEW FASCIA.
4. NEW FLASHING AROUND ALL PENETRATIONS.
5. CUT OFF EXISTING VENT STACK 300mm BELOW ROOF SHEATHING. REPLACE WITH PVC PIPE OF EQUAL DIAMETER TO HEIGHT TO ACCOMMODATE NEW FLASHING.
6. EXISTING ROOF VENTS TO REMAIN.
7. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
8. EXISTING SATELLITE DISH TO BE RELOCATED TO TEMPORARY LOCATION AND MAINTAINED OPERATIONAL DURING CONSTRUCTION. RELOCATE ACTIVE SATELLITE DISH TO CORNER OF BUILDING. PROVIDE 1x6 SOLID CEDAR MOUNTING BOARD, PAINTED TO MATCH SIDING. PROVIDE WEATHERPROOF OUTLET AT TOP OF BOARD AND CARRY CABLES THROUGH ATTIC SPACE TO LOCATION DIRECTLY ABOVE THE INTERNAL OUTLET. EXTEND CABLES THROUGH STUD SPACE.
9. REMOVE EXISTING WINDOWS AND REPLACE WITH TRIPLE GLAZED, PVC WINDOWS. VERIFY DIMENSIONS ON SITE.
10. PROVIDE INFILL PANEL TRAY SYSTEM IN MASTER BEDROOM WINDOW TO ACCOMMODATE FUTURE AIR CONDITIONER UNIT BY OWNER.
11. REMOVE AND SALVAGE EXISTING DOOR PANEL AND STORM DOOR. REMOVE EXISTING THRESHOLD AND DOOR FRAME. RE-INSTALL DOOR PANEL AND STORM DOOR IN NEW FRAME. REFER TO DRAWING A301.
12. REMOVE AND RE-INSTALL EXISTING PRECAST CONCRETE STAIRS AND METAL GUARDRAILS.
13. REMOVE AND RE-INSTALL EXISTING EAVESTROUGHS AND DOWNSPOUTS. REPLACE DOWNSPOUTS THAT ARE DAMAGED, MISSING OR MISMATCHED. PROVIDE AND INSTALL 2 METER LONG DOWNSPOUT EXTENSIONS.
14. REMOVE AND RE-INSTALL ELECTRICAL SERVICE TO ACCOMMODATE NEW CLADDING.
15. REMOVE AND RE-INSTALLED LIGHT FIXTURES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.

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Consultant

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Project Title

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1	ISSUED FOR BID	2015/02/04		BWC
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Checked By: BWC	Initialed
Approved By: MF	Initialed

Sheet Title

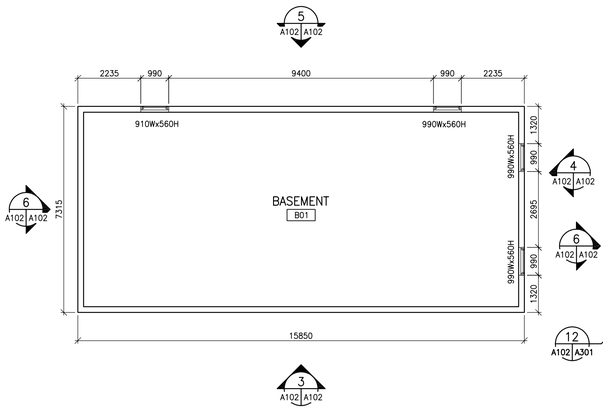
2 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created	Scale
2014/11/17	1:100

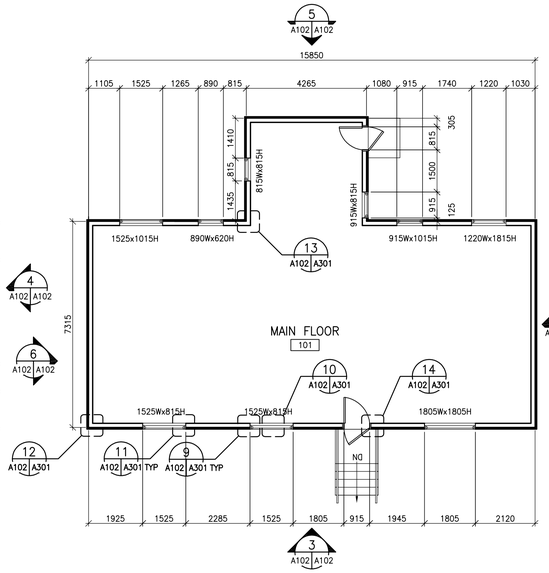
Sheet Number

A101

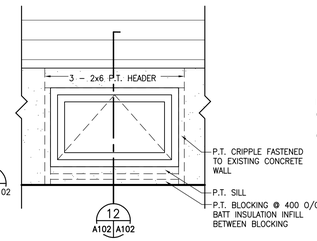
Sheet Order	Project Number
XX OF XX	149-12549-02



1 BASEMENT FLOOR PLAN
A102 1:100



2 MAIN FLOOR PLAN
A102 1:100



11 BASEMENT WINDOW FRAMING CALLOUT
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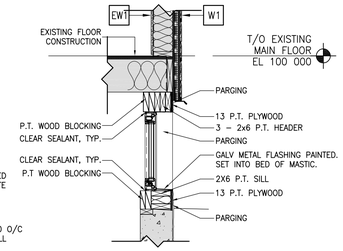

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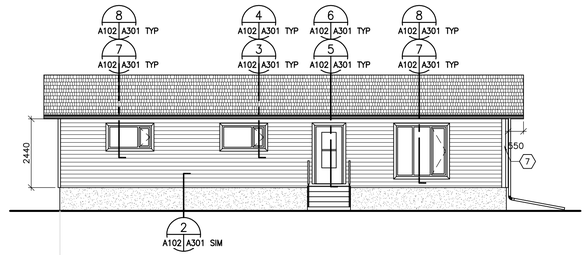
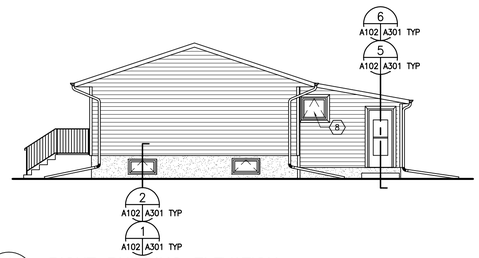


3 FRONT BUILDING ELEVATION
A102 A102 1:100



4 RIGHT BUILDING ELEVATION
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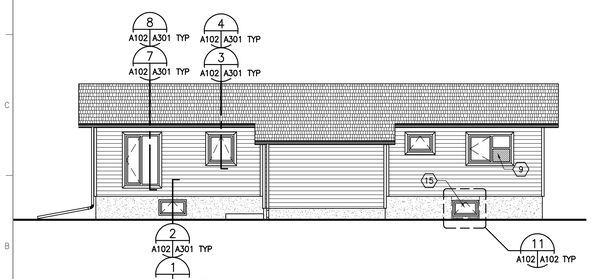

5 REAR BUILDING ELEVATION
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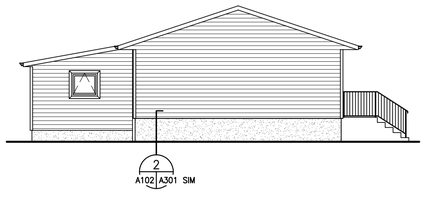

6 LEFT BUILDING ELEVATION
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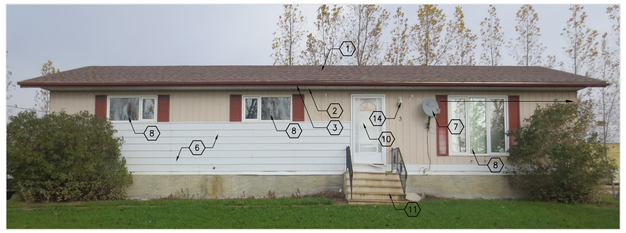

7 FRONT BUILDING ELEVATION
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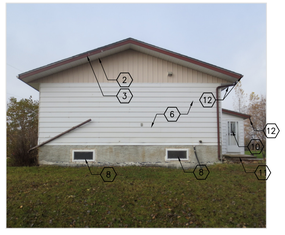

8 RIGHT BUILDING ELEVATION
A102 NO SCALE

9 LEFT BUILDING ELEVATION
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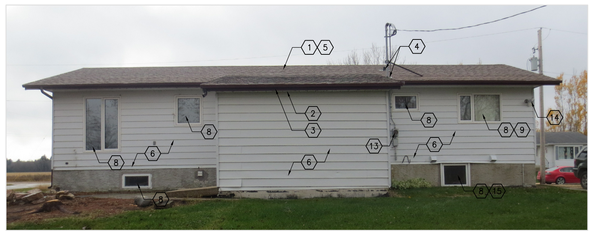

10 REAR BUILDING ELEVATION
A102 NO SCALE

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE–INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE–INSTALL DRAINAGE PIPE.

① DRAWING KEYNOTES:

1. EXISTING SHINGLES TO REMAIN.
2. EXISTING SOFFITS TO REMAIN.
3. REMOVE EXISTING FASCIA AND REPLACE WITH NEW FASCIA.
4. NEW FLASHING AROUND ALL PENETRATIONS.
5. PROVIDE AND INSTALL 4 ROOF VENTS.
6. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
7. EXISTING SATELLITE DISH TO BE RELOCATED TO TEMPORARY LOCATION AND MAINTAINED OPERATIONAL DURING CONSTRUCTION. RELOCATE ACTIVE SATELLITE DISH TO CORNER OF BUILDING. PROVIDE 1x6 SOLID CEDAR MOUNTING BOARD, PAINTED TO MATCH SIDING. PROVIDE WEATHERPROOF OUTLET AT TOP OF BOARD AND CARRY CABLES THROUGH ATTIC SPACE TO LOCATION DIRECTLY ABOVE THE INTERNAL OUTLET. EXTEND CABLES THROUGH STUD SPACE.
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9. PROVIDE INFILL PANEL TRAY SYSTEM IN MASTER BEDROOM WINDOW TO ACCOMMODATE FUTURE AIR CONDITIONER UNIT BY OWNER.
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12. REMOVE AND RE–INSTALL EXISTING EAVESTROUGHS AND DOWNSPOUTS. REPLACE DOWNSPOUTS THAT ARE DAMAGED, MISSING OR MISMATCHED. PROVIDE AND INSTALL 2 METER LONG DOWNSPOUT EXTENSIONS.
13. REMOVE AND RE–INSTALL ELECTRICAL SERVICE TO ACCOMMODATE NEW CLADDING.
14. REMOVE AND RE–INSTALLED LIGHT FIXTURES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
15. INSTALL NEW P.T. HEADER, CRIPPLES AND WINDOW SILL. APPLY NEW PARGING TO NEW WINDOW FRAMING. REFER TO DETAIL 11/A102 AND SECTION DETAIL 12/A102.

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1	ISSUED FOR BID	2015/02/04		BWC
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Sheet Title

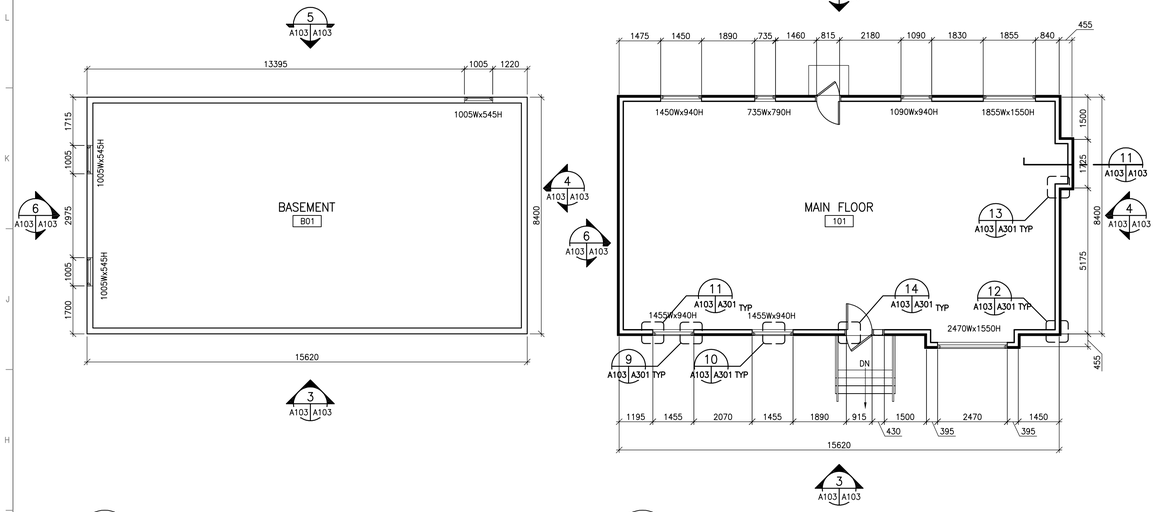
3 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created: 2014/11/17	Scale: 1:100

Sheet Number

A102

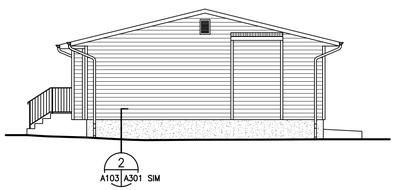
Sheet Order: XX OF XX	Project Number: 149–12549–02



1 BASEMENT FLOOR PLAN
A103 1:100

2 MAIN FLOOR PLAN
A103 1:100

3 FRONT BUILDING ELEVATION
A103 A103 1:100



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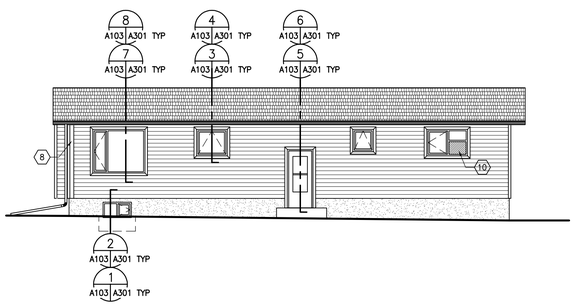
A103 A103 1:100



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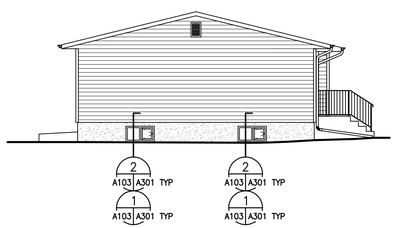

6 LEFT BUILDING ELEVATION
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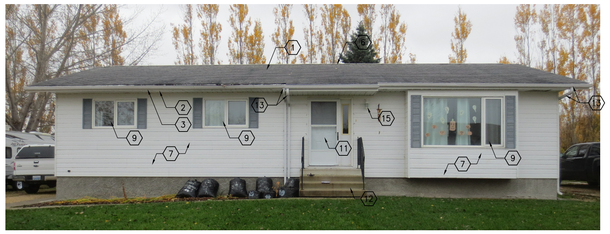
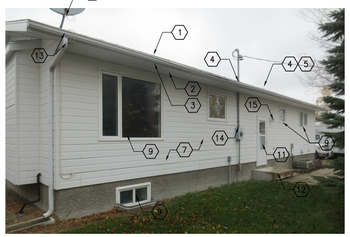


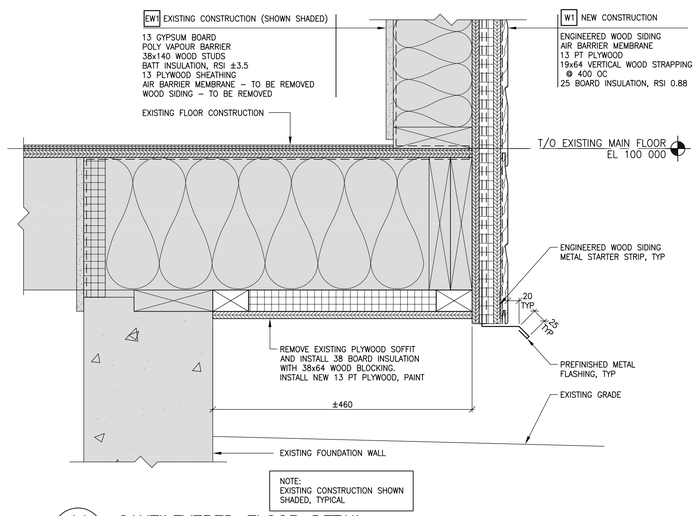
7 FRONT BUILDING ELEVATION
A103 NO SCALE

8 RIGHT BUILDING ELEVATION
A103 NO SCALE

9 LEFT BUILDING ELEVATION
A103 NO SCALE



10 REAR BUILDING ELEVATION
A103 NO SCALE



11 CANTILEVERED FLOOR DETAIL
A103 A103 1:5

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE–INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE–INSTALL DRAINAGE PIPE.

① DRAWING KEYNOTES:

1. REMOVE EXISTING SHINGLES AND RELATED MEMBRANES DOWN TO EXISTING SHEATHING. REFER TO DRAWING A301 FOR NEW ROOFING ASSEMBLY.
2. EXISTING SOFFITS TO REMAIN.
3. EXISTING FASCIA TO REMAIN.
4. NEW FLASHING AROUND ALL PENETRATIONS.
5. CUT OFF EXISTING VENT STACK 300mm BELOW ROOF SHEATHING. REPLACE WITH PVC PIPE OF EQUAL DIAMETER TO HEIGHT TO ACCOMMODATE NEW FLASHING.
6. REMOVE EXISTING RIDGE VENT AND REPLACE WITH NEW RIDGE VENT.
7. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
8. EXISTING SATELLITE DISH TO BE RELOCATED TO TEMPORARY LOCATION AND MAINTAINED OPERATIONAL DURING CONSTRUCTION. RELOCATE ACTIVE SATELLITE DISH TO CORNER OF BUILDING. PROVIDE 1x6 SOLID CEDAR MOUNTING BOARD, PAINTED TO MATCH SIDING. PROVIDE WEATHERPROOF OUTLET AT TOP OF BOARD AND CARRY CABLES THROUGH ATTIC SPACE TO LOCATION DIRECTLY ABOVE THE INTERNAL OUTLET. EXTEND CABLES THROUGH STUD SPACE.
9. REMOVE EXISTING WINDOWS AND REPLACE WITH TRIPLE GLAZED, PVC WINDOWS. VERIFY DIMENSIONS ON SITE.
10. PROVIDE INFILL PANEL TRAY SYSTEM IN MASTER BEDROOM WINDOW TO ACCOMMODATE FUTURE AIR CONDITIONER UNIT BY OWNER.
11. REMOVE AND SALVAGE EXISTING DOOR PANEL AND STORM DOOR. REMOVE EXISTING THRESHOLD AND DOOR FRAME. RE–INSTALL DOOR PANEL AND STORM DOOR IN NEW FRAME. REFER TO DRAWING A301.
12. REMOVE AND RE–INSTALL EXISTING PRECAST CONCRETE STAIRS AND METAL GUARDRAILS.
13. REMOVE AND RE–INSTALL EXISTING EAVESTROUGHS AND DOWNSPOUTS. PROVIDE AND INSTALL 2 METER LONG DOWNSPOUT EXTENSIONS.
14. REMOVE AND RE–INSTALL ELECTRICAL SERVICE TO ACCOMMODATE NEW CLADDING.
15. REMOVE AND RE–INSTALLED LIGHT FIXTURES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.

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Consultant

Seal

Project Title

No	Description	Date(y/m/d)	Drawn	Checked
1	ISSUED FOR BID	2015/02/04		BWC
0	90% CONST DOCUMENT	2015/01/06		BWC

Revisions/Issuance (Read Up)

Designed By: CPG	Initialed
Drawn By: CPG	Initialed
Checked By: BWC	Initialed
Approved By: MF	Initialed

Sheet Title

4 MOYER STREET
FISHER BARNCH, MANITOBA

Date Created	Scale
2014/11/17	1:100

Sheet Number

A103

Sheet Order	Project Number
XX OF XX	149–12549–02

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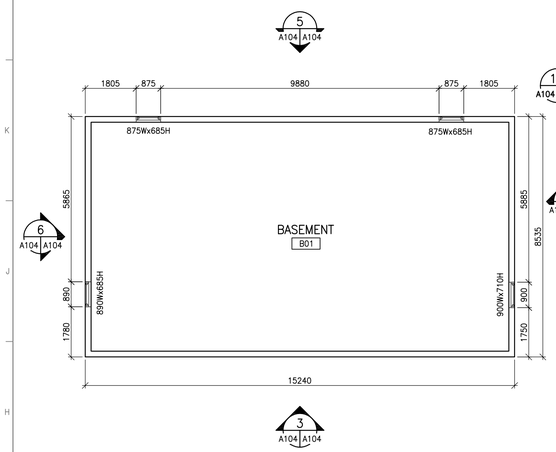
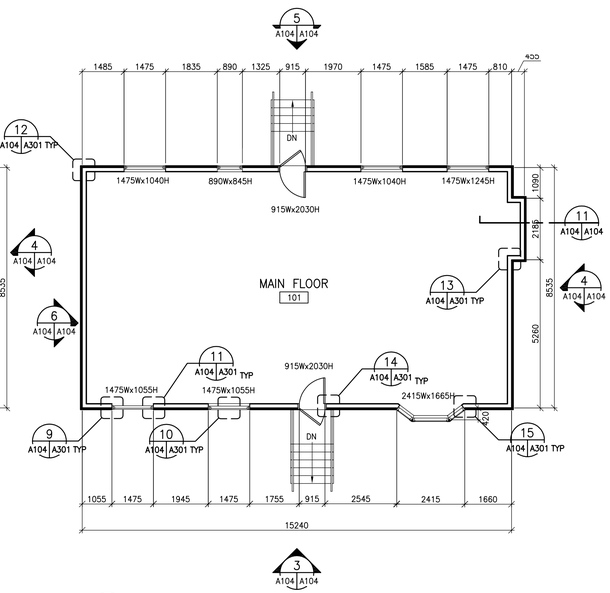


1 BASEMENT FLOOR PLAN
A104 1:100



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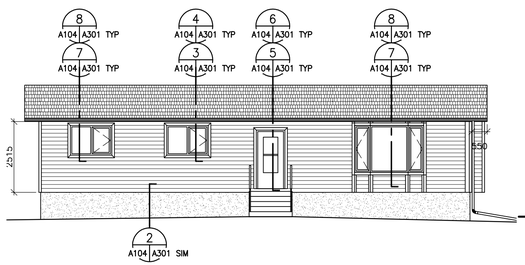

3 FRONT BUILDING ELEVATION
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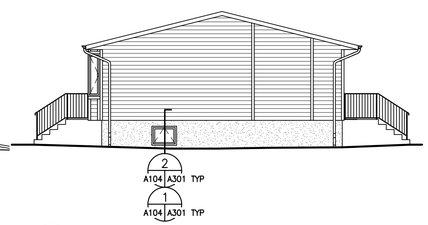
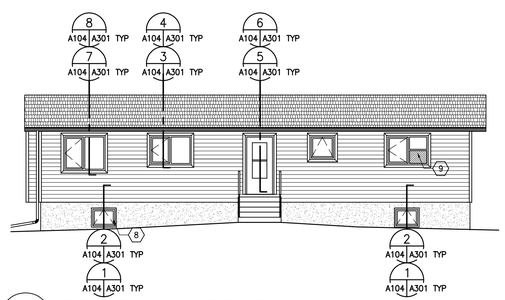


4 RIGHT BUILDING ELEVATION
A104 A104 1:100



5 REAR BUILDING ELEVATION
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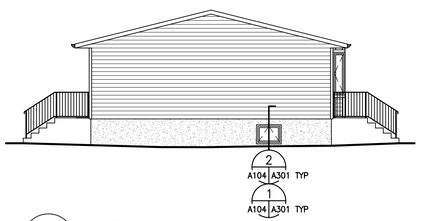

6 LEFT BUILDING ELEVATION
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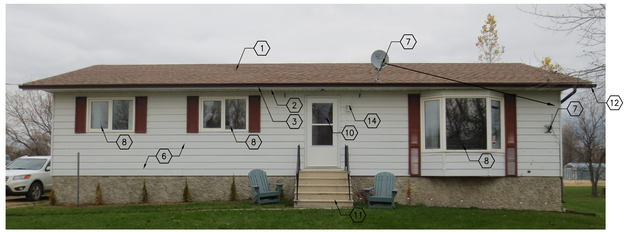

7 FRONT BUILDING ELEVATION
A104 NO SCALE

8 RIGHT BUILDING ELEVATION
A104 NO SCALE

9 LEFT BUILDING ELEVATION
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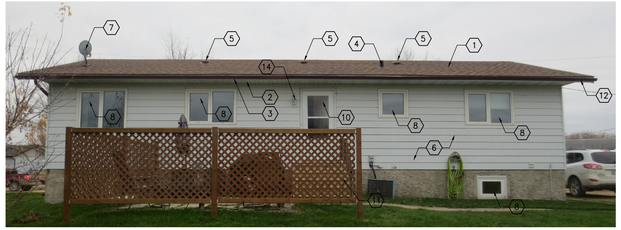

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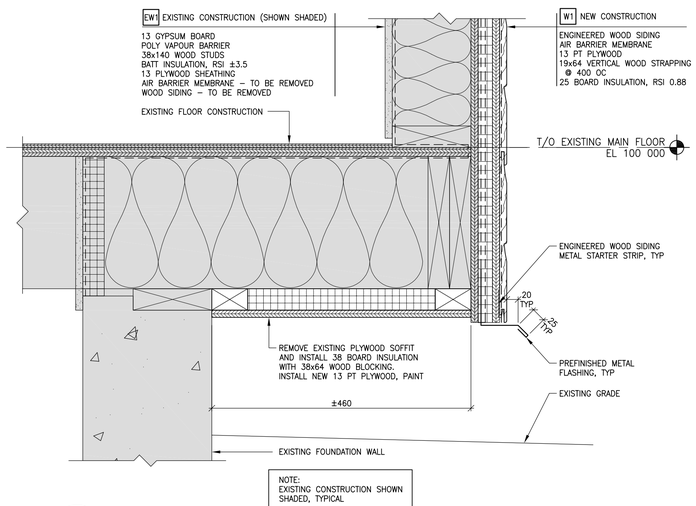

11 CANTILEVERED FLOOR DETAIL
A104 A104 1:5

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE–INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE–INSTALL DRAINAGE PIPE.

(1) DRAWING KEYNOTES:

1. EXISTING SHINGLES TO REMAIN.
2. EXISTING SOFFITS TO REMAIN.
3. REMOVE EXISTING FASCIA AND REPLACE WITH NEW FASCIA.
4. NEW FLASHING AROUND ALL PENETRATIONS.
5. EXISTING ROOF VENTS TO REMAIN.
6. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
7. EXISTING SATELLITE DISH TO BE RELOCATED TO TEMPORARY LOCATION AND MAINTAINED OPERATIONAL DURING CONSTRUCTION. RELOCATE ACTIVE SATELLITE DISH TO CORNER OF BUILDING. PROVIDE 1x6 SOLID CEDAR MOUNTING BOARD, PAINTED TO MATCH SIDING. PROVIDE WEATHERPROOF OUTLET AT TOP OF BOARD AND CARRY CABLES THROUGH ATTIC SPACE TO LOCATION DIRECTLY ABOVE THE INTERNAL OUTLET. EXTEND CABLES THROUGH STUD SPACE.
8. REMOVE EXISTING WINDOWS AND REPLACE WITH TRIPLE GLAZED, PVC WINDOWS. VERIFY DIMENSIONS ON SITE.
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11. REMOVE AND RE–INSTALL EXISTING PRECAST CONCRETE STAIRS AND METAL GUARDRAILS.
12. REMOVE AND RE–INSTALL EXISTING EAVESTROUGHS AND DOWNSPOUTS. REPLACE DOWNSPOUTS THAT ARE DAMAGED, MISSING OR MISMATCHED. PROVIDE AND INSTALL 2 METER LONG DOWNSPOUT EXTENSIONS.
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Checked By: BWC	Initialed
Approved By: MF	Initialed

Sheet Title

5 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created: 2014/11/17	Scale: 1:100

Sheet Number

A104

Sheet Order: XX OF XX	Project Number: 149–12549–02

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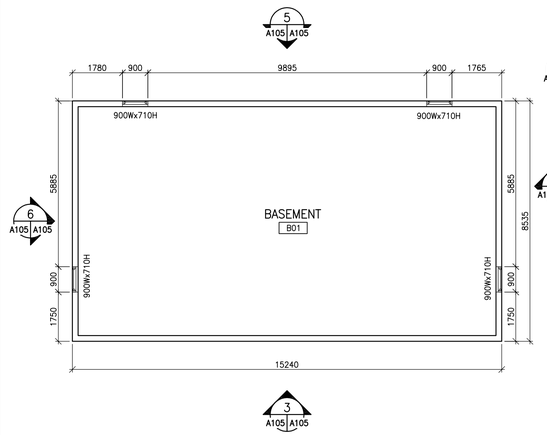
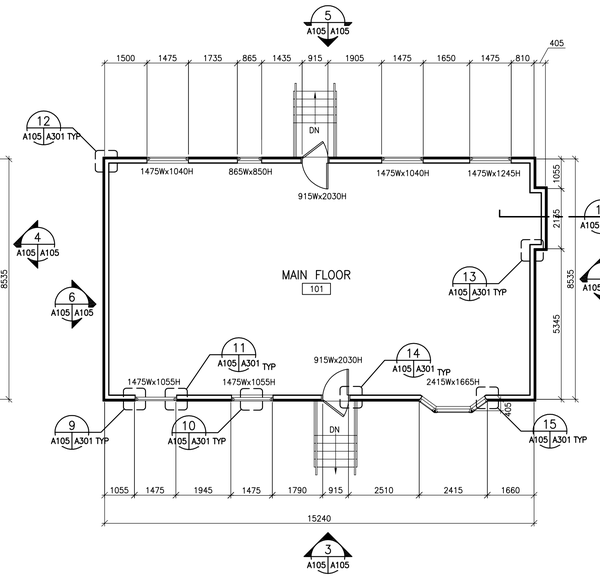


1 BASEMENT FLOOR PLAN
A105 1:100



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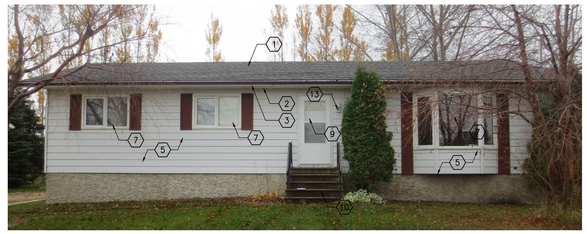
A105 1:100



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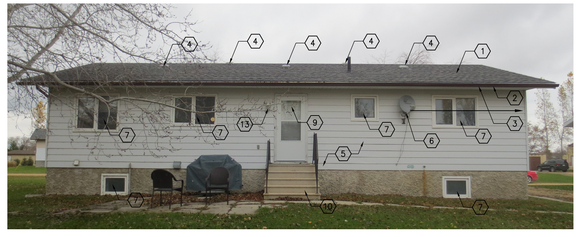

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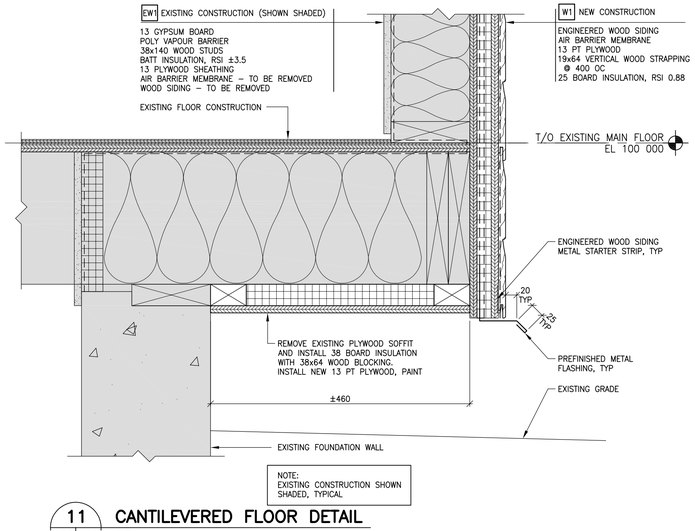
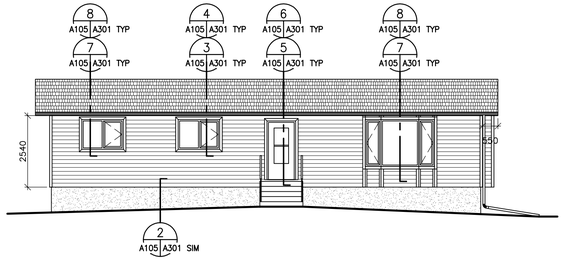


11 CANTILEVERED FLOOR DETAIL
A105 A105 1:5



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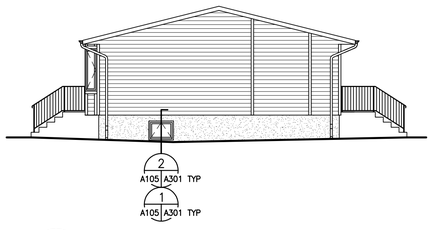

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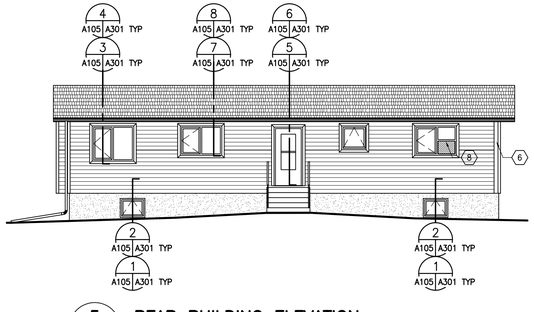

5 REAR BUILDING ELEVATION
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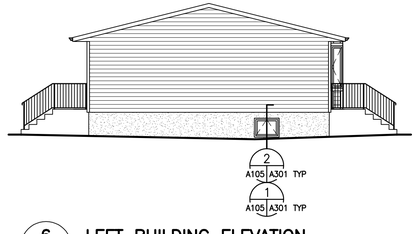

6 LEFT BUILDING ELEVATION
A105 A105 1:100

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE–INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE–INSTALL DRAINAGE PIPE.

(1) DRAWING KEYNOTES:

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2. EXISTING SOFFITS TO REMAIN.
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Consultant

Seal

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0	90% CONST DOCUMENT	2015/01/06		BWC

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Drawn By: CPG	Initialed
Checked By: BWC	Initialed
Approved By: MF	Initialed

Sheet Title

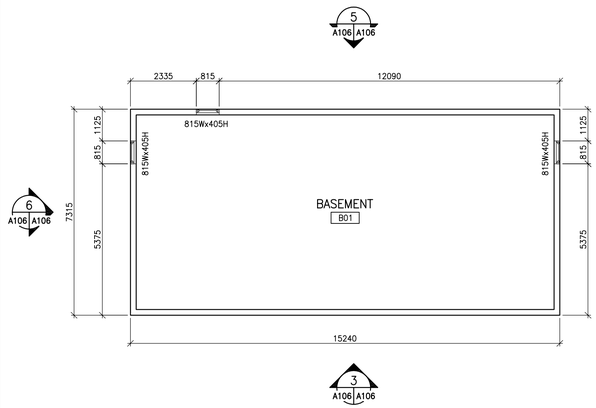
6 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created: 2014/11/17	Scale: 1:100

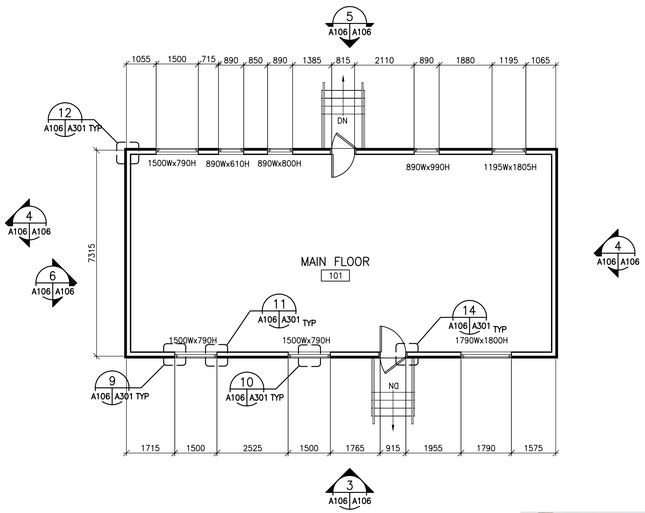
Sheet Number

A105

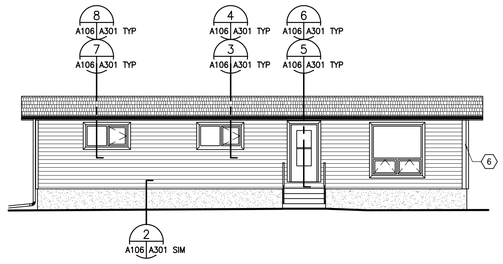
Sheet Order: XX OF XX	Project Number: 149–12549–02



1 BASEMENT FLOOR PLAN
A106 1:100



2 MAIN FLOOR PLAN
A106 1:100



3 FRONT BUILDING ELEVATION
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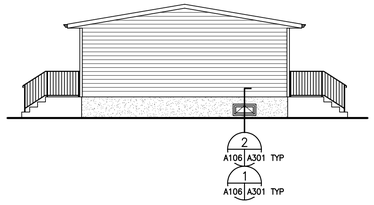

4 RIGHT BUILDING ELEVATION
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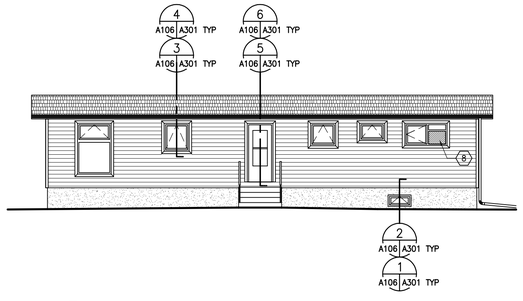

5 REAR BUILDING ELEVATION
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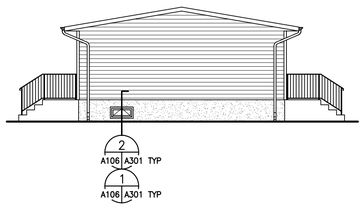

6 LEFT BUILDING ELEVATION
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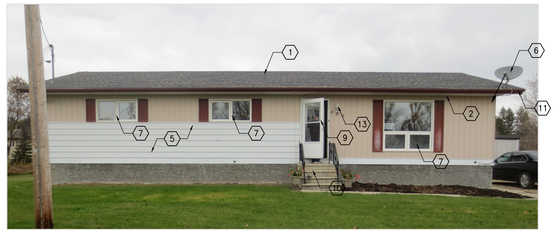

7 FRONT BUILDING ELEVATION
A106 NO SCALE

8 RIGHT BUILDING ELEVATION
A106 NO SCALE

9 LEFT BUILDING ELEVATION
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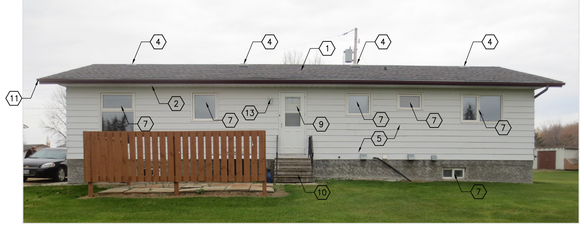

10 REAR BUILDING ELEVATION
A106 NO SCALE

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE-INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE-INSTALL DRAINAGE PIPE.

(1) DRAWING KEYNOTES:

1. REMOVE EXISTING SHINGLES AND RELATED MEMBRANES DOWN TO EXISTING SHEATHING. REFER TO DRAWING A301 FOR NEW ROOFING ASSEMBLY.
2. EXISTING SOFFITS TO REMAIN.
3. REPLACE MISMATCHED FASCIA.
4. EXISTING ROOF VENTS TO REMAIN.
5. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
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Approved By: MF	Initialed

Sheet Title

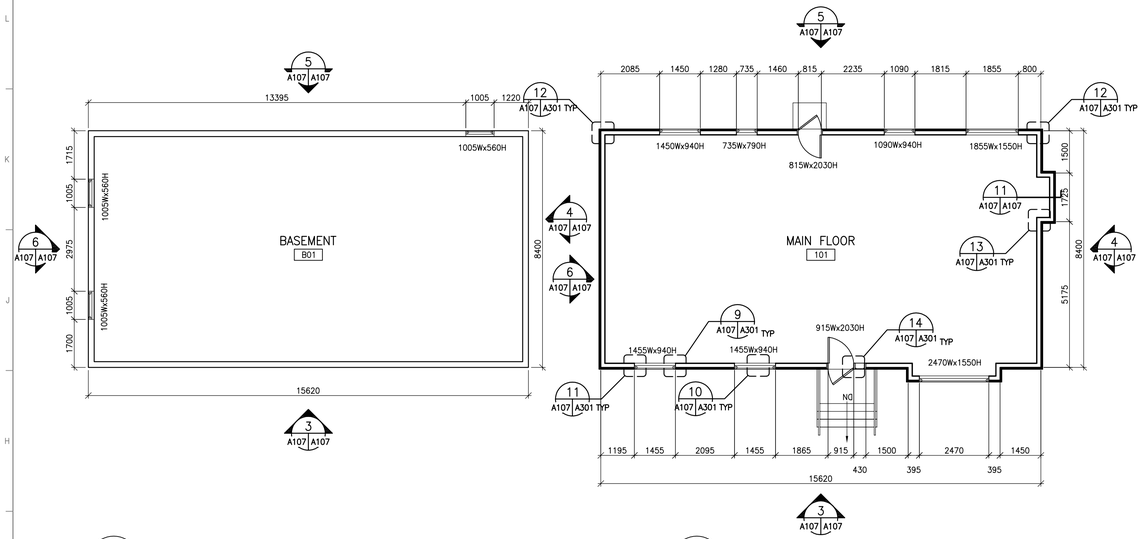
7 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created: 2014/11/17	Scale: 1:100

Sheet Number

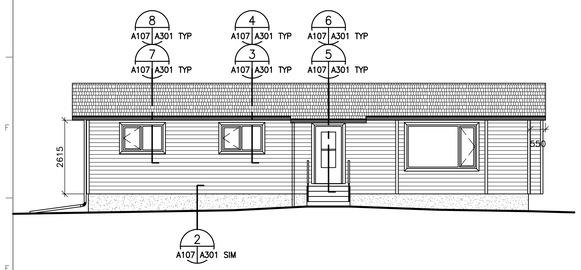
A106

Sheet Order: XX OF XX	Project Number: 149-12549-02



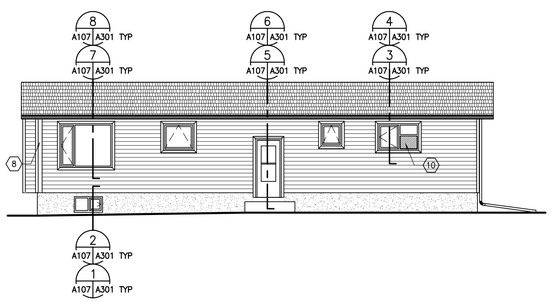
1 BASEMENT FLOOR PLAN
--A107 1:100

2 MAIN FLOOR PLAN
--A107 1:100



3 FRONT BUILDING ELEVATION
A107 A107 1:100

4 RIGHT BUILDING ELEVATION
A107 A107 1:100



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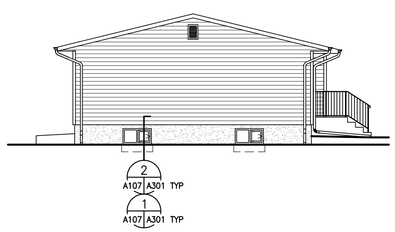
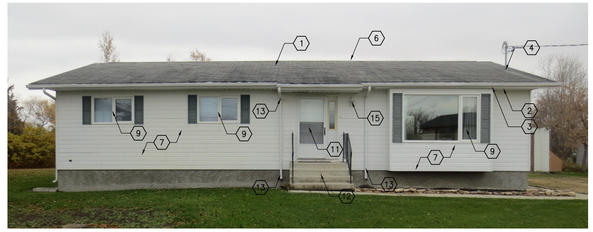


6 LEFT BUILDING ELEVATION
A107 A107 1:100



7 FRONT BUILDING ELEVATION
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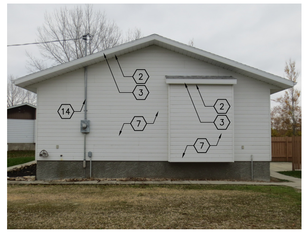

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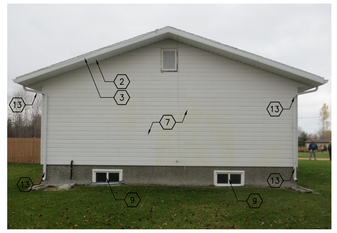

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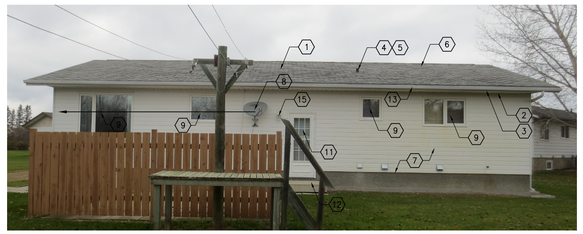

10 REAR BUILDING ELEVATION
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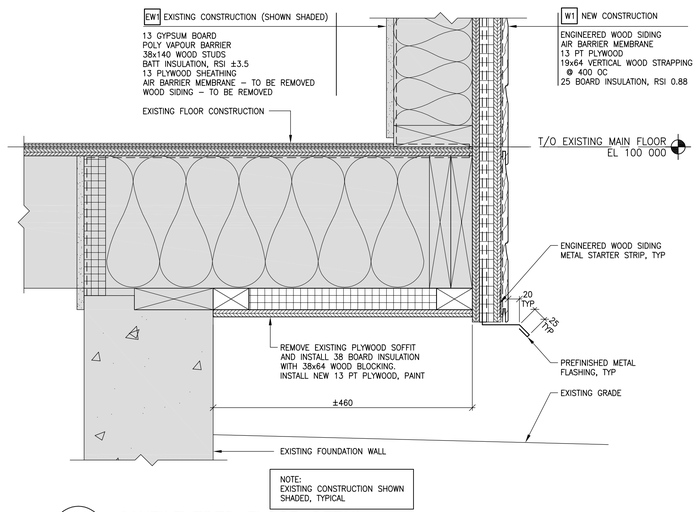

11 CANTILEVERED FLOOR DETAIL
A107 A107 1:5

GENERAL NOTES:

1. REFER TO DRAWING A301 FOR SECTION AND PLAN DETAILS.
2. REPLACE ALL VENTS WITH ALUMINUM VENT. COMPLETE WITH INSECT SCREENS AND HOODS.
3. REMOVE AND EXTEND HOSE BIBS AND HOSE CARRIER TO ACCOMMODATE NEW CLADDING.
4. REMOVE AND RE-INSTALL RECEPTACLES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.
5. REMOVE AND RE-INSTALL DRAINAGE PIPE.

(1) DRAWING KEYNOTES:

1. REMOVE EXISTING SHINGLES AND RELATED MEMBRANES DOWN TO EXISTING SHEATHING. REFER TO DRAWING A301 FOR NEW ROOFING ASSEMBLY.
2. EXISTING SOFFITS TO REMAIN.
3. EXISTING FASCIA TO REMAIN.
4. NEW FLASHING AROUND ALL PENETRATIONS.
5. CUT OFF EXISTING VENT STACK 300mm BELOW ROOF SHEATHING. REPLACE WITH PVC PIPE OF EQUAL DIAMETER TO HEIGHT TO ACCOMMODATE NEW FLASHING.
6. REMOVE EXISTING RIDGE VENT AND REPLACE WITH NEW RIDGE VENT.
7. REMOVE ALL EXISTING EXTERIOR CLADDING TO FACE OF SHEATHING. REFER TO DRAWING A301 FOR NEW EXTERIOR ENVELOPE ASSEMBLY.
8. EXISTING SATELLITE DISH TO BE RELOCATED TO TEMPORARY LOCATION AND MAINTAINED OPERATIONAL DURING CONSTRUCTION. RELOCATE ACTIVE SATELLITE DISH TO CORNER OF BUILDING. PROVIDE 1x6 SOLID CEDAR MOUNTING BOARD, PAINTED TO MATCH SIDING. PROVIDE WEATHERPROOF OUTLET AT TOP OF BOARD AND CARRY CABLES THROUGH ATTIC SPACE TO LOCATION DIRECTLY ABOVE THE INTERNAL OUTLET. EXTEND CABLES THROUGH STUD SPACE.
9. REMOVE EXISTING WINDOWS AND REPLACE WITH TRIPLE GLAZED, PVC WINDOWS. VERIFY DIMENSIONS ON SITE.
10. PROVIDE INFILL PANEL TRAY SYSTEM IN MASTER BEDROOM WINDOW TO ACCOMMODATE FUTURE AIR CONDITIONER UNIT BY OWNER.
11. REMOVE AND SALVAGE EXISTING DOOR PANEL AND STORM DOOR. REMOVE EXISTING THRESHOLD AND DOOR FRAME. RE-INSTALL DOOR PANEL AND STORM DOOR IN NEW FRAME. REFER TO DRAWING A301.
12. REMOVE AND RE-INSTALL EXISTING PRECAST CONCRETE STAIRS AND METAL GUARDRAILS.
13. REMOVE AND RE-INSTALL EXISTING EAVESTROUGHS AND DOWNSPOUTS. REPLACE DOWNSPOUTS THAT ARE DAMAGED, MISSING OR MISMATCHED. PROVIDE AND INSTALL 2 METER LONG DOWNSPOUT EXTENSIONS.
14. REMOVE AND RE-INSTALL ELECTRICAL SERVICE TO ACCOMMODATE NEW CLADDING.
15. REMOVE AND RE-INSTALLED LIGHT FIXTURES. EXTEND JUNCTION BOXES TO ACCOMMODATE NEW CLADDING.

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Seal

Project Title

No	Description	Date(y/m/d)	Drawn	Checked
1	ISSUED FOR BID	2015/02/04		BWC
0	90% CONST DOCUMENT	2015/01/06		BWC

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Drawn By: CPG	Initialed
Checked By: BWC	Initialed
Approved By: MF	Initialed

Sheet Title

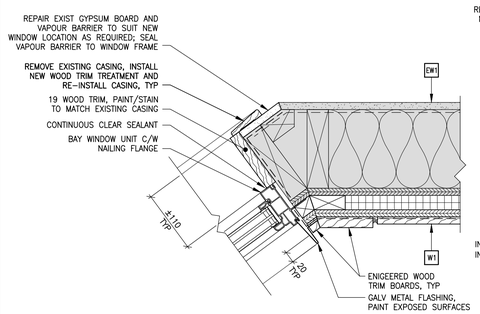
8 MOYER STREET
FISHER BRANCH, MANITOBA

Date Created: 2014/11/17	Scale: 1:100

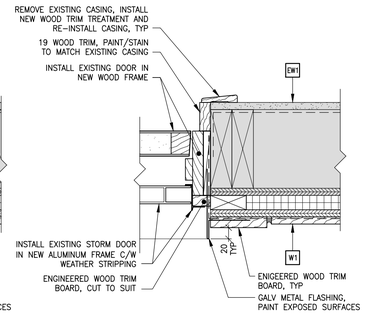
Sheet Number

A107

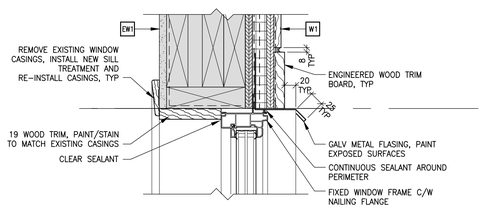
Sheet Order: XX OF XX	Project Number: 149-12549-02



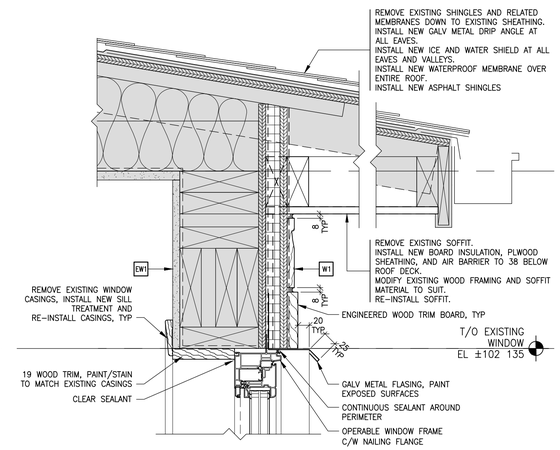
15 TYPICAL BAY WINDOW JAMB
A103 A301 1:5



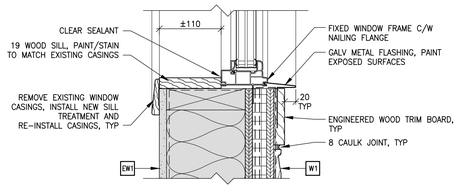
14 TYPICAL DOOR JAMB
A101 A301 1:5



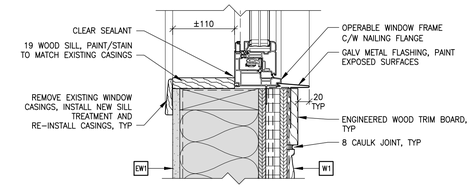
8 TYPICAL FIXED WINDOW HEAD
A101 A301 1:5



4 TYPICAL OPERABLE WINDOW HEAD
A101 A301 1:5



7 TYPICAL FIXED WINDOW SILL
A101 A301 1:5



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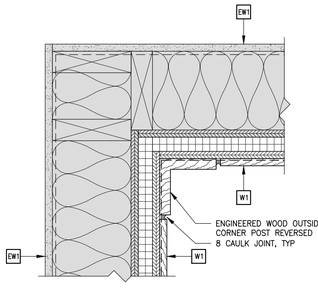
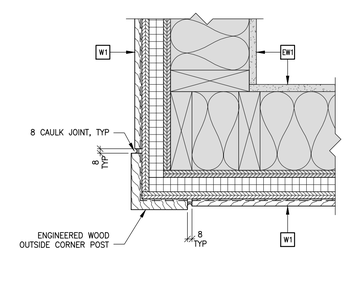
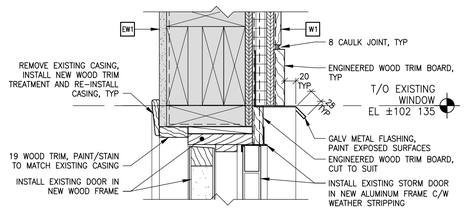
A101 A301 1:5



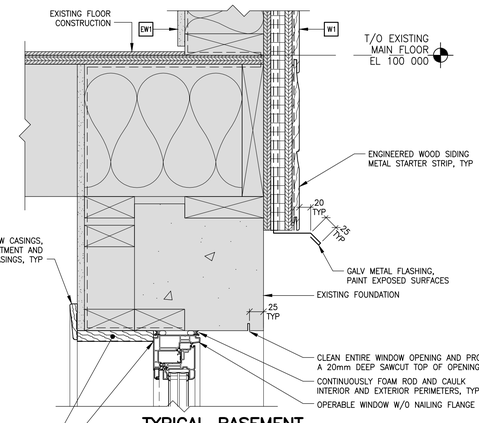
13 TYPICAL INSIDE CORNER
A103 A301 1:5



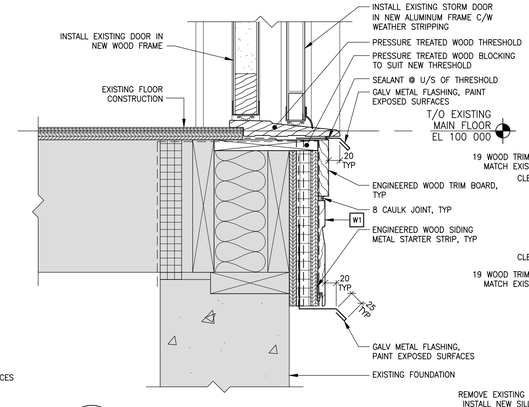
12 TYPICAL OUTSIDE CORNER
A101 A301 1:5



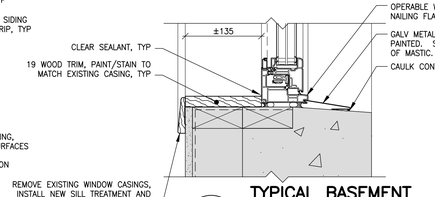
6 TYPICAL DOOR HEAD
A101 A301 1:5



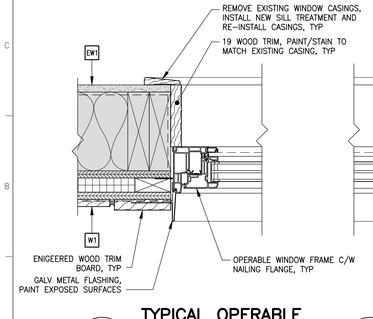
TYPICAL BASEMENT WINDOW HEAD
2 A101 A301 1:5



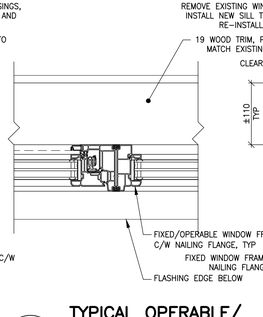
5 TYPICAL DOOR THRESHOLD
A101 A301 1:5



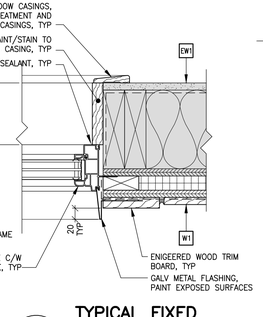
1 TYPICAL BASEMENT WINDOW SILL
A101 A301 1:5



11 TYPICAL OPERABLE WINDOW JAMB
A101 A301 1:5



10 TYPICAL OPERABLE/ FIXED VERT MULLION
A101 A301 1:5



9 TYPICAL FIXED WINDOW JAMB
A101 A301 1:5

GENERAL NOTES:

1. EXISTING CONSTRUCTION SHOWN SHADED.

W EXTERIOR ASSEMBLIES

EW1 EXISTING CONSTRUCTION:
13 GYPSUM BOARD
POLY VAPOUR BARRIER
38x140 WOOD STUDS @ 400 OC
BATT INSULATION, RSI ±3.5
13 PLYWOOD SHEATHING
AIR BARRIER MEMBRANE – TO BE REMOVED
WOOD SIDING – TO BE REMOVED

W1 NEW CONSTRUCTION:
19x64 VERT WOOD STRAPPING @ 400 OC
25 BOARD INSULATION, RSI 1.76
13 PLYWOOD SHEATHING
AIR BARRIER MEMBRANE
ENGINEERED HORIZONTAL WOOD SIDING

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SECTION AND PLAN DETAILS

Date Created: 2014/12/16	Scale: 1:5

Sheet Number

A301

Sheet Order	Project Number: 149-12549-01

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