

INVITATION TO TENDER

RETURN BIDS TO:

Bid Receiving / Agriculture and Agri-Food Canada

Agriculture and Agri-Food Canada
 Central Experimental Farm (CEF)
 K.W. Neatby Building #20 (Main Entrance)
 960 Carling Avenue, Ottawa, ON K1A 0C6
 Attn: Daniel Lafreniere
 Solocitation #20-1207

TENDER TO:

Agriculture and Agri-Food Canada

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 construction listed herein and on any attached sheets at the price(s) set out therefor.

Comments

Title		
Conference Room Renovations-Building 59, CEF, Ottawa		
Solicitation No.		Date
20-1207		2021-01-05
Client Reference No.		
CEF20 0021		
File No.		
20-1207		
Solicitation Closes:		
Wednesday, January 20, 2021, at 02:00 PM, EST.		
F.O.B		
<input type="radio"/> Plant <input checked="" type="radio"/> Destination <input type="radio"/> Other		
Address Enquiries to:		
Daniel Lafreniere		
Title:		
Senior Contracts Officer		
Email:		
daniel.lafreniere@canada.ca		
Telephone Number	Ext.	Fax Number
613 759-6876		
Destination		
Agriculture and Agri-Food Canada Central Experimental Farm (CEF) 960 Carling Ave. Ottawa ON K1A 0C6		

Instructions: See Herein

Delivery Required	Delivery Offered	
Vendor / Firm Name and Address		
Telephone Number	Ext.	Fax Number
Name and title of person authorized to sign on behalf of Vendor / Firm (type or print)		
Signature		Date

ISSUING OFFICE

Agriculture and Agri-Food Canada
 Integrated Services
 Ottawa, Ontario
 K1A 0C6

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SI01 BID DOCUMENTS

- 1) The following are the bid documents:
 - (a) INVITATION TO TENDER - Page 1 form AAFC / AAC5323-E;
 - (b) SPECIAL INSTRUCTIONS TO BIDDERS form AAFC / AAC5301-E;
 - (c) GENERAL INSTRUCTIONS TO BIDDERS form AAFC / AAC5313-E;
 - (d) Clauses and Conditions identified in "CONTRACT DOCUMENTS";
 - (e) Drawings and Specifications;
 - (f) BID AND ACCEPTANCE form AAFC / AAC5320-E and any Appendices attached thereto; 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.

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 G113 of the GENERAL INSTRUCTIONS TO BIDDERS, 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. Non-compliance with this requirement during the solicitation period can, for that reason alone, result in disqualification of a bid.

SI03 MANDATORY SITE VISIT

- 1) There will be a site visit by **appointment only** Thursday, January 14, 2021

SPECIAL INSTRUCTIONS TO BIDDERS (Continued)

Interested parties are required to register with the Contracting Authority in advance by email at: daniel.lafreniere@canada.ca

- The Contracting Authority will assign each bidder a specific time slot.
- The Departmental Representative will show the site to 1 contractor rep at a time (one-on-one).
- No questions will be answered during the site showing; all bidders' questions must be submitted to the Contracting Authority by email and will be answered by solicitation amendment/addendum following the site visit.
- Additional restrictions will include: The Bidder's representative must not have travelled internationally in the past 14 days, must not have symptoms of COVID -19, must wear a facial covering, and must respect physical distancing measures while on site.

SI04 REVISION OF BID

- 1) A bid may be revised by letter in accordance with GI09 of the GENERAL INSTRUCTIONS TO BIDDERS.

SI05 BID RESULTS

- 1) Following bid closing, bid results may be obtained from the bid receiving office by email at daniel.lafreniere@canada.ca.

SI06 INSUFFICIENT FUNDING

- 1) 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 Clause 4 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.

SPECIAL INSTRUCTIONS TO BIDDERS (Continued)

- 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 bid.
- 4) The provisions expressed herein do not in any manner limit Canada's rights in law or under GI10 of the GENERAL INSTRUCTIONS TO BIDDERS.

SI08 CONSTRUCTION DOCUMENTS

- 1) The successful contractor will be provided with one paper copy of the sealed and signed plans, 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 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§ion=text#appL>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

SI10 PERSONNEL SECURITY REQUIREMENTS

- 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 following contract security requirements:
 - Personnel who are required to perform any part of the work must EACH hold a valid personnel security screening at the level of RELIABILITY STATUS, granted or approved by Agriculture and Agri-Food Canada. Until the security screening of the personnel has been completed satisfactorily by Agriculture and Agri-Food Canada, the Contractor/Subcontractor personnel MAY NOT perform contract work. Each of the proposed staff must complete "Security Clearance Form" (TBS 330-23E) upon request from Canada.

GENERAL INSTRUCTIONS TO BIDDERS

- GI01 Completion of Bid
- GI02 Identity or Legal Capacity of the Bidder
- GI03 Applicable Taxes
- GI04 Capital Development and Redevelopment Charges
- GI05 Registry and Pre-qualification of Floating Plant
- GI06 Listing of Subcontractors and Suppliers
- GI07 Bid Security Requirements
- GI08 Submission of Bid
- GI09 Revision of Bid
- GI10 Rejection of Bid
- GI11 Bid Costs
- GI12 Compliance with Applicable Laws
- GI13 Approval of Alternative Materials
- GI14 Conflict of Interest – Unfair Advantage
- GI15 Integrity Provisions – Bid
- GI16 Code of Conduct for Procurement – Bid

GI01 COMPLETION OF BID

- 1) The bid shall be:
 - (a) submitted on the BID AND ACCEPTANCE FORM provided by AAFC with the bid package or on a clear and legible reproduced copy of such BID AND ACCEPTANCE FORM that must be identical in content and format to the BID AND ACCEPTANCE FORM provided by AAFC;
 - (b) based on the Bid Documents listed in the Special Instructions to Bidders;
 - (c) correctly completed in all respects;
 - (d) signed, with an original signature, by a duly authorized representative of the Bidder; and
 - (e) accompanied by
 - (i) bid security as specified in GI07; and
 - (ii) any other document or documents specified elsewhere in the solicitation where it is stipulated that said documents are to accompany the bid.
- 2) Subject to paragraph 6) of GI10, any alteration to the pre-printed or pre-typed sections of the Bid and Acceptance Form, or any condition or qualification placed upon the bid shall be cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the Bid and Acceptance Form by the Bidder shall be initialed by the person or persons signing the bid. Alterations, corrections, changes or erasures that are not initialed shall be deemed void and without effect.
- 3) Unless otherwise noted elsewhere in the Bid Documents, facsimile or email copies of bids are not acceptable.

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

GI02 IDENTITY OR LEGAL CAPACITY OF THE BIDDER

- 1) In order to confirm the authority of the person or persons signing the bid or to establish the legal capacity under which the Bidder proposes to enter into Contract, any Bidder who carries on business in other than its own personal name shall, if requested by Canada, provide satisfactory proof of
 - (a) such signing authority; and
 - (b) the legal capacity under which it carries on business;

prior to contract award. Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this bid on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership.

GI03 APPLICABLE TAXES

- 1) "Applicable Taxes" means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.

GI04 CAPITAL DEVELOPMENT AND REDEVELOPMENT CHARGES

- 1) For the purposes of GC1.8 LAWS, PERMITS AND TAXES in the General Conditions of the Contract, only fees or charges directly related to the processing and issuing of building permits shall be included. The Bidder shall not include any monies in the bid amount for special municipal development, redevelopment or other fees or charges which a municipal authority may seek as a prerequisite to the issuance of building permits.

GI05 REGISTRY AND PRE-QUALIFICATION OF FLOATING PLANT

- 1) Dredges or other floating plant to be used in the performance of the Work must be of Canadian registry. For dredges or other floating plant that are not of Canadian make or manufacture, the Bidder must obtain a certificate of qualification from Industry Canada and this certificate must accompany the bid. Plant so qualified by Industry Canada may be accepted on this project.

GI06 LISTING OF SUBCONTRACTORS AND SUPPLIERS

- 1) Notwithstanding any list of Subcontractors that the Bidder may be required to submit as part of the bid, the Bidder shall, within 48 hours of receipt of a notice to do so, submit all information requested in the said notice including the names of Subcontractors and Suppliers for the part or parts of the Work listed. Failure to do so shall result in the disqualification of its bid.

GI07 BID SECURITY REQUIREMENTS

- 1) The Bidder shall submit bid security with the bid in the form of a bid bond or a security deposit in an amount that is equal to not less than 10 percent of the bid amount. Applicable Taxes shall not be included when calculating the amount of any bid security that may be required. The maximum amount of bid security required with any bid is \$2,000,000.00.

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

- 2) A bid bond shall be in an approved form <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494#appS>, properly completed, with original signature(s) and issued by an approved company whose bonds are acceptable to Canada either at the time of solicitation closing or as identified in Treasury Board Appendix L: [Acceptable Bonding Companies](#).
- 3) A security deposit shall be an original, properly completed, signed where required and be either:
 - (a) a bill of exchange, bank draft or money order made payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or
 - (b) bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada;
- 4) For the purposes of subparagraph 3) (a) of GI07
 - (a) a bill of exchange is an unconditional order in writing signed by the Bidder and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a sum certain of money to, or to the order of, the Receiver General for Canada;
 - (b) if a bill of exchange, bank draft or money order is certified by or drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in subparagraph 4.c. of GI07, either by letter or by a stamped certification on the bill of exchange, bank draft or money; and
 - (c) An approved financial institution is:
 - (i) a corporation or institution that is a member of the Canadian Payments Association as defined in the [Canadian Payments Act](#);
 - (ii) a corporation that accepts deposits that are insured, to the maximum permitted by law, by the Canada Deposit Insurance Corporation or the "Autorité des marchés financiers";
 - (iii) a corporation that accepts deposits from the public if repayment of the deposit is guaranteed by Her Majesty the Queen in right of a province;
 - (iv) a corporation, association or federation incorporated or organized as a credit union or co-operative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137(6) of the [Income Tax Act](#); or
 - (v) Canada Post Corporation.
- 5) Bonds referred to in subparagraph 3)(b) of GI07 shall be provided on the basis of their market value current at the date of solicitation closing, and shall be:
 - (a) payable to bearer;
 - (b) accompanied by a duly executed instrument of transfer of the bonds to the Receiver General for Canada in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - (c) registered as to principal or as to principal and interest in the name of the Receiver General for Canada pursuant to the Domestic Bonds of Canada Regulations.

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

- 6) As an alternative to a security deposit an irrevocable standby letter of credit is acceptable to Canada and the amount shall be determined in the same manner as a security deposit referred to above.
- 7) An irrevocable standby letter of credit referred to in paragraph 6) of GI07 shall
 - (a) be an arrangement, however named or described, whereby a financial institution (the "Issuer") acting at the request and on the instructions of a customer (the "Applicant") or on its own behalf,
 - (i) is to make a payment to, or to the order of, the Receiver General for Canada as the beneficiary;
 - (ii) is to accept and pay bills of exchange drawn by the Receiver General for Canada;
 - (iii) authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or
 - (iv) authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with;
 - (b) state the face amount which may be drawn against it;
 - (c) state its expiry date;
 - (d) provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the Departmental Representative identified in the letter of credit by his/her office;
 - (e) provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
 - (f) provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision, ICC Publication No. 600; pursuant to the ICC UCP; a credit is irrevocable even if there is no indication to that effect; and
 - (g) be issued or confirmed, in either official language, by a financial institution which is a member of the Canadian Payments Association and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.
- 8) Bid security shall lapse or be returned as soon as practical following:
 - (a) the solicitation closing date, for those Bidders submitting non-compliant bids; and
 - (b) the administrative bid review, for those Bidders submitting compliant bids ranked fourth to last on the schedule of bids; and
 - (c) the award of contract, for those Bidders submitting the second and third ranked bids; and
 - (d) the receipt of contract security, for the successful Bidder; or
 - (e) the cancellation of the solicitation, for all Bidders.
- 9) Notwithstanding the provisions of paragraph 8) of GI07 and provided more than three compliant bids have been received, if one or more of the bids ranked third to first is withdrawn or rejected for whatever reason then Canada reserves the right to hold the security of the next highest ranked compliant bid in order to retain the bid security of at least three valid and compliant bids.

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

GI08 SUBMISSION OF BID

- 1) The Bid and Acceptance Form, duly completed, and the bid security shall be enclosed and sealed in an envelope provided by the Bidder, and shall be addressed and submitted to the office designated on the INVITATION TO TENDER Form for the receipt of bids. The bid must be received on or before the date and time set for solicitation closing.
- 2) Unless otherwise specified in the Special Instructions to Bidders
 - (a) the bid shall be in Canadian currency;
 - (b) exchange rate fluctuation protection is not offered; and
 - (c) any request for exchange rate fluctuation protection shall not be considered.
- 3) Prior to submitting the bid, the Bidder shall ensure that the following information is clearly printed or typed on the face of the bid envelope:
 - (a) Solicitation Number;
 - (b) Name of Bidder;
 - (c) Return address; and
 - (d) Closing Date and Time.
- 4) Timely and correct delivery of bids is the sole responsibility of the Bidder.

GI09 REVISION OF BID

- 1) A bid submitted in accordance with these instructions may be revised by letter provided the revision is received at the office designated for the receipt of bids, on or before the date and time set for the closing of the solicitation. The letter shall be on the Bidder's letterhead or bear a signature that identifies the Bidder;
- 2) A revision to a bid that includes unit prices must clearly identify the changes(s) in the unit price(s) and the specific item(s) to which each change applies.
- 3) A letter submitted to confirm an earlier revision shall be clearly identified as a confirmation.
- 4) Failure to comply with any of the above provisions shall result in the rejection of the non-compliant revision(s) only. The bid shall be evaluated based on the original bid submitted and all other compliant revision(s).

GI10 REJECTION OF BID

- 1) Canada may accept any bid, whether it is the lowest or not, or may reject any or all bids.
- 2) Without limiting the generality of paragraph 1) of GI10, Canada may reject a bid if any of the following circumstances is present:
 - (a) the Bidder, or any employee or subcontractor included as part of the bid, has been

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

convicted under Section 121 ("Frauds on the government" & "Contractor subscribing to election fund"), 124 "Selling or purchasing office"), 380 ("Fraud committed against Her Majesty") or 418 ("Selling defective stores to Her Majesty") of the Criminal Code of Canada, or under paragraph 80(1)(d) ("False entry, certificate or return"), subsection 80(2) ("Fraud against Her Majesty") or Section 154.01 ("Fraud against Her Majesty") of the *Financial Administration Act*;

- (b) the Bidder's bidding privileges are suspended or are in the process of being suspended;
 - (c) the bidding privileges of any employee or subcontractor included as part of the bid are suspended or are in the process of being suspended, which suspension or pending suspension would render that employee or subcontractor ineligible to bid on the Work, or the portion of the Work the employee or subcontractor is to perform;
 - (d) the Bidder is bankrupt, or where for whatever reason, its activities are rendered inoperable for an extended period;
 - (e) evidence, satisfactory to Canada, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Bidder, any of its employees or any subcontractor included as part of its bid;
 - (f) evidence satisfactory to Canada that based on past conduct or behavior, the Bidder, a sub-contractor or a person who is to perform the Work is unsuitable or has conducted himself/herself improperly;
 - (g) with respect to current or prior transactions with Canada
 - (i) Canada has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Bidder, any of its employees or any subcontractor included as part of its bid; or
 - (ii) Canada determines that the Bidder's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement being bid on.
- 3) In assessing the Bidder's performance on other contracts pursuant to subparagraph 2)(g)(ii) of GI10, Canada may consider, but not be limited to, such matters as:
- (a) the quality of workmanship in performing the Work;
 - (b) the timeliness of completion of the Work;
 - (c) the overall management of the Work and its effect on the level of effort demanded of the department and its representative; and
 - (d) the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
- 4) Without limiting the generality of paragraphs 1), 2) and 3) of GI10, Canada may reject any bid based on an unfavourable assessment of the:
- (a) adequacy of the bid price to permit the work to be carried out and, in the case of a bid providing prices per unit or a combination of lump sum and prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

price applies;

- (b) Bidder's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
 - (c) Bidder's performance on other contracts.
- 5) Where Canada intends to reject a bid pursuant to a provision of paragraphs 1), 2), 3) or 4) of GI10, other than subparagraph 2)(g) of IT10, the contracting authority will inform the Bidder and provide the Bidder ten (10) days within which to make representations, before making a final decision on the bid rejection.
- 6) Canada may waive informalities and minor irregularities in bids received if Canada determines that the variation of the bid from the exact requirements set out in the Bid Documents can be corrected or waived without being prejudicial to other Bidders.

GI11 BID COSTS

- 1) No payment will be made for costs incurred in the preparation and submission of a bid in response to the bid solicitation. Costs associated with preparing and submitting a bid, as well as any costs incurred by the Bidder associated with the evaluation of the bid, are the sole responsibility of the Bidder.

GI12 COMPLIANCE WITH APPLICABLE LAWS

- 1) By submission of a bid, the Bidder certifies that the Bidder has the legal capacity to enter into a contract and is in possession of all valid licences, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the bid and entry into any ensuing contract for the performance of the work.
- 2) For the purpose of validating the certification in paragraph 1) of GI12, a Bidder shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the said request.
- 3) Failure to comply with the requirements of paragraph 2) of GI12 shall result in disqualification of the bid.

GI13 APPROVAL OF ALTERNATIVE MATERIALS

- 1) When materials are specified by trade names or trademarks, or by manufacturers' or suppliers' names, the bid shall be based on use of the named materials. During the solicitation period, alternative materials may be considered provided full technical data is received in writing by the Contracting Officer at least 10 calendar days prior to the solicitation closing date.

GI14 CONFLICT OF INTEREST - UNFAIR ADVANTAGE

- 1) In order to protect the integrity of the procurement process, bidders are advised that Canada may reject a bid in the following circumstances:
- (a) if the Bidder, any of its subcontractors, any of their respective employees or former

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

employees was involved in any manner in the preparation of the bid solicitation or in any situation of conflict of interest or appearance of conflict of interest;

- (b) if the Bidder, any of its subcontractors, any of their respective employees or former employees had access to information related to the bid solicitation that was not available to other bidders and that would, in Canada's opinion, give or appear to give the Bidder an unfair advantage.
- 2) The experience acquired by a bidder who is providing or has provided the goods and services described in the bid solicitation (or similar goods or services) will not, in itself, be considered by Canada as conferring an unfair advantage or creating a conflict of interest. This bidder remains however subject to the criteria established above.
 - 3) Where Canada intends to reject a bid under this section, the Contracting Authority will inform the Bidder and provide the Bidder an opportunity to make representations before making a final decision. Bidders who are in doubt about a particular situation should contact the Contracting Authority before bid closing. By submitting a bid, the Bidder represents that it does not consider itself to be in conflict of interest nor to have an unfair advantage. The Bidder acknowledges that it is within Canada's sole discretion to determine whether a conflict of interest, unfair advantage or an appearance of conflict of interest or unfair advantage exists.

GI15 INTEGRITY PROVISIONS - BID

- 1) Ineligibility and Suspension Policy (the "Policy"), and all related Directives, are incorporated by reference into, and form a binding part of the procurement process. The Supplier must comply with the Policy and Directives, which can be found at *Ineligibility and Suspension Policy*.
- 2) Under the Policy, charges and convictions of certain offences against a Supplier, its affiliates or first tier subcontractors, and other circumstances, will or may result in a determination by Public Works and Government Services Canada (PWGSC) that the Supplier is ineligible to enter, or is suspended from entering into a contract with Canada. The list of ineligible and suspended Suppliers is contained in PWGSC's Integrity Database. The Policy describes how enquiries can be made regarding the ineligibility or suspension of Suppliers.
- 3) In addition to all other information required in the procurement process, the Supplier must provide the following:
 - a. by the time stated in the Policy, all information required by the Policy described under the heading "Information to be Provided when Bidding, Contracting or Entering into a Real Property Agreement"; and
 - b. with its bid / quote / proposal, a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier subcontractors that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy. The list of foreign criminal charges and convictions must be submitted using an Integrity Declaration Form, which can be found at [Declaration form for procurement](#).
- 4) Subject to subsection 5, by submitting a bid / quote / proposal in response a request by AAFC, the Supplier certifies that:
 - a. it has read and understands the *Ineligibility and Suspension Policy*;
 - b. it understands that certain domestic and foreign criminal charges and convictions, and

GENERAL INSTRUCTIONS TO BIDDERS (Continued)

- other circumstances, as described in the Policy, will or may result in a determination of ineligibility or suspension under the Policy;
- c. it is aware that Canada may request additional information, certifications, and validations from the Supplier or a third party for purposes of making a determination of ineligibility or suspension;
 - d. it has provided with its bid / quote / proposal a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier subcontractors that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy;
 - e. none of the domestic criminal offences, and other circumstances, described in the Policy that will or may result in a determination of ineligibility or suspension, apply to it, its affiliates and its proposed first tier subcontractors; and
 - f. it is not aware of a determination of ineligibility or suspension issued by PWGSC that applies to it.
- 5) Where a Supplier is unable to provide any of the certifications required by subsection 4, it must submit with its bid/ quote / proposal a completed Integrity Declaration Form, which can be found at [Declaration form for procurement](#).
- 6) Canada will declare non-responsive any bid / quote / proposal in respect of which the information requested is incomplete or inaccurate, or in respect of which the information contained in a certification or declaration is found by Canada to be false or misleading in any respect. If Canada establishes after award of the Contract that the Supplier provided a false or misleading certification or declaration, Canada may terminate the Contract for default. Pursuant to the Policy, Canada may also determine the Supplier to be ineligible for award of a contract for providing a false or misleading certification or declaration.

Ineligibility and Suspension Policy - <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>

Declaration form for procurement - <http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>

GI16 CODE OF CONDUCT FOR PROCUREMENT - BID

- 1) The Code of Conduct for Procurement provides that Bidders must respond to bid solicitations in an honest, fair and comprehensive manner, accurately reflect their capacity to satisfy the requirements set out in the bid solicitation and resulting contract, submit bids and enter into contracts only if they will fulfill all obligations of the Contract. By submitting a bid, the Bidder is certifying that it is complying with the Code of Conduct for Procurement. Failure to comply with the Code of Conduct for Procurement may render the bid non-responsive.

MAJOR WORKS - CONTRACT DOCUMENTS

SC01 CONTRACT DOCUMENTS

- 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) AAFC General Conditions form AAFC / AAC5321-E:
 - (i) GC1 General Provisions
 - (ii) GC2 Administration of the Contract
 - (iii) GC3 Execution and Control of the Work
 - (iv) GC4 Protective Measures
 - (v) GC5 Terms of Payment
 - (vi) GC6 Delays and Changes in the Work
 - (vii) GC7 Default, Suspension or Termination of Contract
 - (viii) GC8 Dispute Resolution
 - (ix) GC9 Contract Security
 - (x) GC10 Insurance
 - (e) Supplementary Conditions, if any;
 - (f) Insurance Terms form AAFC / AAC5315-E;
 - (g) Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - (h) Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - (i) Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
- 2) The language of the contract documents shall be the language of the Bid and Acceptance Form submitted.

SC02 ACCEPTANCE AND CONTRACT

- 1) 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 referred to in SC01 CONTRACT DOCUMENTS.



MAJOR WORKS – GENERAL CONDITIONS

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MAJOR WORKS GENERAL CONDITIONS FORM AAFC 5321:

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GC3	EXECUTION AND CONTROL OF THE WORK	2016-01-01
GC4	PROTECTIVE MEASURES	Original
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GC6	DELAYS AND CHANGES IN THE WORK	Original
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GC1 GENERAL PROVISIONS

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 - GC1.1.1 Headings and References
 - GC1.1.2 Terminology
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- GC1.19 INTERNATIONAL SANCTIONS
- GC1.20 INTEGRITY PROVISIONS – CONTRACT
- GC1.21 CODE OF CONDUCT FOR PROCUREMENT - CONTRACT

GC1.1 (2016-05-01) INTERPRETATION

GC1.1.1 Headings and References

- 1) The headings in the contract documents, other than those in the drawings and specifications, form no part of the Contract but are inserted for convenience of reference only.
- 2) A reference made to a part of the Contract by means of numbers preceded by letters is a reference to the particular part of the Contract that is identified by that combination of letters and numbers and to any other part of the Contract referred to therein.
- 3) A reference to a paragraph or subparagraph followed by an identifying number, letter or combination thereof is, unless specifically stated otherwise, a reference to the paragraph or subparagraph that forms part of the clause within which the reference is made.

GC1.1.2 Terminology

In the Contract, unless the context otherwise requires:

“Administrative Agreement”

is a negotiated agreement with the Minister of AAFC as provided for in the Ineligibility and Suspension Policy.

“Affiliate”

is a person, including, but not limited to, organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies or subsidiaries, whether partly or wholly-owned, as well as individuals, directors, officers and key employees if:

- (i) one controls or has the power to control the other, or
- (ii) a third party has the power to control both.

"Applicable Taxes"

means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013;

"Canada", "Crown", "Her Majesty"

means Her Majesty the Queen in right of Canada;

"Contract"

means the contract documents referred to as such therein and every other document specified or referred to in any of them as forming part of the Contract, all as amended by agreement of the parties;

"Contract Amount"

means the amount set out in the Contract to be payable to the Contractor for the Work, subject to the terms and conditions of the Contract, exclusive of Applicable Taxes;

"Contract Security"

means any security given by the Contractor to Canada in accordance with the Contract;

"Contractor"

means the person contracting with Canada to provide or furnish all labour, Material and Plant for the execution of the Work under the Contract, and includes the Contractor's superintendent as designated in writing to Canada.

"Certificate of Completion"

means a certificate issued by Canada when the Work reaches Completion;

"Certificate of Measurement"

means a certificate issued by Canada certifying the correctness of the final quantities, prices per unit and values of labour, Plant and Material performed, used and supplied by the Contractor for the construction of the part of the Work to which a Unit Price Arrangement applies;

"Certificate of Substantial Performance"

means a certificate issued by Canada when the Work reaches Substantial Performance;

“Control”

means:

- a) direct control, such as where:
 - (i) a person controls a body corporate if securities of the body corporate to which are attached more than 50 percent of the votes that may be cast to elect directors of the body corporate are beneficially owned by the person and the votes attached to those securities are sufficient, if exercised, to elect a majority of the directors of the body corporate;

- (ii) a person controls a corporation that is organized on a cooperative basis if the person and all of the entities controlled by the person have the right to exercise more than 50 percent of the votes that may be cast at an annual meeting or to elect the majority of the directors of the corporation;
 - (iii) a person controls an unincorporated entity, other than a limited partnership, if more than 50 percent of the ownership interests, however designated, into which the entity is divided are beneficially owned by that person and the person is able to direct the business and affairs of the entity;
 - (iv) the general partner of a limited partnership controls the limited partnership; and
 - (v) a person controls an entity if the person has any direct or indirect influence that, if exercised, would result in control in fact of the entity.
- b) deemed control, such as where:
a person who controls an entity is deemed to control any entity that is controlled, or deemed to be controlled, by the entity
- c) indirect control, such as where:
a person is deemed to control, within the meaning of paragraph (a) or (b), an entity where the aggregate of:
- (i) any securities of the entity that are beneficially owned by that person, and
 - (ii) any securities of the entity that are beneficially owned by any entity controlled by that person

is such that, if that person and all of the entities referred to in paragraph (c)(ii) that beneficially own securities of the entity were one person, that person would control the entity.

"Departmental Representative"

means the person designated in the Contract, or by written notice to the Contractor, to act as the Departmental Representative for the purposes of the Contract, and includes a person, designated and authorized in writing by the Departmental Representative to the Contractor;

"herein", "hereby", "hereof", "hereunder"

and similar expressions refer to the Contract as a whole and not to any particular section or part thereof;

"Ineligibility"

means a person not eligible to contract with Canada;

"Lump Sum Arrangement"

means that part of the Contract that prescribes a lump sum as payment for performance of the Work to which it relates;

"Material"

includes all commodities, articles, machinery, equipment, fixtures and things required to be furnished in accordance with the Contract for incorporation into the Work;

"person"

also includes, unless there is an express stipulation in the Contract to the contrary, any partnership, proprietorship, firm, joint venture, consortium or corporation;

"Plant"

includes all tools, implements, machinery, vehicles, structures, equipment, articles and things that are necessary for the performance of the Contract, other than Material and those tools customarily provided by a tradesperson in practicing a trade;

"Subcontractor"

means a person having a direct contract with the Contractor, subject to GC3.6

"Subcontracting", to perform a part or parts of the Work, or to supply Material customized for the Work;

"Superintendent"

means the employee or representative of the Contractor designated by the Contractor to act pursuant to GC2.6, "Superintendent";

"Supplementary Conditions"

means the part of the Contract that amends or supplements the General Conditions;

"Supplier"

means a person having a direct contract with the Contractor to supply Plant or Material not customized for the Work;

"Suspension"

means a determination of temporary ineligibility by the Minister of AAFC;

"Total Estimated Cost", "Revised Estimated Cost", "Increase (Decrease)"

on Page 1 of the Contract or Contract Amendment means an amount used for internal administrative purposes only that comprises the Contract Amount, or the revised Contract Amount, or the amount that would increase or decrease the Contract Amount and the Applicable Taxes as evaluated by the Contracting Authority, and does not constitute tax advice on the part of Canada;

"Unit Price Arrangement"

means that part of the Contract that prescribes the product of a price per unit of measurement multiplied by a number of units of measurement for performance of the Work to which it relates;

"Unit Price Table"

means the table of prices per unit set out in the Contract;

"Work"

means, subject only to any express stipulation in the Contract to the contrary, everything that is necessary to be done, furnished or delivered by the Contractor to perform the Contract in accordance with the contract documents; and

"Working Day"

means a day other than a Saturday, Sunday, or a statutory holiday that is observed by the construction industry in the area of the place of the Work.

GC1.1.3 Application of Certain Provisions

- 1) Any provisions of the Contract that are expressly stipulated to be applicable only to a Unit Price Arrangement are not applicable to any part of the Work to which a Lump Sum Arrangement applies.
- 2) Any provisions of the Contract that are expressly stipulated to be applicable only to a Lump Sum Arrangement are not applicable to any part of the Work to which a Unit Price Arrangement applies.

GC1.1.4 Substantial Performance

- 1) The Work shall be considered to have reached Substantial Performance when
 - a) the Work or a substantial part thereof has passed inspection and testing and is, in the opinion of Canada, ready for use by Canada or is being used for the intended purposes; and
 - b) the Work is, in the opinion of Canada, capable of completion or correction at a cost of not more than
 - (i) 3 percent of the first \$500,000;
 - (ii) 2 percent of the next \$500,000; and
 - (iii) 1 percent of the balanceof the Contract Amount at the time this cost is calculated.
- 2) Where the Work or a substantial part thereof is ready for use or is being used for the purposes intended and
 - a. the remainder of the Work or a part thereof cannot be completed by the time specified in the Contract, or as amended in accordance with GC6.5, "Delays and Extension of Time", for reasons beyond the control of the Contractor; or
 - b. Canada and the Contractor agree not to complete a part of the Work within the specified time;

the cost of that part of the Work that was either beyond the control of the Contractor to complete or Canada and the Contractor have agreed not to complete by the time specified, shall be deducted from the value of the Contract referred to in subparagraph 1)(b) of GC1.1.4 and the said cost shall not form part of the cost of the Work remaining to be done in determining Substantial Performance.

GC1.1.5 Completion

The Work shall be deemed to have reached Completion when all labour, Plant and Material required have been performed, used or supplied, and the Contractor has complied with the Contract and all orders and directions made pursuant thereto, all to the satisfaction of Canada.

GC1.2 (2016-05-01) CONTRACT DOCUMENTS

The following discusses contract documents

GC1.2.1 General

- 1) The contract documents are complementary, and what is required by any one shall be as binding as if required by all.

- 2) References in the contract documents to the singular shall be considered to include the plural as the context requires.
- 3) Nothing contained in the contract documents shall create a contractual relationship between Canada and any Subcontractor or Supplier, their subcontractors or suppliers, or their agents or employees.

GC1.2.2 Order of Precedence

- 1) In the event of any discrepancy or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:
 - a) any amendment or variation of the contract documents that is made in accordance with the General Conditions;
 - b) any amendment issued prior to tender closing;
 - c) Supplementary Conditions;
 - d) General Conditions;
 - e) the duly completed Bid and Acceptance Form when accepted;
 - f) drawings and specifications.

later dates shall govern within each of the above categories of documents.

- 2) In the event of any discrepancy or conflict in the information contained in the drawings and specifications, the following rules shall apply:
 - a) specifications shall govern over drawings;
 - b) dimensions shown in figures on a drawings shall govern where they differ from dimensions scaled from the same drawings; and
 - c) drawings of larger scale govern over those of smaller scale.

GC1.2.3 Security and Protection of Documents and Work

- 1) The Contractor shall guard and protect contract documents, drawings, information, models and copies thereof, whether supplied by Canada or the Contractor, against loss or damage from any cause.
- 2) The Contractor shall keep confidential all information provided to the Contractor by or on behalf of Canada in connection with the Work, and all information developed by the Contractor as part of the Work, and shall not disclose any such information to any person without the written permission of Canada, except that the Contractor may disclose to a subcontractor, authorized in accordance with the Contract, information necessary to the performance of a subcontract. This section does not apply to any information that
 - a) is publicly available from a source other than the Contractor; or

- b) is or becomes known to the Contractor from a source other than Canada, except any source that is known to the Contractor to be under an obligation to Canada not to disclose the **information**.
- 3) When the Contract, the Work, or any information referred to in paragraph 2) is identified as top secret, secret, confidential, or protected by Canada, the Contractor shall, at all times, take all measures reasonably necessary for the safeguarding of the material so identified, including such measures as may be further specified elsewhere in the Contract or provided, in writing, from time to time by Canada.
- 4) Without limiting the generality of paragraphs 2) and 3) of GC1.2.3, when the Contract, the Work, or any information referred to in paragraph 2) is identified as top secret, secret, confidential, or protected by Canada, Canada shall be entitled to inspect the Contractor's premises and the premises of its subcontractors or suppliers and any other person at any tier, for security purposes at any time during the term of the Contract, and the Contractor shall comply with, and ensure that any such subcontractors or suppliers comply with all written instructions issued by Canada dealing with the material so identified, including any requirement that employees of the Contractor and its subcontractors and suppliers and any other person at any tier execute and deliver declarations relating to reliability screenings, security clearances and other procedures.
- 5) The Contractor shall safeguard the Work and the Contract, the specifications, drawings and any other information provided by Canada to the Contractor, and shall be liable to Canada for any loss or damage from any causes.

GC1.3 STATUS OF THE CONTRACTOR

- 1) The Contractor is engaged under the Contract as an independent contractor.
- 2) The Contractor, its subcontractors and suppliers and any other person at any tier and their employees are not engaged by the Contract as employees, servants or agents of Canada.
- 3) For the purposes of the contract the Contractor shall be solely responsible for any and all payments and deductions required to be made by law including those required for Canada or Quebec Pension Plans, Employment Insurance, Worker's Compensation, provincial health or insurance plans, and Income Tax.

GC1.4 (2016-05-01) RIGHTS AND REMEDIES

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

GC1.5 (2016-05-01) TIME OF THE ESSENCE

- 1) Time is of the essence of the Contract.

GC1.6 INDEMNIFICATION BY THE CONTRACTOR

- 1) The Contractor shall pay all royalties and patent fees required for the performance of the Contract and, at the Contractor's expense, shall defend all claims, actions or proceedings

against Canada charging or claiming that the Work or any part thereof provided or furnished by the Contractor to Canada infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.

- 2) The Contractor shall indemnify and save Canada harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by, or attributable to the activities of the Contractor, its subcontractors and suppliers and any other person at any tier, in performing the Work.
- 3) For the purposes of paragraph 2) of GC1.6, "activities" means any act improperly carried out, any omission to carry out an act and any delay in carrying out an act.

GC1.7 (2016-05-01) INDEMNIFICATION BY CANADA

- 1) Subject to the Crown Liability and Proceedings Act, the Patent Act, and any other law that affects Canada's rights, powers, privileges or obligations, Canada shall indemnify and save the Contractor harmless from and against all claims, demands, losses, costs, damage, actions, suits or proceedings arising out of the Contractor's activities under the Contract that are directly attributable to
 - a) a lack of or a defect in Canada's title to the Work site if owned by Canada, whether real or alleged; or
 - b) an infringement or an alleged infringement by the Contractor of any patent of invention or any other kind of intellectual property occurring while the Contractor was performing any act for the purposes of the Contract employing a model, plan or design or any other thing related to the Work that was supplied by Canada to the Contractor.

GC1.8 (2016-05-01) LAWS, PERMITS AND TAXES

- 1) The Contractor shall comply with all federal, provincial and municipal laws and regulations applicable to the performance of the Work or any part thereof including, without limitation, all laws concerning health and the protection of the environment, and shall require compliance therewith by all of its subcontractors and suppliers at any tier as if the Work were being performed for an owner other than Canada. The Contractor shall furnish evidence of compliance with such laws and regulations to Canada at such times as Canada may reasonably request.
- 2) Unless stipulated otherwise in the Contract, the Contractor shall obtain and maintain all permits, certificates, licences, registrations and authorizations required for the lawful performance of the Work.
- 3) Prior to the commencement of the Work at the site, the Contractor shall tender to a municipal authority an amount equal to all fees and charges that would be lawfully payable to that municipal authority in respect of building permits as if the Work were being performed for an owner other than Canada.
- 4) Within 10 days of making a tender pursuant to paragraph 3) of GC1.8, the Contractor shall notify Canada of the amount properly tendered and whether or not the municipal authority has accepted that amount.

- 5) If the municipal authority has not accepted the amount tendered, the Contractor shall pay that amount to Canada within 6 days after the time stipulated in paragraph 4) of GC1.8.
- 6) For the purposes of this clause, "municipal authority" means any authority that would have jurisdiction respecting permission to perform the Work if the owner were not Canada.
- 7) Notwithstanding the residency of the Contractor, the Contractor shall pay any applicable tax arising from or related to the performance of the Work under the Contract.
- 8) In accordance with the Statutory Declaration referred to in paragraph 4) of GC5.5, "Substantial Performance of the Work", a Contractor who has neither residence nor place of business in the province or territory in which work under the Contract is being performed shall provide Canada with proof of registration with the provincial sales tax authorities in the said province.
- 9) For the purpose of the payment of any Applicable Taxes or the furnishing of security for the payment of any Applicable Taxes arising from or related to the performance of the Work, and notwithstanding the provision that all Material, Plant and interest of the Contractor in all real property, licences, powers and privileges, become the property of Canada after the time of purchase in accordance with GC3.10, "Material Plant and Real Property Become Property of Canada", the Contractor shall be liable, as a user or consumer, for the payment or for the furnishing of security for the payment of any Applicable Taxes payable, at the time of the use or consumption of that Material, Plant or interest of the Contractor in accordance with the relevant legislation.
- 10) Federal government departments and agencies are required to pay Applicable Taxes.
- 11) Applicable Taxes will be paid by Canada as provided in the request for payment. It is the sole responsibility of the Contractor to charge Applicable Taxes at the correct rate in accordance with applicable legislation. The Contractor agrees to remit to appropriate tax authorities any amounts of Applicable Taxes paid or due.
- 12) The Contractor is not entitled to use Canada's exemptions from any tax, such as provincial sales taxes, unless otherwise specified by law. The Contractor must pay applicable provincial sales tax, ancillary taxes, and any commodity tax, on taxable goods or services used or consumed in the performance of the Contract (in accordance with applicable legislation), including for material incorporated into real property.
- 13) In those cases where Applicable Taxes, customs duties, and excise taxes are included in the Contract Amount, the Contract Amount will be adjusted to reflect any increase, or decrease, of Applicable Taxes, customs duties, and excise taxes that will have occurred between bid submission and contract award. However, there will be no adjustment for any change to increase the Contract Amount if public notice of the change was given before bid submission date in sufficient detail to have permitted the Contractor to calculate the effect of the change.
- 14) Tax Withholding of 15 Percent – Canada Revenue Agency
Pursuant to the *Income Tax Act*, 1985, c. 1 (5th Supp.) and the *Income Tax Regulations*, Canada must withhold 15 percent of the amount to be paid to the Contractor in respect of services provided in Canada if the Contractor is not a resident of Canada, unless the Contractor obtains a valid waiver from the Canada Revenue Agency. The amount withheld will be held on account for the Contractor in respect to any tax liability which may be owed to Canada.

GC1.9 WORKERS' COMPENSATION

- 1) Prior to commencement of Work, at the time of Substantial Performance of the Work, and prior to issuance of the Certificate of Completion, the Contractor shall provide evidence of compliance with workers' compensation legislation applicable to the place of the Work, including payments due thereunder.
- 2) At any time during the term of the Contract, when requested by Canada, the Contractor shall provide such evidence of compliance by the Contractor, its subcontractors and any other person at any tier and any other person performing part of the Work who is required to comply with such legislation.

GC1.10 NATIONAL SECURITY

- 1) If Canada determines that the Work is of a class or kind that involves national security, Canada may order the Contractor to
 - (a) provide Canada with any information concerning persons employed or to be employed by the Contractor for purposes of the Contract; and
 - (b) remove any person from the site of the Work if, in the opinion of Canada, that person may be a risk to the national security;and the Contractor shall comply with the order.
- 2) In all contracts with persons who are to be employed in the performance of the Contract, the Contractor shall make provision for the performance of any obligation that may be imposed upon the Contractor under paragraph 1) of GC1.10.

GC1.11 (2016-05-01) UNSUITABLE WORKERS

- 1) Canada shall instruct the Contractor to remove from the site of the Work any person employed by the Contractor for purposes of the Contract who, in the opinion of Canada, is incompetent or is guilty of improper conduct, and the Contractor shall not permit a person who has been removed to return to the site of the Work.

GC1.12 PUBLIC CEREMONIES AND SIGNS

- 1) The Contractor shall not permit any public ceremony in connection with the Work without the prior consent of Canada.
- 2) The Contractor shall not erect nor permit the erection of any sign or advertising on the Work or its site without the prior consent of Canada.

GC1.13 (2016-05-01) CONFLICT OF INTEREST

- 1) It is a term of the Contract that no individual, for whom the post-employment provisions of the Conflict of Interest and Post-Employment Code for Public Office Holders or the Values and Ethics Code for the Public Service apply, shall derive a direct benefit from the Contract unless that individual is in compliance with the applicable post-employment provisions.

GC1.14 AGREEMENTS AND AMENDMENTS

- 1) The Contract constitutes the entire and sole agreement between the parties with respect to the subject matter of the Contract and supersedes all previous negotiations, communications and other agreements, whether written or oral, relating to it, unless they are incorporated by reference in the Contract. There are no terms, covenants, representations, statements or conditions binding on the parties other than those contained in the Contract.
- 2) The failure of either party at any time to require performance by the other party of any provision hereof shall not affect the right thereafter to enforce such provision. Nor shall the waiver by either party of any breach of any covenant, term or condition hereof be taken to be held to be a waiver of any further breach of the same covenant, term or condition.
- 3) The Contract may be amended only as provided for in the Contract.

GC1.15 (2016-05-01) SUCCESSION

- 1) The Contract shall inure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and, subject to GC1.16, "Assignment", permitted assigns.

GC1.16 (2016-05-01) ASSIGNMENT

- 1) The Contractor shall not make any assignment of the Contract, either in whole or in part, without the written consent of Canada.

GC1.17 (2016-05-01) NO BRIBE

- 1) The Contractor represents and covenants that no bribe, gift, benefit, nor other inducement has been nor shall be paid, given, promised or offered directly or indirectly to any official or employee of Canada or to a member of the family of such a person, with a view to influencing the entry into the Contract or the administration of the Contract.

GC1.18 CERTIFICATION - CONTINGENCY FEES

- 1) In this clause
 - (a) "contingency fee" means any payment or other compensation that is contingent upon or is calculated upon the basis of a degree of success in soliciting or obtaining a Government contract or negotiating the whole or any part of its terms;
 - (b) "employee" means a person with whom the Contractor has an employer/employee relationship; and
 - (c) "person" includes an individual or a group of individuals, a corporation, a partnership, an organization and an association and, without restricting the generality of the foregoing, includes any individual who is required to file a return with the registrar pursuant to section 5 of the Lobbying Act R.S.C. 1985 c.44 (4th Supplement) as the same may be amended from time to time.
- 2) The Contractor certifies that it has not directly or indirectly paid nor agreed to pay and covenants that it shall not directly or indirectly pay nor agree to pay a contingency fee for the solicitation, negotiation or obtaining of the Contract to any person other than an employee acting in the normal course of the employee's duties.

- 3) All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the Contract shall be subject to the accounts and audit provisions of the Contract.
- 4) If the Contractor certifies falsely under this section or is in default of the obligations contained therein, Canada may either take the Work out of the Contractor's hands in accordance with the provisions of the Contract or recover from the Contractor by way of reduction to the Contract Amount or otherwise, the full amount of the contingency fee.

GC1.19 INTERNATIONAL SANCTIONS

- 1) Persons and companies in Canada, and Canadians outside of Canada are bound by economic sanctions imposed by Canada. As a result, the Government of Canada cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries or persons subject to **economic sanctions** (<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>)
- 2) It is a condition of the Contract that the Contractor not supply to the Government of Canada any goods or services which are subject to economic sanctions.
- 3) By law, the Contractor must comply with changes to the regulations imposed during the life of the Contract. During the performance of the Contract should the imposition of sanctions against a country or person or the addition of a good or service to the list of sanctioned goods or services cause an impossibility of performance for the Contractor, the Contractor may request that the Contract be terminated in accordance with GC7.3 TERMINATION OF CONTRACT.

GC1.20 (2016-05-01) INTEGRITY PROVISIONS – CONTRACT

- 1) The Ineligibility and Suspension Policy (the "Policy") and all related Directives are incorporated into, and form a binding part of the Contract. The Contractor must comply with the provisions of the Policy and Directives, which can be found on Public Works and Government Services Canada's website at Ineligibility and Suspension Policy. (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>).

GC1.21 (2016-05-01) CODE OF CONDUCT FOR PROCUREMENT - CONTRACT

- 1) The Contractor agrees to comply with the Code of Conduct (<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>) for Procurement and to be bound by its terms for the period of the Contract.

GC2 ADMINISTRATION OF THE CONTRACT

- GC2.1 DEPARTMENTAL REPRESENTATIVE'S AUTHORITY
- GC2.2 INTERPRETATION OF CONTRACT
- GC2.3 NOTICES
- GC2.4 SITE MEETINGS
- GC2.5 REVIEW AND INSPECTION OF WORK
- GC2.6 SUPERINTENDENT
- GC2.7 NON-DISCRIMINATION IN HIRING AND EMPLOYMENT OF LABOUR
- GC2.8 ACCOUNTS AND AUDITS

GC2.1 (2016-05-01) DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

"Technical Authority" shall be recognized as the Departmental representative and designated at time of award of contract and shall perform the following:

- a) **is responsible for all matters concerning the technical content of the work under the contract;**
- b) **authorized to issue notices, instructions, and changes within the scope of the Work, relevant to the contract.**
- c) **accept on behalf of Canada any notice, order or other communication from the contractor relating to the Work**
- d) **within a reasonable time, review and respond to submissions made by the Contractor in accordance with the requirements of the Contract**

The technical authority has no authority to authorize changes to the Contract terms and conditions of the Contract.

"Contracting Authority" shall be recognized as the authority delegated by the Minister of AAFC to enter into contracts, amend the contracts and is responsible for all matters concerning and interpretation of the terms and conditions of the Contract.

The contracting authority is responsible for the management of the Contract and any changes to the Contract terms **and conditions must be authorized in writing by the Contracting Authority.**

GC2.2 INTERPRETATION OF CONTRACT

- 1) If, at any time before Canada has issued a Certificate of Completion, any question arises between the parties about whether anything has been done as required by the Contract or about what the Contractor is required by the Contract to do, and in particular but without limiting the generality of the foregoing, about
 - (a) the meaning of anything in the drawings and specifications;
 - (b) the meaning to be given to the drawings and specifications in case of any error therein, omission therefrom, or obscurity or discrepancy in their wording or intention;

- (c) whether or not the quality or quantity of any Material or workmanship supplied or proposed to be supplied by the Contractor meets the requirements of the Contract;
- (d) whether or not the labour, Plant or Material performed, used and supplied by the Contractor for performing the Work and carrying out the Contract are adequate to ensure that the Work shall be performed in accordance with the Contract and that the Contract shall be carried out in accordance with its terms;
- (e) what quantity of any of the Work has been completed by the Contractor; or
- (f) the timing and scheduling of the various phases of the performance of the Work as specified in the Contract;

the question shall be decided, subject to the provisions of GC8 DISPUTE RESOLUTION, by Canada.

- 2) The Contractor shall perform the Work in accordance with any decisions of Canada that are made under paragraph 1) of GC2.2 and in accordance with any consequential directions given by Canada.
- 3) If the Contractor fails to comply with any instruction or direction issued by Canada pursuant to the Contract, Canada may employ such methods as Canada deems advisable to do what the Contractor failed to do, and the Contractor shall, on demand, pay Canada an amount that is equal to the aggregate of all costs, expenses and damages incurred or sustained by Canada by reason of the Contractor's failure to comply with such instruction or direction, including the cost of any methods employed by Canada in doing what the Contractor failed to do.

GC2.3 NOTICES

- 1) Subject to paragraph 3) of GC2.3, any notice, order or other communication may be given in any manner, and if required to be in writing, shall be addressed to the party to whom it is intended at the address in the Contract or at the last address of which the sender has received written notice in accordance with this section.
- 2) Any notice, order or other communication given in writing in accordance with paragraph 1) of GC2.3 shall be deemed to have been received by either party
 - (a) if delivered personally, on the day that it was delivered;
 - (b) if forwarded by mail, on the earlier of the day it was received or the sixth day after it was mailed; and
 - (c) if forwarded by facsimile or electronic mail, 24 hours after it was transmitted.
- 3) A notice given under GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS, GC7.2 SUSPENSION OF WORK, and GC7.3 TERMINATION OF CONTRACT shall be given in writing and, if delivered personally, shall be delivered, if the Contractor is a sole proprietor, to the Contractor or, if the Contractor is a partnership or corporation, to an officer thereof.

GC2.4 (2016-05-01) SITE MEETINGS

- 1) In consultation with Canada, the Contractor shall arrange site meetings at regular intervals, with all involved parties who are to attend, in order to ensure, among other things, the proper co-ordination of the Work.

GC2.5 REVIEW AND INSPECTION OF WORK

- 1) Canada shall review the Work to determine if it is proceeding in conformity with the Contract and to record the necessary data to make an assessment of the value of Work completed. Canada shall measure and record the quantities of labour, Plant and Material performed, used or supplied by the Contractor in performing the Work or any part thereof that is subject to a Unit Price Arrangement and, on request, shall inform the Contractor of those measurements, and permit the Contractor to inspect any records pertaining thereto.
- 2) Canada shall reject Work or Material which in Canada's opinion does not conform to the requirements of the Contract, and shall require inspection or testing of Work, whether or not such Work is fabricated, installed, or completed. If such Work is not in accordance with the requirements of the Contract, the Contractor shall correct the Work and shall pay Canada, on demand, all reasonable costs and expenses that were incurred by Canada in having the examination performed.
- 3) The Contractor shall provide Canada with access to the Work and its site at all times, and at all times shall provide sufficient, safe, and proper facilities for the review and inspection of the Work by persons authorized by Canada and any representatives of those authorities having jurisdiction. If parts of the Work are in preparation at locations other than the site of the Work, Canada shall be given access to such Work whenever it is in progress.
- 4) The Contractor shall furnish Canada with such information respecting the performance of the Contract as Canada may require, and render every possible assistance to enable Canada to verify that the Work is performed in accordance with the Contract, carry out any other duties and exercise any powers in accordance with the Contract.
- 5) If Work is designated for tests, inspections, or approvals in the Contract or by Canada's instructions, or by laws or ordinances of the place of the Work, the Contractor shall give Canada reasonable notice of when such Work shall be ready for review and inspection. The Contractor shall arrange for and shall give Canada reasonable notice of the date and time of inspections, tests or approvals.
- 6) If the Contractor covers, or permits to be covered, Work that has been designated for tests, inspections or approvals before such tests, inspections or approvals are made, completed or given, the Contractor shall, if so directed by Canada, uncover such Work, have the inspections, tests or approvals satisfactorily made, completed or given and make good the covering of the Work at the Contractor's expense.

GC2.6 SUPERINTENDENT

- 1) Prior to commencing the Work, the Contractor shall designate a Superintendent and shall notify Canada of the name, address and telephone number of the Superintendent. The Contractor shall keep the Superintendent at the Work site during working hours until the Work has reached completion.
- 2) The Superintendent shall be in full charge of the operations of the Contractor during the performance of the Work and shall be authorized to accept on behalf of the Contractor any notice, order or other communication given to the Superintendent or the Contractor relating to the Work.

- 3) Upon request of Canada, the Contractor shall remove any Superintendent who, in the opinion of Canada, is incompetent or has been guilty of improper conduct, and shall forthwith designate another Superintendent who is acceptable to Canada.
- 4) The Contractor shall not substitute a Superintendent without the written consent of Canada. If a Superintendent is substituted without such consent, Canada shall be entitled to refuse to issue any documentation or certification relating to progress payments, Substantial Performance or Completion of the Work until the Superintendent has returned to the Work site or another Superintendent who is acceptable to Canada has been substituted.

GC2.7 (2016-05-01) NON-DISCRIMINATION IN HIRING AND EMPLOYMENT OF LABOUR

- 1) For the purposes of this clause, "persons" include the Contractor, its subcontractors and suppliers at any tier and their respective employees, agents, licensees or invitees and any other individual involved in the performance of the Work or granted access to the Work site. A "person" includes any partnership, proprietorship, firm, joint venture, consortium and corporation.
- 2) Without restricting the provisions of paragraph 3) of GC2.6, "Superintendent", the Contractor shall not refuse to employ and shall not discriminate in any manner against any person because
 - a) of that person's race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status;
 - b) of the race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status of any person having a relationship or association with that person, or
 - c) a complaint has been made or information has been given in respect of that person relating to an alleged failure by the Contractor to comply with subparagraph (a) or (b).
- 3) Within two working days immediately following receipt of a written complaint pursuant to paragraph 2) of GC2.7, the Contractor shall
 - a) cause to have issued a written direction to the person or persons named by the complainant to cease all actions that form the basis of the complaint;
 - b) forward a copy of the complaint to Canada by registered mail or courier service.
- 4) Within 24 hours immediately following receipt of a direction from Canada to do so, the Contractor shall cause to have removed from the site of the Work and from the performance of Work under the Contract, any person or persons whom Canada believes to be in breach of the provisions of paragraph 2) of GC2.7.
- 5) No later than 30 days after receipt of the direction referred to in paragraph 4) of GC2.7, the Contractor shall cause the necessary action to be commenced to remedy the breach described in the direction.
- 6) If a direction is issued pursuant to paragraph 4) of GC2.7, Canada may withhold from monies that are due and payable to the Contractor or setoff pursuant to GC5.9, "Right of Setoff", whichever is applicable, an amount representing the sum of the costs and payment referred to in paragraph 8) of GC2.7.

- 7) If the Contractor fails to proceed in accordance with paragraph 5) of GC2.7, Canada shall take the necessary action to have the breach remedied, and shall determine all supplementary costs incurred by Canada as a result.
- 8) Canada may make a payment directly to the complainant from monies that are due and payable to the Contractor upon receipt from the complainant of
 - a) a written award issued pursuant to the federal **Commercial Arbitration Act**, R.S. 1985, c. 17 (2nd Supp.);
 - b) a written award issued pursuant to the **Canadian Human Rights Act**, R.S. 1985, c. H-6;
 - c) a written award issued pursuant to provincial or territorial human rights legislation; or
 - d) a judgement issued by a court of competent jurisdiction.
- 9) If Canada is of the opinion that the Contractor has breached any of the provisions of this clause, Canada may take the Work out of the Contractor's hands pursuant to GC7.1, "Taking the Work out of the Contractor's Hands".
- 10) Subject to paragraph 7) of GC3.6, "Subcontracting", the Contractor shall ensure that the provisions of this clause are included in all agreements and contracts entered into as a consequence of the Work.

GC2.8 (2016-05-01) ACCOUNTS AND AUDITS

- 1) The Contractor shall, in addition to the requirements expressed in paragraph 6) of GC3.4, "Execution of the Work", maintain full records of the Contractor's estimated and actual cost of the Work together with all tender calls, quotations, contracts, correspondence, invoices, receipts and vouchers relating thereto, and shall make them available on request to audit and inspection by Canada and the Deputy Receiver General for Canada or by persons designated to act on behalf of either or both of them.
- 2) The Contractor shall allow any of the persons referred to in paragraph 1) of GC2.8 to make copies of and take extracts from any of the records and material, and shall furnish such persons or entities with any information those persons or entities may require from time to time in connection with such records and material.
- 3) The Contractor shall maintain and keep the records intact until the expiration of six (6) years after the date that a Certificate of Completion has been issued or until the expiration of such other period of time as Canada may direct.
- 4) The Contractor shall cause all subcontractors at any tier and all other persons directly or indirectly controlled by or affiliated with the Contractor and all persons directly or indirectly having control of the Contractor to comply with the requirements of this clause as if they were the Contractor.

GC3 EXECUTION AND CONTROL OF THE WORK

- GC3.1 PROGRESS SCHEDULE
- GC3.2 ERRORS AND OMISSIONS
- GC3.3 CONSTRUCTION SAFETY
- GC3.4 EXECUTION OF THE WORK
- GC3.5 MATERIAL
- GC3.6 SUBCONTRACTING
- GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS
- GC3.8 LABOUR
- GC3.9 TRUCK HAULAGE RATES (CANCELLED)
- GC3.10 MATERIAL, PLANT AND REAL PROPERTY BECOME PROPERTY OF CANADA
- GC3.11 DEFECTIVE WORK
- GC3.12 CLEANUP OF SITE
- GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

GC3.1 (2016-05-01) PROGRESS SCHEDULE

The Contractor shall

- a) prepare and submit to Canada, prior to the submission of the Contractor's first progress claim, a progress schedule in accordance with the requirements set out in the Contract;
- b) monitor the progress of the Work relative to the schedule and update the schedule as stipulated by the contract documents;
- c) advise Canada of any revisions to the schedule required as the result of any extension of time for completion of the Contract that was approved by Canada; and
- d) prepare and submit to Canada, at the time of issuance of a Certificate of Substantial Performance, an update of any schedule clearly showing a detailed timetable that is acceptable to Canada for the completion of any unfinished Work and the correction of all listed defects.

GC3.2 (2016-05-01) ERRORS AND OMISSIONS

- 1) The Contractor shall report promptly to Canada any errors, discrepancies, or omissions the Contractor may discover when reviewing the contract documents. In making a review, the Contractor does not assume any responsibility to Canada for the accuracy of the review. The Contractor shall not be liable for damage or costs resulting from such errors, discrepancies, or omissions in the contract documents prepared by or on behalf of Canada that the Contractor did not discover.

GC3.3 CONSTRUCTION SAFETY

- 1) Subject to GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS, the Contractor shall be solely responsible for construction safety at the place of the Work and for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work. In any emergency, the Contractor shall either stop the Work,

make changes or order extra work to ensure the safety of life and the protection of the Work and neighbouring property.

- 2) Prior to commencing the Work, the Contractor shall notify the authorities having jurisdiction for construction safety at the site of the Work with respect to the intended commencement of the Work, and shall provide such authority with whatever additional information may be required by that authority.

GC3.4 EXECUTION OF THE WORK

- 1) The Contractor shall perform, use or supply and pay for, all labour, Plant, Material, tools, construction machinery and equipment, water, heat, light, power, transportation and other facilities and services necessary for the performance of the Work in accordance with the Contract.
- 2) The Contractor shall, at all times, perform the Work in a proper, diligent and expeditious manner as is consistent with construction industry standards and in accordance with the progress schedule prepared pursuant to GC3.1 PROGRESS SCHEDULE and shall provide sufficient personnel to fulfil the Contractor's obligations in accordance with that schedule.
- 3) Subject to paragraph 4) of GC3.4, the Contractor shall have complete care, custody and control of the Work and shall direct and supervise the Work so as to ensure compliance with the Contract. The Contractor shall be responsible for construction means, methods, techniques, sequences and procedures and for co-ordinating the various parts of the Work.
- 4) When requested in writing by Canada, the Contractor shall make appropriate alterations in the method, Plant or workforce at any time Canada considers the Contractor's actions to be unsafe or damaging to either the Work, existing facilities, persons at the site of the Work or the environment.
- 5) The Contractor shall have sole responsibility for the design, erection, operation, maintenance and removal of temporary structures and other temporary facilities and for the construction methods used in their erection, operation, maintenance and removal. The Contractor shall engage and pay for registered professional engineering personnel, skilled in the appropriate discipline to perform these functions if required by law or by the Contract, and in all cases when such temporary facilities and their methods of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results.
- 6) The Contractor shall keep at least one copy of current contract documents, submittals, reports, and records of meetings at the site of the Work, in good order and available to Canada.
- 7) Except for any part of the Work that is necessarily performed away from or off the site of the Work, the Contractor shall confine Plant, storage of Material, and operations of employees to limits indicated by laws, ordinances, permits or the contract documents.

GC3.5 MATERIAL

- 1) Unless otherwise specified in the Contract, all Material incorporated in the Work shall be new.
- 2) Subject to paragraph 3) of GC3.5, if a specified reused, refurbished, or recycled item of Material is not available, the Contractor shall apply to Canada to substitute a similar item for the one specified.

- 3) If Canada agrees that the Contractor's application for substitution of a reused, refurbished or recycled item is warranted, and that the substitute item is of acceptable quality and value to that specified and is suitable for the intended purpose, Canada may approve the substitution, subject to the following:
 - (a) the request for substitution shall be made in writing to Canada and shall be substantiated by information in the form of the manufacturer's literature, samples and other data that may be required by Canada;
 - (b) the Contractor shall make the request for substitution in a manner that shall not negatively affect the progress schedule of the Contract and well in advance of the time the item of Material must be ordered;
 - (c) substitution of Material shall be permitted only with the prior written approval of Canada, and any substituted items that are supplied or installed without such approval shall be removed from the site of the Work at the expense of the Contractor, and specified items installed at no additional cost to Canada; and
 - (d) the Contractor shall be responsible for all additional expenses incurred by Canada, the Contractor, its subcontractors and suppliers at any tier due to the Contractor's use of the substitute.

GC3.6 SUBCONTRACTING

- 1) Subject to the provisions of this clause, the Contractor may subcontract any part of the Work but not the whole of the Work.
- 2) The Contractor shall notify Canada in writing of the Contractor's intention to subcontract.
- 3) A notification referred to in paragraph 2) of GC3.6 shall identify the part of the Work and the Subcontractor with whom the Contractor intends to subcontract.
- 4) Canada may for reasonable cause, object to the intended subcontracting by notifying the Contractor in writing within six (6) days of receipt by Canada of a notification referred to in paragraph 2) of GC3.6.
- 5) If Canada objects to a subcontracting, the Contractor shall not enter into the intended subcontract.
- 6) The Contractor shall not change, nor permit to be changed, a Subcontractor engaged by the Contractor, in accordance with this clause, without the written consent of Canada.
- 7) The Contractor shall ensure that all the terms and conditions of the Contract that are of general application shall be incorporated in every other contract issued as a consequence of the Contract, at whatever tier, except those contracts issued solely to suppliers at any tier for the supply of Plant or Material.
- 8) Neither a subcontracting nor Canada's consent to a subcontracting shall be construed to relieve the Contractor from any obligation under the Contract or to impose any liability upon Canada.

GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS

- 1) Canada reserves the right to send other contractors or workers, with or without Plant and Material, onto the site of the Work.
- 2) When other contractors or workers are sent on to the site of the Work, Canada shall
 - (a) enter into separate contracts, to the extent it is possible, with the other contractors under conditions of contract that are compatible with the conditions of the Contract;
 - (b) ensure that the insurance coverage provided by the other contractors is co-ordinated with the insurance coverage of the Contractor as it affects the Work; and
 - (c) take all reasonable precautions to avoid labour disputes or other disputes arising from the work of the other contractors or workers.
- 3) When other contractors or workers are sent on to the site of the Work, the Contractor shall
 - (a) co-operate with them in the carrying out of their duties and obligations;
 - (b) co-ordinate and schedule the Work with the work of the other contractors and workers;
 - (c) participate with other contractors and workers in reviewing their construction schedules when directed to do so;
 - (d) where part of the Work is affected by or depends upon the work of other contractors or workers for its proper execution, promptly report to Canada in writing and prior to proceeding with that part of the Work, any apparent deficiencies in such work. Failure by the Contractor to so report shall invalidate any claims against Canada by reason of the deficiencies in the work of other contractors or workers except those deficiencies that are not then reasonably discoverable; and
 - (e) when designated as being responsible for construction safety at the place of work in accordance with the applicable provincial or territorial laws, carry out its duties in that role and in accordance with those laws.
- 4) If, when entering into the Contract, the Contractor could not have reasonably foreseen nor anticipated the sending of other contractors or workers on to the site of the Work and provided the Contractor
 - (a) incurs extra expense in complying with the requirements of paragraph 3) of GC3.7; and
 - (b) gives Canada written notice of a claim for that extra expense within thirty (30) days of the date that the other contractors or workers were sent onto the Work or its site;

Canada shall pay the Contractor the cost of the extra labour, Plant and Material that was necessarily incurred, calculated in accordance with GC6.4 DETERMINATION OF PRICE.

GC3.8 LABOUR

- 1) To the extent to which they are available, consistent with proper economy and the expeditious carrying out of the Work, the Contractor shall, in the performance of the Work, employ a reasonable number of persons who have been on active service with the Armed Forces of Canada and have been honourably discharged therefrom.

- 2) The Contractor shall maintain good order and discipline among the Contractor's employees and workers engaged in the Work and shall not employ on the site of the Work anyone not skilled in the tasks assigned.

GC3.9 TRUCK HAULAGE RATES

CANCELLED

GC3.10 MATERIAL, PLANT AND REAL PROPERTY BECOME PROPERTY OF CANADA

- 1) Subject to paragraph 9) of GC1.8 LAWS PERMITS AND TAXES, all Material and Plant and the interest of the Contractor in all real property, licences, powers and privileges purchased, used or consumed by the Contractor for the Work shall, immediately after the time of their purchase, use or consumption be the property of Canada for the purposes of the Work and they shall continue to be the property of Canada
 - (a) in the case of Material, until Canada indicates that the Materials shall not be required for the Work; and
 - (b) in the case of Plant, real property, licences, powers and privileges, until Canada indicates that the interest vested in Canada therein is no longer required for the purposes of the Work.
- 2) Material or Plant, that is the property of Canada by virtue of paragraph 1) of GC3.10, shall not be taken away from the site of the Work nor used nor disposed of except for the purposes of the Work without the written consent of Canada.
- 3) Canada is not liable for loss of nor damage from any cause to the Material or Plant referred to in paragraph 1) of GC3.10, and the Contractor is liable for such loss or damage notwithstanding that the Material or Plant is the property of Canada.

GC3.11 DEFECTIVE WORK

- 1) The Contractor shall promptly remove from the site of the Work and replace or re-execute defective Work whether or not the defective Work has been incorporated in the Work and whether or not the defect is the result of poor workmanship, use of defective Material, or damage through carelessness or other act or omission of the Contractor.
- 2) The Contractor, at the Contractor's expense, shall promptly make good other work destroyed or damaged by such removals or replacements.
- 3) If, in the opinion of Canada, it is not expedient to correct defective Work or Work not performed as provided for in the Contract documents, Canada may deduct from the amount otherwise due to the Contractor the difference in value between the Work as performed and that called for by the contract documents.
- 4) The failure of Canada to reject any defective Work or Material shall not constitute acceptance of the defective Work or Material.

GC3.12 CLEANUP OF SITE

- 1) The Contractor shall maintain the Work and its site in a tidy condition and free from an accumulation of waste material and debris.
- 2) Before the issue of a Certificate of Substantial Performance, the Contractor shall remove waste material and debris, and all Plant and Material not required for the performance of the remaining Work and, unless otherwise stipulated in the Contract Documents, shall cause the Work and its site to be clean and suitable for occupancy by Canada.
- 3) Before the issue of a Certificate of Completion, the Contractor shall remove all surplus Plant and Materials and any waste products and debris from the site of the Work.
- 4) The Contractor's obligations described in paragraphs 1) to 3) of GC3.12 do not extend to waste products and other debris caused by Canada's servants, or by other contractors and workers referred to in GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS.

GC3.13 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

- 1) Without restricting any warranty or guarantee implied or imposed by law or contained in the Contract, the Contractor shall, at the Contractor's expense
 - (a) rectify and make good any defect or fault that appears in the Work or comes to the attention of Canada with respect to those parts of the Work accepted in connection with the Certificate of Substantial Performance within 12 months from the date of Substantial Performance; and
 - (b) rectify and make good any defect or fault that appears in or comes to the attention of Canada in connection with those parts of the Work described in the Certificate of Substantial Performance within 12 months from the date of the Certificate of Completion.
 - (c) transfer and assign, to Canada, any subcontractor, manufacturer or supplier extended warranties or guarantees implied or imposed by law or contained in the Contract covering periods beyond the 12 months stipulated above. Extended warranties or guarantees referred to herein shall not extend the 12-month period whereby the Contractor, except as may be provided elsewhere in the Contract, must rectify and make good any defect or fault that appears in the Work or comes to the attention of Canada.
 - (d) provide, to Canada prior to the issuance of the Certificate of Completion, a list of all extended warranties and guarantees referred to in paragraph (c) above.
- 2) Canada may direct the Contractor to rectify and make good any defect or fault referred to in paragraph 1) of GC3.13 or covered by any other expressed or implied warranty or guarantee and the Contractor shall rectify and make good such defect within the time stipulated in the direction.
- 3) A direction referred to in paragraph 2) GC3.13 shall be in writing and shall be given to the Contractor in accordance with GC2.3 NOTICES.

GC4 PROTECTIVE MEASURES

GC4.1 PROTECTION OF WORK AND PROPERTY

GC4.2 PRECAUTIONS AGAINST DAMAGE, INFRINGEMENT OF RIGHTS, FIRE AND OTHER HAZARDS

GC4.3 MATERIAL, PLANT AND REAL PROPERTY SUPPLIED BY CANADA

GC4.4 CONTAMINATED SITE CONDITIONS

GC4.1 PROTECTION OF WORK AND PROPERTY

- 1) The Contractor shall protect the Work and its site against loss or damage from any cause and shall similarly protect all Material, Plant and real property under the Contractor's care, custody and control whether or not such Material, Plant and real property are supplied by Canada to the Contractor.
- 2) The Contractor shall provide all facilities necessary for the purpose of maintaining security, and shall assist any person authorized by Canada to inspect or to take security measures in respect of the Work and its site.
- 3) Canada may direct the Contractor to do such things and to perform such work as Canada considers reasonable and necessary to ensure compliance with or to remedy a breach of paragraphs 1) or 2) of GC4.1, and the Contractor, shall comply with such direction.

GC4.2 PRECAUTIONS AGAINST DAMAGE, INFRINGEMENT OF RIGHTS, FIRE AND OTHER HAZARDS

- 1) The Contractor shall do whatever is necessary to ensure that
 - (a) no person, property, right, easement nor privilege is injured, damaged or infringed upon by reasons of the Contractor's activities in performing the Work;
 - (b) pedestrian and other traffic on any public or private road or waterway is not unduly impeded, interrupted nor endangered by the performance or existence of the Work, Material or Plant;
 - (c) fire hazards in or about the site of the Work are eliminated and any fire is promptly extinguished;
 - (d) the health and safety of all persons employed in the performance of the Work is not endangered by the methods nor means of their performance;
 - (e) adequate medical services are available to all persons employed on the Work or its site at all times during the performance of the Work;
 - (f) adequate sanitation measures are taken in respect of the Work and its site; and
 - (g) all stakes, buoys and marks placed on the Work or its site by Canada are protected and are not removed, defaced, altered nor destroyed.
- 2) Canada may direct the Contractor to do such things and to perform such work as Canada considers reasonable and necessary to ensure compliance with or to remedy a breach of paragraph 1) of GC4.2, and the Contractor shall comply with the direction of Canada.

GC4.3 MATERIAL, PLANT AND REAL PROPERTY SUPPLIED BY CANADA

- 1) Subject to paragraph 2) of GC4.3, the Contractor is liable to Canada for any loss of or damage to Material, Plant or real property that is supplied or placed in the care, custody and control of the Contractor by Canada for use in connection with the Contract, whether or not that loss or damage is attributable to causes beyond the Contractor's control.
- 2) The Contractor is not liable to Canada for any loss or damage to Material, Plant or real property referred to in paragraph 1) of GC4.3 if that loss or damage results from and is directly attributable to reasonable wear and tear.
- 3) The Contractor shall not use any Material, Plant or real property supplied by Canada except for the purpose of performing the Contract.
- 4) When the Contractor fails to make good any loss or damage for which the Contractor is liable under paragraph 1) within a reasonable time, Canada may cause the loss or damage to be made good at the Contractor's expense, and the Contractor shall thereupon be liable to Canada for the cost thereof and shall, on demand, pay to Canada an amount equal to that cost.
- 5) The Contractor shall keep records of all Material, Plant and real property supplied by Canada as Canada requires and shall satisfy Canada, when requested, that such Material, Plant and real property are at the place and in the condition in which they ought to be.

GC4.4 CONTAMINATED SITE CONDITIONS

- 1) For the purposes of GC4.4, a contaminated site condition exists when a solid, liquid, gaseous, thermal or radioactive irritant or contaminant, or other hazardous or toxic substance or material, including moulds and other forms of fungi, is present at the site of the Work to an extent that constitutes a hazard, or potential hazard, to the environment, property, or the health or safety of any person.
- 2) If the Contractor encounters a contaminated site condition of which the Contractor is not aware or about which the Contractor has not been advised, or if the Contractor has reasonable grounds to believe that such a site condition exists at the site of the Work, the Contractor shall
 - (a) take all reasonable steps, including stopping the Work, to ensure that no person suffers injury, sickness or death, and that neither property nor the environment is injured or destroyed as a result of the contaminated site condition;
 - (b) immediately notify Canada of the circumstances in writing; and
 - (c) take all reasonable steps to minimize additional costs that may accrue as a result of any work stoppage.
- 3) Upon receipt of a notification from the Contractor, Canada shall promptly determine whether a contaminated site condition exists, and shall notify the Contractor in writing of any action to be taken, or work to be performed, by the Contractor as a result of Canada's determination.
- 4) If the Contractor's services are required by Canada, the Contractor shall follow the direction of Canada with regard to any excavation, treatment, removal and disposal of any polluting substance or material.

- 5) Canada, at Canada's sole discretion, may enlist the services of experts and specialty contractors to assist in determining the existence of, and the extent and treatment of contaminated site conditions, and the Contractor shall allow them access and co-operate with them in the carrying out of their duties and obligations.
- 6) Except as may be otherwise provided for in the Contract, the provisions of GC6.4 DETERMINATION OF PRICE shall apply to any additional work made necessary because of a contaminated site condition.

GC5 TERMS OF PAYMENT

- GC5.1 INTERPRETATION
- GC5.2 AMOUNT PAYABLE
- GC5.3 INCREASED OR DECREASED COSTS
- GC5.4 PROGRESS PAYMENT
- GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK
- GC5.6 FINAL COMPLETION
- GC5.7 PAYMENT NOT BINDING ON CANADA
- GC5.8 CLAIMS AND OBLIGATIONS
- GC5.9 RIGHT OF SETOFF
- GC5.10 ASSESSMENTS AND DAMAGES FOR LATE COMPLETION
- GC5.11 DELAY IN MAKING PAYMENT
- GC5.12 INTEREST ON SETTLED CLAIMS
- GC5.13 RETURN OF SECURITY DEPOSIT

GC5.1 INTERPRETATION

In these Terms of Payment

- 1) The "payment period" means a period of 30 consecutive days or such other longer period as may be agreed between the Contractor and Canada.
- 2) An amount is "due and payable" when it is due and payable by Canada to the Contractor according to GC5.4 PROGRESS PAYMENT, GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK or GC5.6 FINAL COMPLETION.
- 3) An amount is "overdue" when it remains unpaid on the first day following the day upon which it is due and payable.
- 4) The "date of payment" means the date of the negotiable instrument of an amount due and payable by the Receiver General for Canada.
- 5) The "Bank Rate" means the rate of interest established by the Bank of Canada as the minimum rate at which it makes short term advances to members of the Canadian Payments Association.
- 6) The "Average Bank Rate" means the simple arithmetic mean of the Bank Rate in effect at 4:00 p.m. Eastern Time each day during the calendar month which immediately precedes the calendar month in which payment is made.

GC5.2 AMOUNT PAYABLE

- 1) Subject to any other provisions of the Contract, Canada shall pay the Contractor, at the times and in the manner hereinafter set out, the amount by which the amounts payable by Canada to the Contractor in accordance with the Contract exceed the amounts payable by the Contractor to Canada, and the Contractor shall accept that amount as payment in full satisfaction for everything furnished and done by the Contractor in respect of the Work to which the payment relates.
- 2) When making any payment to the Contractor, the failure of Canada to deduct an amount payable to Canada by the Contractor shall not constitute a waiver of the right to do so, or an admission of lack of entitlement to do so in any subsequent payment to the Contractor.

- 3) Should any payment be made by Canada in excess of what is owed to the Contractor for the actual work performed, the Contractor will reimburse Canada the excess immediately, with or without demand, and any amounts outstanding shall bear simple interest at the Average Bank rate plus 3 percent per annum from the date of overpayment until the day prior to the date of repayment by the Contractor.
- 4) No payment other than a payment that is expressly stipulated in the Contract shall be made by Canada to the Contractor for any extra expense or any loss or damage incurred or sustained by the Contractor.

GC5.3 (2016-05-01) INCREASED OR DECREASED COSTS

1. The Contract Amount shall not be increased nor decreased by reason of any increase or decrease in the cost of the Work that is brought about by an increase or decrease in the cost of labour, Plant, Material or any wage adjustment.
2. Notwithstanding paragraph 1) of GC5.3, if any change, including a new imposition or repeal, of any tax, customs or other duty, charge, or any similar imposition that is imposed under sales, customs or excise tax legislation of the Government of Canada or any Provincial or Territorial legislation, affects the cost of the Work to the Contractor, and occurs
 - a) after the date of submission by the Contractor of its bid; or
 - b) after the date of submission of the last revision, if the Contractor's bid was revised;
 - c) the Contract Amount shall be adjusted in the manner provided in paragraph 3) of GC5.3.
3. If a change referred to in paragraph 2) of GC5.3 occurs, the Contract Amount shall be increased or decreased by an amount established by an examination by Canada of the relevant records of the Contractor referred to in GC2.8, "Accounts and Audits", to be the increase or decrease in the cost incurred by the Contractor that is directly attributable to that change.
4. For the purpose of paragraph 2) of GC5.3, if a tax is changed after the tender closing, but public notice of the change has been given by the Minister of Finance or the corresponding Provincial or Territorial authority before that closing, the change shall be deemed to have occurred before the solicitation closing.
5. Notwithstanding paragraphs 2) to 4) of GC5.3, no adjustment to the Contract Amount in respect of the Work or a part thereof shall be made for a change in any imposition referred to in this section that occurs after the date required by the Contract for completion of the Work or that part of the Work.

GC5.4 (2016-05-01) PROGRESS PAYMENT

- 1) On the expiration of a payment period, the Contractor shall deliver to Canada
 - a) a written progress claim in a form acceptable to Canada that fully describes any part of the Work that has been completed, and any Material that was delivered to the Work site but not incorporated into the Work, during that payment period, and

- b) a completed and signed statutory declaration containing a declaration that, up to the date of the progress claim, the Contractor has complied with all lawful obligations and that, in respect of the Work, all lawful obligations of the Contractor to its Subcontractors and Suppliers, referred to collectively in the declaration as "subcontractors and suppliers", have been fully discharged.
- 2) Within 10 days of receipt of a progress claim and statutory declaration from the Contractor, Canada shall inspect, or cause to have inspected, the part of the Work and the Material described in the progress claim, and shall issue a progress report to the Contractor, that indicates the value of the part of the Work and the Material described in the progress claim that, in the opinion of Canada
- a) is in accordance with the Contract; and
 - b) was not included in any other progress report relating to the Contract.
- 3) Subject to GC5.2, "Amount Payable", and paragraph 5) of GC5.4, Canada shall pay the Contractor an amount that is equal to
- a) 95 percent of the value that is indicated in Canada's progress report if a labour and material payment bond has been furnished by the Contractor; or
 - b) 90 percent of the value that is indicated in Canada's progress report if a labour and material payment bond has not been furnished by the Contractor.
- 4) Canada shall pay the amount referred to in paragraph 3) of GC5.4 not later than
- a) 30 days after receipt by Canada of both a progress claim and a statutory declaration referred to in paragraph 1) of GC5.4; or
 - b) 15 days after receipt by Canada of the Contractor's progress schedule or updated progress schedule, in accordance with GC3.1, "Progress Schedule",
- whichever is later.
- 5) In the case of the Contractor's first progress claim, it is a condition precedent to Canada's obligation under paragraph 3) of GC5.4 that the Contractor has provided all necessary documentation required by the Contract for the first progress claim.

GC5.5 (2016-05-01) SUBSTANTIAL PERFORMANCE OF THE WORK

1. If, at any time before the issuance of a Certificate of Completion, Canada determines that the Work has reached Substantial Performance as described in subparagraph 1) (b) of GC1.1.4, "Substantial Performance", Canada shall issue a Certificate of Substantial Performance to the Contractor. The Certificate of Substantial Performance shall state or describe
- a) the date of Substantial Performance;
 - b) the parts of the Work not completed to the satisfaction of Canada; and
 - c) all things that must be done by the Contractor before a Certificate of Completion is issued and before the 12-month warranty period referred to in GC3.13, "Warranty and Rectification of Defects in Work", commences for the said parts and all the said things.

2. The issuance of a Certificate of Substantial Performance does not relieve the Contractor from the Contractor's obligations under GC3.11, "Defective Work".
3. Subject to GC5.2, "Amount Payable", and paragraph 4) of GC5.5, Canada shall pay the Contractor the amount referred to in paragraph 1) of GC5.2, "Amount Payable", less the aggregate of
 - a) the sum of all payments that were made pursuant to GC5.4, "Progress Payment";
 - b) an amount that is equal to Canada's estimate of the cost to Canada of rectifying defects described in the Certificate of Substantial Performance; and
 - c) an amount that is equal to Canada's estimate of the cost to Canada of completing the parts of the Work described in the Certificate of Substantial Performance other than defects listed therein.
4. Canada shall pay the amount referred to in paragraph 3) of GC5.5 not later than
 - a) 30 days after the date of issue of a Certificate of Substantial Performance, or
 - b) 15 days after the Contractor has delivered to Canada
 - I. a statutory declaration containing a declaration by the Contractor that up to the date of the Certificate of Substantial Performance, the Contractor has complied with all lawful obligations, discharged all its lawful obligations to its Subcontractors and Suppliers in respect of the work under the Contract, and discharged its lawful obligations referred to in GC1.8, "Laws, Permits and Taxes";
 - II. evidence of compliance with workers' compensation legislation in accordance with GC1.9, "Workers' Compensation"; and
 - III. an update of the progress schedule in accordance with the requirements of GC3.1, "Progress Schedule"; whichever is later.

GC5.6 FINAL COMPLETION

- 1) When Canada is of the opinion that the Contractor has complied with the Contract and all orders and directions made pursuant thereto, and that the Work has been completed as described in GC1.1.5 COMPLETION, Canada shall issue a Certificate of Completion to the Contractor and, if the Work or a portion of the Work is subject to a Unit Price Arrangement, Canada shall issue a Certificate of Measurement that shall, subject to GC8, be binding upon and conclusive between Canada and the Contractor as to the quantities referred to therein.
- 2) Subject to GC5.2 AMOUNT PAYABLE and paragraph 3) of GC5.6, Canada shall pay the Contractor the amount referred to in GC5.2 AMOUNT PAYABLE, less the aggregate of the sum of all payments that were made pursuant to GC5.4 PROGRESS PAYMENT and GC5.5 SUBSTANTIAL PERFORMANCE OF WORK.
- 3) Canada shall pay the amount referred to in paragraph 2) of GC5.6 not later than
 - a) 60 days after the date of issue of a Certificate of Completion; or
 - b) 15 days after the Contractor has delivered to Canada

- (i) a statutory declaration which contains a declaration by the Contractor that all of the Contractor's lawful obligations and any lawful claims against the Contractor that arose out of the performance of the Contract have been discharged and satisfied; and
- (ii) evidence of compliance with workers' compensation legislation in accordance with GC1.9 WORKERS' COMPENSATION;

whichever is later.

GC5.7 (2016-05-01) PAYMENT NOT BINDING ON CANADA

- 1) Neither acceptance of a progress claim or progress report, nor any payment made by Canada under the Contract, nor partial or entire use or occupancy of the Work by Canada shall constitute an acceptance by Canada of any portion of the Work or Material that is not in accordance with the requirements of the Contract.

GC5.8 CLAIMS AND OBLIGATIONS

- 1) The Contractor shall discharge all the Contractor's lawful obligations and shall satisfy all lawful claims against the Contractor arising out of the performance of the Work at least as often as the Contract requires Canada to pay the Contractor.
- 2) Whenever requested to do so by Canada, the Contractor shall make a statutory declaration declaring to the existence and condition of any obligations and claims against the Contractor arising out of the performance of the Work.
- 3) In order to discharge lawful obligations of and satisfy lawful claims against the Contractor or its Subcontractors arising out of the performance of the Contract, Canada may pay an amount that is due and payable to the Contractor directly to the claimant. Such payment is, to the extent of the payment, a discharge of Canada's liability to the Contractor under the Contract and may be deducted from any amount payable to the Contractor under the Contract.
- 4) For the purposes of paragraph 3) of GC5.8, and subject to paragraph 6) of GC5.8, a claim or obligation shall be considered lawful when it is so determined by
 - (a) a court of legal jurisdiction;
 - (b) an arbitrator duly appointed to arbitrate the claim; or
 - (c) the written consent of the Contractor authorizing payment of the claim or obligation.
- 5) If a claim or obligation would have been subject to the provisions of Provincial or Territorial lien legislation or, in the Province of Quebec, the law relating to legal hypothecs had the Contractor been performing the Work for an entity other than Canada
 - (a) such amount as may be paid by Canada pursuant to paragraphs 3) and 4) of GC5.8 shall not exceed the amount that the Contractor would have been obliged to pay had the provisions of such legislation or law been applicable to the Work;
 - (b) a claimant need not comply with the provisions of such legislation, setting out the steps by way of notice, registration or otherwise as might have been necessary to preserve or perfect any claim for lien or privilege which the claimant might have had; and

- (c) for the purposes of determining the entitlement of a claimant, the notice required by paragraph 8) of GC5.8 shall be deemed to replace the registration or provision of notice after the performance of work as required by any applicable legislation and no claim shall be deemed to have expired, become void or unenforceable by reason of the claimant not commencing any action within the time prescribed by such legislation.
- 6) The Contractor shall, at the request of any claimant, submit to binding arbitration those questions that need to be answered to establish the entitlement of the claimant to payment. The arbitration shall have as parties to it any Subcontractor or Supplier to whom the claimant supplied Material, performed work or rented equipment should such Subcontractor or Supplier wish to be adjoined, and Canada shall not be a party to such arbitration. Subject to any agreement between the Contractor and the claimant, the arbitration shall be conducted in accordance with the governing Provincial or Territorial legislation applicable to the site of the Work.
- 7) Paragraph 3) of GC5.8 shall apply only to claims and obligations
 - (a) the notification of which has set forth the amount claimed to be owing and the person who by contract is primarily liable and has been received by Canada in writing before final payment is made to the Contractor pursuant to GC5.6 FINAL COMPLETION, and within 120 days of the date on which the claimant
 - (i) should have been paid in full under the claimant's contract with the Contractor, its Subcontractor or Supplier if the claim is for money that was lawfully required to be held back from the claimant; or
 - (ii) performed the last of the services, work or labour, or furnished the last of the Material pursuant to the claimant's contract with the Contractor or its Subcontractor or Supplier where the claim is for money not lawfully required to be held back from the claimant; and
 - (b) the proceedings to determine the right to payment of which, pursuant to paragraph 5) of GC5.8, shall have commenced within one year from the date that the notification required by subparagraph 7)(a) of GC5.8 was received by Canada.
- 8) Upon receipt of a notice of claim, Canada may withhold, from any amount that is due and payable to the Contractor pursuant to the Contract, the full amount of the claim or any portion thereof.
- 9) Canada shall notify the Contractor in writing in a timely manner of receipt of any claim and of the intention of Canada to withhold funds. At any time thereafter and until payment is made to the claimant, the Contractor may be entitled to post, with Canada, security in a form acceptable to Canada in an amount equal to the value of the claim, and upon receipt of such security Canada shall release to the Contractor any funds that would be otherwise payable to the Contractor, that were withheld pursuant to the provisions of this clause in respect of the claim of any claimant for whom the security stands.

GC5.9 RIGHT OF SETOFF

- 1) Without limiting any right of setoff or deduction given or implied by law or elsewhere in the Contract, Canada may set off any amount payable to Canada by the Contractor under the Contract, or under any current contract, against any amount payable to the Contractor under the Contract.

- 2) For the purposes of paragraph 1) of GC5.9, "current contract" means a contract between Canada and the Contractor
 - (a) under which the Contractor has an undischarged obligation to perform or supply work, labour or material; or
 - (b) in respect of which Canada has, since the date of the Contract, exercised any right to take the work that is the subject of that contract out of the Contractor's hands.

GC5.10 ASSESSMENTS AND DAMAGES FOR LATE COMPLETION

- 1) For the purposes of this clause
 - (a) the Work shall be deemed to be completed on the date of the Certificate of Completion; and
 - (b) the "period of delay" means the number of days commencing on the day fixed for completion of the Work and ending on the day immediately preceding the day on which the Work is completed but does not include any day within a period of extension granted pursuant to GC6.5 DELAYS AND EXTENSION OF TIME and any other day on which, in the opinion of Canada, completion of the Work was delayed for reasons beyond the control of the Contractor.
- 2) If the Contractor does not complete the Work by the day fixed for its completion but completes it thereafter, the Contractor shall pay Canada an amount equal to the aggregate of
 - (a) all salaries, wages and travelling expenses incurred by Canada in respect of persons overseeing the performance of the Work during the period of delay;
 - (b) the cost incurred by Canada as a result of the inability to use the completed Work for the period of delay; and
 - (c) all other expenses and damages incurred or sustained by Canada during the period of delay as a result of the Work not being completed by the day fixed for its completion.
- 3) Canada may waive the right of Canada to the whole or any part of the amount payable by the Contractor pursuant to paragraph 2) of GC5.10 if, in the opinion of Canada, it is in the public interest to do so.

GC5.11 DELAY IN MAKING PAYMENT

- 1) Notwithstanding GC1.5 TIME OF THE ESSENCE, any delay by Canada in making any payment when it is due pursuant to GC5 TERMS OF PAYMENT, shall not be a breach of the Contract by Canada.
- 2) Subject to paragraph 3) of GC5.11, Canada shall pay to the Contractor simple interest at the Average Bank Rate plus 3 percent per annum on any amount that is overdue pursuant to paragraph 3) of GC5.1 INTERPRETATION, and the interest shall apply from and include the day such amount became overdue until the day prior to the date of payment.
- 3) Interest shall be paid without demand by the Contractor except that

- (a) in respect of amounts that are less than 15 days overdue, no interest shall be paid in respect of payment made within such 15 days unless the Contractor so demands after such amounts have become due and payable; and
- (b) interest shall not be payable or paid on overdue advance payments, if any.

GC5.12 INTEREST ON SETTLED CLAIMS

- 1) For the purposes of this clause, a claim means a disputed amount subject to negotiation between Canada and the Contractor under the Contract.
- 2) A claim is deemed to have been settled when an agreement in writing is signed by Canada and the Contractor setting out the amount of the claim to be paid by Canada and the items of work for which the said amount is to be paid.
- 3) A settled claim is deemed to be outstanding from the day immediately following the date the said claim would have been due and payable under the Contract had it not been disputed.
- 4) Canada shall pay to the Contractor simple interest on the amount of a settled claim at the Average Bank Rate plus 3 percent per annum from the date the settled claim was deemed to be outstanding until the day prior to the date of payment.

GC5.13 RETURN OF SECURITY DEPOSIT

- 1) After a Certificate of Substantial Performance has been issued, and if the Contractor is not in breach of nor in default under the Contract, Canada shall return to the Contractor all or any part of a Security Deposit that, in the opinion of Canada, is not required for the purposes of the Contract.
- 2) After a Certificate of Completion has been issued, Canada shall return to the Contractor the remainder of any security deposit unless the Contract stipulates otherwise.
- 3) If the security deposit was paid into the Consolidated Revenue Fund of Canada, Canada shall pay interest thereon to the Contractor at a rate established pursuant to section 21(2) of the Financial Administration Act (FAA).

GC6 DELAYS AND CHANGES IN THE WORK

- GC6.1 CHANGES IN THE WORK
- GC6.2 CHANGES IN SUBSURFACE CONDITIONS
- GC6.3 HUMAN REMAINS, ARCHAEOLOGICAL REMAINS AND ITEMS OF HISTORICAL OR SCIENTIFIC INTEREST
- GC6.4 DETERMINATION OF PRICE
 - GC6.4.1 Price Determination Prior to Undertaking Changes
 - GC6.4.2 Price Determination Following Completion of Changes
 - GC6.4.3 Price Determination - Variations in Tendered Quantities
- GC6.5 DELAYS AND EXTENSION OF TIME

GC6.1 CHANGES IN THE WORK

- 1) At any time before issuance of a Certificate of Completion, Canada may issue orders for additions, deletions or other changes to the Work, or changes in the location or position of the whole or any part of the Work, if the addition, deletion, change or other revision is deemed by Canada to be consistent with the general intent of the Contract.
- 2) An order referred to in paragraph 1) of GC6.1 shall be in writing and given to the Contractor in accordance with GC2.3 NOTICES.
- 3) Upon receipt of an order, the Contractor shall promptly perform the work in accordance with the order as if the order had appeared in and been part of the original Contract.
- 4) If anything done or omitted by the Contractor pursuant to an order increases or decreases the cost of the Work to the Contractor, payment for the work shall be made in accordance with GC6.4 DETERMINATION OF PRICE.

GC6.2 CHANGES IN SUBSURFACE CONDITIONS

- 1) If, during the performance of the Work, the Contractor encounters subsurface conditions that are substantially different from the subsurface conditions described in the tender documents supplied to the Contractor, or a reasonable assumption of fact based thereon, the Contractor shall give notice to Canada immediately upon becoming aware of the situation.
- 2) If the Contractor is of the opinion that the Contractor may incur or sustain any extra expense or any loss or damage that is directly attributable to the changed subsurface conditions, the Contractor shall within 10 days of the date the changed subsurface conditions were encountered, give Canada written notice of intention to claim for that extra expense, loss or damage.
- 3) If the Contractor has given a notice referred to in paragraph 2) of GC6.2, the Contractor shall give Canada a written claim for extra expense, loss or damage no later than 30 days after the date that a Certificate of Substantial Performance is issued.
- 4) A written claim referred to in paragraph 3) of GC6.2 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified, and the Contractor shall supply such further and other information for that purpose as Canada requires.
- 5) If Canada determines that a claim referred to in paragraph 3) of GC6.2 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4 DETERMINATION OF PRICE.

- 6) If, in the opinion of Canada, the Contractor effects a saving of expenditure that is directly attributable to a substantial difference between the information relating to subsurface conditions at the site of the Work that is contained in the tender documents, or a reasonable assumption of fact based thereon, and the actual subsurface conditions encountered by the Contractor, the Contract Amount shall be reduced by the amount of the saving of expenditure determined in accordance with GC6.4 DETERMINATION OF PRICE.
- 7) If the Contractor fails to give a notice referred to in paragraph 2) of GC6.2 and a claim referred to in paragraph 3) of GC6.2 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.
- 8) Canada does not warrant the content expressed in any subsurface report available for the perusal of the Contractor that does not form part of the tender and contract documents.

GC6.3 HUMAN REMAINS, ARCHAEOLOGICAL REMAINS AND ITEMS OF HISTORICAL OR SCIENTIFIC INTEREST

- 1) For the purposes of this clause
 - (a) "human remains" means the whole or any part of a deceased human being, irrespective of the time of death;
 - (b) "archaeological remains" are items, artefacts or things made, modified or used by human beings in antiquity and may include, but not be limited to, stone, wood or iron structures or monuments, dump deposits, bone artefacts, weapons, tools, coins, and pottery; and
 - (c) "items of historical or scientific interest" are naturally occurring or manufactured objects or things of any age that are not archaeological remains but may be of interest to society because of their historical or scientific significance, value, rarity, natural beauty, or other quality.
- 2) If, during the course of the Work, the Contractor encounters any object, item or thing which is described in paragraph 1) of GC6.3 or which resembles any object, item or thing described in paragraph 1) of GC6.3, the Contractor shall
 - (a) take all reasonable steps, including stopping work in the affected area, to protect and preserve the object, item or thing;
 - (b) immediately notify Canada of the circumstances in writing; and
 - (c) take all reasonable steps to minimize additional costs that may accrue as a result of any work stoppage.
- 3) Upon receipt of a notification in accordance with subparagraph 2)(b) of GC6.3, Canada shall promptly determine whether the object, item or thing is one described in, or contemplated by paragraph 1) of GC6.3, and shall notify the Contractor in writing of any action to be performed, or work to be carried out, by the Contractor as a result of Canada's determination.
- 4) Canada may, at any time, enlist the services of experts to assist in the investigation, examination, taking of measurements or other such recordings, placing of permanent protection around or removing of the object, item or thing encountered by the Contractor, and the Contractor shall, to the satisfaction of Canada, allow them access and co-operate with them in the carrying out of their duties and obligations.

- 5) Human remains, archaeological remains and items of historical or scientific interest encountered at the site of the Work shall be deemed to be the property of Canada.
- 6) Except as may be otherwise provided for in the Contract, the provisions of GC6.4 DETERMINATION OF PRICE and GC6.5 DELAYS AND EXTENSION OF TIME shall apply.

GC6.4 DETERMINATION OF PRICE

GC6.4.1 Price Determination Prior to Undertaking Changes

- 1) If a Lump Sum Arrangement applies to the Contract or a part thereof, the price of any change shall be the aggregate estimated cost of labour, Plant and Material that is required for the change as agreed upon in writing by the Contractor and Canada plus a negotiated allowance for supervision, co-ordination, administration, overhead, margin and the risk of undertaking the work within the stipulated amount.
- 2) If a Unit Price Arrangement applies to the Contract or a part thereof, the Contractor and Canada may, by agreement in writing, add items, units of measurement, estimated quantities and prices per unit to the Unit Price Table.
- 3) A price per unit referred to in paragraph 2) of GC6.4.1 shall be determined on the basis of the aggregate estimated cost of labour, Plant and Material that is required for the additional item as agreed upon by the Contractor and Canada, plus a negotiated allowance.
- 4) To facilitate approval of the price of the change or the additional price per unit as applicable, the Contractor shall submit a cost estimate breakdown identifying, as a minimum, the estimated cost of labour, Plant, Material, each subcontract amount, and the amount of the negotiated allowance.
- 5) If no agreement is reached as contemplated in paragraph 1) of GC6.4.1, the price shall be determined in accordance with GC6.4.2.
- 6) If no agreement is reached, as contemplated in paragraphs 2) and 3) of GC6.4.1, Canada shall determine the class and the unit of measurement of the item of labour, Plant or Material and the price per unit shall be determined in accordance with GC6.4.2.

GC6.4.2 Price Determination Following Completion of Changes

- 1) If it is not possible to predetermine, or if there is failure to agree upon the price of a change in the Work, the price of the change shall be equal to the aggregate of
 - (a) all reasonable and proper amounts actually expended or legally payable by the Contractor in respect of the labour, Plant and Material that fall within one of the classes of expenditure described in paragraph 2) of GC6.4.2, that are directly attributable to the performance of the Contract;
 - (b) an allowance for profit and all other expenditures or costs, including overhead, general administration costs, financing and interest charges, in an amount that is equal to 10 percent of the sum of the expenses referred to in subparagraph 1)(a) of GC6.4.2; and
 - (c) interest on the amounts determined under subparagraphs 1)(a) and 1)(b) of GC6.4.2 calculated in accordance with GC5.12 INTEREST ON SETTLED CLAIMS;

- 2) The cost of labour, Plant and Material referred to in subparagraph 1)(a) of GC6.4.2 shall be limited to the following categories of expenditure:
- (a) payments to Subcontractors and Suppliers;
 - (b) wages, salaries, bonuses and, if applicable, travel and lodging expenses of employees of the Contractor located at the site of the Work and that portion of wages, salaries, bonuses and, if applicable, travel and lodging expenses of personnel of the Contractor generally employed at the head office or at a general office of the Contractor provided they are actually and properly engaged on the Work under the Contract;
 - (c) assessments payable under any statutory authority relating to workers' compensation, employment insurance, pension plan or holidays with pay, provincial health or insurance plans, environmental reviews, and Applicable Taxes collection costs;
 - (d) rent that is paid for Plant, or an amount equivalent to the said rent if the Plant is owned by the Contractor, that is necessary for and used in the performance of the Work, if the rent or the equivalent amount is reasonable and use of that Plant has been approved by Canada;
 - (e) payments for maintaining and operating Plant necessary for and used in the performance of the Work, and payments for effecting repairs thereto that, in the opinion of Canada, are necessary for the proper performance of the Contract, other than payments for any repairs to the Plant arising out of defects existing before its allocation to the Work;
 - (f) payments for Material that is necessary for and incorporated in the Work, or that is necessary for and consumed in the performance of the Contract;
 - (g) payments for preparation, delivery, handling, erection, installation, inspection, protection and removal of the Plant and Material necessary for and used in the performance of the Contract; and
 - (h) any other payments made by the Contractor with the approval Canada that are necessary for the performance of the Contract in accordance with the Contract Documents.

GC6.4.3 Price Determination - Variations in Tendeded Quantities

- 1) Except as provided in paragraphs 2), 3), 4) and 5) of GC6.4.3, if it appears that the final quantity of labour, Plant and Material under a price per unit item shall exceed or be less than the estimated tendered quantity, the Contractor shall perform the Work or supply the Plant and Material required to complete the item and payment shall be made for the actual Work performed or Plant and Material supplied at the price per unit set out in the Contract.
- 2) If the final quantity of the price per unit item exceeds the estimated tendered quantity by more than 15 percent, either party to the Contract may make a written request to the other party to negotiate an amended price per unit for that portion of the item which exceeds 115 percent of the estimated tendered quantity, and to facilitate approval of any amended price per unit, the Contractor shall, on request, provide Canada with
- (a) detailed records of the actual cost to the Contractor of performing or supplying the tendered quantity for the price per unit item up to the time the negotiation was requested; and

- (b) the estimated unit cost of labour, Plant and Material required for the portion of the item that is in excess of 115 percent of the tendered quantity.
- 3) If agreement is not reached as contemplated in paragraph 2) of GC6.4.3, the price per unit shall be determined in accordance with GC6.4.2.
 - 4) If it appears that the final quantity of labour, Plant and Material under a price per unit item shall be less than 85 percent of the estimated tendered quantity, either party to the Contract may make a written request to the other party to negotiate a change to the price per unit for the item if
 - (a) there is a demonstrable difference between the unit cost to the Contractor of performing or supplying the estimated tendered quantity and the unit cost to the Contractor for performing or supplying the final quantity; and
 - (b) the difference in unit cost is due solely to the decrease in quantity and not to any other cause.
 - 5) For the purposes of the negotiation referred to in paragraph 4) of GC6.4.3
 - (a) the onus of establishing, justifying and quantifying a proposed change lies with the party making the request for negotiation; and
 - (b) in no event shall the total price for an item that has been amended as a result of a reduction in quantity pursuant to paragraph 4) of GC6.4.3 exceed the amount that would have been payable to the Contractor had 85 percent of the tendered quantity actually been performed or supplied.

GC6.5 DELAYS AND EXTENSION OF TIME

- 1) Upon application of the Contractor made before the date first fixed for completion of the Work or before any other date previously fixed under this clause, Canada may extend the time for completion of the Work by fixing a new date if Canada determines that causes beyond the control of the Contractor have delayed its completion.
- 2) The Contractor's application shall be accompanied by the written consent of the bonding company whose bond forms part of the Contract Security.
- 3) Subject to paragraph 4) of GC6.5, no payment, other than a payment that is expressly stipulated in the Contract, shall be made by Canada to the Contractor for any extra expense, loss or damage incurred or sustained by the Contractor due to delay, whether or not the delay is caused by circumstances beyond the control of the Contractor.
- 4) If the Contractor incurs or sustains any extra expense or any loss or damage that is directly attributable to any neglect or delay that occurs after the date of the Contract on the part of Canada in providing any information or in doing any act that the Contract either expressly requires Canada to do or that would ordinarily be done by an owner in accordance with the practice of the trade, the Contractor shall give Canada written notice of intention to claim for that extra expense or loss or damage within ten working days of the date the neglect or delay first occurred.
- 5) When the Contractor has given a notice referred to in paragraph 4) of GC6.5, the Contractor shall give Canada a written claim for the extra expense, loss or damage no later than 30 days after the date that a Certificate of Completion is issued and not afterwards.

- 6) A written claim referred to in paragraph 5) of GC6.5 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified and the Contractor shall supply such further and other information for that purpose as Canada may require.
- 7) If Canada determines that a claim referred to in paragraph 5) of GC6.5 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4 DETERMINATION OF PRICE.
- 8) If the Contractor fails to give a notice referred to in paragraph 4) and a claim referred to in paragraph 5) of GC6.5 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.

GC7 DEFAULT, SUSPENSION OR TERMINATION OF CONTRACT

GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS

GC7.2 SUSPENSION OF WORK

GC7.3 TERMINATION OF CONTRACT

GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN

GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS

- 1) By giving notice in writing to the Contractor in accordance with GC2.3 NOTICES, Canada, without any other authorization, may take all or any part of the Work out of the Contractor's hands, and may employ such means as Canada sees fit to have the Work completed if the Contractor:
 - (a) fails to remedy any delay in the commencement or default in the diligent performance of the Work to the satisfaction of Canada within six days of Canada giving notice to the Contractor in writing in accordance with GC2.3 NOTICES;
 - (b) defaults in the completion of any part of the Work within the time fixed for its completion by the Contract;
 - (c) becomes insolvent, or has committed an act of bankruptcy, and has neither made a proposal to its creditors nor filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act;
 - (d) abandons the work;
 - (e) makes an assignment of the Contract without the consent required by GC1.16 ASSIGNMENT; or
 - (f) otherwise fails to observe or perform any of the provisions of the Contract.
- 2) If the whole or any part of the Work is taken out of the Contractor's hands, the Contractor's right to any further payment that is due or accruing due under the Contract is, subject only to paragraph 3) of GC7.1, extinguished, and the Contractor is liable to pay Canada, upon demand, an amount that is equal to the amount of all loss and damage incurred or sustained by Canada in respect of the Contractor's failure to complete the Work.
- 3) If the whole or any part of the Work that is taken out of the Contractor's hands is completed by Canada, Canada may pay the Contractor the amount, if any, of the holdback or a progress claim as determined by Canada that had accrued and was due prior to the date on which the Work was taken out of the Contractor's hands and that is not required for the purposes of having the Work performed or of compensating Canada for any other loss or damage incurred or sustained by reason of the Contractor's default.
- 4) The taking of the Work or any part thereof out of the Contractor's hands does not relieve the Contractor from any obligation under the Contract or imposed by law except the obligation to complete the performance of that part of the Work that was taken out of the Contractor's hands.
- 5) If the Work or any part thereof is taken out of the Contractor's hands, all Plant and Material and the interest of the Contractor, or its suppliers or subcontractors at any tier, in all real property, licences, powers and privileges acquired, used or provided by the Contractor, or its suppliers or subcontractors at any tier, under the Contract shall continue to be the property of Canada without compensation.

- 6) When Canada certifies that any Plant, Material, or any interest of the Contractor is no longer required for the purposes of the Work, or that it is not in the interests of Canada to retain that Plant, Material, or interest, it shall revert to the Contractor.
- 7) If the Contractor has become insolvent or has committed an act of bankruptcy, and has either made a proposal to its creditors or filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act, the Contractor shall immediately forward a copy of the proposal or the notice of intention to Canada.

GC7.2 SUSPENSION OF WORK

- 1) When, in Canada's opinion, it is in the public interest to do so, Canada may require the Contractor to suspend performance of the Work either for a specified or an unspecified period, by giving a notice of suspension in writing to the Contractor in accordance with GC2.3 NOTICES.
- 2) When a notice of suspension is received by the Contractor, the Contractor shall suspend all operations in respect of the Work except those that Canada determines are necessary for the care and preservation of the Work, Plant and Material.
- 3) During a period of suspension, the Contractor shall not remove any part of the Work, Plant or Material from its site without the consent of Canada.
- 4) If a period of suspension is 60 days or less, the Contractor shall resume the performance of the Work on the expiration of that period, and the Contractor is entitled to be paid the extra costs necessarily incurred by the Contractor as a result of the suspension, determined in accordance with GC6.4 DETERMINATION OF PRICE.
- 5) If a period of suspension is more than 60 days, Canada and the Contractor may agree that the performance of the Work shall be continued by the Contractor, and the Contractor shall resume performance of the Work subject to any terms and conditions agreed upon by Canada and the Contractor. If Canada and the Contractor do not agree that performance of the Work shall be continued by the Contractor, or upon the terms and conditions under which the Contractor shall continue the Work, the notice of suspension shall be deemed to be a notice of termination pursuant to GC7.3 TERMINATION OF CONTRACT.

GC7.3 TERMINATION OF CONTRACT

- 1) Canada may terminate the Contract at any time by giving a notice of termination in writing to the Contractor in accordance with GC2.3 NOTICES.
- 2) If the Contractor receives a notice of termination, the Contractor shall forthwith cease all operations in performance of the Contract, subject to any conditions stipulated in the notice.
- 3) Subject to paragraph 4) of GC7.3, if the Contract is terminated, Canada shall pay the Contractor an amount determined to be due to the Contractor pursuant to GC6.4 DETERMINATION OF PRICE less the aggregate of all amounts that were paid to the Contractor by Canada and all amounts that are due to Canada from the Contractor pursuant to the Contract.
- 4) In no event shall the total amount payable by Canada to the Contractor exceed the amount, calculated in accordance with GC5 TERMS OF PAYMENT, that would have been payable to the Contractor had the Contractor completed the Work.

- 5) Payment to the Contractor, if any, shall be made as soon as practicable under the circumstances.

GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN

- 1) If the Work is taken out of the Contractor's hands, or the Contractor is in breach of, or in default under, the Contract, Canada may convert a security deposit to Canada's own use.
- 2) If Canada converts a security deposit, the amount realized shall be deemed to be an amount due from Canada to the Contractor under the Contract.
- 3) Any balance of the amount realized that remains after payment of all losses, damage and claims of Canada and others shall be paid by Canada to the Contractor if, in the opinion of Canada, it is not required for the purposes of the Contract.

GC8 DISPUTE RESOLUTION

- GC8.1 INTERPRETATION
- GC8.2 CONSULTATION AND CO-OPERATION
- GC8.3 NOTICE OF DISPUTE
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 - GC8.10.10 Termination of Mediation
 - GC8.10.11 Costs
 - GC8.10.12 Subsequent Proceedings

GC8.1 INTERPRETATION

- 1) "dispute" means any disagreement regarding any issue identified by the Contractor in the notice submitted to Canada in accordance with paragraph 2 of GC8.3 NOTICE OF DISPUTE, and includes any claim by the Contractor arising from such disagreement and any counterclaim by Canada, but does not include any claim by either party for punitive or exemplary damages, injury to persons, death, or any claim based on an allegation of libel or slander.
- 2) The alternative dispute resolution procedures set out in GC8, do not apply to any claim by Canada against the Contractor except any counterclaim in a dispute as defined in paragraph 1 of GC8.1, including, but not limited to, any claim of setoff regarding any amount due to Canada under GC5.10 ASSESSMENT AND DAMAGES FOR LATE COMPLETION.

GC8.2 CONSULTATION AND CO-OPERATION

- 1) The parties agree to maintain open and honest communication throughout the performance of the Contract.
- 2) The parties agree to consult and co-operate with each other in the furtherance of the Work and the resolution of problems or differences that may arise.

GC8.3 NOTICE OF DISPUTE

- 1) Any difference between the parties to the Contract of any nature arising out of or in connection with the Contract which could result in a claim by the Contractor against Canada, and which is not settled by consultation and co-operation as envisaged in GC8.2

CONSULTATION AND CO-OPERATION, shall be resolved in the first instance by Canada, whose written decision or direction shall be final and binding subject only to the provisions of GC8. Such written decision or direction includes, but is not limited to, any written decision or direction by Canada under any provision of the General Conditions.

- 2) The Contractor shall be deemed to have accepted the decision or direction of Canada referred to in paragraph 1) of GC8.3 and to have expressly waived and released Canada from any claim in respect of the particular matter dealt with in that decision or direction unless, within 15 working days after receipt of the decision or direction, the Contractor submits to Canada a written notice of dispute requesting formal negotiation under GC8.4 NEGOTIATION. Such notice shall refer specifically to GC8.4 NEGOTIATION, and shall specify the issues in contention and the relevant provisions of the Contract.
- 3) The giving of a written notice in accordance with paragraph 2) of GC8.3 shall not relieve the Contractor from complying with the decision or direction that is the subject of the dispute. Such compliance, however, shall not be construed as an admission by the Contractor of the correctness of such decision or direction.
- 4) If a dispute is not resolved promptly, Canada shall give such instructions as, in Canada's opinion, are necessary for the proper performance of the Work and to prevent delays pending a resolution of the matter. Unless Canada terminates the Contract, orders the Contractor to suspend the Work, or takes the Work out of the hands of the Contractor, the Contractor shall continue to perform the Work in accordance with the provisions and requirements of the Contract and the instructions of Canada. Such performance shall not prejudice any claim that the Contractor may have.
- 5) Nothing in GC8 relieves the Contractor from its obligation to provide any other notice required by the Contract within the time specified in the Contract, including but not limited to, any notice required under GC6.2 CHANGES IN SUBSURFACE CONDITIONS.

GC8.4 NEGOTIATION

- 1) Within 10 working days after receipt by Canada of a notice referred to in paragraph 2) of GC8.3 NOTICE OF DISPUTE, or within such other period of time as may be mutually agreed to, the parties shall commence formal negotiations in order to resolve the dispute. Negotiations shall occur initially between representatives of the Contractor and Canada who play a direct supervisory role in the performance, administration or management of the Contract.
- 2) If the representatives referred to in paragraph 1) of GC8.4 are unable to resolve some or all of the issues which are the subject of the negotiations within 10 working days, the parties shall refer the remaining issues which are in dispute to a second level of negotiation between a principal or principals of the Contractor and a senior level manager or senior level managers representing Canada.
- 3) If negotiations fail to resolve the dispute within 30 working days from the date of delivery of the notice referred to in paragraph 2) of GC8.3 NOTICE OF DISPUTE, or within such longer period as may have been agreed to by the parties, the Contractor may, by giving written notice to Canada, in accordance with GC2.3 NOTICES, within 10 working days from the end of such period, request that mediation be undertaken to assist the parties to reach agreement on the outstanding issues.
- 3) If the Contractor does not request mediation within the period permitted by paragraph 3) of GC8.4, the Contractor shall be deemed to have accepted the decision or direction of Canada under paragraph 1) of GC8.3 NOTICE OF DISPUTE and to have expressly waived and

released Canada from any claim in respect of the particular matter dealt with in that decision or direction.

GC8.5 MEDIATION

- 1) If the Contractor has requested mediation in accordance with paragraph 3) of GC8.4 NEGOTIATION, mediation shall be conducted in accordance with GC8.8 RULES FOR MEDIATION OF DISPUTES.
- 2) If a Project Mediator has not previously been appointed for the purposes of the Contract, a Project Mediator shall be appointed in accordance with GC8.8 RULES FOR MEDIATION OF DISPUTES forthwith after delivery of a notice in accordance with paragraph 3) of GC8.4 NEGOTIATION, requesting mediation.
- 3) If the dispute has not been resolved within
 - (a) Ten (10) working days following the appointment of a Project Mediator in accordance with paragraph 2) of GC8.5, if a Project Mediator was not previously appointed;
 - (b) Ten (10) working days following receipt by Canada of a written notice in accordance with paragraph 3) of GC8.4 NEGOTIATION, if a Project Mediator was previously appointed; or
 - (c) such other longer period as may have been agreed to by the parties;

the Project Mediator shall terminate the mediation by giving written notice to the parties stating the effective date of termination.

GC8.6 BINDING ARBITRATION

- 1) If mediation of the dispute is terminated pursuant to the provisions of GC8.5, "Mediation", and
 - a) the termination of mediation occurs prior to the applicable date set out in paragraph 4) of GC8.6; and
 - b) the disputed issues involve issues of fact or issues of arbitral questions of law or issues of mixed fact and arbitral questions of law;either party, by giving notice in writing to the other party in accordance with GC2.3, "Notices", may require that the dispute be resolved by binding arbitration pursuant to GC8.6.
- 2) A notice referred to in paragraph 1) of GC8.6 shall be given within 10 working days of the date of termination of mediation under GC8.5 Mediation and shall be in accordance with GC2.3, "Notices".
- 3) If no notice is given within the period set out in paragraph 2) of GC8.6, or if the conditions set out in subparagraphs 1)(a) and 1)(b) of GC8.6 are not met, the arbitration provisions set out in GC8.6 do not apply to the dispute.
- 4) Unless otherwise agreed, the arbitration of the dispute shall be held in abeyance until the earlier of
 - a) the date of issuance of a Certificate of Substantial Performance under GC5.5, "Substantial Performance of the Work";

- b) the date the Work is taken out of the Contractor's hands; and
- c) the date of termination of the Contract;

and consolidated with all other such disputes into a single arbitration.

- 5) Arbitral proceedings under this GC8.6 shall be governed by and conducted in accordance with the **Commercial Arbitration Act**, R.S. 1985, c. 17 (2nd Supp.) and the provisions of GC8.11, "Rules for Arbitration of Disputes".
- 6) For the purposes of calculating time under the Rules for Arbitration referred to in paragraph 5) of GC8.6, arbitration proceedings shall commence on the applicable date set out in paragraph 4) of GC8.6.
- 7) Notwithstanding anything else contained in GC8.6, the arbitration provisions in GC8.6 do not apply if the aggregate amount of all claims by the Contractor required to be arbitrated on the applicable date set out in paragraph 4) of GC8.6 is less than \$25,000.

GC8.7 DISPUTES NOT SUBJECT TO ARBITRATION

- 1) Where the arbitration provisions in GC8.6, "Binding Arbitration", do not apply to a dispute as a result of paragraphs 3) or 7) of GC8.6, "Binding Arbitration", either party may take such court action or proceedings as it considers appropriate, including, without limiting the foregoing, all suits that would otherwise have been immediately available to it but for the provisions of these Dispute Resolution Conditions. Subject to the provisions of paragraph 2) of GC8.7, the Contractor shall initiate any such action or proceeding no later than three calendar months after the date that a Certificate of Completion is issued under GC5.6, "Final Completion", and not afterwards, except where it is otherwise provided by law.
- 2) Any action or proceeding resulting from a direction under GC3.13, "Warranty and Rectification of Defects in Work", shall be initiated by the Contractor no later than three calendar months after the expiry of the warranty or guarantee period and not afterwards, except where it is otherwise provided by law.

GC8.8 (2016-05-01) CONFIDENTIALITY

All information exchanged during alternative dispute resolution procedures, by whatever means, shall be without prejudice and shall be treated as confidential by the parties and their representatives, unless otherwise required by law. However, evidence that is independently admissible or discoverable shall not be rendered inadmissible or non-discoverable by virtue of its use during an alternative dispute resolution process.

GC8.9 (2016-05-01) SETTLEMENT

Any agreement to settle all or any part of a dispute, by whatever means, shall be in writing and be signed by the parties or their authorized representatives.

GC8.10 (2016-05-01) RULES FOR MEDIATION OF DISPUTES

GC8.10.1 Interpretation

In these Rules

- 1) “Coordinator” means the person designated by Canada to act as the Dispute Resolution Coordinator.

GC8.10.2 Application

- 1) By mutual agreement, the parties may change or make additions to the Rules.

GC8.10.3 Communication

- 1) Written communications pursuant to these Rules shall be given in accordance with GC2.3 NOTICES.

GC8.10.4 Appointment of Project Mediator

- 1) The parties to the Contract may, by mutual consent, at any time after entry into the Contract, appoint a mediator (the “Project Mediator”) to conduct mediation proceedings in accordance with these Rules for Mediation of Disputes, in regard to any dispute that may arise with regard to the interpretation, application or administration of the Contract. In this case, they shall jointly enter into a contract with the appointed Project Mediator, which contract shall be in a form drafted by the Coordinator and agreed to by the parties.
- 2) If the parties do not appoint a Project Mediator pursuant to paragraph 1) of GC8.8.4, the parties shall appoint a Project Mediator within 17 working days following receipt of a written notice from the Contractor, in accordance with GC2.3 NOTICES, requesting that mediated negotiations be undertaken in accordance with these Rules to assist the parties to reach agreement on any outstanding issues that may be in dispute. Any contract entered into with the appointed Project Mediator shall meet the requirements as set out for the contract described in paragraph 1) of GC8.8.4.
- 3) When mediation is requested by the Contractor pursuant to paragraph 3) of GC8.4 NEGOTIATION, if the parties have previously entered into a contract with a Project Mediator, the parties shall within 2 days send to both the Project Mediator and the Coordinator
 - (a) a copy of the notice requesting negotiation under paragraph 2) of GC8.3 NOTICE OF DISPUTE;
 - (b) a copy of Canada’s written position in relation to the notice, the issues in contention and the relevant provisions of the contract; and
 - (c) a copy of the Contractor’s written request for mediation required under paragraph 3) of GC8.4 NEGOTIATION.
- 4) If the parties have not agreed on a Project Mediator, the parties shall forthwith provide the Coordinator with the written materials referred to in subparagraphs 3)(a), 3)(b) and 3)(c) of GC8.8.4 together with a request that the Coordinator assist in the appointment of a mutually acceptable Project Mediator in accordance with these Rules.
- 5) Within 5 working days following receipt of the request and materials referred to in paragraph 4) of GC8.8.4, the Coordinator shall provide the parties with a list of qualified private sector mediators obtained from an independent and impartial entity, together with instructions to

each party to individually and confidentially select and rank their preferred and fully acceptable choices of mediator in descending order. Each mediator listed shall be impartial and independent of the parties, and shall be an experienced and skilled commercial mediator, preferably with knowledge of the subject matter of the dispute.

- 6) Within 10 working days of receipt of the list referred to in paragraph 5) of GC8.8.4 each party shall comply with the instructions accompanying the list(s) and shall deliver the completed listing to the Coordinator.
- 7) Within 2 working days following receipt of the completed listings, the Coordinator shall select the highest common ranked mediator to act as Project Mediator for the purposes of the contract.
- 8) In the event of a tie, the Coordinator shall consult both parties to re-evaluate their rankings in order to assist the Coordinator in selecting a Project Mediator acceptable to both parties. If the parties cannot agree upon a Project Mediator, the Coordinator shall forthwith provide the parties with a second list of mediators and the procedure shall be repeated.
- 9) If the parties have not previously entered into a contract with a mutually acceptable Project Mediator, the Coordinator shall use reasonable efforts to negotiate a contract with a mutually acceptable Project Mediator on behalf of the parties, which contract shall incorporate or otherwise comply with the provisions of these Rules. If negotiations are unsuccessful, or if for other reason the individual is unwilling or unable to enter into a contract to act as Project Mediator, the Coordinator shall repeat the process with the second-highest common ranked mediator.
- 10) The parties agree that, upon successful completion of the negotiations referred to in paragraph 9) of GC8.8.4, they shall jointly enter into a contract with the selected Project Mediator, which contract shall be in a form drafted by the Coordinator and agreed to by the parties.
- 11) Upon execution of the contract with the Project Mediator referred to in paragraph 10) of GC8.8.4 the Coordinator shall provide the Project Mediator with copies of the documents referred to in paragraph 3) of GC8.8.4.

GC8.10.5 Confidentiality

- 1) Subject to paragraph 2) of GC8.8.5, and unless otherwise agreed in writing by the parties, the Project Mediator, the parties and their counsel or representatives shall keep confidential all matters and documents disclosed during mediation proceedings except where the disclosure is necessary for any implementation of any agreement reached or is required by law.
- 2) Evidence that is independently admissible or discoverable in any arbitral or judicial proceeding shall not be rendered inadmissible or non-discoverable by virtue of its use in mediation proceedings.
- 3) Neither party shall make transcripts, minutes or other records of a mediation conference.
- 4) The personal notes and written opinions of the Project Mediator made in relation to mediation are in the Project Mediator's sole possession and control, are confidential, and may not be used in any subsequent proceeding between the parties or where they are opposed in interest without the express written permission of the parties.

- 5) All information exchanged during mediation procedures, by whatever means, shall be without prejudice and shall be treated as confidential by the parties and their representatives, unless otherwise required by law.

GC8.10.6 Time and Place of Mediation

- 1) The Project Mediator, in consultation with the parties shall set the date, time and place of any mediation conference as soon as possible, bearing in mind that, subject to agreement to the contrary between the parties, only 10 working days are available within which to attempt to settle the dispute.

GC8.10.7 Representation

- 1) Representatives of the parties may be accompanied at the mediation conference by legal counsel or any other person.
- 2) If the Project Mediator is a lawyer, the Project Mediator shall not provide legal advice to a party during the course of the mediation conference, but may recommend that a party obtain independent legal advice before finalizing a settlement agreement.

GC8.10.8 Procedure

- 1) The parties agree to an exchange of all facts, information and documents upon which they intend to rely in any oral or written presentation during the mediation. This exchange shall be completed no later than 2 working days prior to the date set for a mediation conference.
- 2) The Project Mediator shall be free to meet with the parties individually during a mediation conference if the Project Mediator is of the opinion that this may improve the chances of a mediated settlement, and either party may request such an individual meeting at any time.
- 3) The parties may agree to extend the 10 working days available for settlement of the dispute through mediation, and the Project Mediator shall record that agreement in writing.

GC8.10.9 Settlement Agreement

- 1) The parties shall record in writing any settlement agreement reached, with sufficient detail to ensure a clear understanding of
 - (a) the issues resolved;
 - (b) any obligations assumed by each party including criteria to determine if and when these obligations have been met; and
 - (c) the consequences of failure to comply with the agreement reached.
- 2) The parties agree to carry out the terms of a settlement agreement as soon as possible and, in any event, within any time periods specified in the agreement.

GC8.10.10 Termination of Mediation

- 1) Either party may withdraw from mediation at any time without reason and, in that event, the Project Mediator shall give each party a written notice terminating the mediation and establishing the effective date of termination.
- 2) If, in the opinion of the Project Mediator, either party fails to mediate in good faith or fails to comply with the terms of these Rules, or if the Project Mediator, at any time during mediation, is of the opinion that further negotiations will fail to resolve the issues outstanding, the Project Mediator may terminate the negotiations by providing the parties with a written notice of termination, stating therein the Project Mediator's reasons for the termination, and the effective date of termination.
- 3) If a dispute has not been resolved within 10 working days or such other longer period as may have been agreed to by the parties, the Project Mediator shall terminate the mediation by giving written notice to the parties stating the effective date of termination.

GC8.10.11 Costs

- 1) The parties agree that they will each be responsible for the costs of their own representatives and advisors and associated travel and living expenses. Fees and expenses of the Project Mediator and all administrative costs of mediation, such as the cost of the meeting room(s), if any, shall be borne equally by the parties.

GC8.10.12 Subsequent Proceedings

- 1) The parties shall not rely on or introduce as evidence in any arbitral or judicial proceeding, whether or not such proceeding relates to the subject matter of mediation,
 - (a) any documents of other parties that are not otherwise producible in those proceedings;
 - (b) any views expressed or suggestions made by any party in respect of a possible settlement of issues;
 - (c) any admission made by any party in the course of mediation unless otherwise stipulated by the admitting party; and
 - (d) the fact that any party has indicated a willingness to make or accept a proposal or recommendation for settlement.
- 2) The Project Mediator shall neither represent nor testify on behalf of either of the parties in any subsequent investigation, action or proceeding relating to the issues in mediation proceedings.
- 3) The Project Mediator shall not be subpoenaed to give evidence relating to
 - (a) the Project Mediator's role in mediation; or
 - (b) the matters or issues in mediation;**

in any subsequent investigation, action or proceeding and the parties agree to vigorously oppose any effort to have the Mediator so subpoenaed.

GC9 CONTRACT SECURITY

GC9.1 OBLIGATION TO PROVIDE CONTRACT SECURITY

GC9.2 TYPES AND AMOUNTS OF CONTRACT SECURITY

GC9.1 OBLIGATION TO PROVIDE CONTRACT SECURITY

- 1) The Contractor shall, at the Contractor's expense and within 14 days after the date that the Contractor receives notice that the Contractor's bid was accepted by Canada, obtain and deliver Contract Security to Canada in one of the forms prescribed in GC9.2 TYPES AND AMOUNTS OF CONTRACT SECURITY.
- 2) If the whole or a part of the Contract Security provided is in the form of a security deposit, it shall be held and disposed of in accordance with GC5.13 RETURN OF SECURITY DEPOSIT and GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN.
- 3) If a part of the Contract Security provided is in the form of a labour and material payment bond, the Contractor shall post a copy of that bond at the site of the Work.
- 4) It is a condition precedent to the release of the first progress payment that the Contractor has provided the Contract Security as specified herein.

GC9.2 (2016-05-01) TYPES AND AMOUNTS OF CONTRACT SECURITY

- 1) The Contractor shall deliver to Canada either (a) or (b).
 - a) A performance bond and a labour and material payment bond each in an amount that is equal to not less than 50 percent of the Contract Amount (excluding applicable tax(es)).
 - b) A security deposit or an irrevocable standby letter of credit in an amount that is equal to not less than 20 percent of the Contract Amount (excluding applicable tax(es)).
- 2) A performance bond and a labour and material payment bond referred to in paragraph 1) of GC9.2 shall be in a form and be issued by a bonding or surety company that is approved by Canada.
 - (a) The approved form for the performance bond is displayed at the following Website:
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appS>
 - (b) The approved form for the labour and material payment bond is displayed at the following website: <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appS>
; and
 - (c) The list of approved bonding or surety companies is displayed at the following Website:
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appl>
- 3) A security deposit referred to in subparagraph 1)(b) of GC9.2 shall be in the form of
 - a. a bill of exchange, bank draft or money order made payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or

- b. bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada.
- 4) For the purposes of subparagraph 3)(a) of GC9.2
- a) a bill of exchange is an unconditional order in writing signed by the Contractor and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a sum certain of money to, or to the order of, the Receiver General for Canada;
 - b) if a bill of exchange, bank draft or money order is certified by or drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in subparagraph 4)(c) of GC9.2, either by letter or by a stamped certification on the bill of exchange, bank draft or money; and
 - c) An approved financial institution is
 - I.a corporation or institution that is a member of the Canadian Payments Association as defined in the Canadian Payments Act;
 - II.a corporation that accepts deposits that are insured, to the maximum permitted by law, by the Canada Deposit Insurance Corporation or the "Autorité des marchés financiers";
 - III.a corporation that accepts deposits from the public if repayment of the deposit is guaranteed by Her Majesty the Queen in right of a province;
 - IV.a corporation, association or federation incorporated or organized as a credit union or co-operative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137(6) of the Income Tax Act; or
 - V.Canada Post Corporation.
- 5) Bonds referred to in subparagraph 3)(b) of GC9.2 shall be provided on the basis of their market value current at the date of the Contract, and shall be
- a) made payable to bearer; or
 - b) accompanied by a duly executed instrument of transfer of the bonds to the Receiver General for Canada in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - c) registered as to principal, or as to principal and interest, in the name of the Receiver General for Canada pursuant to the Domestic Bonds of Canada Regulations.
- 6) An irrevocable standby letter of credit referred to in subparagraph 1)(b) of GC9.2 shall
- a) be an arrangement, however named or described, whereby a financial institution (the "Issuer") acting at the request and on the instructions of a customer (the "Applicant") or on its own behalf,
 - I.is to make a payment to, or to the order of, Canada as the beneficiary;
 - II.is to accept and pay bills of exchange drawn by Canada;

III. authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or

IV. authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with;

- b) state the face amount that may be drawn against it;
- c) state its expiry date;
- d) provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by Canada;
- e) provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
- f) provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision, ICC Publication No. 600. Pursuant to the ICC UCP, a credit is irrevocable even if there is no indication to that effect; and
- g) be issued or confirmed, in either official language in a format left to the discretion of the issuer or confirmer, by an approved financial institution on its letterhead.

GC10 INSURANCE

GC10.1 INSURANCE CONTRACTS

GC10.2 INSURANCE PROCEEDS

GC10.1 INSURANCE CONTRACTS

- 1) The contractor shall, at the contractor's expense, obtain and maintain insurance contracts in respect of the work and shall provide evidence thereof to Canada in accordance with the requirements of the INSURANCE TERMS.
- 2) The insurance contracts referred to in paragraph 1) of GC10.1 shall
 - (a) be in a form, of the nature, in the amounts, for the periods and containing the terms and conditions specified in INSURANCE TERMS; and
 - (b) provide for the payment of claims under such insurance contracts in accordance with GC10.2 INSURANCE PROCEEDS.

GC10.2 INSURANCE PROCEEDS

- 1) In the case of a claim payable under a Builders Risk/Installation (All Risks) insurance contract maintained by the contractor pursuant to GC10.1 INSURANCE CONTRACTS, the proceeds of the claim shall be paid directly to Canada, and
 - (a) the monies so paid shall be held by Canada for the purposes of the contract, or
 - (b) if Canada elects, shall be retained by Canada, in which event they vest in Canada absolutely.
- 2) In the case of a claim payable under a General Liability insurance contract maintained by the contractor pursuant to GC10.1 INSURANCE CONTRACTS, the proceeds of the claim shall be paid by the insurer directly to the claimant.
- 3) If an election is made pursuant to paragraph 1) of GC10.2, Canada may cause an audit to be made of the accounts of the contractor and of Canada in respect of the part of the work that was lost, damaged or destroyed for the purpose of establishing the difference, if any, between
 - (a) the aggregate of the amount of the loss or damage suffered or sustained by Canada, including any costs incurred in respect of the clearing and cleaning of the work and its site and any other amount that is payable by the contractor to Canada under the contract, minus any monies retained pursuant to subparagraph 1)(b) of GC10.2; and
 - (b) the aggregate of the amounts payable by Canada to the contractor pursuant to the contract up to the date of the loss or damage.
- 4) A difference that is established pursuant to paragraph 3) of GC10.2 shall be paid forthwith by the party who is determined by the audit to be the debtor to the party who is determined by the audit to be the creditor.

- 5) When payment of a deficiency has been made pursuant to paragraph 4) of GC10.2, all rights and obligations of Canada and the contractor under the contract shall, with respect only to the part of the work that was the subject of the audit referred to in paragraph 3) of GC10.2, be deemed to have been expended and discharged.
- 6) If an election is not made pursuant to subparagraph 1)(b) of GC10.2, the contractor shall, subject to paragraph 7) of GC10.2, clear and clean the work and its site and restore and replace the part of the work that was lost, damaged or destroyed at the contractor's expense as if that part of the work had not yet been performed.
- 7) When the contractor clears and cleans the work and its site and restores and replaces the work referred to in paragraph 6) of GC10.2, Canada shall pay the contractor out of the monies referred to in paragraph 1) of GC10.2 so far as they will thereunto extend.
- 8) Subject to paragraph 7) of GC10.2, payment by Canada pursuant to paragraph 7) of GC10.2 shall be made in accordance with the contract but the amount of each payment shall be 100 percent of the amount claimed notwithstanding subparagraphs 3)(a) and 3)(b) of GC5.4 PROGRESS PAYMENT.



INSURANCE TERMS

IN1 GENERAL

- IN1.1 Worker's Compensation
- IN1.2 Indemnification
- IN1.3 Proof of Insurance
- IN1.4 Insured
- IN1.5 Payment of Deductible

IN2 COMMERCIAL GENERAL LIABILITY

- IN2.1 Scope of Policy
- IN2.2 Period of Insurance

IN3 AUTOMOBILE INSURANCE

- IN3.1 Scope of Policy

IN1 GENERAL

IN1.1 Worker's Compensation

- 1) The Contractor shall provide and maintain Worker's Compensation Insurance in accordance with the legal requirements of the Province or Territory where the work is being carried out.

IN1.2 Indemnification

- 1) The insurance required by the provisions of these Insurance Terms shall in no way limit the Contractor's responsibility under the Indemnification clause of the General Conditions of the contract. Any additional coverage the Contractor may deem necessary to fulfill his obligations under the aforesaid clause shall be at his own discretion and expense.

IN1.3 Proof of Insurance

- 1) Before commencement of the Work, and within thirty (30) days after acceptance of its bid, the Contractor shall deposit with Canada a CERTIFICATE OF INSURANCE (form AAFC / AAC5314) available upon request.
- 2) In the event that the Contractor already possesses an insurance certificate clearly demonstrating that their insurance coverage meets IN2.1 Scope of Policy provisions, then the Contractor may deposit an original copy of this insurance certificate.
- 3) Upon request by Canada, the Contractor shall provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the provisions contained herein.

IN1.4 Insured

- 1) Each policy shall insure the Contractor and shall include Her Majesty the Queen in right of Canada, represented by the Minister of Agriculture & Agri-Food Canada as an additional Insured, with respect to liability arising out of the operations of the contractor with regard to the work.

IN1.5 Payment of Deductible

- 1) The payment of monies up to the deductible amount made in satisfaction of a claim shall be borne by the Contractor.

INSURANCE TERMS (Continued)

IN2 COMMERCIAL GENERAL LIABILITY

IN2.1 Scope of Policy

- 1) The insurance coverage provided shall not be less than that provided by IBC Form 2100, as amended from time to time, and shall have:
 - (a) an Each Occurrence Limit of not less than \$5,000,000.00 ;
 - (b) a Products/Completed Operations Aggregate Limit of not less than \$5,000,000.00 ; and
 - (c) a General Aggregate Limit of not less than \$10,000,000.00 per policy year, if the policy is subject to such a limit.
- 2) The policy shall either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:
 - (a) Blasting.
 - (b) Pile driving and caisson work.
 - (c) Underpinning.
 - (d) Removal or weakening of support of any building or land whether such support be natural or otherwise if the work is performed by the insured contractor.
 - (e) Asbestos.
 - (f) Non-owed Automobile Policy.

IN2.2 Period of Insurance

- 1) Unless otherwise directed in writing by Canada, or, otherwise stipulated elsewhere herein, the policy required herein shall be in force and be maintained from the date of contract award until the day of issue of the Certificate of Completion except that the coverage for Completed Operations Liability shall, in any event, be maintained for a period of at least six (6) years beyond the date of the CERTIFICATE OF SUBSTANTIAL PERFORMANCE.

IN3 AUTOMOBILE INSURANCE

IN3.1 Scope of Policy

- 1) Automobile Liability Insurance in respect of licensed vehicles shall have limits of not less than one million dollars inclusive per occurrence for bodily injury, death, and damage to property.

BID AND ACCEPTANCE FORM

CONSTRUCTION CONTRACT - MAJOR WORKS

BA01 IDENTIFICATION					
Description of the Work Conference Room Renovations - Building 59, CEF, Ottawa					
Solicitation Number 20-1207			File / Project Number CEF20 0021		
BA02 BUSINESS NAME AND ADDRESS OF BIDDER					
Name					
Address					
Unit/Suite/Apt.	Street number	Number suffix	Street name	Street type	Street direction
PO Box or Route Number			Municipality (City, Town, etc.)	Province	Postal code
Phone number		Fax number		Email address	
BA03 THE OFFER					
1) The Bidder offers to Canada as represented by the Minister of Agriculture and Agri-food Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the Total Bid Amount of: \$ _____ excluding Applicable Taxes (GST/HST/QST). (to be expressed in numbers only)					
BA04 BID VALIDITY PERIOD					
1) The bid shall not be withdrawn for a period of <u>60</u> days following the date of solicitation closing.					
BA05 APPENDICES					
1) The following appendices are included in this Bid and Acceptance Form: <input checked="" type="checkbox"/> No appendices					
BA06 ACCEPTANCE AND CONTRACT					
1) Upon acceptance of the Bidder's offer by Canada, a binding Contract shall be formed between Canada and the resulting Contractor. The documents forming the Contract shall be the contract documents referred to in SC01 CONTRACT DOCUMENTS.					
BA07 CONSTRUCTION TIME					
1) The Contractor shall perform and complete the Work <u>on or before 2021-03-31</u>					
BA08 BID SECURITY					
1) The Bidder shall enclose bid security with its bid in accordance with GI07 BID SECURITY REQUIREMENTS.					
2) If a security deposit is furnished as bid security, it shall be forfeited in the event that the bid is accepted by Canada and the Contractor fails to provide Contract Security in accordance with GC9 CONTRACT SECURITY, provided that Canada may, if it is in the public interest, waive the right of Canada to forfeiture any or all of the security deposit.					

BA09 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (type or print)	Name
	Title
	Signature _____ Date _____
	Name
	Title
	Signature _____ Date _____

BA10 INTEGRITY PROVISIONS - LIST OF NAMES

If the required list of names has not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to provide the names within the time frame specified will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

SPECIFICATIONS & DAWINGS

#20-1207

FOR

**CONFERENCE ROOM
RENOVATIONS**

of

BUILDING # 59

**CENTRAL EXPERIMENTAL FARM (CEF)
Agriculture and Agri-Food Canada (AAFC)
960 Carling Ave.
Ottawa, ON K1A 0C6**

SPECIFICATIONS

CENTRAL EXPERIMENTAL FARM – Conference Room Renovations
Building 59, 960 Carling Avenue, Ottawa, Ontario

Section	Section Title	No. of Pages
<u>Division 00 Procurement and Contracting Requirements</u>		
00 01 10	Table of Contents	1
00 01 50	List of Drawings	1
<u>Division 01 General Requirements</u>		
01 32 16.19	Construction Progress Schedule	3
01 33 00	Submittal Procedures	4
01 35 29.06	Health and Safety Requirements	4
01 41 00	Regulatory Requirements	1
01 45 00	Quality Control	2
01 73 00	Execution	2
01 74 11	Cleaning	2
01 77 00	Closeout Procedures	2
01 78 00	Closeout Submittals	7
<u>Division 06 Wood Plastics and Composites</u>		
06 10 00	Rough Carpentry	4
06 20 00	Finish Carpentry	5
06 40 00	Architectural Woodwork	6
<u>Division 07 Thermal & Moisture Protection</u>		
07 84 00	Firestopping	4
07 92 00	Joint Sealants	4
<u>Division 08 Openings</u>		
08 14 16	Flush Wood Doors	3
08 71 00	Door Hardware	4
<u>Division 09 Finishes</u>		
09 21 99	Partitions for Minor Works	6
09 68 13	Tile Carpeting	8
09 91 99	Painting for Minor Works	5

END OF SECTION

DRAWINGS

The following is a list of drawings which accompany these specifications and which form part of the Contract Documents for the Work.

ARCHITECTURAL

A-001	COVER SHEET
A-101	LEVEL 200: DEMOLITION FLOORPLAN, DEMOLITION REFLECTED CEILING PLAN
A-102	LEVEL 200: PROPOSED FLOORPLAN, PROPOSED REFLECTED CEILING PLAN
A-103	LEVEL 200: FINISH PLAN, FINISH REFLECTED CEILING
A-104	INTERIOR ELEVATION
A-105	SECTIONS AND DETAILS
A-106	SECTIONS AND DETAILS

MECHANICAL

M-000	MECHANICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS
M-001	MECHANICAL SPECIFICATIONS
M-100	DEMOLITION & NEW FIRE PROTECTION PLANS
M-200	DEMOLITION & NEW HVAC PLANS

ELECTRICAL

E-000	ELECTRICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS
E-100	LIGHTING DEMOLITION & NEW
E-200	POWER & SYSTEMS DEMOLITION & NEW

STRUCTURAL

S-000	GENERAL NOTES
S-100	PARTIAL PLANS & DETAILS

END OF SECTION

1 GENERAL

1.01 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by Departmental Representative to enable monitoring of project work in relation to established milestones.

1.02 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to Departmental Representative within 10 working days of Award of Contract.
- .3 Submit Project Schedule to Departmental Representative within 5 working days of receipt of acceptance of Master Plan.

1.04 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Departmental Representative will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 5 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.05 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - .01 Award.
 - .02 Shop Drawings, Samples.
 - .03 Mobilization.
 - .04 Interior Architecture (Walls, Floors and Ceiling).
 - .05 Windows and Doors
 - .06 Lighting.
 - .07 Electrical.
 - .08 Piping.
 - .09 Controls.
 - .10 Heating, Ventilating, and Air Conditioning.
 - .11 Millwork.
 - .12 Fire Systems.
 - .13 Testing and Commissioning.

1.06 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.07 PROJECT MEETINGS

- .1 Discuss Project Schedule at regular site meetings, identify activities that are behind

schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

- .2 Weather related delays with their remedial measures will be discussed and negotiated.

2 PRODUCTS

2.01 NOT USED

- .1 Not used.

3 EXECUTION

3.01 NOT USED

- .1 Not used.

END OF SECTION

1 GENERAL

1.01 ADMINISTRATIVE

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
- .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are co-ordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's or Consultant's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative or Consultant review.
- .10 Keep one reviewed copy of each submission on site.

1.02 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 7 days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended

- to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
 - .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
 - .8 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
 - .9 After Departmental Representative's review, distribute copies.
 - .10 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
 - .11 Submit copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
 - .12 Submit copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative:
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .2 Certificates must have a date after contract award and indicate the name of the project.

- .13 Submit copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
 - .2 Certificates must be dated after award of project contract complete with project name.
- .14 Submit copies of manufacturers instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .15 Submit copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .17 Submit copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .18 Delete information not applicable to project.
- .19 Supplement standard information to provide details applicable to project.
- .20 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

1.03 SAMPLES

- .1 Submit for review samples as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's business address.
- .3 Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material

against which installed Work will be verified.

1.04 PHOTOGRAPHIC DOCUMENTATION

- .1 Submit electronic copy of colour digital photography in jpg format, standard resolution as directed by Departmental Representative.
- .2 Project identification: name and number of project and date of exposure indicated.
- .3 Frequency of photographic documentation: as directed by Departmental Representative.
 - .1 Upon completion of: excavation, foundation, framing and services before concealment, of Work, and as directed by Departmental Representative.

1.05 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Province of Ontario
 - .1 Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990, c.0.1, as amended and O. Reg. 213/91 as amended - Updated 2005.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
 - .3 Contractor's Health and Safety Policy.
- .3 Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative and authority having jurisdiction, weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 7 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 7 days after receipt of comments from Departmental Representative.
- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.
- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.03 FILING OF NOTICE

- .1 File Notice of Project with authorities prior to beginning of Work.

1.04 SAFETY ASSESSMENT

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

1.05 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.

1.06 REGULATORY REQUIREMENTS

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

1.07 PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
 - .1 (RESERVED)

1.08 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.09 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Contractor will be responsible and assume the role Constructor as described in the Ontario Occupational Health and Safety Act and Regulations for Construction Projects.

1.10 COMPLIANCE REQUIREMENTS

- .1 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.11 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, advise Health and Safety co-ordinator and Safety Officer and follow procedures in accordance with Acts and Regulations of Ontario having jurisdiction and advise Departmental Representative verbally and in writing.

1.12 HEALTH AND SAFETY CO-ORDINATOR

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

1.13 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Ontario having jurisdiction, and in consultation with Departmental Representative.

1.14 CORRECTION OF NON-COMPLIANCE

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

1.15 BLASTING

- .1 Blasting or other use of explosives is not permitted.

1.16 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.

1.17 WORK STOPPAGE

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

2 PRODUCTS

2.01 NOT USED

.1 Not used.

3 EXECUTION

3.01 NOT USED

.1 Not used.

END OF SECTION

1 GENERAL

1.01 REFERENCES AND CODES

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

1.02 HAZARDOUS MATERIAL DISCOVERY

- .1 Asbestos: demolition of spray or trowel-applied asbestos is hazardous to health. Stop work immediately when material resembling spray or trowel-applied asbestos is encountered during demolition work. Notify Departmental Representative.
- .2 PCB: Polychlorinated Biphenyl: stop work immediately when material resembling Polychlorinated Biphenyl is encountered during demolition work. Notify Departmental Representative.
- .3 Mould: stop work immediately when material resembling mould is encountered during demolition work. Notify Departmental Representative.

1.03 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions and municipal by-laws.
- .2 No smoking within within any AAFC facilities.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 INSPECTION

- .1 Allow 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 Departmental Representative's instructions, or law of Place of Work.
- .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 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents.

1.02 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and reinspection.

1.03 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.04 PROCEDURES

- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.05 REPORTS

- .1 Submit two (2) copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to subcontractor of work being inspected or tested.

1.06 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by Departmental Representative and may be authorized as recoverable.

1.07 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 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 Work of Owner or separate contractor.
- .3 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.

1.02 MATERIALS

- .1 Materials, products and equipment shall all be new, except as specifically noted otherwise.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

1.03 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 with Departmental Representative.
- .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.

1.04 EXECUTION

- .1 Execute cutting, fitting, and patching including excavation and fill, 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 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .9 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .10 Restore work with new products in accordance with requirements of Contract Documents.
- .11 Fit Work to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .12 Install firestopping in accordance with Section 07 84 00 Firestopping to maintain the integrity of fire separations including:
 - .1 Protect penetrations of walls, ceilings or floors with a fire resistance rating.
 - .2 Use firestopping at construction joints and at the perimeter of building to protect junctions at fire separations and other elements.
- .13 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.
- .14 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3 Clear snow and ice from all work areas and access to building.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site containers for collection of waste materials and debris.
- .6 Provide and use marked separate bins for recycling.
- .7 Dispose of waste materials and debris off site.
- .8 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .9 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .10 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .12 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.02 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris other than that caused by Owner or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed

by Departmental Representative. Do not burn waste materials on site.

- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, hardware, stainless steel, chrome, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, and floors.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .13 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .14 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request Departmental Representative inspection.
 - .2 Departmental Representative Inspection:
 - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
 - .2 Contractor to correct Work as directed.
 - .3 Completion Tasks: submit written certificates that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Equipment and systems: tested, adjusted and balanced and fully operational.
 - .4 Certificates required by Fire Commissioner, Utility companies: submitted.
 - .5 Operation of systems: demonstrated to Departmental Representative's personnel.
 - .6 Commissioning of mechanical systems: completed and copies of final Commissioning Report submitted to Departmental Representative.
 - .7 Work: complete and ready for final inspection.
 - .4 Final Inspection:
 - .1 When completion tasks are done, request final inspection of Work by Departmental Representative.
 - .2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection.

1.02 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.

2 PRODUCTS

2.01 NOT USED

- .1 Not Used.

3 EXECUTION

3.01 NOT USED

- .1 Not Used.

END OF SECTION

1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-warranty Meeting:
 - .1 Convene meeting one week prior to contract completion with contractor's representative and Departmental Representative to:
 - .1 Verify Project requirements.
 - .2 Review manufacturer's installation instructions and warranty requirements.
 - .2 Departmental Representative to establish communication procedures for:
 - .1 Notifying construction warranty defects.
 - .2 Determine priorities for type of defects.
 - .3 Determine reasonable response time.
 - .3 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
 - .4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four final copies of operating and maintenance manuals in English.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.03 FORMAT

- .1 Organize data as instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings.
 - .1 Identify contents of each binder on spine.
- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.

- .8 Drawings: provide with reinforced punched binder tab.
 - .1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide 1:1 scaled CAD files in .dwg format.

1.04 CONTENTS - PROJECT RECORD DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project;
 - .1 Date of submission; names.
 - .2 Addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.
 - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

1.05 AS -BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, at site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction.
 - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
 - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.06 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
 - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.

1.07 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 Include summer, winter, and any special operating instructions.
- .3 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .4 Include manufacturer's printed operation and maintenance instructions.
- .5 Include sequence of operation by controls manufacturer.

- .6 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .7 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .8 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .9 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .10 Include test and balancing reports.
- .11 Additional requirements: as specified in individual specification sections.

1.08 MATERIALS AND FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
 - .1 Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional requirements: as specified in individual specifications sections.

1.09 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.

1.10 DELIVERY, STORAGE AND HANDLING

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and for review by Departmental Representative.

1.11 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Departmental Representative approval.
- .3 Warranty management plan to include required actions and documents to assure that Departmental Representative receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to Departmental Representative for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Conduct joint 4 month and 9 month warranty inspection, measured from time of acceptance, by Departmental Representative.
- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty

- items, to include lightning protection systems.
- .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Starting point and duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.
 - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
 - .11 Organization, names and phone numbers of persons to call for warranty service.
 - .12 Typical response time and repair time expected for various warranted equipment.
 - .4 Contractor's plans for attendance at 4 and 9 month post-construction warranty inspections.
 - .5 Procedure and status of tagging of equipment covered by extended warranties.
 - .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
 - .11 Written verification to follow oral instructions.
 - .1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

1.12 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of acceptance until project is accepted for occupancy.
- .4 Indicate following information on tag:
 - .1 Type of product/material.
 - .2 Model number.
 - .3 Serial number.
 - .4 Contract number.
 - .5 Warranty period.
 - .6 Inspector's signature.
 - .7 Construction Contractor.

2 PRODUCTS

2.01 NOT USED

.1 Not Used.

3 EXECUTION

3.01 NOT USED

.1 Not Used.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 ASTM International
 - .1 ASTM A 123/A 123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .2 ASTM C 1396/C 1396M, Standard Specification for Gypsum Board.
 - .3 ASTM D 1761, Standard Test Methods for Mechanical Fasteners in Wood.
 - .4 ASTM D 5456, Standard Specification for Evaluation of Structural Composite Lumber Products.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-71.26, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.
- .3 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.
 - .7 CAN/CSA-Z809, Sustainable Forest Management.
- .4 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001, FSC Principle and Criteria for Forest Stewardship.
- .5 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber.
- .6 Sustainable Forestry Initiative (SFI)
 - .1 SFI Standard.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.

1.03 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood panels in accordance with CSA and ANSI standards.
- .3 Sustainable Standards Certification:

- .1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809 or FSC or SFI.

1.04 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 Store and protect from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 FRAMING STRUCTURAL AND PANEL MATERIALS

- .1 Lumber: softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CSA O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Framing and board lumber: in accordance with NBC.
- .3 Furring, blocking, nailing strips, grounds, rough bucks, curbs and sleepers:
 - .1 Board sizes: "Standard" or better grade.
 - .2 Dimension sizes: "Standard" light framing or better grade.
 - .3 Post and timbers sizes: "Standard" or better grade.
- .4 Plywood and wood based composite panels: to CSA O325.
- .5 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .6 Canadian softwood plywood (CSP): to CSA O151, standard construction.

2.02 ACCESSORIES

- .1 Sealants: in accordance with Section 07 92 00 - Joint Sealants.
- .2 Subflooring adhesive: to CAN/CGSB-71.26, cartridge loaded.
- .3 General purpose adhesive: to CSA O112.9.
- .4 Nails, spikes and staples: to CSA B111.
- .5 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .6 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.

- .7 Fastener Finishes:
 - .1 Galvanizing: to ASTM A 123/A 123M, use galvanized fasteners for pressure-preservative and treated lumber.
 - .2 Stainless steel: use stainless steel 304 alloy for general purpose fasteners.

3 EXECUTION

3.01 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.

3.02 MATERIAL USAGE

- .1 Subflooring:
 - .1 Plywood, DFP or CSP sheathing grade, 19 mm thick.

3.03 INSTALLATION

- .1 Install members true to line, levels and elevations, square and plumb.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown-edge" up.
- .4 Install subflooring with panel end-joints located on solid bearing, staggered at least 800 mm.
 - .1 In addition to mechanical fasteners, floor panels secure floor subflooring to floor joists using glue and screws. Place continuous adhesive bead in accordance with manufacturer's instructions, single-bead on each joist and double-bead on joists where panel ends butt.
- .5 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding, electrical equipment mounting boards, and other work as required.
- .6 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .7 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using steel fasteners.
- .8 Install sleepers as indicated.
- .9 Use dust collectors and wear a high quality respirator.

- .10 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .11 Countersink bolts where necessary to provide clearance for other work.

3.04 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.

3.05 PROTECTION

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

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/HPVA HP-1, American National Standard for Hardwood and Decorative Plywood.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
 - .1 Architectural Woodwork Quality Standards, 2nd edition.
- .3 ASTM International
 - .1 ASTM A 123/A 123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .4 CSA International
 - .1 CSA B111, Wire Nails, Spikes and Staples.
 - .2 CSA O141, Softwood Lumber.
 - .3 CAN/CSA-Z809, Sustainable Forest Management.
- .5 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001, FSC Principle and Criteria for Forest Stewardship.
- .6 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber.
- .7 Sustainable Forestry Initiative (SFI)
 - .1 SFI Standard.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit two copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Shop Drawings:
 - .1 Prepare and submit shop drawings in accordance with AWMAC Architectural Woodwork Standards.
 - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .3 Indicate materials, thicknesses, finishes and hardware.
- .4 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate 300 x 300 mm samples of Baltic birch veneer panelling.

1.03 QUALITY ASSURANCE

- .1 Work in this section must be carried out by a carpenter with a minimum of 5 years experience and who has completed at least one project in the last 5 years, where the value of the work was at least 20% of the cost of work described in this Section.

1.04 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect wood products from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 MATERIALS

- .1 Softwood lumber: S4S, moisture content 19% or less in accordance with following standards:
 - .1 CSA O141.
 - .2 CAN/CSA-Z809 or FSC or SFI certified.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.
 - .4 AWMAC custom grade, moisture content as specified.
 - .5 Machine stress-rated lumber is acceptable.
 - .6 Hardwood lumber: moisture content 12% or less in accordance:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 AWMAC custom grade, moisture content as specified.
 - .3 CAN/CSA-Z809 or FSC or SFI certified.
- .2 Panel Material: urea-formaldehyde free
 - .1 CAN/CSA-Z809 or FSC or SFI certified.
 - .2 Hardwood plywood: to ANSI/HPVA HP-1.

2.02 ACCESSORIES

- .1 Nails and staples: to CSA B111; galvanized to ASTM A 123/A 123M for exterior work, interior humid areas and for treated lumber; stainless steel finish elsewhere.
- .2 Wood screws: type and size to suit application.
- .3 Splines: wood or metal.
- .4 Sealants: in accordance with Section 07 92 00 - Joint Sealants.

3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for wood products 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.

3.02 INSTALLATION

- .1 Do finish carpentry to Quality Standards of (AWMAC).
- .2 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
- .3 Form joints to conceal shrinkage.

3.03 CONSTRUCTION

- .1 Fastening:
 - .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
 - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
 - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.
 - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
- .2 Standing and running trim:
 - .1 Butt and cope internal joints of baseboards to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.
 - .2 Fit backs of baseboards and casing snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.
 - .3 Make joints in baseboard, where necessary using a 45 degrees scarf type joint.
 - .4 Install door and window trim in single lengths without splicing.
- .3 Interior and exterior frames:
 - .1 Set frames with plumb sides and level heads and sills and secure.
- .4 Panelling:
 - .1 Secure panelling and perimeter trim using adhesive recommended for purpose by manufacturer. Fill nail holes caused by temporary fixing with filler matching wood in colour.
 - .2 Secure panelling and perimeter trim using concealed fasteners.
- .5 Shelving:

- .1 Install shelving on ledgers and shelf brackets.
- .6 Hardware:
 - .1 Install Panel Mounting System, location: removable panels at Room 206 (Translation) soffit.
 - Basis of Design: Fastmount Panel Mounting System by Sugastune
 - Female clips: item # PC-F1A
 - Male clips: item # PC-M2H
 - Panel Control: item # PS-150E
 - Installed per manufacturer's instructions with recommended manufacturer's installation tools.
 - .2 Clothes rails and brackets: metal sockets for metal rods of 32 mm in diameter, finished 603 zinc plated, size as indicated.

3.04 INSTALLATION OF TRIM

- .1 Standing and running trim:
 - .1 Interior:
 - .1 Veneered stock: birch veneer, B/BB grade, rotary cut.

3.05 INSTALLATION OF FRAMES

- .1 Interior frames:
 - .1 Grade: Custom.
 - .2 Frames to be solid wood Birch species, Select White.
 - .3 Construction:
 - .1 Profile: as detailed.
 - .2 Corner: Type 1 Rabbet.

3.06 INSTALLATION OF PANELLING

- .1 Panel types:
 - .1 Hardwood plywood.
 - .2 Panel face assembly: running match.
 - .3 Matching of adjacent panels: sequence matched sets
 - .4 Flitch selection: flitches to be selected by Departmental Representative from sample flitches.
 - .5 Labelling: classified as to surface burning characteristics as follows:
 - .1 Flame spread: 150.

3.07 INSTALLATION OF SHELVING

- .1 Hardwood plywood:
 - .1 Thickness: 19 mm.
 - .2 Number of plies: 13.
 - .3 Face veneer: birch species, B grade, rotary cut.
 - .4 Back veneer: birch species, BB grade, rotary cut.
 - .5 Core: Veneer core, Birch.
 - .6 Bond: Type II.
 - .7 Sanding: regular sanding.
 - .8 Grain direction: vertical.

- .2 Edge banding: provide 10 mm thick solid matching wood strip on plywood edges 12 mm or thicker, exposed in final assembly. Strips same width as plywood.

3.08 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.

3.09 PROTECTION

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

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/HPVA HP-1, Standard for Hardwood and Decorative Plywood.
- .2 ASTM International
 - .1 ASTM E 1333, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
 - .2 ASTM D 2832, Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
 - .3 ASTM D 5116, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .3 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
 - .1 Architectural Woodwork Quality Standards.
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-71.20, Adhesive, Contact, Brushable.
- .5 CSA International
 - .1 CSA B111, Wire Nails, Spikes and Staples.
 - .2 CSA O112.10, Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure).
 - .3 CSA O121, Douglas Fir Plywood.
 - .4 CSA O141, Softwood Lumber.
 - .5 CSA O151, Canadian Softwood Plywood.
 - .6 CSA O153, Poplar Plywood.
 - .7 CAN/CSA-Z809, Sustainable Forest Management.
- .6 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001, FSC Principle and Criteria for Forest Stewardship.
- .7 Green Seal Environmental Standards (GS)
 - .1 GS-11, Paints and Coatings.
 - .2 GS-36, Commercial Adhesives.
- .8 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .9 International Organization for Standardization (ISO)
 - .1 ISO 14040, Environmental Management-Life Cycle Assessment - Principles and Framework.
 - .2 ISO 14041, Environmental Management-Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis.
- .10 National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3, High-Pressure Decorative Laminates (HPDL).

- .11 National Hardwood Lumber Association (NHLA)
 - .1 Rules for the Measurement and Inspection of Hardwood and Cypress.
- .12 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber.
- .13 Sustainable Forestry Initiative (SFI)
 - .1 SFI Standard.

1.02 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 architectural woodwork and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of Ontario, Canada.
 - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
 - .1 Scales: profiles full size, details half full size.
 - .3 Indicate materials, thicknesses, finishes and hardware.
 - .4 Indicate locations of service outlets in casework, and connections, attachments, anchorage and location of exposed fastenings.
- .4 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate samples of hardwood plywood: sample size 300 x 300 mm.
- .5 Certifications: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

1.03 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Sustainable Standards Certification:
 - .1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809 or FSC or SFI.
- .3 Plywood and wood based composite panels to CSA and ANSI standards.

1.04 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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.
 - .1 Protect millwork against dampness and damage during and after delivery.
 - .2 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
- .3 Storage and Handling Requirements:
 - .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect architectural woodwork from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 MATERIALS

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 15 % or less in accordance with following standards:
 - .1 CSA O141.
 - .2 CAN/CSA-Z809 or FSC or SFI certified.
 - .3 NLGA Standard Grading Rules for Canadian Lumber.
 - .4 AWMAC custom grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Hardwood lumber: moisture content 12 % or less in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 CAN/CSA-Z809 or FSC or SFI certified.
 - .3 AWMAC custom grade, moisture content as specified.
- .4 Nails and staples: to CSA B111.
- .5 Wood screws: stainless steel, type and size to suit application.
- .6 Splines: wood or metal.
- .7 Sealant: in accordance with Section 07 92 00 - Joint Sealants.

2.02 MANUFACTURED UNITS

- .1 Casework:
 - .1 Fabricate caseworks to AWMAC custom quality grade.
 - .2 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.
 - .1 S2S is acceptable for concealed areas.
 - .2 Board sizes: "standard" or better grade.
 - .3 Dimension sizes: "standard" light framing or better grade.
 - .4 Urea-formaldehyde free.
 - .3 Framing Birch species, NHLA grade.
 - .4 Case bodies (ends, divisions and bottoms).
 - .1 Hardwood plywood:
 - .1 Thickness: 19 mm.

- .2 Number of plies: 13.
- .3 Face veneer: Birch species, B grade, Rotary cut.
- .4 Back veneer: Birch species, BB grade, Rotary cut.
- .5 Core: Veneer, Birch.
- .6 Bond: Type II.
- .7 Sanding: regular sanding.
- .8 Grain direction vertical.
- .2 Solid wood: Birch species, Custom grade.
- .5 Backs:
 - .1 Hardwood plywood:
 - .1 Thickness: 13 mm.
 - .2 Number of plies: 9.
 - .3 Face veneer: Birch species, B grade, Rotary cut.
 - .4 Back veneer: Birch species, BB grade, Rotary cut.
 - .5 Core: Veneer, Birch.
 - .6 Bond: Type II.
 - .7 Sanding: regular sanding.
 - .8 Grain direction vertical.
- .6 Shelving:
 - .1 Hardwood plywood:
 - .1 Thickness: 19 mm.
 - .2 Number of plies: 13.
 - .3 Face veneer: Birch species, B grade, Rotary cut.
 - .4 Back veneer: Birch species, BB grade, Rotary cut.
 - .5 Core: Veneer, Birch.
 - .6 Bond: Type II.
 - .7 Sanding: regular sanding.
 - .8 Grain direction vertical.
- .7 Solid Surfacing:
 - .1 Solid Surfacing: Homogenous filled acrylic sheets; not coated, laminated or of composite construction, superficial damage to a depth of 0.25mm shall be repairable by sanding and polishing, semi-gloss finish with a gloss rating of 25-50. Colour to be selected by Departmental Representative from manufacturer's standard colour range.
 - .1 Thickness: 19 mm
 - .2 Counter edge: 38mm, square edge
 - .2 Joint Adhesive, Solid Surfacing: Manufacturer's standard two-part adhesive kit to create inconspicuous, non-porous joints, with a chemical bond.
 - .3 Sealant, Solid Surfacing: Manufacturer's standard mildew-resistant silicone sealant colour formulated to match sheets.

2.03 FABRICATION

- .1 Set nails and countersink screws apply wood filler to indentations, sand smooth and leave ready to receive finish.
- .2 Shop install cabinet hardware shelves. Recess shelf standards unless noted otherwise.
- .3 Shelving to cabinetwork to be adjustable unless otherwise noted.

- .4 Provide cutouts for inserts, outlet boxes and other fixtures.
- .5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .7 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .8 Veneer laminated to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm. Keep joints 600 mm from sink cutouts.
- .9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
- .10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .11 Solid Surfacing:
 - .1 Shop fabricate work to greatest extent practical and to sizes and shapes indicated, in accordance with reviewed shop drawings and solid polymer manufacturer requirements.
 - .2 Form joints between work using manufacturer's joint adhesive. Make joints inconspicuous in appearance and without voids. Attach 50mm wide reinforcing strip of solid polymer material under each joint or as recommended by manufacturer.
 - .3 Cut holes and cutouts for items penetrating the work to templates. Reinforce holes and cutouts to manufacturer's requirements.
 - .4 Provide edge details as indicated. Rout and finish component edges to a smooth uniform finish. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.

2.04 FINISHING

- .1 Finish in accordance with Section 09 91 99 – Painting for Minor Works.

3 EXECUTION

3.01 EXAMINATION

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

3.02 INSTALLATION

- .1 Do architectural woodwork to Quality Standards of AWMAC.
- .2 Install prefinished millwork at locations shown on drawings.
 - .1 Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely.
 - .1 Supply and install heavy duty fixture attachments for wall mounted cabinets.
- .4 Use draw bolts in countertop joints.
- .5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.
- .6 At junction of counter back splash and adjacent wall finish, apply small bead of sealant in accordance with Section 07 92 00 - Joint Sealants.
- .7 Apply water resistant building paper or bituminous coating over wood framing members in contact with masonry or cementitious construction.
- .8 Fit hardware accurately and securely in accordance with manufacturer's written instructions.
- .9 Install 2 grommets, at Translation Counter as indicated.

Basis of Design:	88mm diameter, satin chrome, with brush. Richelieu #168021174 or equal.
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3.03 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.
 - .1 Clean.
 - .2 Remove excess glue from surfaces.

3.04 PROTECTION

- .1 Protect from damage until final inspection.
- .2 Protect installed products and components from damage during construction.
- .3 Repair damage to adjacent materials caused by architectural woodwork installation.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .2 Underwriter's Laboratories of Canada (ULC)
 - .1 ULC-S115, Fire Tests of Fire stop Systems.

1.02 DEFINITIONS

- .1 Fire Stop Material: device intended to close off opening or penetration during fire or materials that fill openings in wall or floor assembly where penetration is by cables, cable trays, conduits, ducts and pipes and poke-through termination devices, including electrical outlet boxes along with their means of support through wall or floor openings.
- .2 Single Component Fire Stop System: fire stop material that has Listed Systems Design and is used individually without use of high temperature insulation or other materials to create fire stop system.
- .3 Multiple Component Fire Stop System: exact group of fire stop materials that are identified within Listed Systems Design to create on site fire stop system.
- .4 Tightly Fitted; (ref: NBC Part 3.1.9.1.1 and 9.10.9.6.1): penetrating items that are cast in place in buildings of noncombustible construction or have "0" annular space in buildings of combustible construction.
 - .1 Words "tightly fitted" should ensure that integrity of fire separation is such that it prevents passage of smoke and hot gases to unexposed side of fire separation.

1.03 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets.

1.04 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Installer: company specializing in fire stopping installations.

1.05 DELIVERY, STORAGE AND HANDLING

- .1 Packing, shipping, handling and unloading:
 - .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.

- .3 Deliver materials to the site in undamaged condition and in original unopened containers, marked to indicate brand name, manufacturer, ULC markings.
- .2 Storage and Protection:
 - .1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 MATERIALS

- .1 Fire stopping and smoke seal systems: in accordance with CAN-ULC-S115.
 - .1 Asbestos-free materials and systems capable of maintaining effective barrier against flame, smoke and gases in compliance with requirements of CAN-ULC-S115 and not to exceed opening sizes for which they are intended.
 - .2 Fire stop system rating: F.
- .2 Service penetration assemblies: systems tested to CAN-ULC-S115.
- .3 Service penetration fire stop components: certified by test laboratory to CAN-ULC-S115.
- .4 Fire-resistance rating of installed fire stopping assembly in accordance with NBC.
- .5 Fire stopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
- .6 Fire stopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
- .7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.
- .8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
- .9 Damming and backup materials, supports and anchoring devices: to manufacturer's recommendations, and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction.
- .10 Sealants for vertical joints: non-sagging.

3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

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

3.02 PREPARATION

- .1 Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials.
 - .1 Ensure that substrates and surfaces are clean, dry and frost free.
- .2 Prepare surfaces in contact with fire stopping materials and smoke seals to manufacturer's instructions.
- .3 Maintain insulation around pipes and ducts penetrating fire separation.
- .4 Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces.

3.03 INSTALLATION

- .1 Install fire stopping and smoke seal material and components in accordance with manufacturer's certified tested system listing.
- .2 Seal holes or voids made by through penetrations, poke-through termination devices, and unpenetrated openings or joints to ensure continuity and integrity of fire separation are maintained.
- .3 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .4 Tool or trowel exposed surfaces to neat finish.
- .5 Remove excess compound promptly as work progresses and upon completion.

3.04 SEQUENCES OF OPERATION

- .1 Proceed with installation only when submittals have been reviewed by Departmental Representative.
- .2 Install floor fire stopping before interior partition erections.
- .3 Metal deck bonding: fire stopping to precede spray applied fireproofing to ensure required bonding.

3.05 FIELD QUALITY CONTROL

- .1 Inspections: notify Departmental Representative when ready for inspection and prior to concealing or enclosing fire stopping materials and service penetration assemblies.

3.06 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.
- .3 Remove temporary dams after initial set of fire stopping and smoke seal materials.

3.07 SCHEDULE

- .1 Fire stop and smoke seal at:
 - .1 Penetrations through fire-resistance rated masonry, concrete, and gypsum board partitions and walls.
 - .2 Intersection of fire-resistance rated masonry and gypsum board partitions.
 - .3 Penetrations through fire-resistance rated floor slabs, ceilings and roofs.
 - .4 Around mechanical and electrical assemblies penetrating fire separations.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 ASTM International
 - .1 ASTM C 919, Standard Practice for Use of Sealants in Acoustical Applications.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-19.17, One-Component Acrylic Emulsion Base Sealing Compound.
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.02 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 joint sealants and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Manufacturer's product to describe:
 - .1 Caulking compound.
 - .2 Primers.
 - .3 Sealing compound, each type, including compatibility when different sealants are in contact with each other.
 - .3 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Samples:
 - .1 Submit 2 samples of each type of material and colour.
 - .2 Cured samples of exposed sealants for each colour where required to match adjacent material.
- .4 Manufacturer's Instructions:
 - .1 Submit instructions to include installation instructions for each product used.

1.03 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

1.04 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
- .2 Store and protect.
- .3 Replace defective or damaged materials with new.

1.05 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Proceed with installation of joint sealants only when:
 - .1 Ambient and substrate temperature conditions are within limits permitted by joint sealant manufacturer or are above 4.4 degrees C.
 - .2 Joint substrates are dry.
 - .3 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.
 - .2 Joint-Width Conditions:
 - .1 Proceed with installation of joint sealants only where joint widths are more than those allowed by joint sealant manufacturer for applications indicated.
 - .3 Joint-Substrate Conditions:
 - .1 Proceed with installation of joint sealants only after contaminants capable of interfering with adhesion are removed from joint substrates.

1.06 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 Health Canada.
- .2 Departmental Representative will arrange for ventilation system to be operated on maximum outdoor air and exhaust during installation of caulking and sealants.

2 PRODUCTS

2.01 SEALANT MATERIALS

- .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 off gas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize off gas time.
- .3 Where sealants are qualified with primers use only these primers.

2.02 SEALANT MATERIAL DESIGNATIONS

- .1 Type 1: Acrylic latex one part: to CAN/CGSB-19.17. Colour to be selected Departmental Representative from manufacturer's full colour range.
- .2 Type 2: Acoustical sealant: to ASTM C 919.

2.03 SEALANT SELECTION

- .1 Perimeter of solid surface countertops: sealant Type 1.
- .2 Acoustic Sealant: sealant Type 2.

2.04 JOINT CLEANER

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant in accordance with sealant manufacturer's written recommendations.
- .2 Primer: in accordance with sealant manufacturer's written recommendations.

3 EXECUTION

3.01 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for joint sealants 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.

3.02 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.
- .4 Ensure joint surfaces are dry and frost free.
- .5 Prepare surfaces in accordance with manufacturer's directions.

3.03 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.

3.04 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.

3.05 MIXING

- .1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.06 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.
- .2 Curing:
 - .1 Cure sealants in accordance with sealant manufacturer's instructions.
 - .2 Do not cover up sealants until proper curing has taken place.

3.07 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 – Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Clean adjacent surfaces immediately.
 - .3 Remove excess and droppings, using recommended cleaners as work progresses.
 - .4 Remove masking tape after initial set of sealant.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.08 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by joint sealants installation.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 Quality Standards for Architectural Woodwork.
- .2 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-71.19, Adhesive, Contact, Sprayable.
 - .2 CAN/CGSB-71.20, Adhesive, Contact, Brushable.
- .3 Canadian Standards Association (CSA International).
 - .1 CSA A440.2, Energy Performance of Windows and Other Fenestration Systems.
 - .2 CSA O115, Hardwood and Decorative Plywood.
 - .3 CAN/CSA O132.2 Series, Wood Flush Doors.
 - .4 CAN/CSA-O132.5, Stile and Rail Wood Doors.
 - .5 CAN/CSA-Z808, A Sustainable Forest Management System: Guidance Document.
 - .6 CSA Certification Program for Windows and Doors.
- .4 Environmental Choice Program (ECP).
 - .1 CCD-045, Sealants and Caulking Compounds.
 - .2 CCD-046, Adhesives.
- .5 National Fire Protection Association (NFPA).
 - .1 NFPA 80, Standard for Fire Doors and Fire Windows.
 - .2 NFPA 252, Standard Method of Fire Tests of Door Assemblies.
- .6 Underwriters' Laboratories of Canada (ULC).
 - .1 CAN-4S104M, Fire Tests of Door Assemblies.
 - .2 CAN4-S105M, Fire Door Frames Meeting the Performance Required by CAN4-S104.

1.02 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's:
 - .1 For caulking materials during application.
 - .2 For door materials and adhesives.
- .2 Shop Drawings:
 - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Indicate door types, sizes, core construction, transom panel construction and cutouts.

1.03 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

- .2 Submit one 300 x 300 mm corner sample of each type wood door.
- .3 Show door construction, core, glazing detail and faces.
- .4 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions.

1.04 QUALITY ASSURANCE

- .1 Regulatory Requirements:
 - .1 Wood fire rated doors: labelled and listed by an organization accredited by Standards Council of Canada.
- .2 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .3 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .4 Pre-installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.05 DELIVERY, STORAGE, AND HANDLING

- .1 Storage and Protection:
 - .1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.
 - .2 Store doors in well ventilated room, off floor, in accordance with manufacturer's recommendations.
 - .3 Protect doors from scratches, handling marks and other damage.
 - .4 Store doors away from direct sunlight.

1.06 WASTE MANAGEMENT AND DISPOSAL

- .1 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .2 Dispose of packaging material in appropriate on-site bin for recycling in accordance with site waste management program.
- .3 Unused or damaged glazing materials are not recyclable and must not be diverted to municipal recycling programs.
- .4 Divert unused adhesive material from landfill to official hazardous material collections site approved by Departmental Representative.
- .5 Do not dispose of unused paint materials into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

2 PRODUCTS

2.01 WOOD FLUSH DOORS

- .1 Solid core: to CAN/CSA-O132.2.1.

- .1 Construction:
 - .1 Solid particleboard core: stile and rail frame bonded to particleboard core with wood lock blocks, 7-ply construction.
- .2 Face Panels:
 - .1 Hardwood; veneer grades: Grade I (Premium), Birch species.
- .3 Adhesive: Type II (water resistant) for interior doors.

2.02 FABRICATION

- .1 Vertical edge strips to match face veneer.
- .2 Bevel vertical edges of single acting doors 3 mm in 50 mm on lock side and 1.5 mm in 50 mm on hinge side.

3 EXECUTION

3.01 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.

3.02 INSTALLATION

- .1 Unwrap and protect doors in accordance with CAN/CSA-O132.2 Series, Appendix A.
- .2 Install doors and hardware in accordance with manufacturer's printed instructions and CAN/CSA-O132.2 Series, Appendix A.
- .3 Adjust hardware for correct function.

3.03 ADJUSTMENT

- .1 Re-adjust doors and hardware just prior to completion of building to function freely and properly.

3.04 CLEANING

- .1 Perform cleaning as soon as possible after installation to remove construction and accumulated environmental dirt.
- .2 Remove traces of primer, caulking; clean doors and frames.
- .3 Clean glass and glazing materials with approved non-abrasive cleaner.
- .4 On completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA)
 - .1 ANSI/BHMA A156.1, American National Standard for Butts and Hinges.
 - .2 ANSI/BHMA A156.6, Architectural Door Trim.
 - .3 ANSI/BHMA A156.10, Power Operated Pedestrian Doors.
 - .4 ANSI/BHMA A156.13, Mortise Locks and Latches Series 1000.
 - .5 ANSI/BHMA A156.16, Auxiliary Hardware.
 - .6 ANSI/BHMA A156.18, Materials and Finishes.
 - .7 ANSI/BHMA A156.19, Power Assist and Low Energy Power - Operated Doors.

1.02 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 door hardware and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Hardware List:
 - .1 Submit contract hardware list.
 - .2 Indicate specified hardware, including make, model, material, function, size, finish and other pertinent information.
- .4 Manufacturer's Instructions: submit manufacturer's installation instructions.

1.03 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for door hardware for incorporation into manual.

1.04 QUALITY ASSURANCE

- .1 Regulatory Requirements:
 - .1 Hardware for doors in fire separations and exit doors certified by a Canadian Certification Organization accredited by Standards Council of Canada.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.05 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 Package items of hardware including fastenings, separately or in like groups of hardware, label each package as to item definition and location.
- .4 Storage and Handling Requirements:
 - .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect.
 - .3 Protect prefinished surfaces with wrapping.
 - .4 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 HARDWARE ITEMS

- .1 Use one manufacturer's products only for similar items.

2.02 DOOR HARDWARE

- .1 Locks and latches:
 - .1 Mortise locks and latches: to ANSI/BHMA A156.13, series 1000 mortise lock, grade 1, designed for function and keyed as stated in Hardware Schedule.
 - .2 Lever handles: To match base building standard design.
 - .3 Roses: round.
 - .4 Normal strikes: box type, lip projection not beyond jamb.
 - .5 Cylinders: key into keying system as noted.
 - .6 Finished to Satin Chrome 626.
- .2 Butts and hinges:
 - .1 Butts and hinges: to ANSI/BHMA A156.1, designated by letter A and numeral identifiers, followed by size and finish, listed in Hardware Schedule.
- .3 Door Operators:
 - .1 Power assist and low energy power operated doors: to ANSI/BHMA A156.19.
- .4 Thresholds: 50 mm wide x full width of door opening, extruded aluminum mill finish, plain surface.
- .5 Barrier Free Pneumatic Door Operator:
 - .1 Heavy duty pneumatically assisted door closer, complete with actuators, control boxes, pneumatic tubing and compressed air source.
 - .2 Self contained control box/compressor combination.
 - .3 Control boxes: complete with electric strike relay.
 - .4 Mount operators on either push or pull sides of doors as required to place them inside rooms.
 - .5 Electrical box and actuator: Hardwired low voltage actuator with stainless steel 114 mm round plate, engraved blue filled with handicap symbol. Box 51 mm wide x 102 mm high x 50 mm deep single gang electrical box, flush mounted in wall, locations indicated.
 - .6 Supply switched line voltage to control box. Locate switch adjacent to box.
 - .7 Supply low voltage wiring to each actuator and 6 mm diameter air tubing to each

- operator.
- .8 Mount control box in location as directed by Departmental Representative.

2.03 FASTENINGS

- .1 Use only fasteners provided by manufacturer. Failure to comply may void warranties and applicable licensed labels.
- .2 Supply screws, bolts, expansion shields and other fastening devices required for satisfactory installation and operation of hardware.
- .3 Exposed fastening devices to match finish of hardware.
- .4 Where pull is scheduled on one side of door and push plate on other side, supply fastening devices, and install so pull can be secured through door from reverse side. Install push plate to cover fasteners.
- .5 Use fasteners compatible with material through which they pass.

3 EXECUTION

3.01 INSTALLATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.
- .2 Supply manufacturers' instructions for proper installation of each hardware component.
- .3 Where door stop contacts door pulls, mount stop to strike bottom of pull.
- .4 Use only manufacturer's supplied fasteners.
 - .1 Use of "quick" type fasteners, unless specifically supplied by manufacturer, is unacceptable.

3.02 ADJUSTING

- .1 Adjust door hardware, operators, closures and controls for optimum, smooth operating condition, and safety.
- .2 Lubricate hardware, operating equipment and other moving parts.
- .3 Adjust door hardware to ensure tight fit at contact points with frames.

3.03 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Clean hardware with damp rag and approved non-abrasive cleaner, and polish hardware in accordance with manufacturer's instructions.
 - .3 Remove protective material from hardware items where present.
 - .4 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.04 DEMONSTRATION

- .1 Maintenance Staff Briefing:
 - .1 Brief maintenance staff regarding:
 - .1 Proper care, cleaning, and general maintenance of projects complete hardware.
 - .2 Description, use, handling, and storage of keys.
 - .3 Use, application and storage of wrenches.
 - .2 Demonstrate operation, operating components, adjustment features, and lubrication requirements.

3.05 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by door hardware installation.

3.06 SCHEDULE

- .1 Hardware Group 1: (Door D-01)
 - .1 1-1/2 pairs hinges A5111, 114 x 101 mm 626.
 - .2 1 Passage set, ANSI F01
Basis of Design: Schlage L9010, Trim 03, Colour/finish: ANSI 626, Rose: A
 - .3 1 Barrier-free pneumatic door operator
Basis of Design: LCN 4660
 - .4 1 Electric Strike
Basis of Design: Von Duprin 6212WF, Finish US43D/32, E59, Grade 1
 - .5 1 door stop, L02141
- .2 Hardware Group 2: (Door D-02)
 - .1 1-1/2 pairs hinges A5111, 114 x 101 mm 626.
 - .2 1 Passage set, ANSI F01
Basis of Design: Schlage L9010, Trim 03, Colour/finish: ANSI 626, Rose: A
 - .3 1 door stop, L02141
- .3 Hardware Group 3: (Doors D-03, D-04)
 - .1 3 pairs hinges A5111, 114 x 101 mm 626.
 - .2 2 Full Dummy Trim
Basis of Design: Schlage L0172, Trim 03, Colour/finish: ANSI 626, Rose A
 - .3 2 roller latch and strikes, type E09101

.4 Table:

<u>Door No.</u>	<u>Groups</u>
D-01	1
D-02	2
D-03	3
D-04	3

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 ASTM International
 - .1 ASTM C 1396/C 1396M, Standard Specification for Gypsum Wallboard.
 - .2 ASTM C 475/C 475M, Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
 - .3 ASTM C 514, Standard Specification for Nails for the Application of Gypsum Board.
 - .4 ASTM C 645, Standard Specification for Nonstructural Steel Framing Members.
 - .5 ASTM C 754, Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
 - .6 ASTM C 840, Standard Specification for Application and Finishing of Gypsum Board.
 - .7 ASTM C 954, Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.122 in. (2.84 mm) in Thickness.
 - .8 ASTM C 1002, Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.
 - .9 ASTM C 1047, Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.
 - .10 ASTM C 1178/C 1178M, Standard Specification for Glass Mat Water-Resistant Gypsum Backing Board.
- .2 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.

1.02 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 gypsum, framing, sealants and include product characteristics, performance criteria, physical size, finish and limitations.

1.03 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store materials inside, level, under cover. Protect from weather, damage from

construction operations and other causes, in accordance with manufacturer's printed instructions.

- .3 Handle materials to prevent damage to edges or surfaces. Protect metal accessories and trim from being bent or damaged.
- .4 Store and protect.
- .5 Replace defective or damaged materials with new.

2 PRODUCTS

2.01 MATERIALS

- .1 Non-structural Metal Framing:
 - .1 Non-load bearing channel stud framing: to ASTM C 645, 64, 92 and 140 mm stud size, roll formed from 0.53 mm thickness hot dipped galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460 mm centres.
 - .2 Floor and ceiling tracks: to ASTM C 645 , in widths to suit stud sizes, 32 mm flange height.
 - .3 Metal channel stiffener: 19 x 1.4 mm thick cold rolled steel, coated with rust inhibitive coating.
- .2 Gypsum Board:
 - .1 Standard board: to ASTM C1396/C1396M regular, 13 mm thick, 16mm thick and Type X, 13 mm thick, 1200 mm wide x maximum practical length, ends square cut, edges bevelled.
 - .2 Drywall furring channels: 0.5 mm core thickness galvanized steel channels for screw attachment of gypsum board.
 - .3 Resilient drywall furring: 0.5 mm base steel thickness galvanized steel for resilient attachment of gypsum board.
 - .4 Steel drill screws: to ASTM C 1002.
 - .5 Stud adhesive: to CAN/CGSB-71.25.
 - .6 Laminating compound: as recommended by manufacturer, asbestos-free.
 - .7 Casing beads, corner beads, control joints and edge trim: to ASTM C 1047, galvanized metal, 0.5 mm base thickness, perforated flanges, one piece length per location.
 - .8 Shadow mould: extruded PVC plastic, white colour.
 - .1 J-Bead:
Basis of Design: Trim-Tex, stock number #1710 or #1810.
 - .2 Reveal:
Bead Basis of Design: Trim-Tex, stock number #AS5325.
 - .3 Corner bead:
Basis of Design: Trim-Tex stock number #R010LP.

- .9 Sealants: in accordance with Section 07 92 00 - Joint Sealants.
- .10 Joint compound: to ASTM C 475, asbestos-free.

2.02 ACCESSORIES

- .1 Acoustical insulation: Non-combusible stone wool insulation.
Basis of Design: Rockwool, Safe'n'Sound.
- .2 Sealants: in accordance with Section 07 92 00 - Joint Sealants to ASTM C 475.
- .3 Insulating strip: rubberized, moisture resistant, 3 mm thick closed cell neoprene strip, 12 mm wide, with self sticking permanent adhesive on one face, lengths as required.

3 EXECUTION

3.01 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 prior to partition installation.
 - .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.

3.02 ERECTION OF FRAMING

- .1 Install steel framing members to receive screw-attached gypsum board in accordance with ASTM C 754 except where specified otherwise.
- .2 Align partition tracks at floor and ceiling and secure at 600 mm on centre maximum.
- .3 Place studs vertically at 400 mm on centre and maximum of 50 mm from abutting walls, and at each side of openings and corners. Position studs in tracks at floor and ceiling. Cross brace steel studs as required to provide rigid installation to manufacturer's instructions.
- .4 Erect metal studding to tolerance of 1:1000.
- .5 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned.
- .6 Include two studs extending from floor to ceiling at each side of openings wider than stud centres specified. Secure studs together, 50 mm apart using column clips or other approved means of fastening placed alongside frame anchor clips.
- .7 Install heavy gauge single jamb studs at openings.
- .8 Erect track at head of door/window openings and sills of sidelight/window openings to accommodate intermediate studs. Secure track to studs at each end, in accordance with manufacturer's instructions. Install intermediate studs above and below openings in

same manner and spacing as wall studs.

- .9 Install steel studs or furring channel between studs for attaching electrical and other boxes.
- .10 Extend partitions to ceiling height except where indicated.
- .11 Maintain clearance under beams and structural slabs to avoid transmission of structural loads to studs. Use double track slip joint.
- .12 Install continuous insulating strips to isolate studs from uninsulated surfaces.
- .13 Install insulating strip under studs and tracks around perimeter of sound control partitions.

3.03 ERECTION OF GYPSUM BOARD AND ACCESSORIES

- .1 Do application and finishing of gypsum board in accordance with ASTM C 840 except where specified otherwise.
- .2 Erect hangers and runner channels for suspended gypsum board ceilings in accordance with ASTM C 840 except where specified otherwise.
- .3 Support light fixtures by providing additional ceiling suspension hangers within 150 mm of each corner and at maximum 600 mm around perimeter of fixture.
- .4 Frame with furring channels, perimeter of openings for access panels, light fixtures, diffusers, grilles.
- .5 Install furring channels parallel to, and at exact locations of steel stud partition header track.
- .6 Furr for gypsum board faced vertical bulkheads within and at termination of ceilings.
- .7 Furr above suspended ceilings for gypsum board fire and sound stops and to form plenum areas as indicated.
- .8 Install wall furring for gypsum board wall finishes in accordance with ASTM C 840, except where specified otherwise.
- .9 Install acoustical insulation and sealant in sound rated partitions to correspond with tested assembly.
- .10 Install gypsum boards in direction that will minimize number of end-butt joints. Stagger end joints 250 mm minimum.

3.04 APPLICATION

- .1 Apply gypsum board after bucks, anchors, blocking, sound attenuation, electrical and mechanical work are approved.
- .2 Apply double layer gypsum board to metal furring or framing using screw fasteners for first layer, laminating adhesive for second layer. Maximum spacing of screws 300 mm on centre.

- .1 Single-Layer Application:
 - .1 Apply gypsum board on ceilings prior to application of walls to ASTM C 840.
 - .2 Apply gypsum board vertically or horizontally, providing sheet lengths that will minimize end joints.
- .2 Double-Layer Application:
 - .1 Install gypsum board for base layer and exposed gypsum board for face layer.
 - .2 Apply base layer to ceilings prior to base layer application on walls; apply face layers in same sequence. Offset joints between layers at least 250 mm.
 - .3 Apply base layers at right angles to supports unless otherwise indicated.
 - .4 Apply base layer on walls and face layers vertically with joints of base layer over supports and face layer joints offset at least 250 mm with base layer joints.
- .3 Apply 12 mm diameter bead of acoustic sealant continuously around periphery of each face of partitioning to seal gypsum board/structure junction where partitions abut fixed building components. Seal full perimeter of cut-outs around electrical boxes, ducts, in partitions where perimeter sealed with acoustic sealant.
- .4 Install ceiling boards in direction that will minimize number of end-butt joints. Stagger end joints at least 250 mm.
- .5 Install gypsum board on walls vertically to avoid end-butt joints. At stairwells and similar high walls, install boards horizontally with end joints staggered over studs, except where local codes or fire-rated assemblies require vertical application.
- .6 Install gypsum board with face side out.
- .7 Do not install damaged or damp boards.

3.05 INSTALLATION

- .1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces where practical. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges. Secure at 150 mm on centre.
- .2 Install casing beads around perimeter of suspended ceilings.
- .3 Install casing beads where gypsum board butts against surfaces having no trim concealing junction and where indicated. Seal joints with sealant.
- .4 Install access doors to electrical and mechanical fixtures specified in respective sections.
 - .1 Rigidly secure frames to furring or framing systems.
- .5 Finish face panel joints and internal angles with joint system consisting of joint compound, joint tape and taping compound installed according to manufacturer's directions and feathered out onto panel faces.
- .6 Gypsum Board Finish: finish gypsum board walls and ceilings to following levels in accordance with AWCI Levels of Gypsum Board Finish:

- .1 Level 5: embed tape for joints and interior angles in joint compound and apply three separate coats of joint compound over joints, angles, fastener heads and accessories; apply a thin skim coat of joint compound to entire surface; surfaces smooth and free of tool marks and ridges.
- .7 Finish corner beads, control joints and trim as required with two coats of joint compound and one coat of taping compound, feathered out onto panel faces.
- .8 Fill screw head depressions with joint and taping compounds to bring flush with adjacent surface of gypsum board so as to be invisible after surface finish is completed.
- .9 Completed installation to be smooth, level or plumb, free from waves and other defects and ready for surface finish.

3.06 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.

3.07 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by partition installation.

3.08 SCHEDULES

- .1 Construct fire rated assemblies where indicated.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 American Association of Textile Chemists and Colorists (AATCC)
 - .1 AATCC Test Method 16, Colorfastness to Light.
 - .2 AATCC Test Method 23, Colorfastness to Burn Gas Fumes.
 - .3 AATCC Test Method 129, Colourfastness to Ozone in the Atmosphere Under High Humidities.
 - .4 AATCC Test Method 134, Electrostatic Propensity of Carpets.
 - .5 AATCC Test Method 171, Carpets: Cleaning of; Hot Water Extraction Method.
 - .6 AATCC Test Method 175, Stain Resistance: Pile Floor Coverings.
 - .7 AATCC Test Method 189, Fluorine Content of Carpet Fibers.
- .2 ASTM International
 - .1 ASTM D 297, Standard Test Methods for Rubber Products-Chemical Analysis.
 - .2 ASTM D 1335, Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings.
 - .3 ASTM D 2661, Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings.
 - .4 ASTM D 1667, Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
 - .5 ASTM D 3574, Standard Test Methods for Flexible Cellular Materials - Slab, Bonded, and Molded Urethane Foams.
 - .6 ASTM D 3936, Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-4.2 No. 22, Textile Test Methods - Colourfastness to Rubbing (Crocking).
 - .2 CAN/CGSB-4.2 No.27.6M, Textile Test Methods - Flame Resistance - Methemine Tablet Test for Textile Floor Coverings.
 - .3 CAN/CGSB-4.2 No. 76/ISO 2551: , Textile Test Methods - Machine-Made Textile Floor Coverings - Determination of Dimensional Changes Due to the Effects of Varied Water and Heat Conditions.
 - .4 CAN/CGSB-4.2 No.77.1/ISO 4919: Textile Test Methods - Carpets - Determination of Tuft Withdrawal Force.
 - .5 CAN/CGSB-4.129, Carpets for Commercial Use.
- .4 Carpet and Rug Institute (CRI)
 - .1 CRI Carpet Installation Standard.
 - .2 CRI Green Label Indoor Air Quality Testing Program.
 - .3 CRI Green Label Plus Indoor Air Quality Testing Program.
- .5 Environmental Choice Program (ECP)
 - .1 CCD-152, Flooring Products, Commercial Non-modular Textile Flooring.
- .6 Health Canada
 - .1 C.R.C., c.923, Hazardous Products Act - Carpet Regulations, Part II of Schedule 1.
- .7 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

- .1 Material Safety Data Sheets (MSDS).
- .8 National Floor Covering Association (NFCA)
 - .1 National Floor Covering Specification Manual.
- .9 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
 - .2 CAN/ULC-S102.2, Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies.

1.02 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 each carpet tile, adhesive, and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit duplicate samples of each type of carpet tile specified and duplicate tiles for each colour selected, base, divider strips.

1.03 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.
- .3 Warranty Documentation: submit warranty documents specified.

1.04 MAINTENANCE MATERIAL SUBMITTALS

- .1 Extra stock materials in accordance with Closeout Submittals Section 01 78 00.
 - .1 Quantity: provide minimum of:
 - .1 Carpet tile: 1 box.
 - .2 Delivery, storage and protection : comply with Owner's requirements for delivery and storage of extra materials.

1.05 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Flooring Installer:
 - .1 Experienced in performing work of this Section who has specialized in installation of work similar to that required for this project.
 - .2 Certified by carpet manufacturer prior to bid submission.
 - .3 Must not sub-contract labour without written approval of Departmental

- Representative.
- .4 Responsible for proper product installation, including floor testing and preparation as specified and in accordance with carpet manufacturer's written instructions.

1.06 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - .3 Store and protect in original containers or wrapping with manufacturer's seals and labels intact.
 - .4 Store and protect carpet tile and accessories in location as directed by Departmental Representative.
 - .5 Store carpet and adhesive at minimum temperature of 18 degrees C and relative humidity of maximum 65% for minimum of 48 hours before installation.
 - .6 Prevent damage to materials during handling and storage. Keep materials under cover and free from dampness.
 - .7 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials.
 - .8 Replace defective or damaged materials with new.

1.07 SITE CONDITIONS

- .1 Moisture: ensure substrate is within moisture limits and alkalinity limits recommended by manufacturer. Prepare moisture testing and provide report to Departmental Representative.
- .2 Temperature: maintain ambient temperature of not less than 18 degrees C from 48 hours before installation to at least 48 hours after completion of work.
- .3 Relative humidity: maintain between 10% and 65% for 48 hours before, during and 48 hours after installation.
- .4 Ventilation:
 - .1 Departmental Representative will co-ordinate operation of ventilation system during installation of carpet.
 - .2 Ventilate enclosed spaces.
 - .3 Provide continuous ventilation during and after carpet application. Run ventilation system during installation; provide continuous ventilation for 7 days after completion of carpet installation.
- .5 Install carpet after space is enclosed and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete.

1.08 WARRANTY

- .1 Manufacturer's warranty: submit, for Departmental Representative's acceptance,

manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and does not limit other rights Owner may have under Contract Documents.

2 PRODUCTS

2.01 MATERIALS

- .1 Manufacturers:
 - .1 Ensure manufacturer has minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.
- .2 Description:
 - .1 Adhesives: VOC limit to SCAQMD Rule 1168.
 - .2 Primer /Sealer: in accordance with manufacturer's recommendations for surface conditions:

2.02 PERFORMANCE

- .1 Flammability: certified for flammability to Health Canada regulations under "Hazardous Products - Carpet Regulations", Part II of Schedule 1.
- .2 Flame Spread: maximum flame spread rating 300, maximum smoke developed classification 500, when tested to CAN/ULC-S102.2.
- .3 Smoke Development: 450 or less per ASTM E 662.
- .4 Dry Breaking Strength: to ASTM D 2661, minimum acceptable tear strength in both length and width:
 - .1 11.3 kg for carpets installed by glue down installation.
- .5 Wear: maximum 10% of pile face fiber by weight for 10 years.
- .6 Edge Ravel: none for 10 years.
- .7 Static Resistance: permanent static control to AATCC 134, 3500 V maximum at 20% RH and 22 degrees C.
- .8 Static Generation: less than 3.5 kV per AATCC 134 for 10 years.
- .9 Tuft Bind: Tuft Lock: to ASTM D 1335, minimum acceptable 3.6 for loop pile product.
- .10 De-lamination of Secondary Backing: Lamination Strength of Secondary Backing: to ASTM D 3936, minimum acceptable peel strength of 1.6 kg/25 mm.
- .11 Stain resistance: to AATCC 175.
- .12 Soil Resistance: Fluorine Durability Level to AATCC 189.
- .13 Colourfastness to light: to AATCC 16.
- .14 Colourfastness to atmosphere: to AATCC 129 and AATCC 23.

- .15 Colourfastness to crocking: to CAN/CGSB-4.2 No. 22.
- .16 Indoor Air Quality Certification: certified to CRI Green Label [Plus] IAQ requirements.

2.03 FABRICATION

- .1 Type CT-1:
Basis of Design: product "Scape Tile" by ShawContract, pattern 5T080, colour "Distance" 78597, size 610 mm x 610 mm.
- .2 Construction:
 - .1 Multi-Level Loop: «Multi-Level Pattern Loop».
- .3 Pile fibre: to CAN/CGSB-4.129.
 - .1 Nylon:
 - .1 Type: Nylon 6.
- .4 Woven Carpet Backing: to CAN/CGSB-4.129.
 - .1 100% moisture resistant warp, filling and stuffer yarns.
- .5 Stitches: 32 per 10cm.
- .6 Gauge: 47.2 per 10cm.
- .7 Pile Weight Density: 0.175g/cm³.
- .8 Finished Pile Height: minimum 3.1 mm average.
- .9 Surface Pile Weight: minimum 474 g.
- .10 Performance Rating: 3.0 minimum at 12,000 cycles to Hexapod test or 22,000 cycles to Vetterman test.
- .11 Dimensional Stability: maximum + 0.15% to CAN/CGSB-4.2 No. 76/ISO 2551.

2.04 ACCESSORIES

- .1 Base:
 - .1 Resilient Base: rubber cove base
- .2 Edge Strips:
 - .1 Metal:
 - .1 Designed for carpet being installed.
 - .2 Floor flange minimum 38 mm wide, face minimum 16 mm wide.
 - .3 Finish: clear anodic coating.
- .3 Adhesive:
 - .1 Multi-purpose Adhesive Type: recommended by carpet tile manufacturer for direct glue down installation.
 - .2 Adhesive in compliance with CCD-152.
- .4 Carpet protection: non-staining heavy duty kraft paper.

- .5 Subfloor patching compound: Portland cement base filler, mix to form cementitious paste.

3 EXECUTION

3.01 INSTALLERS

- .1 Use experienced and qualified technicians to carry out assembly and installation of tile carpet.

3.02 EXAMINATION

- .1 Examine conditions, substrates and work to receive work of this Section.
- .2 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for carpet tile installation in accordance with manufacturer's written instructions.
 - .1 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .2 Proceed with installation only after unacceptable conditions have been remedied.

3.03 PREPARATION

- .1 Subfloor Preparation:
 - .1 Fill and level cracks 3 mm wide or protrusions over 0.8 mm with appropriate and compatible patching compound.
 - .2 Comply with manufacturer's written recommendations for maximum patch thickness.
 - .3 Prime large patch areas with compatible primer.
 - .4 Ensure concrete substrates are cured, clean and dry.
 - .5 Ensure concrete substrates are free of paint, dirt, grease, oil, curing or parting agents, and other contaminants, including sealers, that interfere with the bonding of adhesive.
 - .6 Where powdery or porous concrete surface is encountered, apply primer compatible with adhesive to provide a suitable surface for glue-down installation.
- .2 Surface Preparation: prepare surface in accordance with manufacturer's written recommendations.
 - .1 Prepare floor surfaces in accordance with CRI Carpet Installation Standard.
- .3 Tile Carpeting Preparation:
 - .1 Pre-condition carpeting: following manufacturer's written instructions.
- .4 Demolition / Removal:
 - .1 Co-ordinate with Departmental Representative.
 - .2 Vacuum used carpet before removal.
 - .3 Maintain possession of removed used carpet.

3.04 INSTALLATION

- .1 Install carpet tiles in accordance with manufacturer's written instructions, and CRI Carpet Installation Standard and co-ordinate with Section 01 73 00 - Execution.

- .2 Co-ordinate tile carpeting work with work of other trades, for proper time and sequence to avoid construction delays.
- .3 Install carpet tile after finishing work is completed but before demountable office partitions and telephone and electrical pedestal outlets are installed.
- .4 Install carpet tile in quarter-turn pattern as per manufacturer's recommendation.
- .5 Snugly join carpet tiles in completed installation.
 - .1 Measure distance covered by 11 carpet tiles (10 joints) and ensure distance is in compliance with manufacturer specifications.
 - .2 Do not trap yarn between carpet tiles.
- .6 Apply thin film of pressure-sensitive adhesive according to manufacturer's recommendations.
- .7 Ensure finished installation presents smooth wearing surface free from conspicuous seams, burring and other faults.
- .8 Use material from same dye lot.
 - .1 Ensure colour, pattern and texture match within visual areas.
 - .2 Maintain constant pile direction.
- .9 Fit around architectural, mechanical, electrical and telephone outlets, and furniture fitments, around perimeter of rooms into recesses, and around projections.
- .10 Install carpet tiles to underfloor duct system and to access covers.
- .11 Install carpeting in pan type floor access covers.
- .12 Extend carpet tiles into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- .13 Install carpet tiles smooth and free from bubbles, puckers, and other defects.
- .14 Protect exposed carpet tile edges at transition to other flooring materials with suitable transition strips.
- .15 Base Installation: rubber cove base.

3.05 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.
 - .1 Vacuum carpets clean immediately after completion of installation.

3.06 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Prohibit traffic on carpet for period of 24 hours minimum after installation and until adhesive is cured.

- .3 Install carpet protection to satisfaction of Departmental Representative
- .4 Repair damage to adjacent materials caused by tile carpeting installation.

END OF SECTION

1 GENERAL

1.01 REFERENCES

- .1 Green Seal Environmental Standards (GS)
 - .1 GS-11, Paints and Coatings.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - current edition.
 - .2 Maintenance Repainting Manual - current edition.

1.02 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 [paint and coating products] and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Samples:
 - .1 Submit for review and acceptance of each unit.
 - .2 Samples will be returned for inclusion into work.
 - .3 Submit 200 x 300 mm sample panels of each paint, stain, clear coating with specified paint or coating in colours, gloss/sheen and textures required to MPI Painting Specification Manual standards.
- .4 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.03 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements 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 Provide and maintain dry, temperature controlled, secure storage.
 - .2 Store painting materials and supplies away from heat generating devices.
 - .3 Store materials and equipment in well ventilated area within temperature as recommended by manufacturer.
- .4 Fire Safety Requirements:

- .1 Supply fire extinguisher adjacent to storage area.
- .2 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.
- .3 Handle, store, use and dispose of flammable and combustible materials in accordance with National Fire Code of Canada requirements.

1.04 SITE CONDITIONS

- .1 Heating, Ventilation and Lighting:
 - .1 Ventilate enclosed spaces.
 - .2 Co-ordinate use of existing ventilation system with Departmental Representative and ensure its operation during and after application of paint as required.
 - .3 Provide minimum lighting level of 323 Lux on surfaces to be painted.
- .2 Temperature, Humidity and Substrate Moisture Content Levels:
 - .1 Apply paint finishes when ambient air and substrate temperatures at location of installation can be satisfactorily maintained during application and drying process, within MPI and paint manufacturer's prescribed limits.
 - .2 Test concrete, masonry and plaster surfaces for alkalinity as required.
 - .3 Apply paint to adequately prepared surfaces, when moisture content is below paint manufacturer's prescribed limits.
- .3 Additional application requirements:
 - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - .2 Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.

2 PRODUCTS

2.01 MATERIALS

- .1 Supply paint materials for paint systems from single manufacturer.
- .2 Conform to latest MPI requirements for painting work including preparation and priming.
- .3 Materials in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual "Approved Product" listing.
 - .1 Use MPI listed materials having E3 rating where indoor air quality requirements exist.
- .4 Colours:
 - .1 Submit proposed Colour Schedule to Departmental Representative for review.
 - .2 Base colour schedule on selection of 5 base colours and 3 accent colours.
- .5 Mixing and tinting:
 - .1 Perform colour tinting operations prior to delivery of paint to site, in accordance with manufacturer's written recommendations. Obtain written approval from Departmental Representative for tinting of painting materials.

- .2 Use and add thinner in accordance with paint manufacturer's recommendations.
 - .1 Do not use kerosene or similar organic solvents to thin water-based paints.
- .3 Thin paint for spraying in accordance with paint manufacturer's written recommendations.
- .4 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.
- .6 Gloss/sheen ratings:
 - .1 Paint gloss is defined as sheen rating of applied paint, in accordance with following values:

<u>Gloss Level Category</u>	<u>Units @ 60 Degrees</u>	<u>Units @ 85 Degrees</u>
G1 matte finish	0 to 5	Maximum 10
G2 velvet finish	0 to 10	10 to 35
G3 eggshell finish	10 to 25	10 to 35
G4 satin finish	20 to 35	minimum 35
G5 semi-gloss finish	35 to 70	
G6 gloss finish	70 to 85	
G7 high gloss finish	>85	

- .2 Gloss level ratings of painted surfaces as indicated and as noted on Finish Schedule.
- .7 Interior painting:
 - .1 Galvanized Metal: high contact/high traffic areas (railings and handrails).
 - .1 INT 5.3C - Alkyd G4 finish (over cementitious primer).
 - .2 Dressed Lumber: doors, door and window frames, casings, mouldings, etc.:
 - .1 INT 6.3K - Polyurethane varnish G2 finish.
 - .3 Plaster and gypsum board: gypsum wallboard, drywall, "sheet rock" type material, etc.
 - .1 INT 9.2A - Latex G3 finish (over latex sealer).
- .8 Interior re-painting:
 - .1 Plaster and Gypsum Board: gypsum wallboard, drywall, "sheet rock" type material, etc.
 - .1 RIN 9.2A - Latex G3.

3 EXECUTION

3.01 GENERAL

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

- .2 Perform preparation and operations for interior painting in accordance with MPI - Architectural Painting Specifications Manual and MPI - Maintenance Repainting Manual except where specified otherwise.

3.02 EXAMINATION

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Departmental Representative damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.
- .2 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "cover patch test". Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.

3.03 PREPARATION

- .1 Protection of in-place conditions:
 - .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore surfaces as directed by Departmental Representative.
 - .2 Protect items that are permanently attached such as Fire Labels on doors and frames.
 - .3 Protect factory finished products and equipment.
- .2 Surface Preparation:
 - .1 Remove electrical cover plates, light fixtures, surface hardware on doors, bath accessories and other surface mounted equipment, fittings and fastenings prior to undertaking painting operations. Identify and store items in secure location and re-installed after painting is completed.
 - .2 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.
 - .3 Place "WET PAINT" signs in occupied areas as painting operations progress. Signs to approval of Departmental Representative.
 - .4 Clean and prepare surfaces in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual specific requirements and coating manufacturer's recommendations.
 - .5 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pretreatment as soon as possible after cleaning and before deterioration occurs.
 - .6 Where possible, prime non-exposed surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.
 - .1 Apply vinyl sealer to MPI #36 over knots, pitch, sap and resinous areas.
 - .2 Apply wood filler to nail holes and cracks.
 - .3 Tint filler to match stains for stained woodwork.
 - .7 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.
 - .8 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements.

- .9 Touch up of shop primers with primer as specified.

3.04 APPLICATION

- .1 Paint only after prepared surfaces have been accepted by Departmental Representative
- .2 Use method of application approved by Departmental Representative.
 - .1 Conform to manufacturer's application recommendations.
- .3 Apply coats of paint in continuous film of uniform thickness.
 - .1 Repaint thin spots or bare areas before next coat of paint is applied.
- .4 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .5 Sand and dust between coats to remove visible defects.
- .6 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.
- .7 Finish closets and alcoves as specified for adjoining rooms.
- .8 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.
- .9 Mechanical/Electrical Equipment:
 - .1 Paint conduits, piping, hangers, ductwork and other mechanical and electrical equipment exposed in finished areas, to match adjacent surfaces, except as indicated.
 - .2 Do not paint over nameplates.
 - .3 Keep sprinkler heads free of paint.
 - .4 Paint fire protection piping red.
 - .5 Paint disconnect switches for fire alarm system and exit light systems in red enamel.
 - .6 Paint natural gas piping yellow.
 - .7 Paint both sides and edges of backboards for telephone and electrical equipment before installation.
 - .1 Leave equipment in original finish except for touch-up as required, and paint conduits, mounting accessories and other unfinished items.

3.05 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .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 74 11 - Cleaning.
- .3 Place paint, stains and primer defined as hazardous or toxic waste, including tubes and containers, in containers or areas designated for hazardous waste.

END OF SECTION

CONTACT LIST

CLIENT
AGRICULTURE AND AGRI-FOOD CANADA (AAFC)
CONTACT: WLADYSLAW WRZESNIEWSKI
OTTAWA, ON
T: 613.759.1416

ARCHITECT
STEWART + TSAI ARCHITECTS INC.
160 CLEMOW AVENUE
OTTAWA, ON K1S 2B4
CONTACT: KEN TSAI
T: 613.686.5910
F: 613.686.6216
E: info@stewarttsai.com

MECHANICAL AND ELECTRICAL ENGINEERING
VANDERWESTEN & RUTHERFORD
(VR ENGINEERING)
1130 MORRISON DRIVE, SUITE 260
OTTAWA, ON K2H 9N6
CONTACT: SHARON BARR
T: 613.563-2100

STRUCTURAL ENGINEERING
CLELAND JARDINE ENGINEERING LTD.
200-580 TERRY FOX DRIVE
KANATA, ON K2L 4B9
CONTACT: BRENT WEATHERDON
T: 613.591-1533

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR	EQ.	EQUAL	T.B.D.	TO BE DETERMINED
ALUM.	ALUMINUM	EXIST.	EXISTING	T.O.	TOP OF
CJ.	CONTRACTION JOINT	FIN.	FINISH	TYP.	TYPICAL
CLR.	CLEAR	GL.	GLAZING	T&G	TONGUE AND GROOVE
CL.	CENTRELINE	H.S.	HOLLOW STEEL SECTION	U/S	UNDERSIDE
CONT.	CONTINUOUS	MTL.	MATERIAL	UNO	UNLESS NOTED OTHERWISE
C/W	COMES WITH	N/A	NOT APPLICABLE	VB	VAPOUR BARRIER
DIA.	DIAMETER	NIC	NOT IN CONTRACT	V.L.F.	VERIFY IN FIELD
DIM.	DIMENSION	O.C.	ON CENTRE	WD	WOOD
		SIM.	SIMILAR		

SYMBOLS

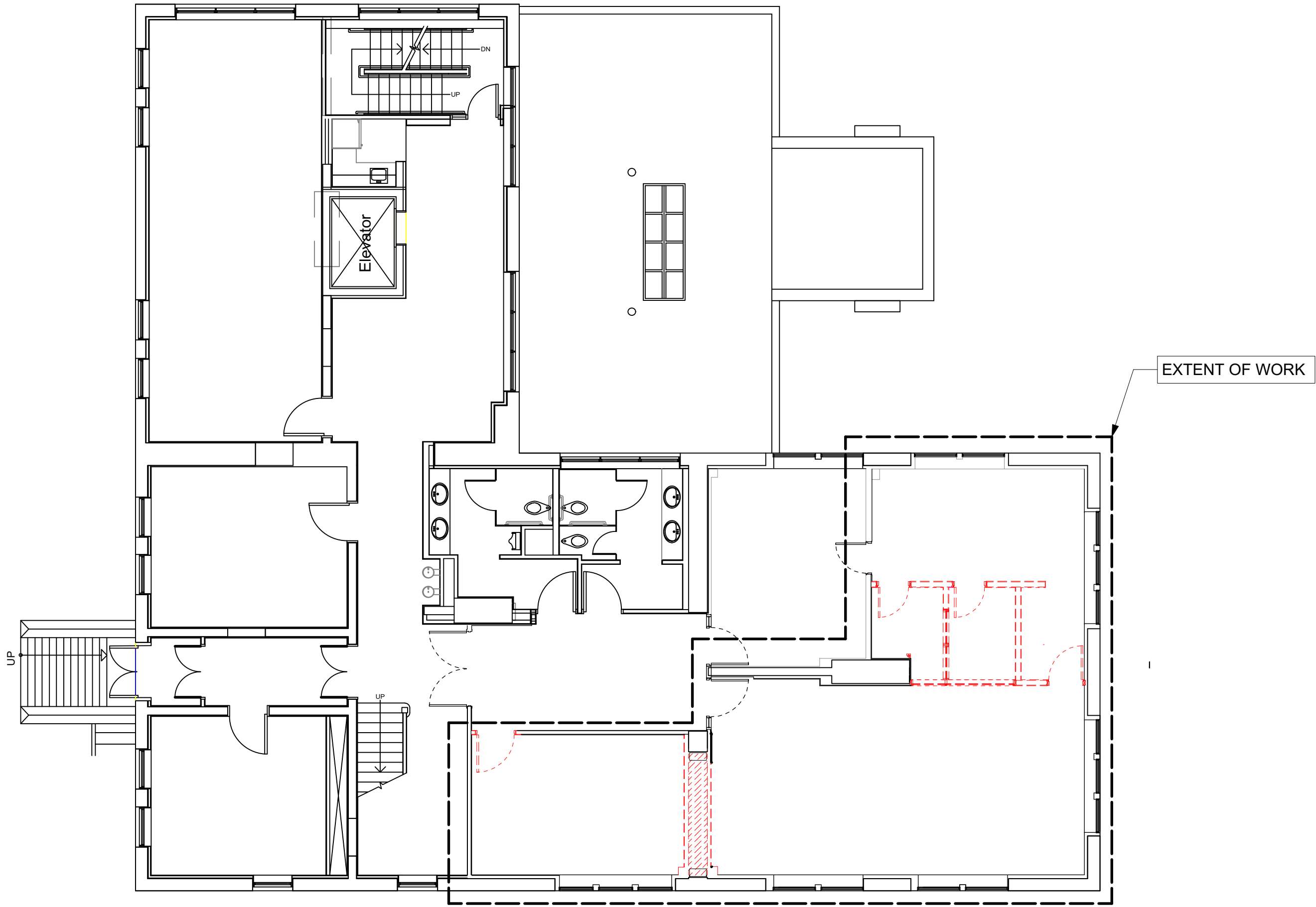
	KEYNOTE		ELEVATIONAL HEIGHT MARKER
	SECTION MARKER		DIMENSION TO FACE OF STUD OR MASONRY WALL UNLESS NOTED OTHERWISE
	ELEVATION MARKER		REVISION MARKER
	DETAIL MARKER		SWITCH
	WALL/PARTITION, FLOOR OR ROOF TYPE		DIMMABLE SWITCH
	DOOR MARKER		DOOR OPERATOR ACTUATOR
	WINDOW MARKER		DUPLEX RECEPTACLE
			240V RECEPTACLE
			DATA

GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR AND ALL EMPLOYEES AND SUBCONTRACTORS SHALL HAVE PROOF OF RELIABILITY STATUS SECURITY LEVEL IN PLACE PRIOR TO THE AWARD OF CONTRACT, TO THE SATISFACTION OF THE OWNER'S REQUIREMENTS.
- THESE DRAWINGS FORM THE CONTRACT DOCUMENTS. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDE THE SPECIFICATIONS, ADDENDA AND MODIFICATIONS ISSUED BY THE DEPARTMENTAL REPRESENTATIVE. ALL WORK, TO BE ACCEPTABLE, MUST BE IN COMPLIANCE WITH THESE DOCUMENTS, AND MUST BE OF A QUALITY EQUAL OR BETTER THAN THE STANDARD OF THE TRADE. ANY CONFLICTS OR DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE DEPARTMENTAL REPRESENTATIVE IN WRITING PRIOR TO PROCEEDING.
- ALL CODES HAVING JURISDICTION ARE HEREBY MADE A PART OF THIS DOCUMENT AND ARE TO BE STRICTLY OBSERVED BY THE CONTRACTOR IN THE CONSTRUCTION OF THE PROJECT. THIS INCLUDES THE CURRENT EDITION OF THE NATIONAL BUILDING CODE INCLUDING AMENDMENTS. IN CASE OF CONFLICT BETWEEN THESE DOCUMENTS AND THE CODE, THE CODE SHALL PREVAIL. IN CASE OF CONFLICT OR DISCREPANCY IMMEDIATELY NOTIFY THE DEPARTMENTAL REPRESENTATIVE.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND FOR ALL SAFETY PROGRAMS AND PRECAUTIONS IN CONNECTION WITH THE PROJECT. NEITHER THE OWNER NOR THE ARCHITECT IS RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO FOLLOW PROPER SAFETY PROCEDURES.
- ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN WITH THE BEST PRESENT KNOWLEDGE. ANY DISCREPANCIES BETWEEN THE DOCUMENTS AND THE EXISTING CONDITIONS SHALL BE REFERRED TO THE DEPARTMENTAL REPRESENTATIVE IN WRITING PRIOR TO PROCEEDING.
- PRIOR TO BEGINNING WORK, CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ENSURE THAT ALL WORK IS BUILDABLE AS SHOWN. CONDITIONS THAT ARE NOT REFLECTIVE OF THAT WHICH IS SHOWN SHALL BE REFERRED TO THE DEPARTMENTAL REPRESENTATIVE IN WRITING PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR SHALL AT ALL TIMES PROVIDE PROTECTION TO MAINTAIN ALL WORK, MATERIALS, AND EQUIPMENT FREE FROM DAMAGE.
- CONTRACTOR SHALL DEMOLISH/REMOVE FROM SITE ALL EXISTING CONSTRUCTION AND IMPROVEMENTS AS NECESSARY FOR COMPLETION OF WORK; CONTRACTOR SHALL SUPPLY SHORING C/W ENGINEERING WHERE NECESSARY AND AS REQUIRED.
- CONTRACTOR MUST FOLLOW THE ABATEMENT PROCEDURES FOR DESIGNATED SUBSTANCES AS SET OUT BY THE ENVIRONMENTAL CONSULTANT.
- PROVIDE CONSTRUCTION WASTE BIN AND RECYCLING BINS AS REQUIRED IN LOCATION APPROVED BY DEPARTMENTAL REPRESENTATIVE. RECYCLE ALL MATERIALS WHERE FACILITIES EXIST. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR THE COST OF WASTE DISPOSAL.
- MATERIALS, PRODUCTS AND EQUIPMENT SHALL ALL BE NEW, EXCEPT AS SPECIFICALLY NOTED OTHERWISE. SUPPLY SHOP DRAWINGS FOR REVIEW; PROVIDE A LETTER OF CONFIRMATION THAT SUPPLIES ARE IN INVENTORY IN ADVANCE OF MOBILIZATION.
- CONTRACTOR TO PRECISELY LOCATE ALL UTILITIES PRIOR TO ANY CONSTRUCTION AND/OR EXCAVATION.
- PATCH/REPAIR AND MAKE GOOD ALL SURFACES AFFECTED BY CONSTRUCTION. PROVIDE ADEQUATE BLOCKING AND/OR BRACING AT WALL HUNG OR WALL BRACED ITEMS. CUT AND PATCH FLOORS AS REQUIRED; SUPPLY AND INSTALL HIGH EARLY STRENGTH CONCRETE (24 HOURS MAX TO MEET REQUIRED STRENGTH) FOR ALL PATCHES/REPAIRS.
- DO NOT SCALE DRAWINGS. ALL DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL FINISHES.
- "TYPICAL" OR "TYP." SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED (U.O.N.). "ALIGN" SHALL MEAN TO ACCURATELY LOCATE FINISH FACES IN THE SAME PLANE. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON PLANS AND ELEVATIONS.
- SUBMIT SHOP DRAWINGS AND PRODUCT INFORMATION FOR REVIEW. PROVIDE WRITTEN CONFIRMATION THAT PRODUCT AND MATERIALS REQUIRED TO COMPLETE THE WORK ARE AVAILABLE PRIOR TO COMMENCING WORK.

DRAWING LIST

ARCHITECTURAL	
A-001	COVER SHEET
A-101	LEVEL 200: DEMOLITION FLOOR PLAN, DEMOLITION REFLECTED CEILING PLAN
A-102	LEVEL 200: PROPOSED FLOOR PLAN, PROPOSED REFLECTED CEILING PLAN
A-103	LEVEL 200: FINISH PLAN, FINISH REFLECTED CEILING PLAN
A-104	INTERIOR ELEVATIONS
A-105	SECTIONS AND DETAILS
A-106	SECTIONS AND DETAILS
MECHANICAL	
M-000	MECHANICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS
M-001	MECHANICAL SPECIFICATIONS
M-100	DEMOLITION & NEW FIRE PROTECTION PLANS
M-200	DEMOLITION & NEW HVAC PLANS
ELECTRICAL	
E-000	ELECTRICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS
E-100	LIGHTING DEMOLITION & NEW
E-200	POWER & SYSTEMS DEMOLITION & NEW
STRUCTURAL	
S-000	GENERAL NOTES
S-100	PARTIAL PLANS & DETAILS

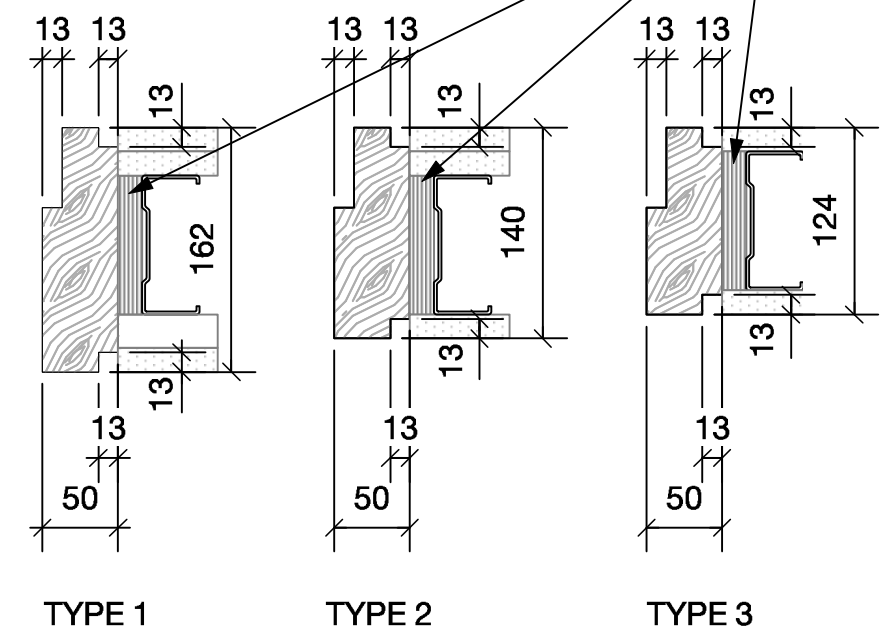


1 CONTEXT PLAN- LEVEL 200
A-001 Scale: 1:100

PARTITION TYPES

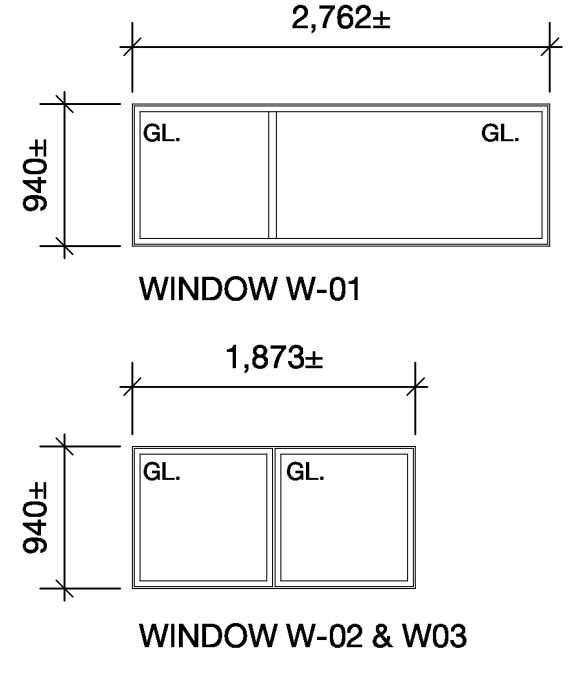
- P1** 13mm GYPSUM WALL BOARD
84mm METAL STUD FRAMING @ 400mm o.c.
EXISTING STRUCTURE
- P2** DOUBLE LAYER 16mm GYPSUM BOARD
64mm METAL STUD FRAMING @ 400mm o.c.
84mm SOUND ATTENUATING BATT INSULATION
EXISTING STRUCTURE
- P3** 13mm GYPSUM WALL BOARD
92mm METAL STUD FRAMING @ 400mm o.c.
13mm GYPSUM WALL BOARD
- P4** 16mm GYPSUM WALL BOARD
92mm METAL STUD FRAMING @ 400mm o.c.
16mm GYPSUM WALL BOARD
- P5** (RESERVED)
- P6** DOUBLE LAYER 16mm GYPSUM BOARD
140mm METAL STUD FRAMING @ 400 mm o.c.
90mm SOUND ATTENUATING BATT INSULATION
HORIZONTAL RESILIENT CHANNELS @ 600mm o.c.
16mm GYPSUM WALL BOARD
- P7** DOUBLE LAYER 16mm GYPSUM BOARD
140mm METAL STUD FRAMING @ 400 mm o.c.
140mm SOUND ATTENUATING BATT INSULATION
HORIZONTAL RESILIENT CHANNELS @ 600mm o.c.
16mm GYPSUM WALL BOARD

DOOR FRAME TYPES



NOTE: ALL NEW FRAMES TO BE SOLID BIRCH, FINISHED TO MATCH EXISTING DOOR FRAMES.

WINDOW SIZES (EXISTING WINDOWS TO BE RELOCATED)



CONTRACTOR TO VERIFY SIZE OF EXISTING WINDOWS PRIOR TO FRAMING NEW OPENINGS (TYP).

DOOR SCHEDULE

DOOR #	NEW/EXIST	DOOR SIZE W X H (mm)	RATING (hrs)	DOOR MTL.	THICKNESS (mm)	FRAME MTL.	GLAZING	CLOSER	LOCKSET FUNCTION	HINGES	DOOR STOP	DROP SEAL	FRAME TYPE	HARDWARE GROUP	COMMENTS
D-01	NEW	965 x 2134	N/A	SOLID CORE WOOD	44	WOOD	N/A	●	PASSAGE	1.5 pr	●	●	1	1	PROVIDE AUTO DOOR OPERATOR AND DOOR ACTUATORS FOR BARRIER-FREE ACCESS, PER SPECIFICATIONS.
D-02	NEW	762 x 2134	N/A	SOLID CORE WOOD	44	WOOD	N/A		PASSAGE	1.5 pr	●		2	2	
D-03 D-04	NEW	2- 610 x 2134	N/A	SOLID CORE WOOD	44	WOOD	N/A		PASSAGE	1.5 pr	●		3	3	

NOTES:
1) REFER TO SPECIFICATIONS.

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KEY PLAN

#	ISSUE	DATE
01	66% REVIEW SET	10/16/2020
02	89% REVIEW SET	12/02/2020
03	ISSUE FOR TENDER	12/21/2020

PROJECT NAME
CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE
COVER SHEET

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PROJECT #: 20-011
DRAWN BY: KT
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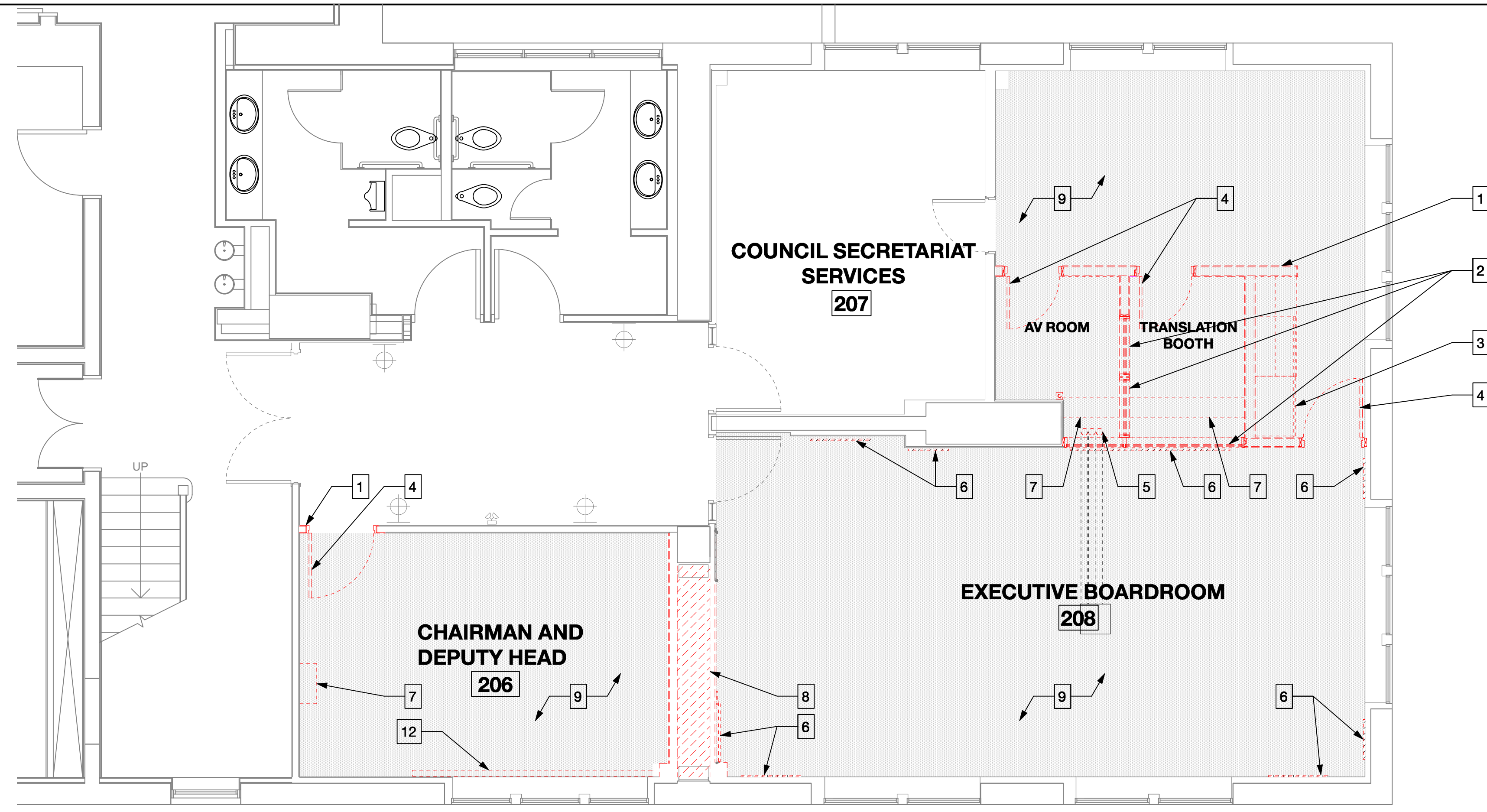
SHEET
A-001

GENERAL NOTES:

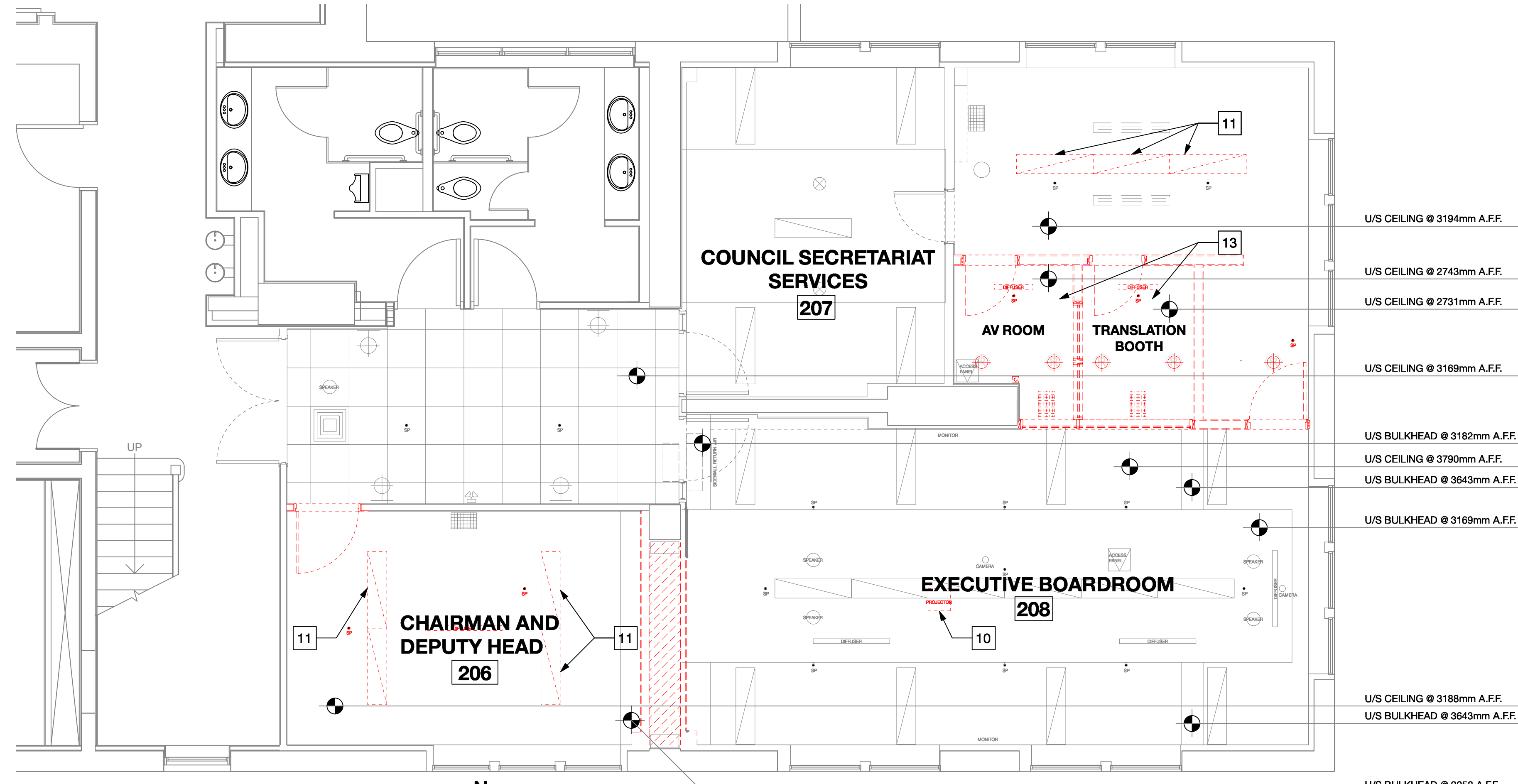
- 01) CONTRACTOR TO ALLOW AND INCLUDE FOR REMOVAL AND RE-INSTATEMENT OF MATERIALS AND EQUIPMENT ADEQUATELY REQUIRED FOR THE INSTALLATION OF ALL NEW CONSTRUCTION, CONDUIT, SERVICES AND EQUIPMENT. MAKE GOOD ALL SURFACES AND RE-FINISH TO MATCH EXISTING STATE.
- 02) REFER TO STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.

KEYNOTES

- 1. REMOVE PORTION OF EXISTING PARTITIONS (SHOWN DASHED - TYP).
- 2. RELOCATE EXISTING WINDOW.
- 3. RELOCATE EXISTING SERVERY MILLWORK.
- 4. REMOVE EXISTING DOOR AND FRAME.
- 5. REMOVE EXISTING EXPOSED CONDUIT. SALVAGE EXISTING CONDUIT AND CAPS FOR RE-USE AT NEW CONDUIT TERMINATION POINTS. INFILL FLOOR PENETRATION WITH 19mm PLYWOOD SUBFLOOR TO MATCH EXISTING (TYP), BEARING ON NEW CONTINUOUS BLOCKING. REFER TO DETAIL DRAWING 4-A105. EXTEND AND RE-ROUTE CONDUIT PER DRAWING A-102.
- 6. REMOVE AND RELOCATE EXISTING SOUND ABSORPTION PANEL (TYP) AS DIRECTED BY DEPARTMENTAL REPRESENTATIVE.
- 7. REMOVE EXISTING SHELVING.
- 8. REMOVE PORTION OF EXISTING LOAD BEARING BRICK WALL, FURRING AND GYPSUM BOARD. REFER TO STRUCTURAL.
- 9. REMOVE EXISTING CARPET, TRANSITION STRIPS AND BASEBOARDS (AREA SHOWN SHADED- TYP).
- 10. REMOVE EXISTING PROJECTOR AND CEILING-MOUNT HARWARE.
- 11. REMOVE EXISTING LIGHT FIXTURES AND MAKE GOOD CEILING. REFER TO ELECTRICAL DRAWINGS.
- 12. REMOVE AND RELOCATE EXISTING RADIATOR (REFER TO MECHANICAL)
- 13. REMOVE EXISTING CEILING AND CEILING FRAMING. PREPARE FRAMING FOR NEW CEILING HEIGHT AND NEW LIGHTING. REFER TO SHEET A-102.



1 LEVEL 200: DEMOLITION FLOOR PLAN
A-101 Scale: 1:50



2 LEVEL 200: DEMOLITION REFLECTED CEILING PLAN
A-101 Scale: 1:50

SEAL

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KEY PLAN

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01	66% REVIEW SET	10/16/2020
02	99% REVIEW SET	12/02/2020
03	ISSUE FOR TENDER	12/21/2020

PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE

LEVEL 200:
DEMOLITION FLOOR PLAN
DEMOLITION REFLECTED
CEILING PLAN

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PROJECT #: 20-011

DRAWN BY: KT

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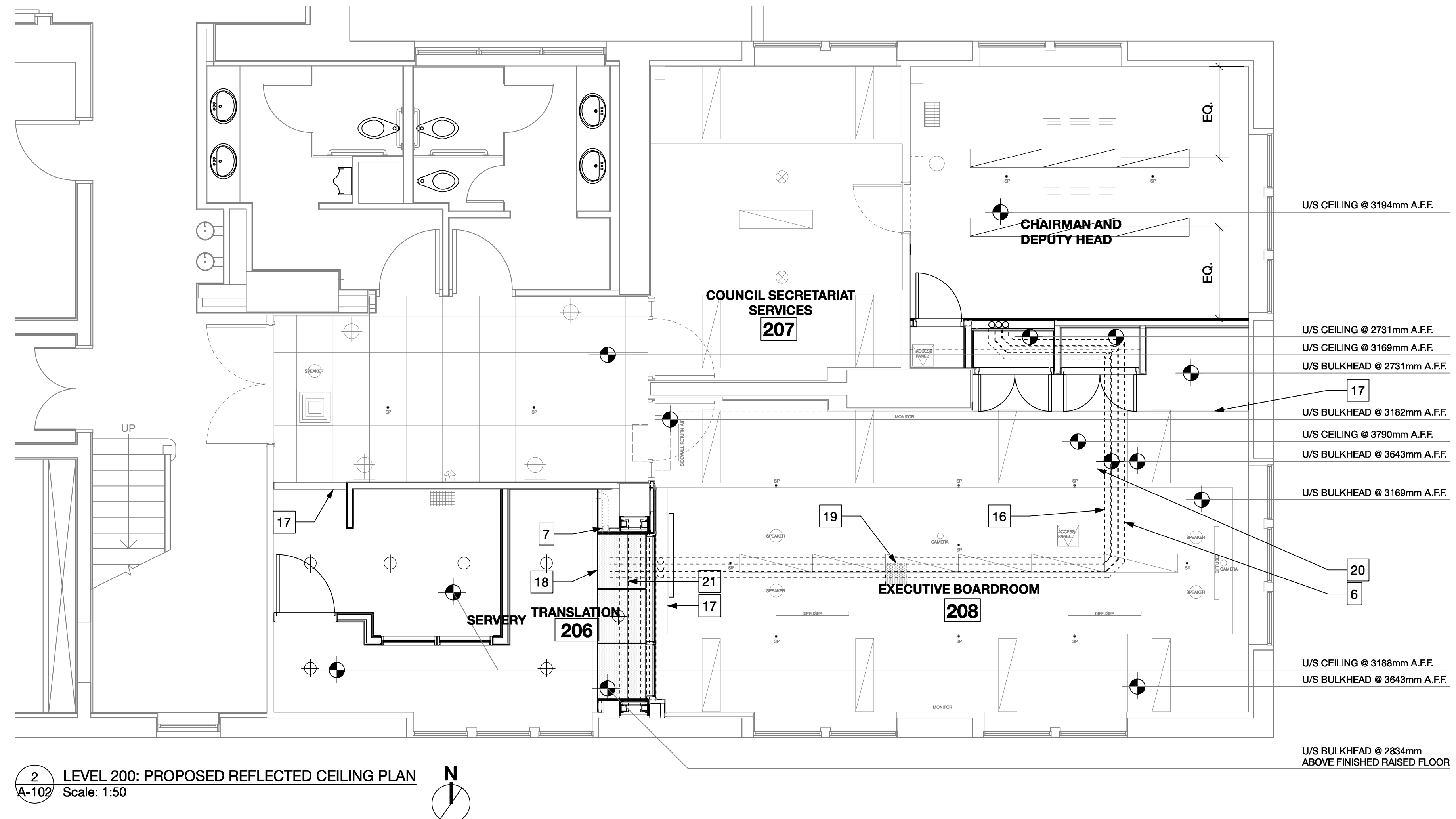
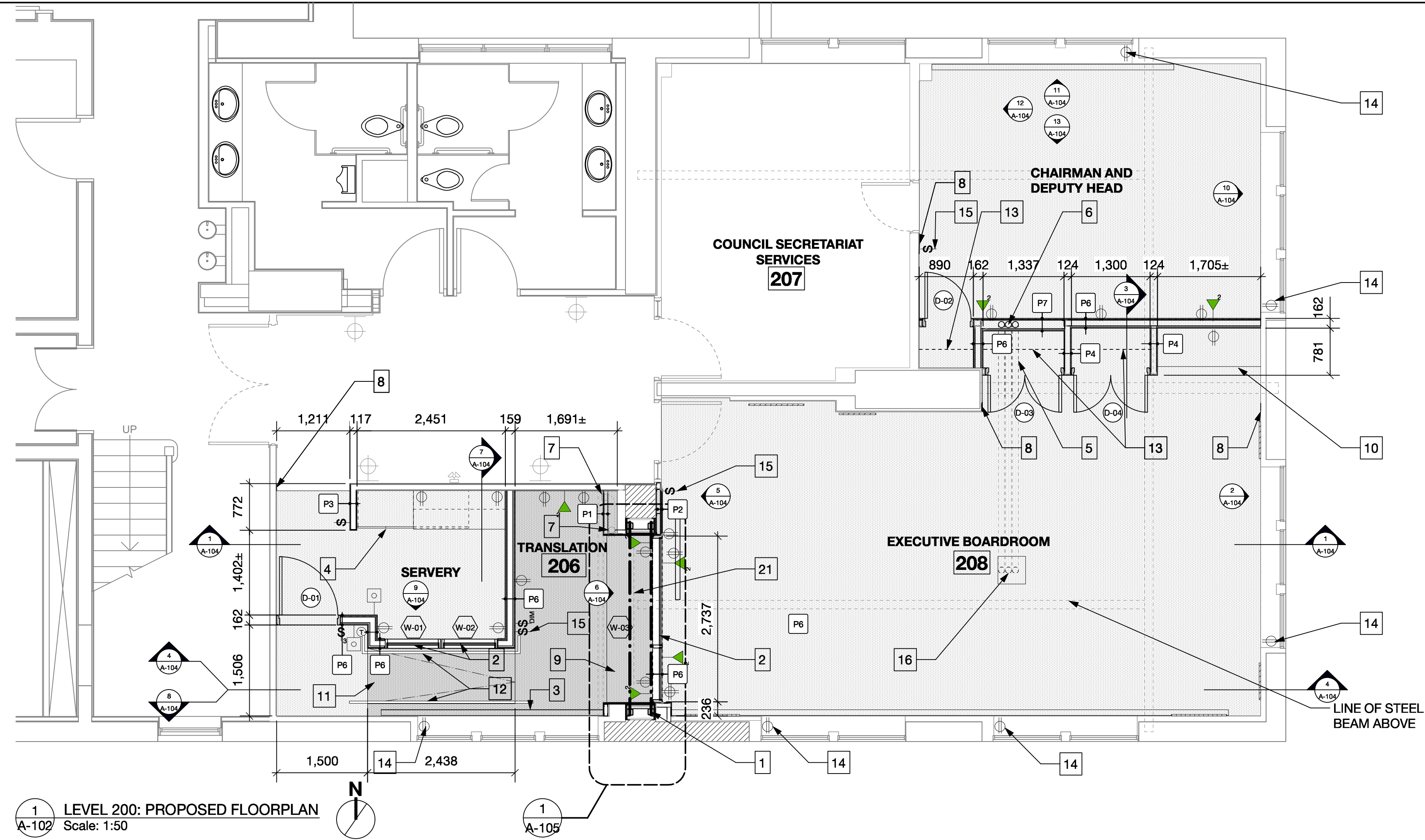
A-101

GENERAL NOTES:

- 01) CONTRACTOR TO ALLOW AND INCLUDE FOR REMOVAL AND RE-INSTATEMENT OF MATERIALS AND EQUIPMENT ADEQUATELY REQUIRED FOR THE INSTALLATION OF ALL NEW CONSTRUCTION, CONDUIT, SERVICES AND EQUIPMENT. MAKE GOOD ALL SURFACES AND RE-FINISH TO MATCH EXISTING STATE.
- 02) NEW POWER, DATA, SWITCHES AND CONTROLS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS.

KEYNOTES

1. REFER TO STRUCTURAL FOR DETAILS OF NEW WALL OPENING AND STRUCTURAL ELEMENTS.
2. INSTALL RELOCATED WINDOW.
3. INSTALL RELOCATED RADIATOR. REFER TO MECHANICAL DRAWINGS.
4. INSTALL RELOCATED SERVERY MILLWORK.
5. EXTEND EXISTING CONDUIT BELOW.
6. REPLACE EXISTING 19mm SUBFLOOR WHERE PREVIOUS CONDUITS HAVE BEEN REMOVED. REFER TO DETAIL 4-A105.
7. SUPPLY AND INSTALL NEW CONDUIT AND EXTEND TO NEW TRANSLATION BOOTH LOCATION.
8. NEW CHASEWAY/CONDUIT FOR A/V CABLES.
9. MAKE GOOD WALL SURFACE WHERE EXISTING PARTITION AND/OR DOOR FRAME HAS BEEN REMOVED.
10. SUPPLY AND INSTALL NEW MILLWORK. REFER TO 2/A-105.
11. SUPPLY AND INSTALL NEW RAISED FLOOR AREA AND RAMP (SHOWN SHADED TYP.).
12. SUPPLY AND INSTALL NEW HANDRAILS, SUPPORTS AND POSTS- PER DRAWING 2/A-106.
13. SUPPLY AND INSTALL NEW CLOTHES ROD AND SHELF.
14. PROVIDE NEW POWER FOR AUTOMATED BLINDS. REFER TO ELECTRICAL.
15. INSTALL NEW AUTOMATED BLINDS CONTROL SWITCH. REFER TO ELECTRICAL.
16. RE-ROUTE A/V CONDUIT TO NEW TRANSLATION BOOTH LOCATION.
17. SUPPLY AND INSTALL NEW GYPSUM BOARD BULKHEAD.
18. SUPPLY AND INSTALL NEW BIRCH VENEER PLYWOOD SOFFIT/BULKHEAD. REFER TO 3/A-103.
19. PATCH AND MAKE GOOD GYPSUM BOARD CEILING AT REMOVED PROJECTOR LOCATION.
20. EXTEND EXISTING BULKHEAD TO SUIT NEW CONDUIT SPACE. REFER TO DETAIL 3-A105.
21. SUPPLY AND INSTALL NEW BIRCH VENEER SHELF ABOVE WINDOW.



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KEY PLAN

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02	89% REVIEW SET	12/02/2020
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PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
 OTTAWA, ON

SHEET TITLE

LEVEL 200: PROPOSED FLOOR PLAN
PROPOSED REFLECTED CEILING PLAN

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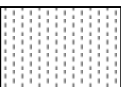
A-102

GENERAL NOTES:

- 01) CONTRACTOR TO ALLOW AND INCLUDE FOR REMOVAL AND RE-INSTALLMENT OF MATERIALS AND EQUIPMENT ADEQUATELY REQUIRED FOR THE INSTALLATION OF ALL NEW CONSTRUCTION, CONDUIT, SERVICES AND EQUIPMENT. MAKE GOOD ALL SURFACES AND RE-FINISH TO MATCH EXISTING STATE.
- 02) REMOVE EXISTING COVERPLATES, TRIMS, ACCESSORIES, SOUND ABSORPTION PANELS IN PREPARATION FOR PAINTING AND RE-INSTALL UPON COMPLETION OF PAINTING.

KEYNOTES

1. SUPPLY AND INSTALL NEW CARPET TILE AND BASEBOARD (TYP.)
2. SUPPLY AND INSTALL NEW TRANSITION STRIP.
3. INSTALL RELOCATED RADIATOR. REFER TO MECHANICAL DRAWINGS.
4. RE-PAINT ALL GYPSUM BOARD CEILING, WALLS AND BULKHEADS (ALL EXPOSED SIDES).
5. SUPPLY AND INSTALL NEW VENEERED PLYWOOD PANEL SOFFIT ABOVE TRANSLATION COUNTER. REFER TO SECTION 2-A105.
6. REPAINT WALLS TO EXTENT NOTED.
7. SUPPLY AND INSTALL REMOVABLE BIRCH VENEER CEILING PANEL (SOFFIT).
8. SUPPLY AND INSTALL FIXED BIRCH VENEER CEILING PANEL (SOFFIT).
9. SUPPLY AND INSTALL FIXED BIRCH VENEER WALL PANELS.
10. REVEAL (VARNISHED BIRCH PLYWOOD BEYOND- TYP).
11. REVEAL. PRE-PAINT GYPSUM BOARD BEYOND.

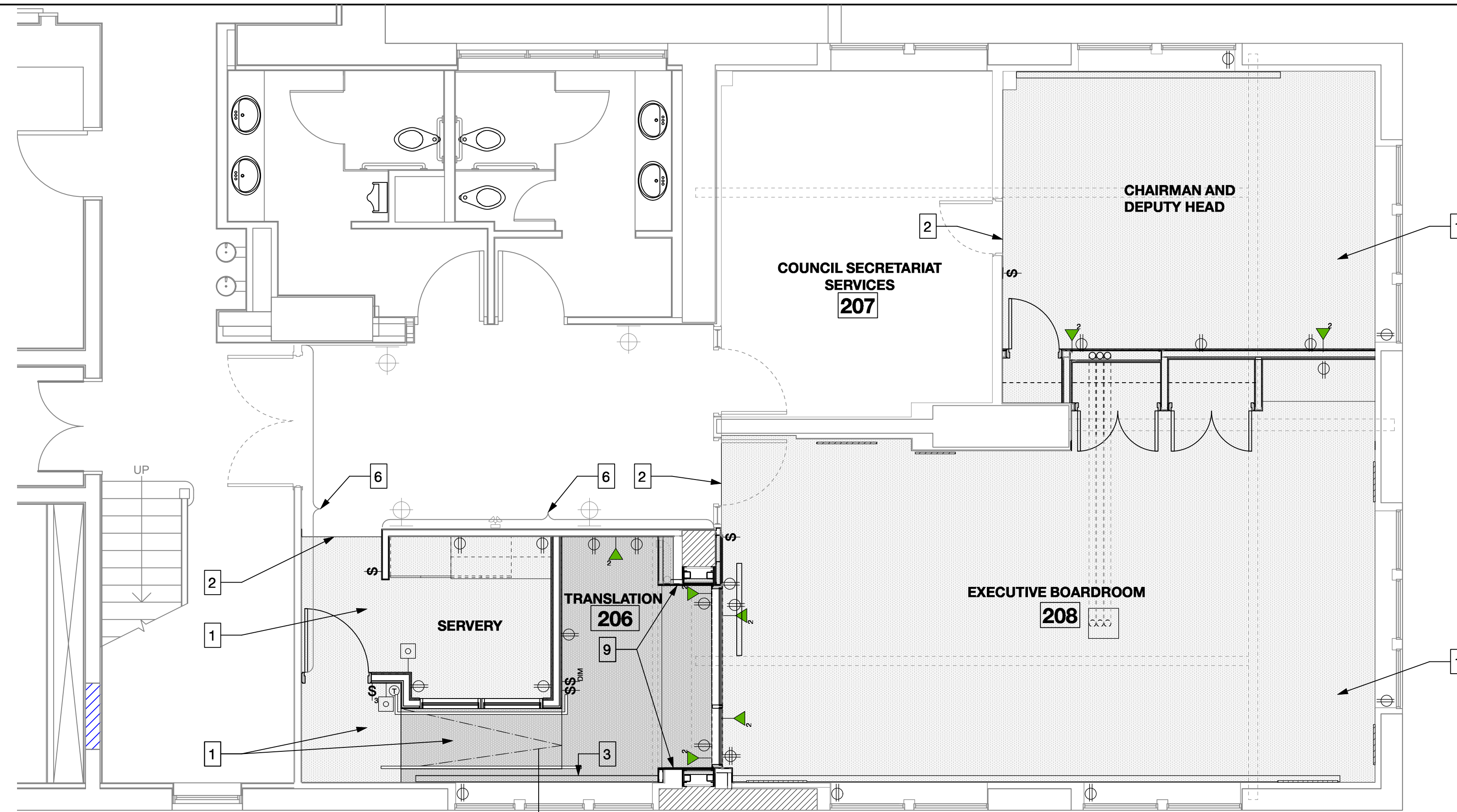
-  NEW CARPET TILE (TYPE CT-1) AND RUBBER COVE BASE
-  NEW CARPET TILE ON RAMP AND RAISED FLOOR AREA (TYPE CT-1) AND RUBBER COVE BASE
-  RE-PAINT CEILING (PAINT COLOUR 1)

PAINT SCHEDULE

ROOM	CEILING	WALLS	OTHER
SERVERY	GYPSUM: COLOUR 1	GYPSUM: COLOUR 2	SEE NOTE 1 BELOW
TRANSLATION	GYPSUM: COLOUR 1 WOOD PANELS: VARNISH	GYPSUM: COLOUR 3 WOOD PANELS: VARNISH	METAL RAILING, POSTS & SUPPORTS: (ACCENT) COLOUR 6
EXECUTIVE BOARDROOM	GYPSUM: COLOUR 1	GYPSUM: COLOUR 4	
CHAIRMAN & DEPUTY HEAD	GYPSUM: COLOUR 1	GYPSUM: COLOUR 5	

NOTES:

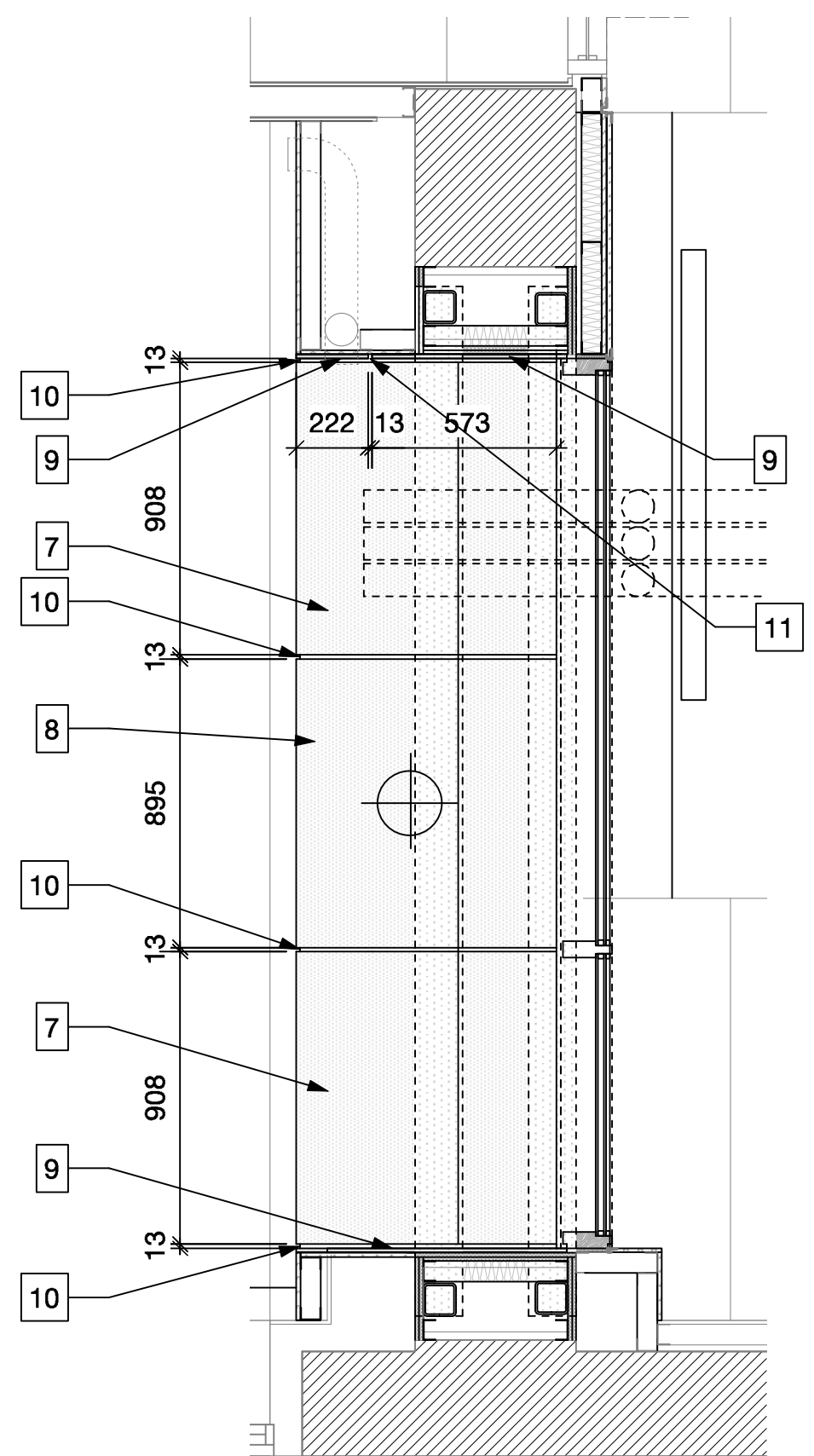
- 1) REPAINT WALLS CONTINUOUS WITH HALLWAY TO EXTENT NOTED.
- 2) ALL NEW WOODWORK, MILLWORK, WOOD PANELS TO BE VARNISHED AND FINISHED TO MATCH EXISTING DOOR FRAMES.



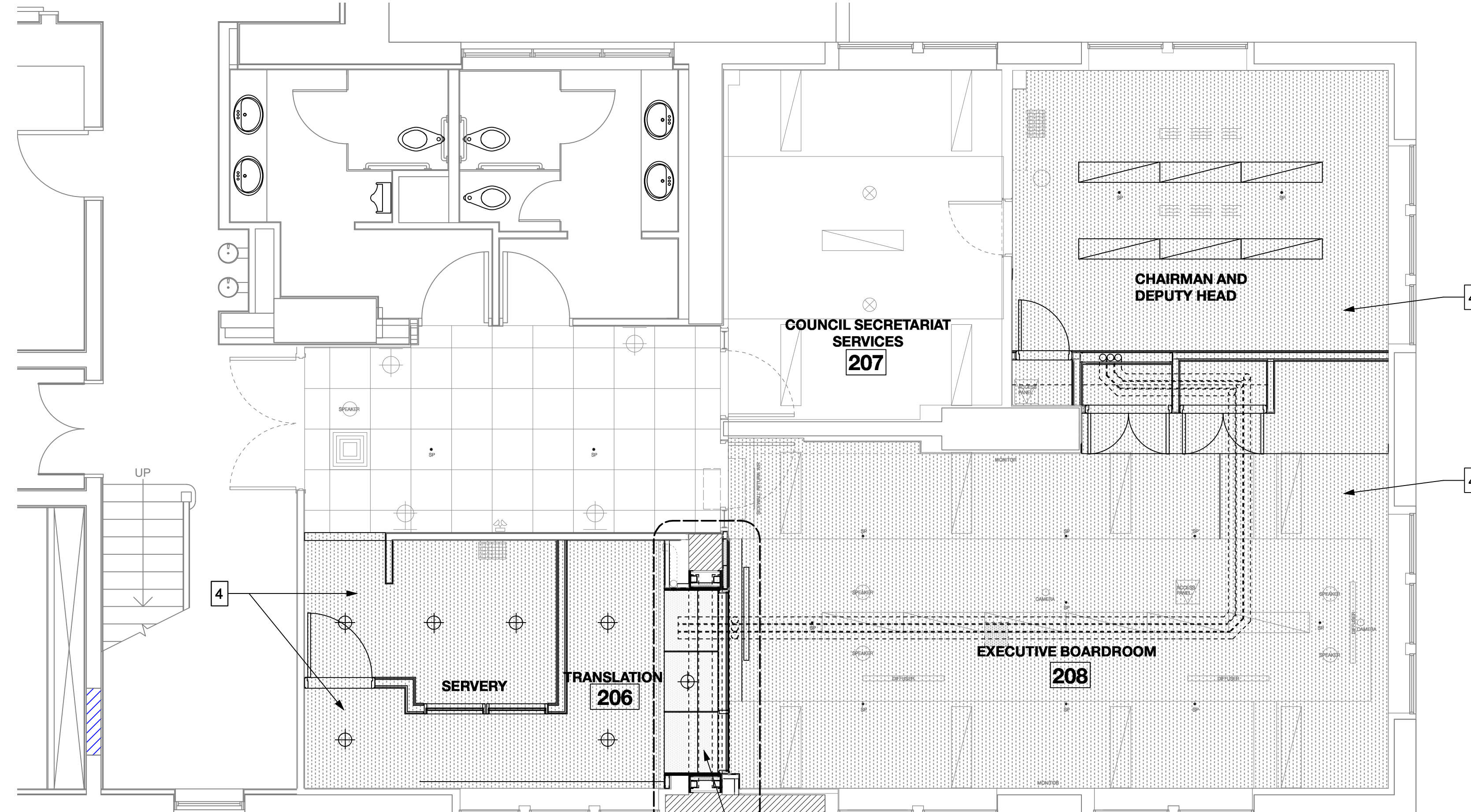
1 PROPOSED FINISH PLAN
A-103 Scale: 1:50



2
A-106



3 SOFFIT DETAIL
A-103 Scale: 1:20



2 PROPOSED REFLECTED CEILING FINISH PLAN
A-103 Scale: 1:50



3
A-103

SEAL

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KEY PLAN

#	ISSUE	DATE
01	66% REVIEW SET	10/16/2020
02	89% REVIEW SET	12/02/2020
03	ISSUE FOR TENDER	12/21/2020

PROJECT NAME
CENTRAL EXPERIMENTAL FARM
Building 59
 OTTAWA, ON

SHEET TITLE
 LEVEL 200:
 FINISH PLAN
 FINISH REFLECTED
 CEILING PLAN

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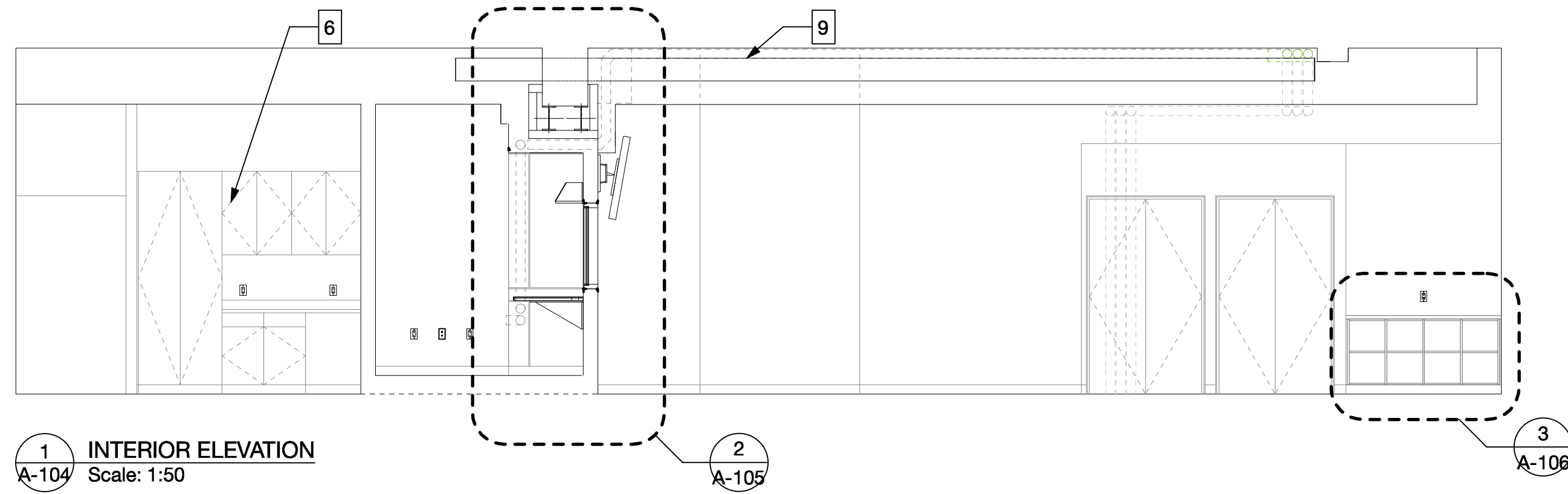
SHEET

A-103

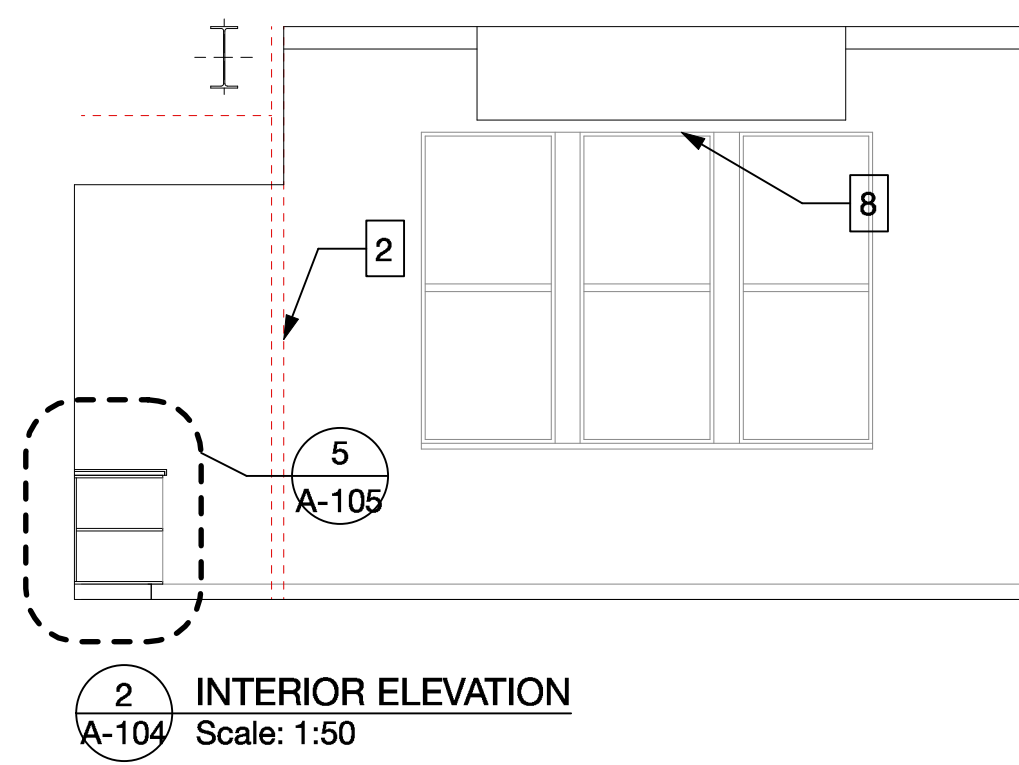
SEAL

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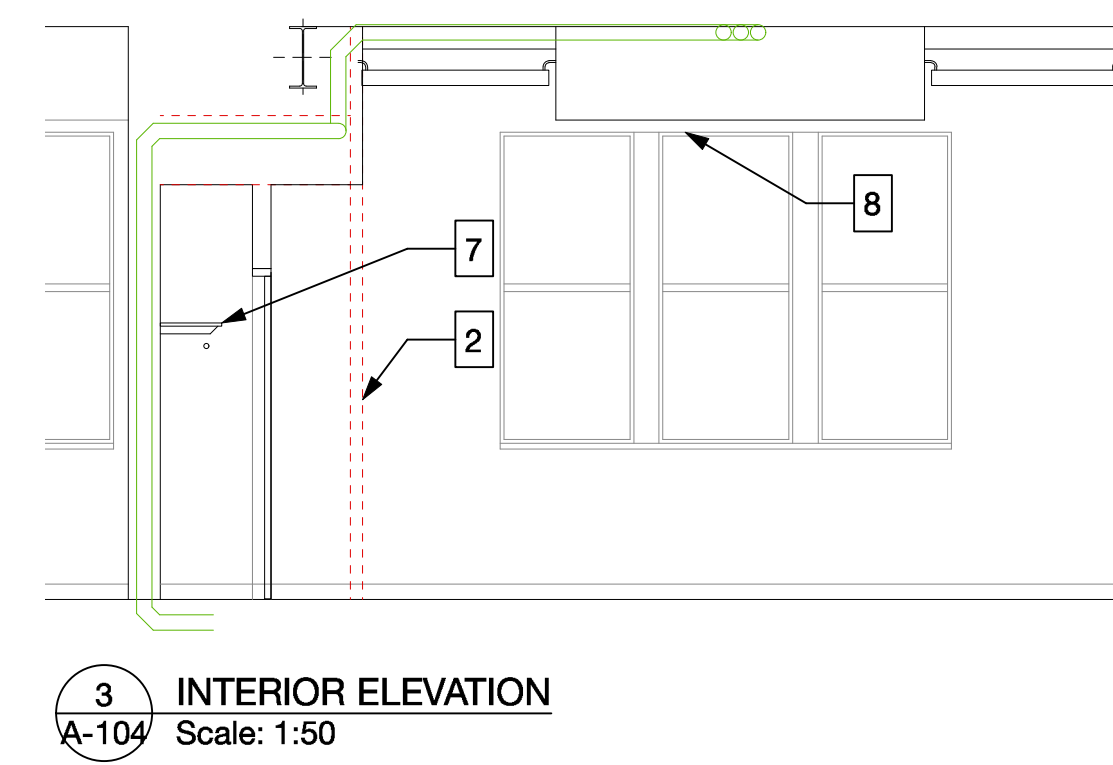
KEY PLAN



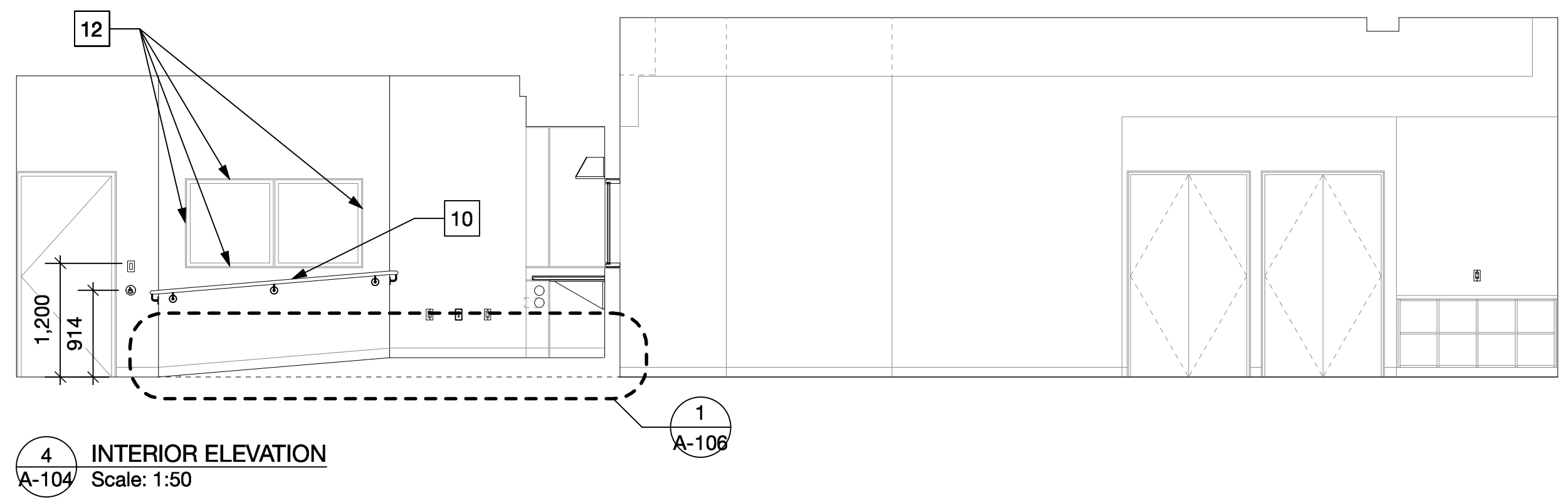
1 INTERIOR ELEVATION
A-104 Scale: 1:50



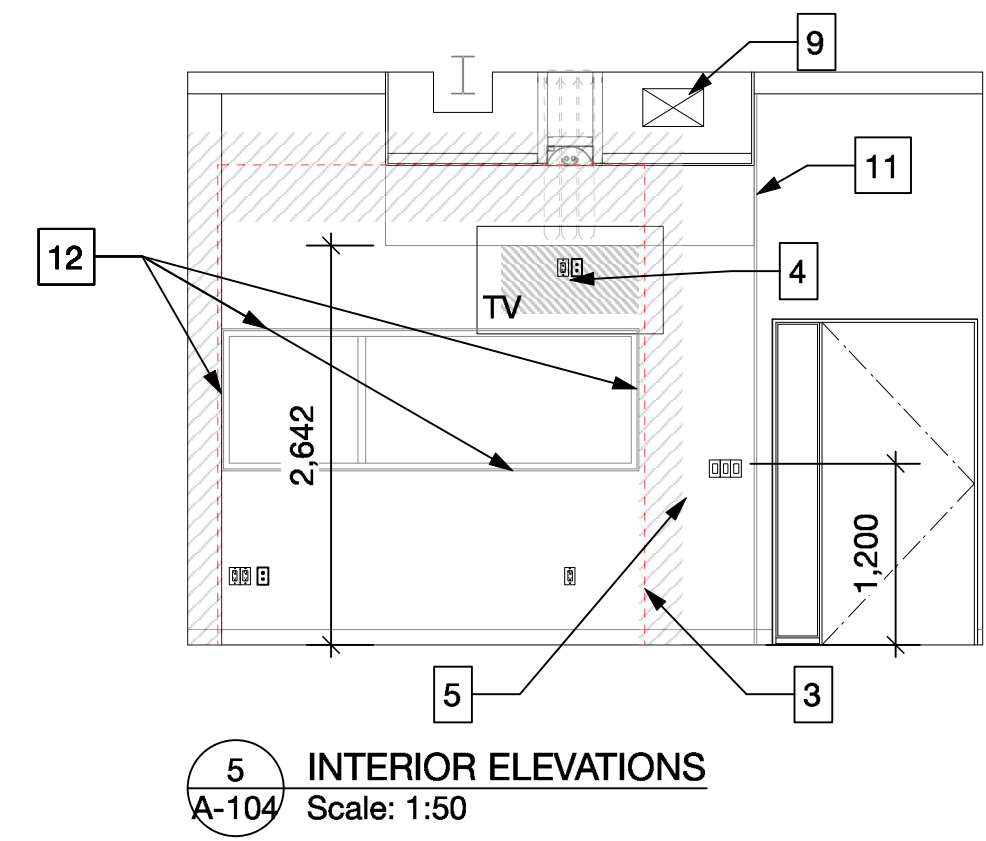
2 INTERIOR ELEVATION
A-104 Scale: 1:50



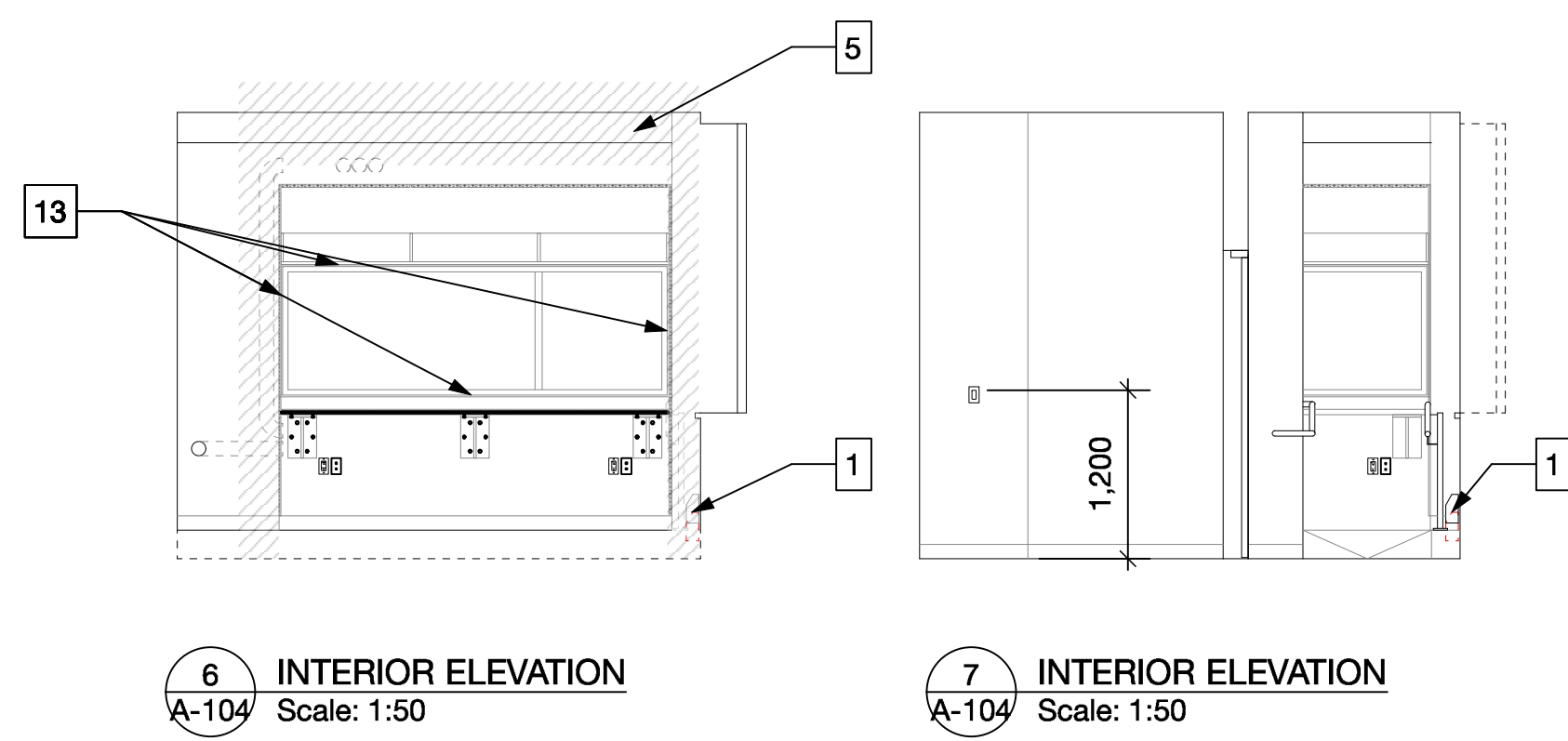
3 INTERIOR ELEVATION
A-104 Scale: 1:50



4 INTERIOR ELEVATION
A-104 Scale: 1:50

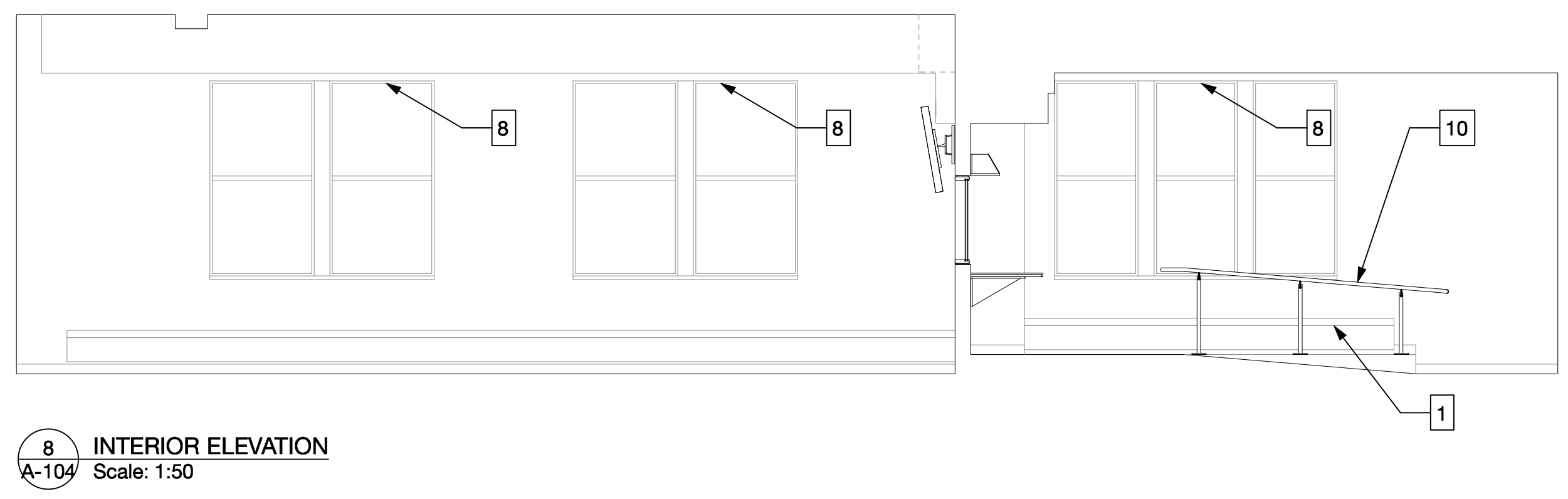


5 INTERIOR ELEVATIONS
A-104 Scale: 1:50

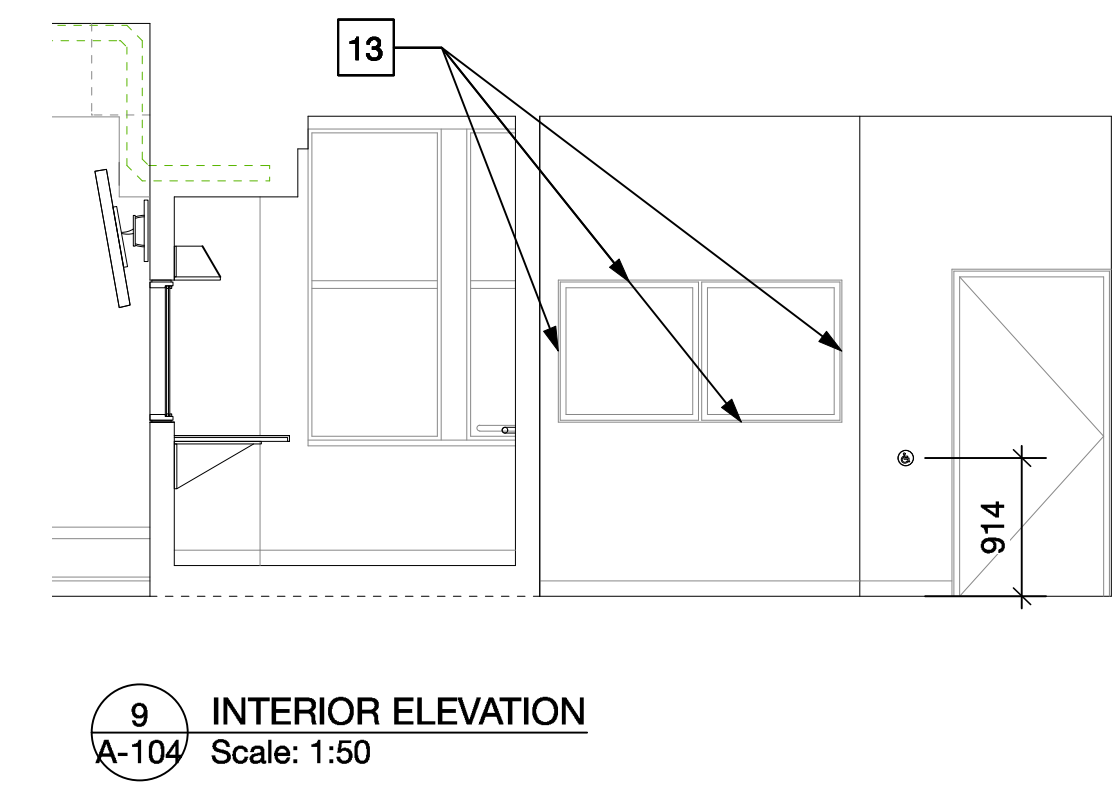


6 INTERIOR ELEVATION
A-104 Scale: 1:50

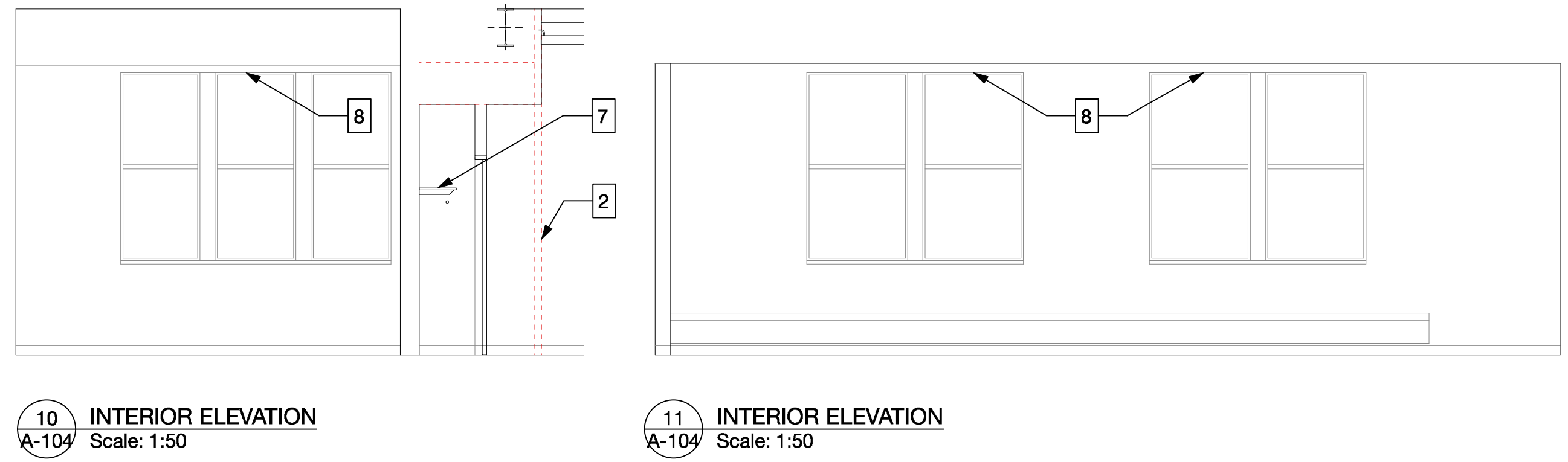
7 INTERIOR ELEVATION
A-104 Scale: 1:50



8 INTERIOR ELEVATION
A-104 Scale: 1:50

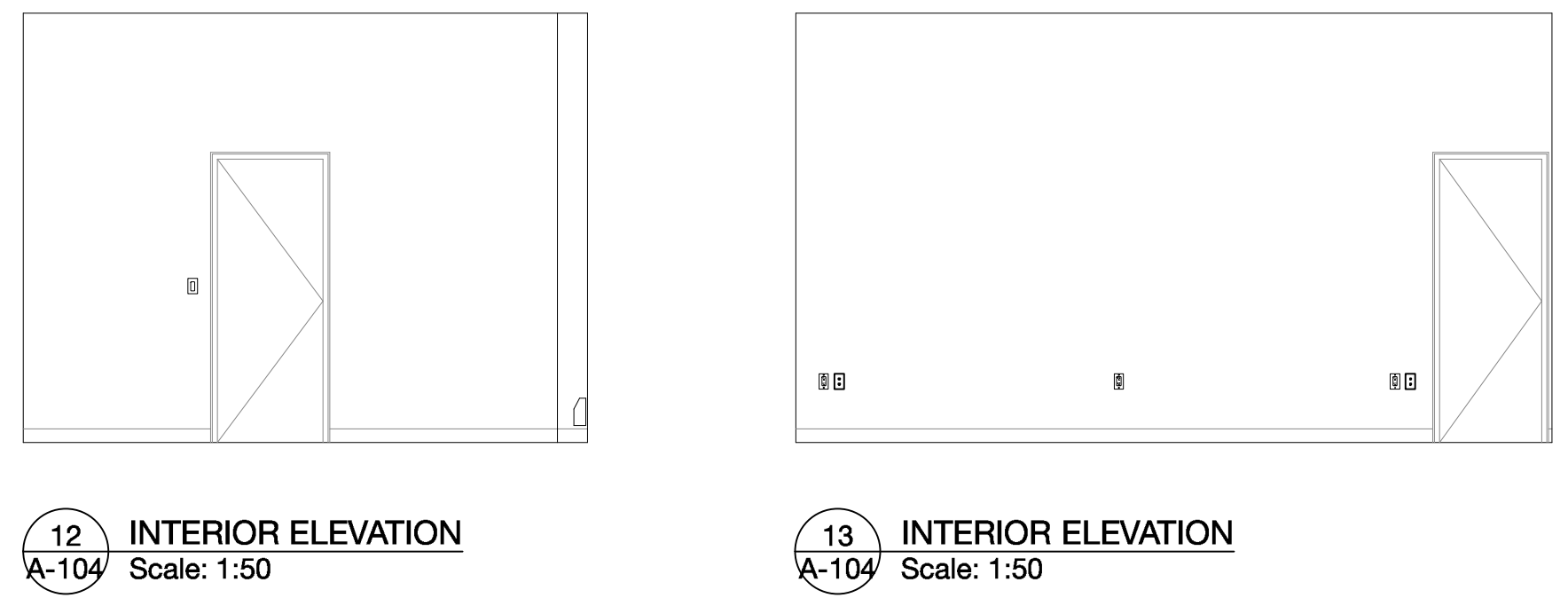


9 INTERIOR ELEVATION
A-104 Scale: 1:50



10 INTERIOR ELEVATION
A-104 Scale: 1:50

11 INTERIOR ELEVATION
A-104 Scale: 1:50



12 INTERIOR ELEVATION
A-104 Scale: 1:50

13 INTERIOR ELEVATION
A-104 Scale: 1:50

GENERAL NOTES:

- 01) CONTRACTOR TO ALLOW AND INCLUDE FOR REMOVAL AND RE-INSTATEMENT OF MATERIALS AND EQUIPMENT ADEQUATELY REQUIRED FOR THE INSTALLATION OF ALL NEW CONSTRUCTION, CONDUIT, SERVICES AND EQUIPMENT. MAKE GOOD ALL SURFACES AND RE-FINISH TO MATCH EXISTING STATE.
- 02) REMOVE EXISTING COVERPLATES, TRIMS, ACCESSORIES, SOUND ABSORPTION PANELS IN PREPARATION FOR PAINTING AND RE-INSTATE UPON COMPLETION OF PAINTING.

KEYNOTES

- 1. RELOCATE EXISTING RADIATOR (REFER TO MECHANICAL)
- 2. DASHED LINE INDICATES LINE OF EXISTING PARTITION TO BE REMOVED.
- 3. DASHED LINE INDICATES PORTION OF EXISTING SOLID MASONRY WALL (BEYOND) TO BE REMOVED. REFER TO STRUCTURAL.
- 4. SUPPLY AND INSTALL SOLID BLOCKING FOR WALL-MOUNTED TV BRACKET. REFER TO 2-A105.
- 5. HATCHED AREA INDICATES PORTION OF NEW STEEL STRUCTURE (BEYOND) TO BE ENCAPSULATED WITH 2 LAYERS 13mm TYPE X GYPSUM ON METAL STUD FRAMING.
- 6. EXISTING SERVERY MILLWORK TO BE RELOCATED.
- 7. SUPPLY AND INSTALL NEW CLOTHES ROD AND SHELF (TYP)
- 8. INSTALLATION OF AUTOMATED BLINDS BY OTHERS (N.I.C.)
- 9. LINE OF EXISTING SUPPLY AIR DUCT
- 10. SUPPLY AND INSTALL NEW METAL HANDRAIL AND SUPPORTS.
- 11. INSTALL SHADOW REVEAL AS PER 1/A-105.
- 12. SUPPLY AND INSTALL J-BEAD (TYP).
- 13. SUPPLY AND INSTALL CORNER BEAD (TYP).

#	ISSUE	DATE
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PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
 OTTAWA, ON

SHEET TITLE

EXTERIOR ELEVATIONS (PROPOSED)

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PROJECT #:	20-011
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SHEET

A-104

SEAL

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KEY PLAN

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01	66% REVIEW SET	10/16/2020
02	99% REVIEW SET	12/02/2020
03	ISSUE FOR TENDER	12/21/2020

PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
 OTTAWA, ON

SHEET TITLE

SECTIONS AND DETAILS

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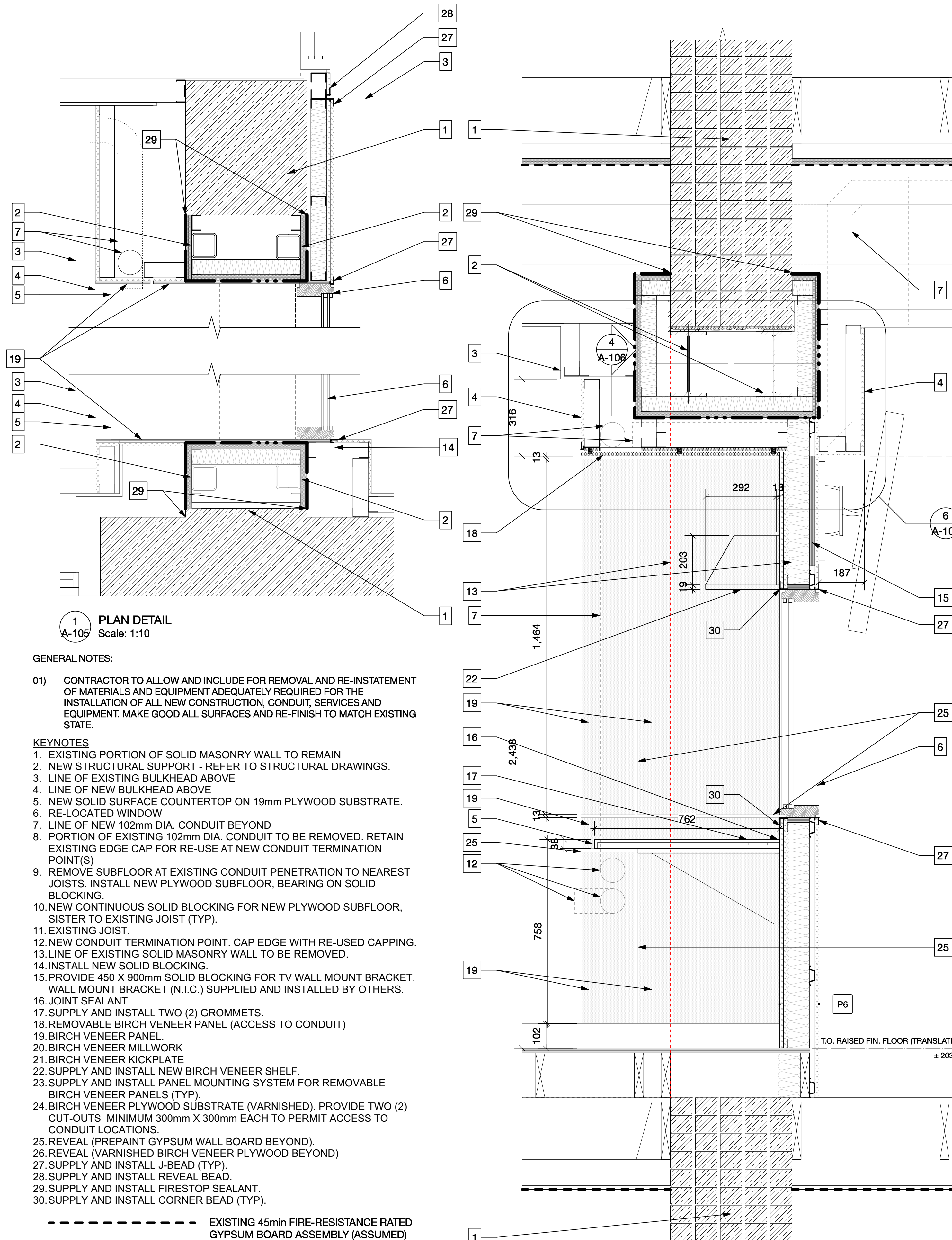
PROJECT #: 20-011

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A-105



1 PLAN DETAIL
A-105 Scale: 1:10

GENERAL NOTES:

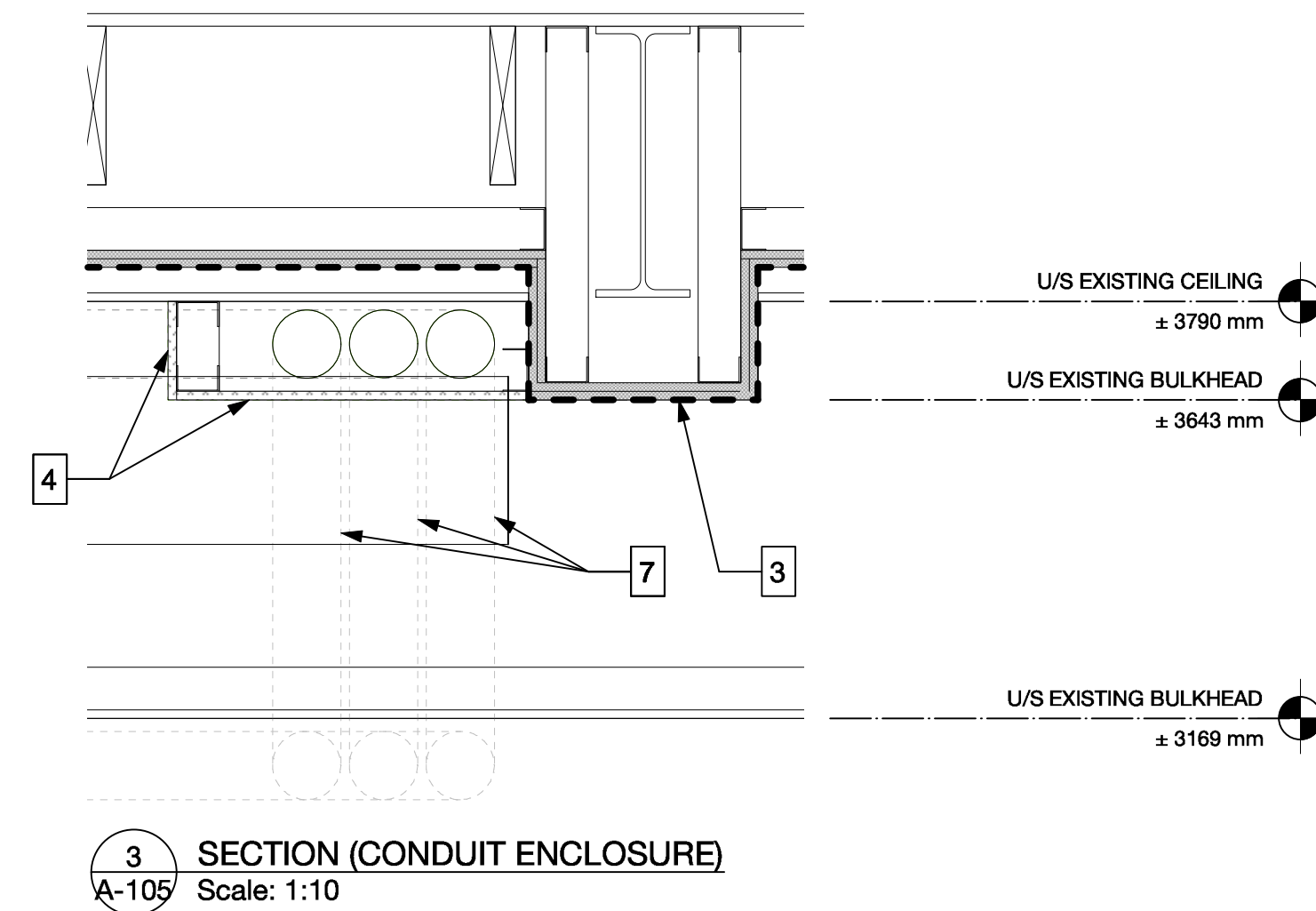
- 01) CONTRACTOR TO ALLOW AND INCLUDE FOR REMOVAL AND RE-INSTALLMENT OF MATERIALS AND EQUIPMENT ADEQUATELY REQUIRED FOR THE INSTALLATION OF ALL NEW CONSTRUCTION, CONDUIT, SERVICES AND EQUIPMENT. MAKE GOOD ALL SURFACES AND RE-FINISH TO MATCH EXISTING STATE.

KEYNOTES

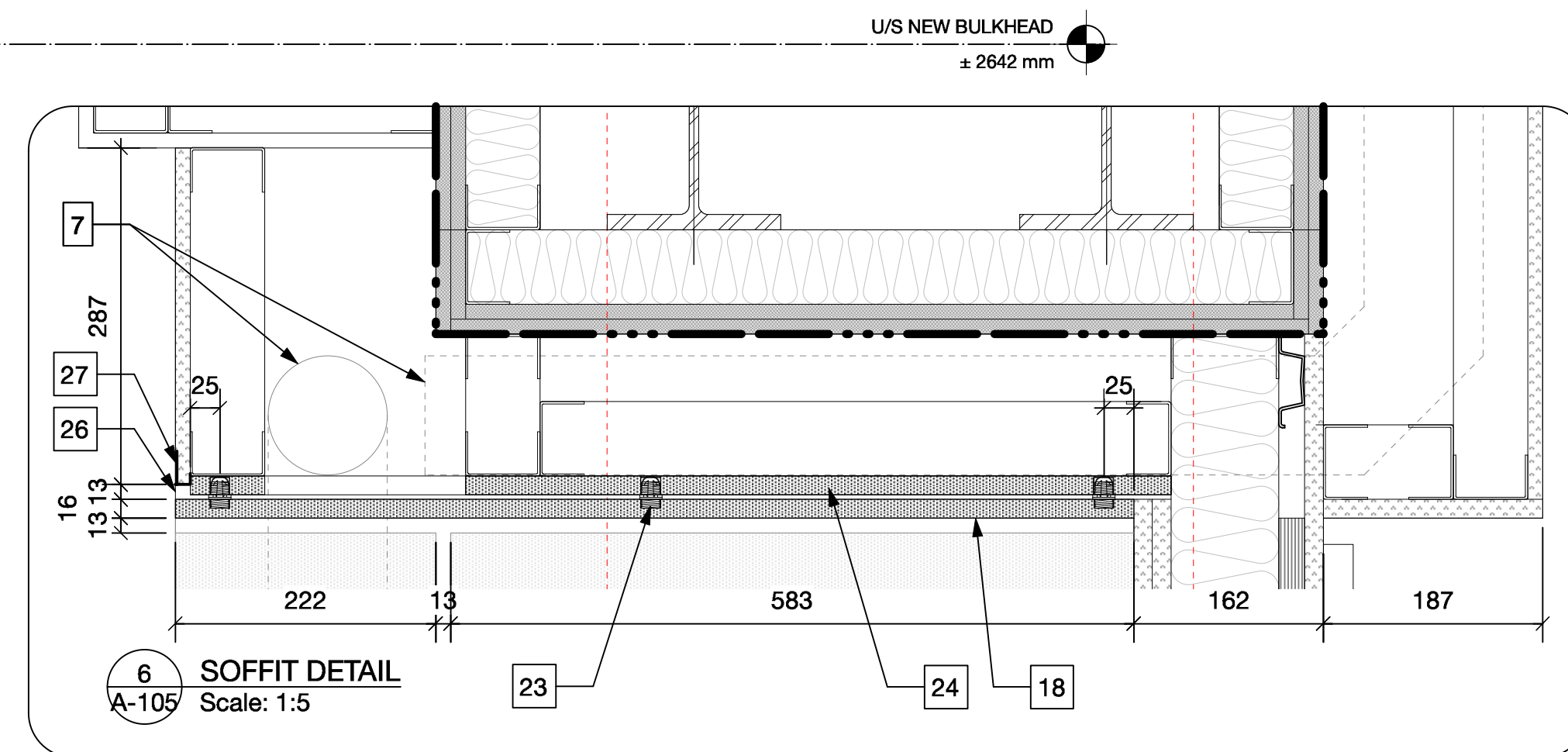
1. EXISTING PORTION OF SOLID MASONRY WALL TO REMAIN
2. NEW STRUCTURAL SUPPORT - REFER TO STRUCTURAL DRAWINGS.
3. LINE OF EXISTING BULKHEAD ABOVE
4. LINE OF NEW BULKHEAD ABOVE
5. NEW SOLID SURFACE COUNTERTOP ON 19mm PLYWOOD SUBSTRATE.
6. RE-LOCATED WINDOW
7. LINE OF NEW 102mm DIA. CONDUIT BEYOND
8. PORTION OF EXISTING 102mm DIA. CONDUIT TO BE REMOVED. RETAIN EXISTING EDGE CAP FOR RE-USE AT NEW CONDUIT TERMINATION POINT(S)
9. REMOVE SUBFLOOR AT EXISTING CONDUIT PENETRATION TO NEAREST JOISTS. INSTALL NEW PLYWOOD SUBFLOOR, BEARING ON SOLID BLOCKING.
10. NEW CONTINUOUS SOLID BLOCKING FOR NEW PLYWOOD SUBFLOOR, SISTER TO EXISTING JOIST (TYP).
11. EXISTING JOIST.
12. NEW CONDUIT TERMINATION POINT. CAP EDGE WITH RE-USED CAPPING.
13. LINE OF EXISTING SOLID MASONRY WALL TO BE REMOVED.
14. INSTALL NEW SOLID BLOCKING.
15. PROVIDE 450 X 900mm SOLID BLOCKING FOR TV WALL MOUNT BRACKET. WALL MOUNT BRACKET (N.I.C.) SUPPLIED AND INSTALLED BY OTHERS.
16. JOINT SEALANT
17. SUPPLY AND INSTALL TWO (2) GROMMETS.
18. REMOVABLE BIRCH VENEER PANEL (ACCESS TO CONDUIT)
19. BIRCH VENEER PANEL.
20. BIRCH VENEER MILLWORK
21. BIRCH VENEER KICKPLATE
22. SUPPLY AND INSTALL NEW BIRCH VENEER SHELF.
23. SUPPLY AND INSTALL PANEL MOUNTING SYSTEM FOR REMOVABLE BIRCH VENEER PANELS (TYP).
24. BIRCH VENEER PLYWOOD SUBSTRATE (VARNISHED). PROVIDE TWO (2) CUT-OUTS MINIMUM 300mm X 300mm EACH TO PERMIT ACCESS TO CONDUIT LOCATIONS.
25. REVEAL (PREPAINT GYPSUM WALL BOARD BEYOND).
26. REVEAL (VARNISHED BIRCH VENEER PLYWOOD BEYOND)
27. SUPPLY AND INSTALL J-BEAD (TYP).
28. SUPPLY AND INSTALL REVEAL BEAD.
29. SUPPLY AND INSTALL FIRESTOP SEALANT.
30. SUPPLY AND INSTALL CORNER BEAD (TYP).

- - - - - EXISTING 45min FIRE-RESISTANCE RATED GYPSUM BOARD ASSEMBLY (ASSUMED)
- NEW 45min FIRE-RESISTANCE RATED ENCLOSURE:
2 LAYERS 13mm TYPE 'X' GYPSUM WALL BOARD
64mm METAL STUD FRAMING @ 400mm o.c.
64mm SOUND ATTENUATING BATT INSULATION
EXISTING STRUCTURE

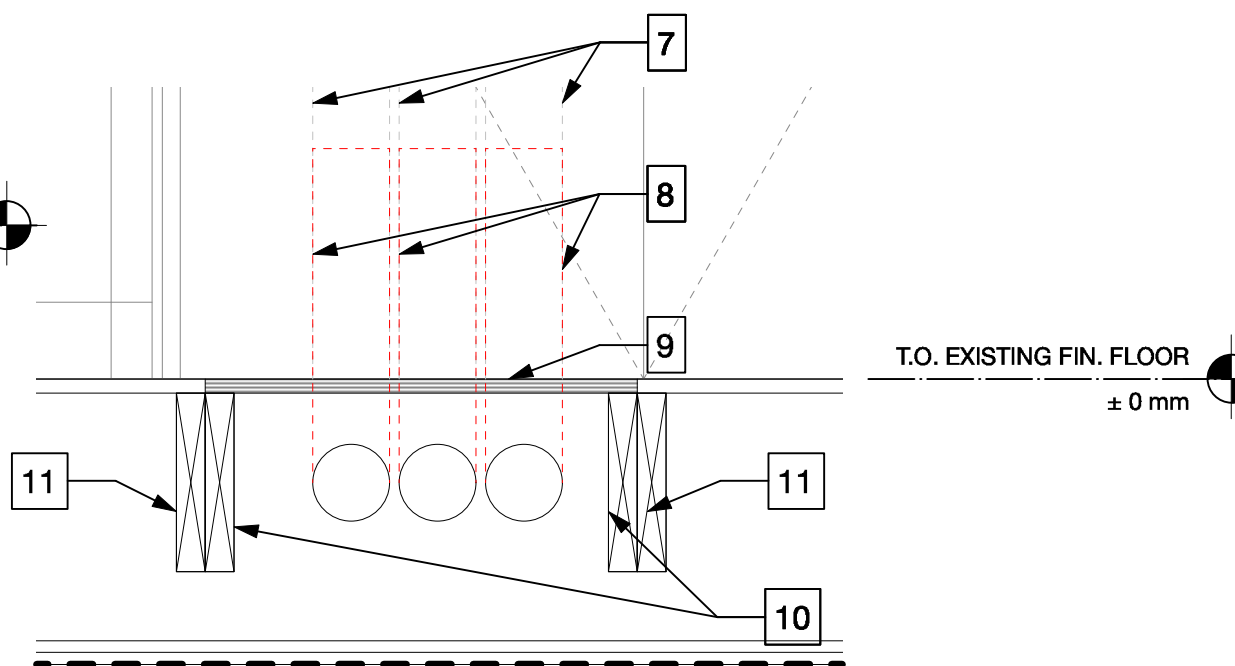
2 SECTION (TRANSLATION BOOTH)
A-105 Scale: 1:10



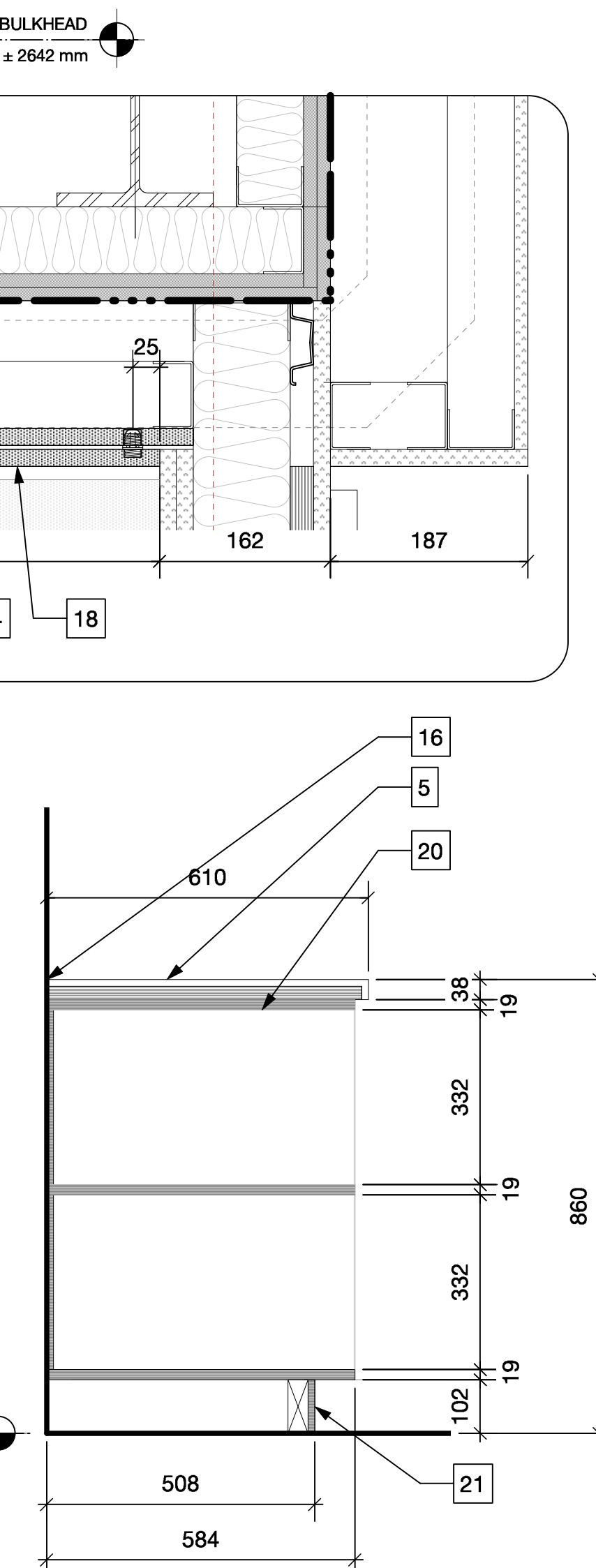
3 SECTION (CONDUIT ENCLOSURE)
A-105 Scale: 1:10



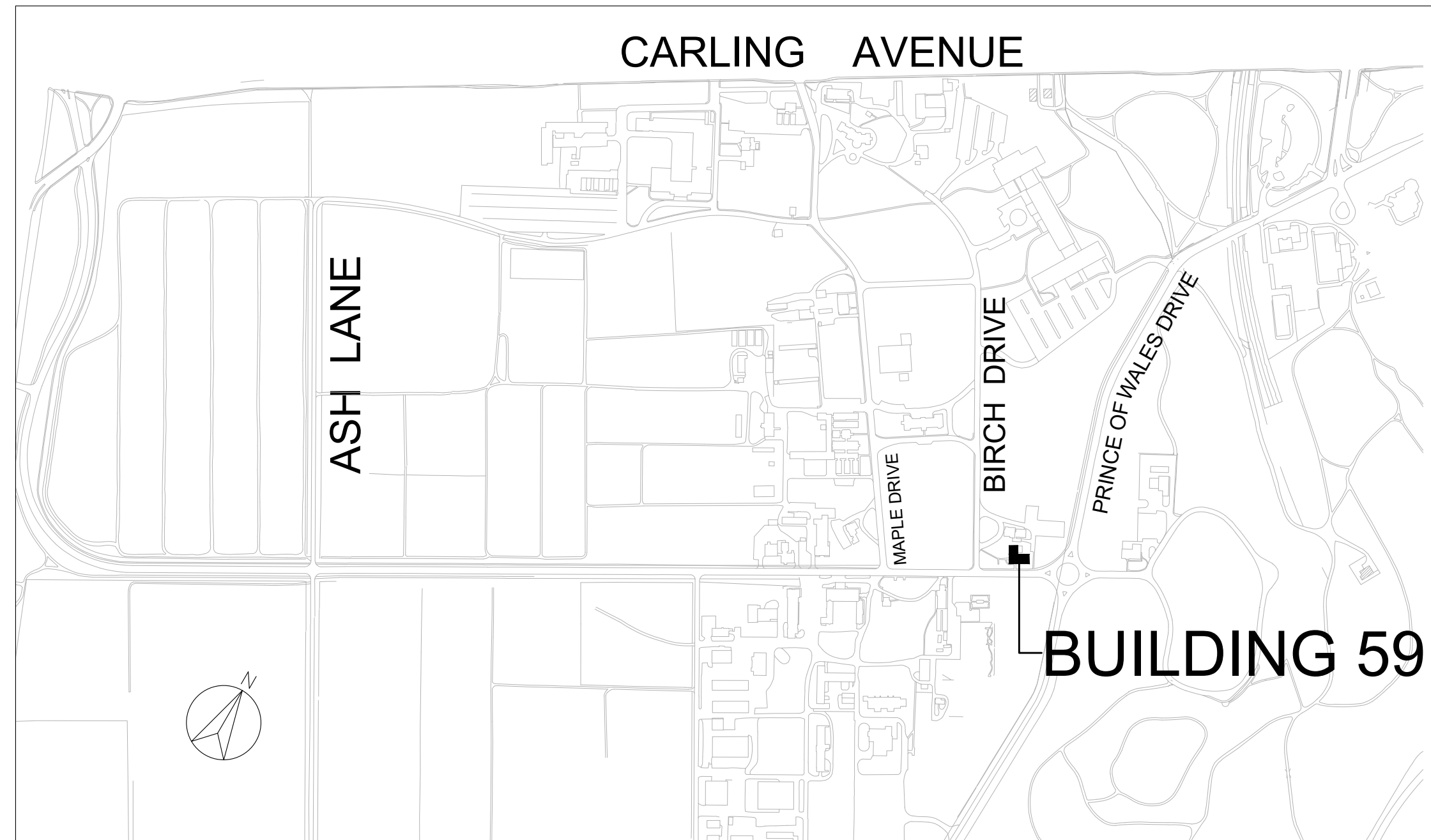
6 SOFFIT DETAIL
A-105 Scale: 1:5



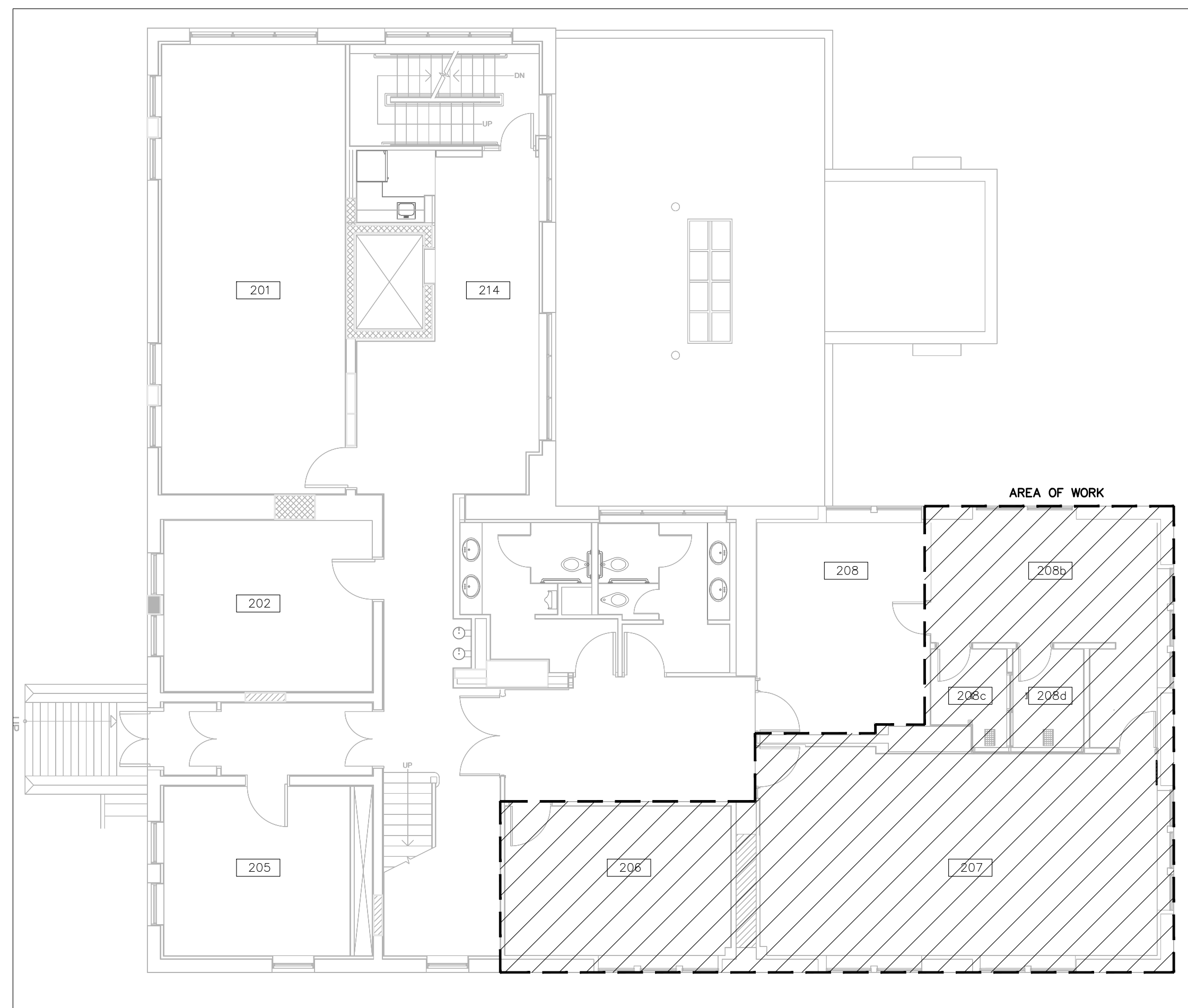
4 SECTION (CONFERENCE ROOM)
A-105 Scale: 1:10



5 MILLWORK SECTION
A-105 Scale: 1:10



1 SITE PLAN
M000 N.T.S.



2 BUILDING 59 - AREA OF WORK (LEVEL 2)
M000 1:100

GENERAL AIR DISTRIBUTION NOTES

- CONTRACTOR TO TAKE ALL MEASUREMENTS NECESSARY TO DETERMINE CURRENT SYSTEMS PERFORMANCE IN AREAS THAT WILL CONTINUE TO BE SERVED BY EXISTING AIR HANDLING EQUIPMENT AND SHALL REPORT TO CONSULTANT ALL MEASUREMENTS MADE PRIOR TO START OF DEMOLITION.
- ON COMPLETION OF DUCT ALTERATIONS, CONTRACTOR SHALL RE-BALANCE ALL EXISTING SYSTEMS TO DELIVER PRE-CONSTRUCTION FLOWS, OR NEW FLOWS WHERE PROVIDED.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR CO-ORDINATION OF GRILLES, DIFFUSERS AND OTHER ELEMENTS.
- CONTRACTORS SHALL COORDINATE ALL FLOOR AND CEILING FINISHES WITH ARCHITECTURAL DRAWINGS. CONTRACTOR SHALL REVIEW MECHANICAL DRAWINGS, ARCHITECTURAL REFLECTED CEILING PLANS AND ARCHITECTURAL ROOM FINISH SCHEDULES AS SOON AS CONTRACT DOCUMENTS ARE SIGNED. ADVISE CONSULTANT OF ANY CONFLICTS BETWEEN FLOOR & CEILING TYPE AND DIFFUSER/GRILLE TYPE.
- CONTRACTOR AND DIFFUSER/GRILLE SUPPLIER ARE RESPONSIBLE TO PROVIDE ALL PLASTER AND FINISHING FRAMES, MOUNTING HARDWARE, AND ACCESSORIES TO SUIT ARCHITECTURAL CEILING & FLOOR TYPES. MECHANICAL CONTRACTOR SHALL CO-ORDINATE AND PROVIDE DETAILS OF MOUNTING REQUIREMENTS OF DIFFUSERS AND GRILLES IN FLOORS AND DRYMALL CEILINGS TO OTHER TRADES AND ENSURE EDGES OF OPENINGS ARE FRAMED BY THAT TRADE TO SUPPORT DIFFUSERS AND GRILLES PROPERLY. DIFFUSERS AND GRILLES MUST NOT BE SUPPORTED SOLELY BY HANGER WIRES.
- PROPERLY SUPPORT CEILING MOUNTED EQUIPMENT AND ANY OTHER EQUIPMENT INDEPENDENT OF CEILING SUPPORT SYSTEM. REFER TO ARCHITECTURAL DETAILS AND CO-ORDINATE WITH STRUCTURAL TRADE.
- ALL DUCTWORK FITTINGS SHALL BE RIGID GALVANIZED IRON AND AS PER SPECIFICATIONS.
- CONTRACTOR TO COORDINATE INSTALLATION WITH OTHER TRADES TO PLAN AND LAYOUT WORK TO AVOID INTERFERENCES. CONTRACTOR SHALL CARRY FOR ADDITIONAL DUCTS AND DUCT FITTINGS TO CLEAR THE INTERFERENCES.
- CONTRACTOR IS TO RECONNECT ALL TAKE-OFFS / BRANCH LINES FROM MAINS BEING REMOVED TO NEW MAINS INSTALLED UNDER THIS CONTRACT. EXACT SIZE, LOCATION AND NUMBER OF TAKE-OFFS TO BE VERIFIED ON SITE.
- LOCATION OF THERMOSTATS TO BE COORDINATED WITH FINAL LOCATION OF FURNITURE AND EQUIPMENT. TYPICAL FOR ALL INDICATED.

GENERAL NOTES

- CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS TO EXISTING MECHANICAL SERVICES ON SITE.
- CONTRACTOR IS TO ENSURE THAT ALL EXISTING PIPING SERVING EXISTING AREAS REMAINS IN SERVICE UNTIL THESE AREAS ARE RECONNECTED TO NEW SERVICES. ONLY THEN OBSOLETE PIPING IS TO BE REMOVED AS SHOWN.
- ALL DISTURBED SURFACES AFTER PIPE REMOVAL OR ROUTING TO BE FILLED-IN WITH APPROPRIATE MATERIAL TO MAINTAIN FIRE SEPARATION AND PATCHED TO MATCH EXISTING OR NEW.
- EXISTING ITEMS TO BE REMOVED REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DELIVERED TO A LOCATION ON SITE DESIGNATED BY THE OWNER. IF THE OWNER DECLARES NO INTERESTS IN THE REMOVED ITEMS, ASSUME OWNERSHIP AND REMOVE THE ITEMS FROM THE SITE.
- ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH CODES, BULLETINS ETC. AND REQUIREMENTS OF ALL INSPECTION AUTHORITIES FOR THE CITY OF OTTAWA.
- ALL DRAWINGS ARE INTEGRATED WITH THE SPECIFICATIONS WHICH ACCOMPANY THEM. NEITHER IS TO BE USED ALONE. ANY ITEM OR SUBJECT OMITTED FROM ONE BUT IMPLIED IN THE OTHER IS FULLY AND PROPERLY REQUIRED. WHEREVER DIFFERENCE OCCURS, THE MOST ONEROUS CONDITION GOVERNS.
- PENETRATIONS OF EITHER FIRE OR SMOKE BARRIER RESISTANT WALLS SHALL BE SLEEVED & SEALED AGAINST THE PASSAGE OF FLAME OR SMOKE W/SUITABLE NON-COMBUSTIBLE MATERIALS EQUAL TO THE CONSTRUCTION TO BE PENETRATED.
- DO NOT SCALE DRAWINGS FOR INSTALLATION PURPOSES. OBTAIN ALL DIMENSIONS FROM ARCHITECTURAL PLANS, MANUFACTURER'S SHOP DRAWINGS, AND ON SITE INSPECTIONS.
- MECHANICAL, DIV. 2-14 AND ELECTRICAL TRADES SHALL WORK IN CONJUNCTION WITH ONE ANOTHER SO AS TO AVOID INTERFERENCE'S BETWEEN PIPING, DUCTWORK, CONDUIT, LIGHTING FIXTURES, ETC.
- WORK SHALL BE CO-ORDINATED THROUGH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION OF ANY EQUIPMENT, DUCTWORK AND CONTROLS. CO-ORDINATE WITH ARCHITECTURAL ELEVATIONS FOR ARCHITECTURAL, MECHANICAL, AND ELECTRICAL SPACE ALLOCATIONS.
- REFER TO ARCHITECTURAL FOR OWNER SUPPLIED EQUIPMENT. CONFIRM ALL MECHANICAL REQUIREMENTS AND PROVIDE TO SUIT.
- REVIEW ARCHITECTURAL AND ELECTRICAL DRAWINGS AND PROVIDE ON SITE INSPECTIONS TO DETERMINE FULL EXTENT OF PROJECT PRIOR TO SUBMITTING BID.
- PENETRATIONS OF CONCRETE SHALL BE SAW-CUT OR CORE BORED - IMPACT HAMMERS ARE NOT ALLOWED. SEAL ALL DUCTWORK & SLEEVES TO PREVENT LEAKAGE THRU FLOOR.
- PROPERLY SUPPORT CEILING MOUNTED EQUIPMENT AND ANY OTHER EQUIPMENT INDEPENDENT OF CEILING SUPPORT SYSTEM.
- AVOID ANY DIRECT CONTACT BETWEEN ANY PIPING, DUCTING AND ELECTRICAL CONDUIT SYSTEMS TO PREVENT SOUND TRANSMISSION.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL MECHANICAL SERVICES TO THE OCCUPIED AREA THROUGHOUT CONSTRUCTION. PROVIDE CONSTRUCTION VALVES, TEMPORARY DUCTWORK AND PIPING AS REQUIRED TO LIMIT THE SHUT DOWN OF SERVICES.
- IF ANY AREAS ARE AFFECTED BY THE NEW SCOPE OF WORK, CONTRACTOR TO CARRY COSTS FOR THE REMOVAL AND INSTALLATION OF THE EXISTING CEILING TILES. REFER TO ARCHITECTURAL NEW REFLECTED CEILING PLAN FOR SCOPE OF NEW CEILING.
- INSTALLATION SHALL BE COMPLETE AND FULLY FUNCTIONAL. PROVIDE ALL LABOR, MATERIALS, TOOLS, SERVICES, EQUIPMENT, ETC. AS REQUIRED.
- PROVIDE ACCESS FOR SERVICING EQUIPMENT AS INDICATED, AS REQUIRED BY CODE AND AS RECOMMENDED BY THE MANUFACTURER.
- PROVIDE ACCESS DOORS AS NECESSARY FOR ACCESS TO VALVES, DAMPERS, AND OTHER COMPONENTS REQUIRING MONITORING, INSPECTION, AND MAINTENANCE.
- INSTALL EQUIPMENT, DUCTS, AND PIPES PARALLEL TO OR PERPENDICULAR TO BUILDING LINES. PROVIDE SPACE, UNIONS AND FLANGES FOR DISASSEMBLY, SERVICING AND REMOVAL OF EQUIPMENT.
- WHEN A CONFLICT OCCURS BETWEEN INSTALLATION DETAILS, DIAGRAMS, ETC. INDICATED IN THE CONTRACT DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS, THE MANUFACTURER'S INSTRUCTIONS SHALL GOVERN AND SHALL BE FOLLOWED.
- DUE TO AN INCONSISTENT RECORD OF EXISTING SERVICES, NOT ALL PIPING AND DUCTWORK MAY BE SHOWN, OR IF SHOWN MAY NOT BE ACCURATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD CONFIRM ALL SERVICES.

MECHANICAL DRAWING LIST

M000	MECHANICAL DRAWING LIST, LEGEND, NOTES, SCHEDULES & KEY PLANS
M001	MECHANICAL SPECIFICATIONS
M100	DEMOLITION AND NEW FIRE PROTECTION PLANS - LEVEL 2
M200	DEMOLITION AND NEW HVAC PLANS - LEVEL 2

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	FIRE EXTINGUISHER - SURFACE MOUNTED
	EXISTING SPRINKLER PIPING
	SPRINKLER PIPING
	INDICATES EXISTING AIR OUTLET TO BE REBALANCED TO AIR QUANTITY INDICATED.
	INDICATES EXISTING SUPPLY AIR OUTLET TO BE RELOCATED AND RE-BALANCED TO AIR QUANTITY INDICATED.
	INDICATES EXISTING SUPPLY AIR OUTLET.
	INDICATES NEW SUPPLY DIFFUSER
	INDICATES EXISTING RETURN GRILLE.
	INDICATES NEW RETURN GRILLE
	INDICATES EXISTING TERMINAL UNIT
CTE	
	CONNECT TO EXISTING
	POSITIVE PRESSURE (SUPPLY) DUCT UP
	POSITIVE PRESSURE (SUPPLY) DUCT UP
	NEGATIVE PRESSURE (RETURN) DUCT UP
	POSITIVE PRESSURE (SUPPLY) DUCT DOWN
	POSITIVE PRESSURE (SUPPLY) DUCT DOWN
	NEGATIVE PRESSURE (RETURN) DUCT DOWN
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK
	RETURN/EXHAUST GRILLE
	SUPPLY AIR DIFFUSER
	BALANCING DAMPER
	TRANSFER DUCT

NOTE: ALL NEW DEVICES SHOWN IN BOLD

RETURN AIR OUTLET SCHEDULE

DESIGNATION	R-1
MOUNTING	CEILING DRY WALL
OUTLET TYPE	EGGCRATE
NOMINAL SIZE: MM (IN)	300X300 (12X12)
CONNECTION SIZE: MM (IN)	---
AIRFLOW RANGE: L/S (CFM)	47 (100)
MAXIMUM NOISE CRITERIA	NC 20
MODEL REFERENCE	PRICE 80

SUPPLY AIR OUTLET SCHEDULE

DESIGNATION	S-1
MOUNTING	CEILING DRY WALL
OUTLET TYPE	SQUARE CONE
NOMINAL SIZE: MM (IN)	600X600 (24X24)
CONNECTION SIZE: MM (IN)	150 (6")
AIRFLOW RANGE: L/S (CFM)	47 (100)
MAXIMUM NOISE CRITERIA	NC 20
MODEL REFERENCE	PRICE SCD

SEAL

CONSULTANTS



KEY PLAN

#	ISSUE	DATE
01	ISSUED FOR 66% REVIEW	10/16/2020
02	ISSUED FOR 99% REVIEW	12/02/2020
03	ISSUED FOR TENDER	12/21/2020

PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE

MECHANICAL DRAWING LIST, LEGEND, NOTES, SCHEDULES & KEY PLANS

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PROJECT #: 20-105

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SHEET

M-000

MECHANICAL SPECIFICATIONS

1. GENERAL CONDITIONS
 - A. CONFORM TO NATIONAL BUILDING CODE—2015, FIRST PRINTING
 - B. CONFORM TO NATIONAL FIRE CODE—2015.
 - C. CONFORM TO LOCAL AND DISTRICT BYLAWS, REGULATIONS AND PUBLISHED ENGINEERING STANDARDS.
 - D. CONFORM TO CSA STANDARDS.
2. SCOPE OF WORK
 - A. COMPLY WITH ALL CONDITIONS OF TENDER DOCUMENTS ISSUED FOR THIS PROJECT.
 - B. THE REMOVAL OR RELOCATION OF EXISTING, AND THE SUPPLY AND INSTALLATION OF NEW EQUIPMENT, DUCTWORK AND PIPING AS SHOWN ON THE DRAWINGS AND AS NOTED.
 - C. GENERAL
 - a. COMPLY WITH GENERAL CONDITIONS.
 - b. PROVIDE ONE (1) ELECTRONIC COPY OF SHOP DRAWINGS OF ALL MAJOR EQUIPMENT FOR APPROVAL. THIS PROJECT ALLOWS FOR 1 REVISION. ANY SUBMISSIONS AFTER REVISION 1 CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE.
 - c. BALANCE ALL AIR SYSTEMS AND SUBMIT BALANCING REPORT ON COMPLETION.
 - d. SUBMIT MAINTENANCE AND INSTRUCTION MANUALS. THIS PROJECT ALLOWS FOR TWO (2) REVISIONS. PRELIMINARY SET AND THEN A FINAL SET. ANY SUBMISSIONS AFTER REVISION 2 CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE. SEE SPECIFICATIONS FOR DETAILS.
 - e. ON COMPLETION OF PROJECT AND BEFORE FINAL PAYMENT, SUBMIT TWO (2) SETS OF AUTOCAD, PDF AND HARDCOPY AS-BUILT DRAWINGS SHOWING ALL CHANGES AND CONCEALED SERVICES DIMENSIONED WITH EXACT LOCATIONS NOTED THEREON. THIS PROJECT ALLOWS FOR 1 REVISION. ANY SUBMISSIONS AFTER REVISION 1 CONTRACTOR SHALL BE CHARGED A CONSULTANTS FEE.
 - f. THOROUGHLY CLEAN ALL MECHANICAL EQUIPMENT DURING CONSTRUCTION AND ON COMPLETION OF CONTRACT.
 - g. PROVIDE WRITTEN GUARANTEE FOR ALL NEW EQUIPMENT AND WORKMANSHIP FOR ONE YEAR FROM DATE OF ACCEPTANCE. FIVE (5) YEARS FOR COMPRESSOR AND HEAT EXCHANGER. DEFECTIVE PARTS REPAIRED OR REPLACED WITHOUT CHARGE.
 - h. IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA AND IMMEDIATELY NOTIFY THE CONSULTANT AND THE OWNER.
 - i. CONFER WITH ALL TRADES AND ARRANGE EQUIPMENT IN PROPER RELATION WITH OTHERS AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISHES.
 - j. REFER TO ARCHITECTURAL SPECIFICATIONS AND DRAWINGS WHICH ARE PART OF THIS WORK.
 - k. OWNER RESERVES RIGHT TO TRIAL AND/OR TEMPORARY USAGE PRIOR TO ACCEPTING INSTALLATION.
 - l. PROVIDE ALL MATERIALS, EQUIPMENT, ACCESSORIES, CONSUMABLES, LABOR, SUPERVISION, TOOLS, SERVICES, ETC. AS REQUIRED FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS.
 - m. PRIOR TO TENDERING, EXAMINE THE SITE, ALL DRAWINGS AND SPECIFICATIONS AND REPORT ALL/ANY CONFLICTS, DISCREPANCIES TO THE CONSULTANT FOR CLARIFICATION AND/OR CORRECTION.
 - n. COORDINATE AND SCHEDULE WORK WITH OWNER AND OTHER TRADES TO MINIMIZE CONFLICTS, DELAYS, AND DISRUPTION OF EXISTING SERVICES AND OPERATIONS.
 - D. DEFINITIONS: FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATION AND ON ASSOCIATED DRAWINGS.
 - a. "CONCEALED" – HIDDEN FROM NORMAL SIGHT IN FURRED – SPACES, SHAFTS, CEILING SPACES, WALLS, UNDERFLOOR, AND PARTITIONS.
 - b. "EXPOSED" – ALL MECHANICAL WORK VISIBLE TO BUILDING OCCUPANTS.
 - c. "PROVIDE" – (AND ALL TENSES OF "PROVIDE") SUPPLY AND INSTALL
 - d. "INSTALL" – (AND ALL TENSES OF "INSTALL")—INSTALL, WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
 - e. "SUPPLY" – SUPPLY ONLY.
 - f. "OR APPROVED EQUAL" – MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
 - g. "AS INDICATED" – AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
 - h. "OWNER" – BUILDING OWNER AS DEFINED IN THE CONTRACT OR THE OWNER'S DESIGNED REPRESENTATIVE.
 - i. "ELECTRONIC" OR "SOFT COPY" – PDF FORMAT
 - j. "AUTOCAD" – DWG FORMAT
3. LIABILITY
 - A. THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND ANY DAMAGE OR EXTRA COSTS CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT HIS WORK. CARRY ALL NECESSARY INSURANCE COVERAGE.
4. CERTIFICATES, FEES, ETC.
 - A. GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT. AT THE ENGINEER'S REQUEST, FURNISH ANY CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS TO THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.
5. CEILING TILE REMOVAL / REPLACEMENT
 - A. EACH RESPECTIVE SUB—TRADE OR PRIME MECHANICAL CONTRACTOR AS THE CASE MAY BE SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF ANY CEILING TILES TO SUIT WORK WITHIN THE CEILING SPACE. ANY DAMAGED TILES SHALL BE REPLACED AT THE COST TO THE RESPECTIVE SUB—TRADE OR PRIME MECHANICAL CONTRACTOR AND SHALL BE HELD BACK ON THE PROGRESS DRAW.
6. HOURS OF WORK
 - A. ANY AUDIBLE TESTING, CORE DRILLING OR ANY OTHER NOISY WORK MUST BE PERFORMED "AFTER HOURS". MAKE ARRANGEMENTS WITH BUILDING PERSONNEL TO CONFIRM TIMES FOR SUCH WORK.
 - B. PHASING AND SCHEDULING
 - a. REFER TO GENERAL CONDITIONS, ARCHITECTURAL SPECIFICATIONS, AND MECHANICAL PHASING PLANS FOR

MECHANICAL SPECIFICATIONS CONT'D

- PHASING AND SCHEDULING OF WORK.
- b. COORDINATE ALL WORK WITH OTHER TRADES AND ASSIST IN THE IMPLEMENTATION OF THE PHASING STRATEGY.
7. SERVICE PENETRATIONS
 - A. FIRE STOP AND SMOKE SEALS: MATERIALS SHALL BE ULC LISTED COMPONENTS SUITABLE FOR FIRE RESISTANCE RATINGS.
 - B. ALL OPENINGS IN FIRE SEPARATIONS FOR SERVICE PENETRATIONS SHALL BE PROTECTED WITH ULC LISTED "SERVICE PENETRATIONS FIRESTOP SYSTEMS"
 8. TESTING AND BALANCING
 - A. BALANCE ALL SYSTEMS WHERE AIRFLOW IS GIVEN FOR RATED AIR FLOW, ROOM TEMPERATURE CONTROL AND CHECK CURRENT DRAW AFTER INSTALLATION IS COMPLETE AND IN FULL WORKING ORDER. ADJUST CONTROLS DAMPERS AND DIFFUSERS FOR PROPER AIR CIRCULATION AND MINIMUM ENERGY CONSUMPTION. ADJUST FAN SPEEDS AS REQUIRED TO OBTAIN SPECIFIC PERFORMANCE. BALANCE VAV BOXES TO THEIR MAXIMUM AND MINIMUM POSITIONS.
 - B. MECHANICAL SYSTEMS SHALL NOT BE CONSIDERED READY FOR FINAL INSPECTION UNTIL BALANCING RESULTS ACCEPTABLE TO THE ENGINEER ARE OBTAINED. IF IT IS FOUND THAT THE SPECIFIED AIR FLOWS CANNOT BE ACHIEVED ON PORTIONS OF THE SYSTEM, THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE ENGINEER FOR CONSIDERATION OF CORRECTIVE ACTION BEFORE CONTINUING THE BALANCING PROCEDURE. PROVIDE INSTRUMENTS AND MANPOWER TO VERIFY RESULTS OF UP TO 30% OF ALL REPORTED MEASUREMENTS. IF MEASURED FLOW AT FINAL INSPECTION SHOWS A DEVIATION OF 10% OR MORE OF SELECTED AREAS, THE REPORT SHALL BE REJECTED. IF REPORT IS REJECTED, SYSTEMS SHALL BE RE-BALANCED AND NEW CERTIFIED REPORT SUBMITTED AT NO EXTRA COST, FOLLOWING WHICH THE ENGINEER RESERVES THE RIGHT TO REQUEST ADDITIONAL VERIFICATION.
 - C. SUBMIT WRITTEN BALANCING REPORT CONFIRMING TO AABC AND ASHRAE STANDARDS FOR ENGINEER'S APPROVAL ONCE REVIEWED AND DEEMED SATISFACTORY BY THE ENGINEER, THE BALANCING CONTRACTOR SHALL SUBMIT 3 COPIES OF THE BALANCING REPORT FOR SUBMISSION TO THE OWNER.
 9. CONTROLS
 - A. ALL CONTROLS SHALL BE BY AINSWORTH. LOCATE THERMOSTATS AS SHOWN ON THE DRAWINGS, AND VERIFY CONNECTION TO CORRECT TERMINAL UNITS AS SHOWN ON THE DRAWINGS. VERIFY PROPER CALIBRATION AND OPERATION OF ALL NEW AND EXISTING CONTROLS IS FAULTY, ADVISE ENGINEER OF PROBLEM AND OBTAIN DIRECTIONS FOR REMEDIAL WORK.
 - B. PROVIDE ALL REQUIRED CONTROL HARDWARE LOW VOLTAGE WIRING, AND OTHER DEVICES FOR PROPER CONTROL. INCLUDE ALL ASSOCIATED COSTS.
 - C. MOUNTING HEIGHT SHALL BE 1200MM AFF OR AS REQUIRED BY NBC.
 10. DUCTWORK
 - A. ALL DUCTWORK TO BE FABRICATED FROM GALVANIZED STEEL TO CLEAR INSIDE DIMENSIONS AS NOTED ON THE DRAWINGS WITH ALL FLAT SURFACES GROSS BROKEN. ALL DUCTWORK TO BE FREE FROM LEAKS, IN ACCORDANCE WITH RECOMMENDATIONS OF ASHRAE AND SMACNA. ALL DUCTWORK IS TO BE FABRICATED COMPLETE WITH FLEXIBLE CONNECTIONS, TURNING VANES, VOLUME EXTRACTORS, APPROPRIATE MANUAL DAMPERS, TEST PORTS AND ACCESS PANELS AS REQUIRED AND AS INDICATED ON DRAWINGS.
 - B. DUCT CLEANING
 - a. CLEAN ALL NEW AND RENOVATED DUCTWORK. CLEAN INTERIOR SURFACES OF ALL NEW DUCTWORK AND ACCESSORIES INSTALLED AS PART OF THIS PROJECT. VERIFY CLEANLINESS AND PROVIDE REPORT TO CONSULTANT WITH CERTIFICATE OF CLEANLINESS. INCLUDE PHOTOGRAPHIC RECORD OF CLEANED SURFACES AND COMPONENTS.
 11. GRILLES AND DIFFUSERS REFER TO SCHEDULE
 - A. PRICE MODELS INDICATED. OUTLETS BY TITUS AND KRUGER ARE SUBJECT TO SHOP DRAWING REVIEW.
 12. DUCT INSULATION
 - A. RIGID DUCT INSULATION SHALL BE FIBROUS GLASS WOOL. FIBERGLAS CANADA INC. VAPOUR—SEAL DUCT INSULATION AF530 WITH RFFRK FACING OR MANSON INSULATION INC. AK BOARD WITH FSK FACING.
 - B. FLEXIBLE DUCT INSULATION SHALL BE FIBROUS GLASS WOOL. FIBERGLAS CANADA INC. TYPE 2/RFFRK FACING OR MANSON INSULATION INC. ALLEY WRAP/FSK FACING.
 - C. APPLY INSULATION, WRAPPING, VAPOUR BARRIER, ADHESIVE AND COATINGS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS ONLY AFTER ALL REQUIRED TESTING IS COMPLETED AND APPROVALS ARE RECEIVED.
 - D. WORK SHALL BE PERFORMED BY INSULATION JOURNEYMEN IN A WORKMAN LIKE MANNER TO PRESENT A NEAT APPEARANCE.
 - E. DO NOT APPLY INSULATION OR FINISHING WHEN THE AMBIENT TEMPERATURE IN THE SPACE IS BELOW 50F.
 - F. SERVICE

	TYPE	THICKNESS
a. AIR SUPPLY RECTANGULAR	RIGID	1" (25 MM)
b. AIR SUPPLY ROUND	FLEXIBLE	1"(25MM)
 13. SPRINKLER SYSTEM
 - A. THE SPRINKLER SYSTEM INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF NFPA STANDARD 13, NATIONAL BUILDING CODE, LOCAL BY—LAWS AND FIRE CODE, ONTARIO REG. 730/81.
 - B. SPRINKLER: SPRINKLER PIPING, FITTINGS, AND COUPLINGS TO MOST CURRENT NFPA 13.
 - C. SPRINKLER HEADS:
 - a. SEMI—RECESSED SPRINKLER HEADS: ULC LISTED, PLAIN BRONZE, STANDARD PATTERN, ORDINARY RATING, UPRIGHT TYPE. SPRINKLER HEADS CONFORMING TO MOST CURRENT NFPA 13. TYCO, GRINNEL, STAR SPRINKLER, RELIABLE, GLOBE, CENTRAL OR VIKING.
 - D. WHERE TEMPORARY SHUTDOWN OF EXISTING SPRINKLER SYSTEM IS NECESSARY DUE TO ALTERATIONS, REPAIR OR EXTENSIONS, THE APPROPRIATE REQUIREMENTS IN THE FIRE CODE MUST BE OBSERVED COMPLIED WITH.
 14. PIPE INSULATION
 - A. MINIMUM PIPE INSULATION SHALL CONFORM TO CURRENT ASHRAE 90.1 AND SHALL BE MOUNTED GLASS FIBRE INSULATION WITH VAPOUR BARRIER JACKET, EQUAL TO FIBREGLASS OF CANADA INC.; STANDARD TEMP PIPE INSULATION WITH ASJ; MANSON INSULATION INC. ALLEY—K WITH APT; KNAUF FIBREGLASS OR ROXUL—SEITZ.

MECHANICAL SPECIFICATIONS CONT'D

- B. INSULATE NEW [OR ALTERED] PIPING WITH RIGID PIPE INSULATION AS FOLLOW:

SERVICE	THICKNESS
HOT WATER HEATING SUPPLY	1" (25 MM)
HOT WATER HEATING RETURN	1" (25 MM)
- C. PROVIDE PVC JACKETING FOR ALL EXPOSED PIPE INSULATION.

SEAL

CONSULTANTS



KEY PLAN

#	ISSUE	DATE
01	ISSUED FOR 66% REVIEW	10/16/2020
02	ISSUED FOR 99% REVIEW	12/02/2020
03	ISSUED FOR TENDER	12/21/2020

PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE

MECHANICAL
SPECIFICATIONS

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PROJECT #: 20-105

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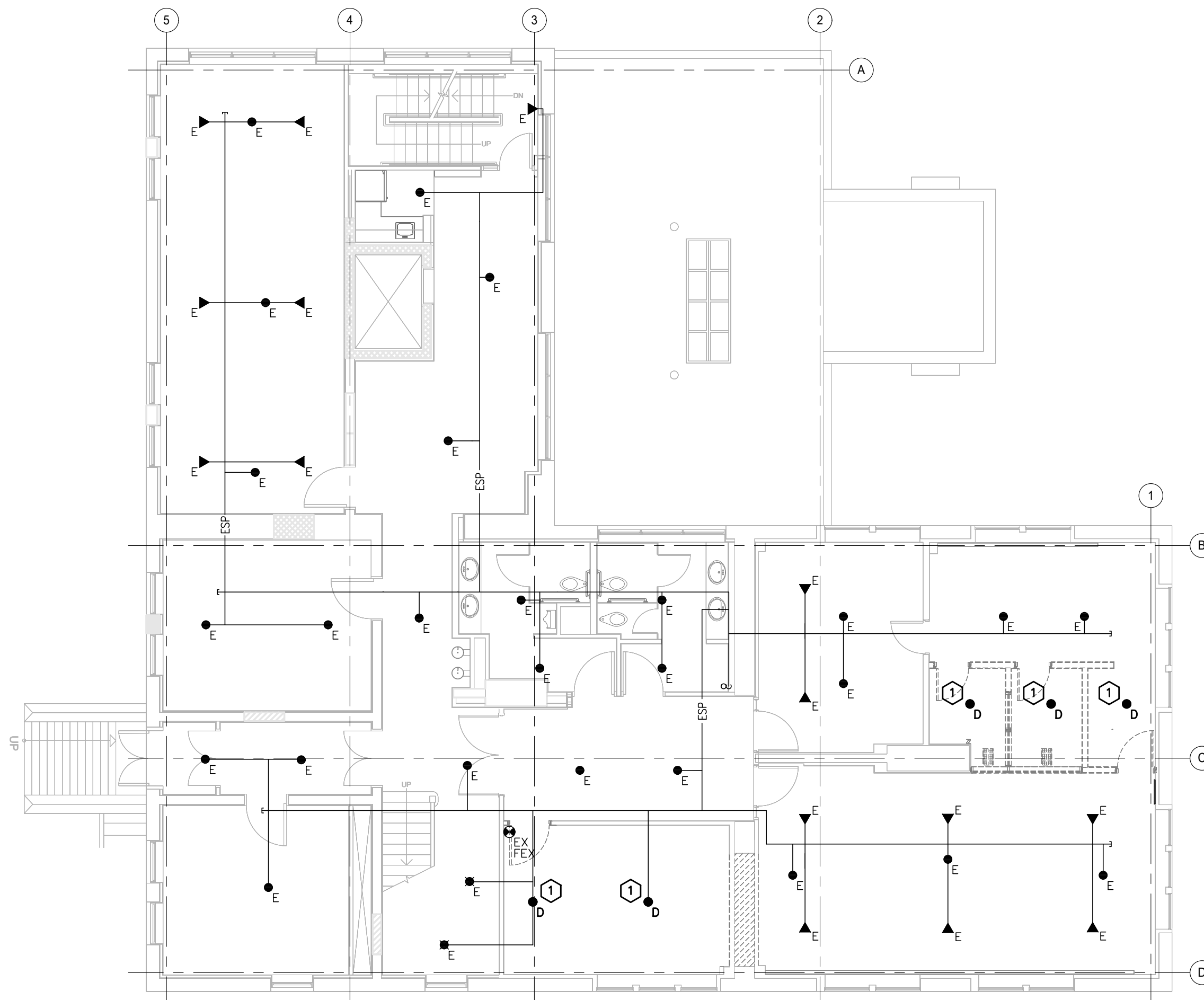
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SHEET

M-001

FIRE PROTECTION LEGEND	
SYMBOL	DESCRIPTION
● E	SPRINKLER HEAD - EXISTING
● D	SPRINKLER HEAD - DEMOLITION
● N	SPRINKLER HEAD - NEW
⊙	SPRINKLER HEAD - UPRIGHT c/w WIRE GUARD
✕	SPRINKLER HEAD - UPRIGHT
▶	SPRINKLER HEAD - SIDEWALL
▷	SPRINKLER HEAD - PENDENT SIDEWALL
☒	FIRE EXTINGUISHER

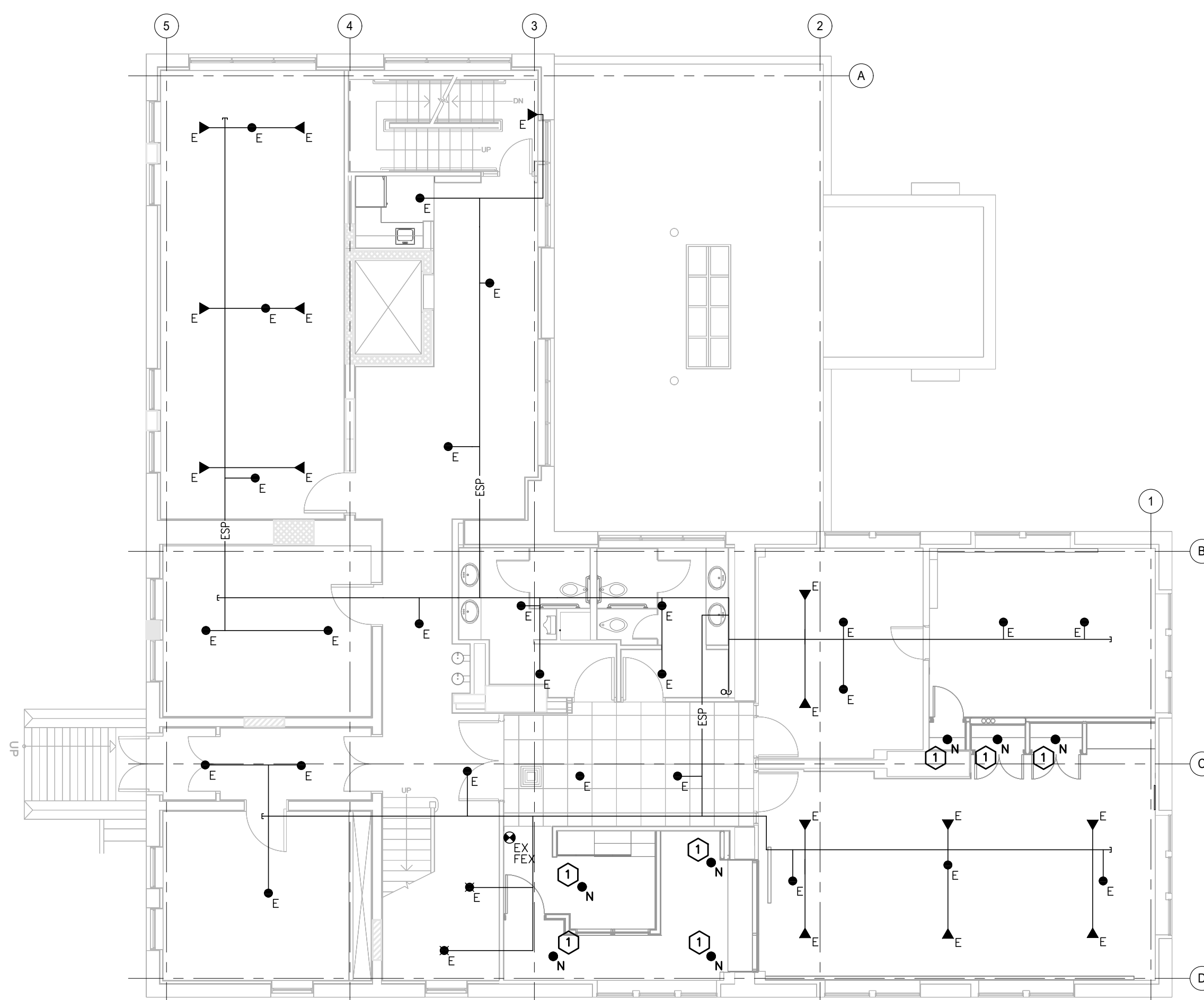
- GENERAL AUTOMATIC SPRINKLER NOTES**
- SPRINKLER CONTRACTOR IS RESPONSIBLE FOR DESIGN OF SPRINKLER SYSTEM IN STRICT ACCORDANCE WITH THE ONTARIO BUILDING CODE, ALL APPLICABLE NFPA STANDARDS, THE REQUIREMENTS OF THE OWNER'S INSURANCE UNDERWRITER'S ENGINEERING AUTHORITY [NAME OF INSURANCE Co.] AND AUTHORITIES HAVING JURISDICTION.
 - THE SPRINKLER LAYOUT SHOWN ON THESE DRAWINGS SERVES AS GENERAL SCOPE OF WORK. QUANTITY AND LAYOUT OF SPRINKLER HEADS IS NOT SHOWN ON THE DRAWINGS. REFER TO LEGEND FOR SPRINKLER HEAD TYPE. THE SPRINKLER CONTRACTOR SHALL MAKE ALL MODIFICATIONS TO THE DESIGN TO COMPLY WITH AUTHORITIES REQUIREMENTS AND TO THE ARCHITECT'S AND CONSULTANT'S APPROVAL. SPRINKLER HEADS MAY BE ADDED OR DELETED TO PROVIDE ADEQUATE COVERAGE AS DETERMINED BY THE SPRINKLER CONTRACTOR AT NO EXTRA OR CREDIT TO THE CONTRACT, PROVIDED ALL APPROVALS ARE MET IN FULL COORDINATION WITH MECHANICAL, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL ELEMENTS OF THE BUILDING.
 - FOR FINAL COORDINATION OF SPRINKLER LAYOUT REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.
 - SPRINKLER CONTRACTOR IS TO COORDINATE WITH ALL OTHER MECHANICAL, STRUCTURAL AND ELECTRICAL ELEMENTS AND MAKE ALL NECESSARY ADJUSTMENTS TO INSTALL SPRINKLER PIPING CLEAR OF ALL OBSTRUCTIONS AND MINIMUM 12" (305mm) ABOVE FINISHED CEILINGS. INSTALL SPRINKLER HEADS BELOW ALL OBSTRUCTIONS TO WATER DISCHARGE AND DETECTION OF FIRE AS REQUIRED BY APPLICABLE CODES AND STANDARDS.
 - CONTRACTOR SHALL SUBMIT PLANS TO THE OWNER'S INSURANCE UNDERWRITER'S ENGINEERING AUTHORITY [NAME OF INSURANCE Co.] AND THE CITY FOR APPROVAL IN ACCORDANCE WITH THEIR SPECIFIC REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL APPROVALS ARE RECEIVED FROM SUCH AUTHORITIES.
 - SPRINKLER CONTRACTOR IS RESPONSIBLE FOR REDESIGN AND ANY OTHER REQUIRED ADJUSTMENTS TO EXISTING SPRINKLER SYSTEM (INCLUDING HYDRAULIC CALCULATIONS) IN STRICT ACCORDANCE WITH ALL APPLICABLE NFPA STANDARDS, INCLUDING NFPA-13, NFPA-20, NFPA-24 AND REQUIREMENTS OF THE OWNER'S INSURANCE UNDERWRITER'S ENGINEERING AUTHORITY [NAME OF INSURANCE Co.] AND AUTHORITIES HAVING JURISDICTION.
 - CONTRACTOR SHALL PAY ALL FEES, CHARGES, AND COSTS REQUIRED FOR REVIEWS, INSPECTIONS, TESTS OR COMMENTS IN REGARD TO THIS PROJECT.



1 FIRE PROTECTION DEMOLITION
M100 1:50

DEMOLITION NOTES:

1 DISCONNECT AND REMOVE EXISTING SPRINKLER HEADS TO SUIT NEW CONSTRUCTION.



2 FIRE PROTECTION NEW
M100 1:100

NEW NOTES:

1 PROVIDE NEW SEMI RECESSED SPRINKLER HEADS AS SHOWN, COVERAGE SHALL MEET NFPA 13 REQUIREMENTS. COORDINATE WITH ALL OTHER TRADES. INSTALLATION OF NEW SPRINKLER HEADS TO BE COORDINATED WITH EXISTING DUCTWORK AND NEW CONSTRUCTION.

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KEY PLAN

#	ISSUE	DATE
01	ISSUED FOR 66% REVIEW	10/16/2020
02	ISSUED FOR 99% REVIEW	12/02/2020
03	ISSUED FOR TENDER	12/21/2020

PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE
DEMOLITION & NEW FIRE
PROTECTION PLANS

LEVEL 2

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M-100

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CENTRAL EXPERIMENTAL FARM
 Building 59
 OTTAWA, ON

SHEET TITLE
 DEMOLITION & NEW HVAC
 PLANS

LEVEL 2

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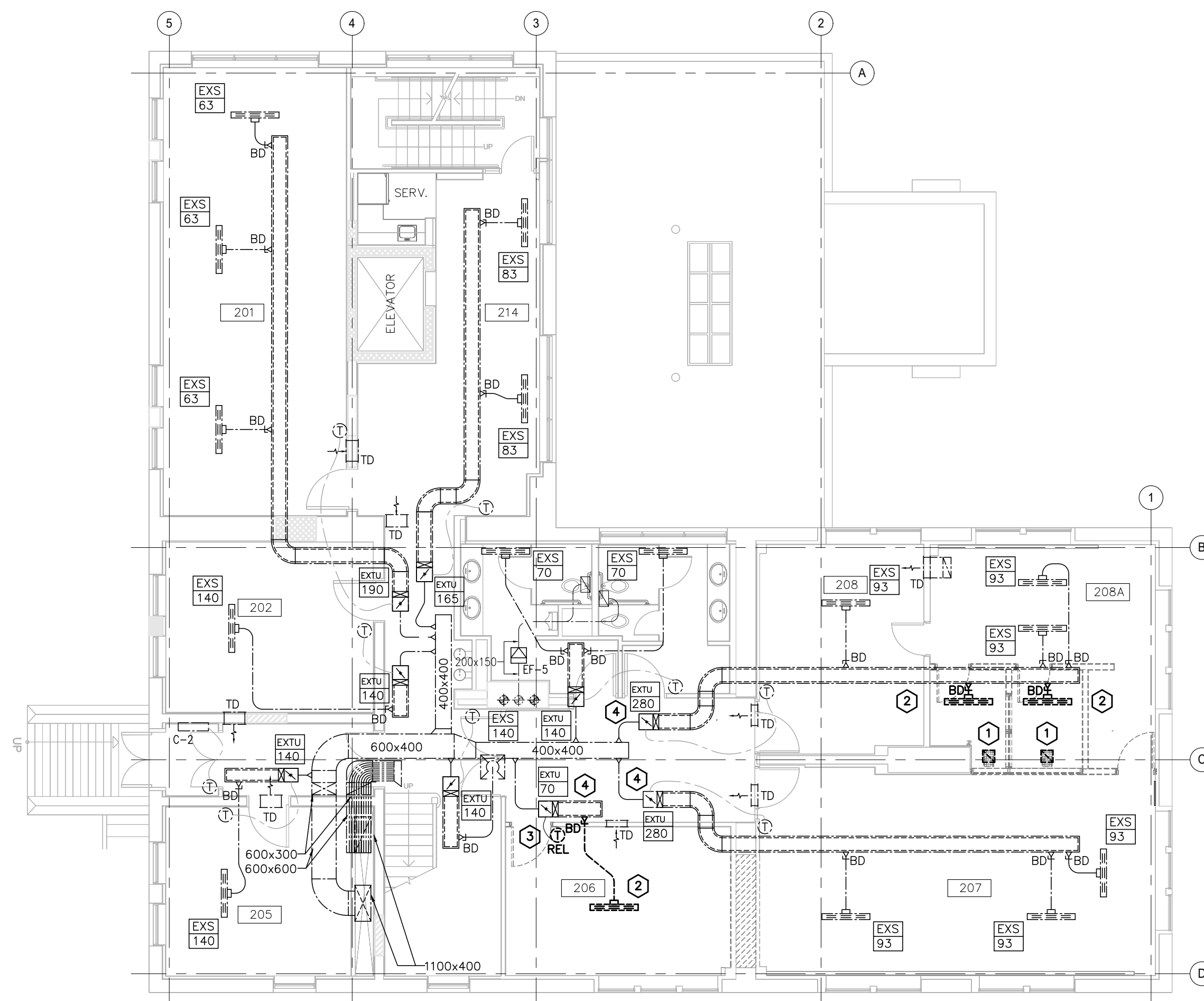
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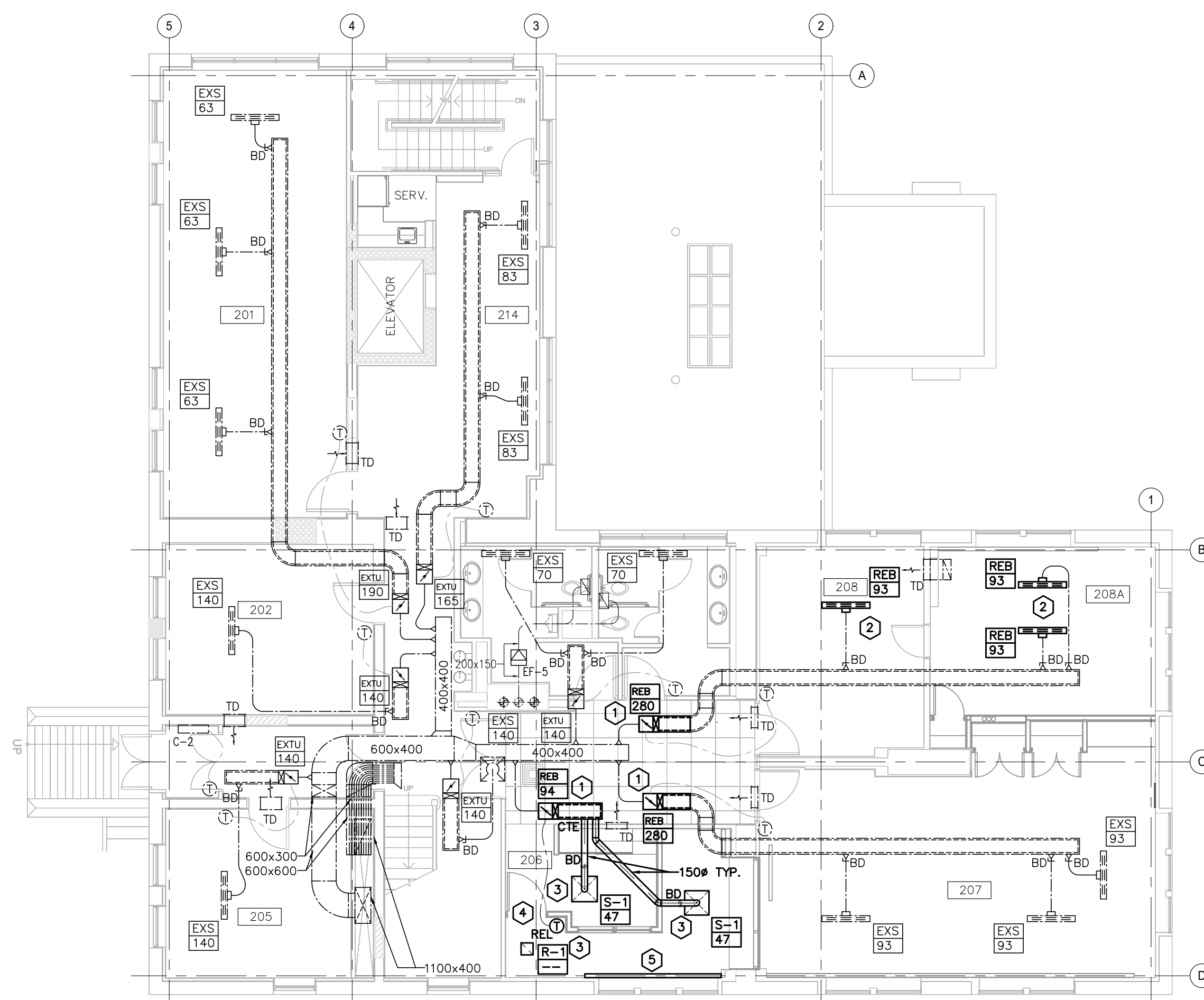
M-200



1 HVAC DEMOLITION
 M200 1:50

- DEMOLITION NOTES:**
- DISCONNECT & REMOVE RETURN GRILLE & DUCTWORK.
 - DISCONNECT & REMOVE SUPPLY DIFFUSER & DUCTWORK. CAP DUCTWORK AT MAINS. PROVIDE MEASUREMENT OF AIRFLOW & SUBMIT TO CONSULTANT PRIOR TO REMOVAL.
 - RELOCATE THERMOSTAT TO SUIT NEW CONSTRUCTION.
 - CONTRACTOR TO TAKE PRE-CONSTRUCTION AIR FLOW READINGS FROM EXISTING TERMINAL UNITS AND DIFFUSERS AS SHOWN.

- AIR BALANCING NOTES:**
- CONTRACTOR TO TAKE PRE-CONSTRUCTION AIR FLOW MEASUREMENTS FROM ALL DIFFUSERS AND TERMINAL UNITS SHOWN WITHIN THE AREA OF WORK. CONTRACTOR TO SUBMIT BALANCING REPORT TO ENGINEER PRIOR TO DEMOLITION.
 - CONTRACTOR TO INFORM ENGINEER PRIOR TO CONFUSION IF NEW AIR FLOW VALUES CANNOT BE ACHIEVED.

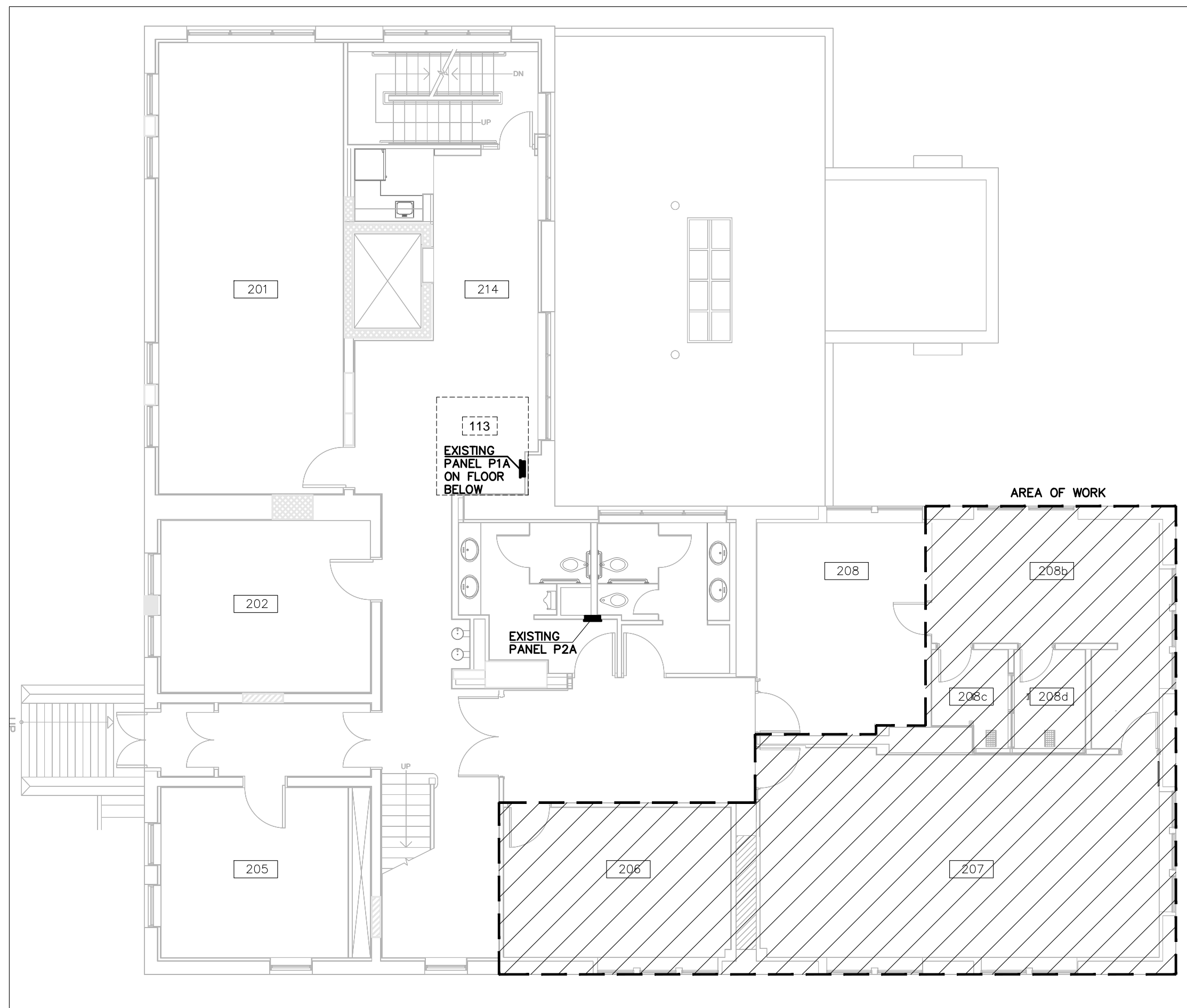


2 HVAC NEW
 M200 1:100

- NEW NOTES:**
- REBALANCE EXISTING TERMINAL UNITS TO MATCH INDICATED VALUES.
 - REBALANCE EXISTING DIFFUSERS TO MATCH INDICATED VALUES.
 - PROVIDE NEW DUCTWORK, DIFFUSERS AND GRILLES AS SHOWN IN BOLD. BALANCE TO INDICATED VALUES.
 - RELOCATE THERMOSTAT TO SUIT NEW LAYOUT. PROVIDE WIRING & ACCESSORIES AS NECESSARY FOR A COMPLETE & FUNCTIONING SYSTEM.
 - RELOCATE EXISTING RADIATOR TO SUIT NEW RAMP. EXTEND EXISTING HEATING PIPING TO NEW CONNECTIONS. SALVAGE AND REINSTALL ALL VALVES AND CONTROL WIRING.



1 SITE PLAN
M000 N.T.S.



2 BUILDING 59 - AREA OF WORK (LEVEL 2)
M000 1:100

ELECTRICAL SPECIFICATIONS

- GENERAL CONDITIONS
 - OBTAIN AND PAY FOR PERMITS REQUIRED BY ELECTRICAL SAFETY AUTHORITY AND LOCAL INSPECTION AUTHORITIES FOR THIS WORK. PRESENT FINAL CERTIFICATES TO OWNER.
 - CARRY OUT ALL WORK IN ACCORDANCE WITH CEC (CANADIAN ELECTRICAL CODE) REGULATIONS AND IESA REQUIREMENTS.
 - ALL EQUIPMENT SHALL BE NEW AND CSA APPROVED UNLESS OTHERWISE NOTED.
- SCOPE OF WORK
 - COMPLY WITH ALL CONDITIONS OF TENDER DOCUMENTS ISSUED FOR THIS PROJECT.
 - THE REMOVAL OR RELOCATION OF EXISTING, AND THE SUPPLY AND INSTALLATION OF NEW EQUIPMENT AS SHOWN ON THE DRAWINGS AND AS NOTED, THE MATERIALS REMOVED AND NOT REUSED, SHALL BECOME OWNERS PROPERTY AND SHALL BE REMOVED FROM THE SITE PRIOR TO COMPLETION OF WORK AS DIRECTED BY OWNER.
 - GENERAL
 - COMPLY WITH GENERAL CONDITIONS.
 - SUBMIT ONE (1) DIGITAL COPY OF SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS, AND BATTERY UNITS; DISCONNECT SWITCHES, STARTERS, NEW PANELS, ETC TO OWNER FOR REVIEW.
 - SUBMIT MAINTENANCE AND INSTRUCTION MANUALS, THIS PROJECT ALLOWS FOR 2 REVISIONS, PRELIMINARY SET AND THEN A FINAL SET.
 - ON COMPLETION OF PROJECT AND BEFORE FINAL PAYMENT, SUBMIT TWO (2) DWG, PDF'S AND HARD COPY OF AS-BUILT DRAWINGS WITH ALL CHANGES AND BURIED SERVICES EXACT LOCATIONS NOTED THEREON.
 - GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER, PROVIDE WRITTEN GUARANTEE.
 - PROVIDE LAMACOID LABELS (3-PLY) WHITE LETTERED ON BLACK BACKGROUND - 1/4" HIGH LETTERING ON ALL ELECTRICAL EQUIPMENT SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT.
 - THOROUGHLY CLEAN ALL ELECTRICAL WORK DURING CONSTRUCTION AND ON COMPLETION OF CONTRACT.
 - CONFER WITH ALL TRADES AND ARRANGE EQUIPMENT IN PROPER RELATION WITH OTHERS AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISHES.
 - REFER TO ARCHITECTURAL SPECIFICATIONS AND DRAWINGS WHICH ARE PART OF THIS WORK.
 - OWNER RESERVES RIGHT TO TRIAL AND/OR TEMPORARY USAGE PRIOR TO ACCEPTING INSTALLATION.
 - PROVIDE ALL MATERIALS, EQUIPMENT, ACCESSORIES, CONSUMABLES, LABOR, SUPERVISION, TOOLS, SERVICES, ETC. AS REQUIRED FOR COMPLETE AND FULLY FUNCTIONAL SYSTEMS AS DESCRIBED IN THE CONTRACT DOCUMENTS.
 - PRIOR TO TENDERING, EXAMINE THE SITE, ALL DRAWINGS AND SPECIFICATIONS AND REPORT ALL/ANY CONFLICTS, DISCREPANCIES TO THE OWNER FOR CLARIFICATION AND/OR CORRECTION.
 - COORDINATE AND SCHEDULE WORK WITH OWNER AND OTHER TRADES TO MINIMIZE CONFLICTS, DELAYS, AND DISRUPTION OF EXISTING SERVICES AND OPERATIONS.
- DEFINITIONS: FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATION AND ON ASSOCIATED DRAWINGS.
 - "CONCEALED" - HIDDEN FROM NORMAL SIGHT IN FURRED - SPACES, SHAFTS, CEILING SPACES, WALLS, UNDERFLOOR, AND PARTITIONS
 - "EXPOSED" - ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
 - "PROVIDE" - (AND ALL TENSES OF "PROVIDE") SUPPLY AND INSTALL, WIRE AND CONNECT COMPLETE.
 - "INSTALL" - (AND ALL TENSES OF "INSTALL")-INSTALL, WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
 - "SUPPLY" - SUPPLY ONLY.
 - "OR APPROVED EQUAL" - MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY OWNER.
 - "AS INDICATED" - AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
 - "OWNER" - BUILDING OWNER AS DEFINED IN THE CONTRACT OR THE DEPARTMENTAL REPRESENTATIVE.
 - "SOFT COPY" - PDF FORMAT
 - "AUTOCAD" - DWG FORMAT
- LIABILITY
 - THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS/HER WORK AND ANY DAMAGE OR EXTRA COSTS CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT HIS WORK. CARRY ALL NECESSARY INSURANCE COVERAGE.
- CERTIFICATES, FEES, ETC.
 - GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT. AT THE OWNER'S REQUEST, FURNISH ANY CERTIFICATES AS EVIDENCE
 - THAT THE WORK INSTALLED CONFORMS TO THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.
- CEILING TILE REMOVAL / REPLACEMENT
 - EACH RESPECTIVE SUB-TRADE OR PRIME ELECTRICAL CONTRACTOR AS THE CASE MAY BE SHALL BE RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF ANY CEILING TILES TO SUIT WORK WITHIN THE CEILING SPACE. ANY DAMAGED TILES SHALL BE REPLACED AT THE COST TO THE RESPECTIVE SUB-TRADE OR PRIME ELECTRICAL CONTRACTOR AND SHALL BE HELD BACK ON THE PROGRESS DRAW.
- HOURS OF WORK
 - ANY AUDIBLE TESTING, CORE DRILLING OR ANY OTHER NOISY WORK MUST BE PERFORMED "AFTER HOURS". MAKE ARRANGEMENTS WITH BUILDING PERSONNEL TO CONFIRM TIMES FOR SUCH WORK.
 - REFER TO GENERAL CONDITIONS, ARCHITECTURAL SPECIFICATIONS, AND MECHANICAL PHASING PLANS FOR PHASING AND SCHEDULING OF WORK.
- SERVICE PENETRATIONS
 - FIRE STOP AND SMOKE SEALS: MATERIALS SHALL BE ULC LISTED COMPONENTS SUITABLE FOR FIRE RESISTANCE RATINGS.
 - ALL OPENINGS IN FIRE SEPARATIONS FOR SERVICE PENETRATIONS SHALL BE PROTECTED WITH ULC LISTED "SERVICE PENETRATIONS FIRESTOP SYSTEMS"
- ACCESS DOORS
 - MINIMUM 12 GA. PRIME COAT PAINTED, HEAVY DUTY FULLY CONCEALED FRAME AND HINGES, POSITIVE LOCKING DEVICE.
 - ACCESS DOORS SHALL BE AS RECOMMENDED BY MANUFACTURER FOR PARTICULAR INSTALLATION.
 - SUPPLY ACCESS DOORS FOR ACCESS TO EQUIPMENT REQUIRING SERVICE, LUBRICATION OR ADJUSTMENT AND ALL CONCEALED VALVES, CLEANOUTS, TRAP PRIMERS, FIRE DAMPERS, CONTROL AND VOLUME DAMPERS, AND OTHER SUCH EQUIPMENT.
 - TURN OVER ACCESS DOORS TO THE APPROPRIATE GENERAL TRADE FOR INSTALLATION.
 - INCLUDE COST FOR GENERAL TRADES TO SUPPLY AND INSTALL ACCESS PANELS IN GYPSUM CEILING OR WALLS.

ELECTRICAL SPECIFICATIONS

- GROUNDING
 - INSTALL COMPLETE PERMANENT, CONTINUOUS, BONDING SYSTEM AND CIRCUIT GROUNDING SYSTEM CONFORMING TO REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION AND OESC.
- WIRES AND CABLES
 - ALL WIRING SHALL BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF-STICKING PERMACODE WIRE MARKERS. ALL JUNCTION BOXES IN CEILING SPACES SHALL BE LABELED WITH PERMANENT MARKER AS TO CIRCUITS CONTAINED THEREIN.
 - ALL SURFACE MOUNTED OR SUSPENDED CABLES TO BE SECURELY SUPPORTED BY STAPLES, STRAPS, HANGERS OR APPROVED DEVICES ATTACHED TO BUILDING STRUCTURE AT INTERVALS NOT EXCEEDING OESC REQUIREMENTS.
 - GENERAL WIRING INSIDE BUILDING: CSA APPROVED, SOFT COPPER, 600VOLT, T90 (90°C) FOR #10 AWG AND SMALLER; 600VOLT R90XL (90°C) OR T90 (90°C) FOR #8 AWG AND LARGER. RACEWAY SIZE SHALL BE BASED ON USE OF TWH/RW90XL INSULATION.
 - MINIMUM GAUGE: #12 AWG, UNLESS SPECIFICALLY NOTED OTHERWISE. CONDUCTORS #10 AWG AND SMALLER TO BE SOLID AND/OR STRANDED CONDUCTORS #8 AWG AND LARGER TO BE STRANDED. WHERE DISTANCE FROM PANEL TO FIRST OUTLET ON 15AMP RATED CIRCUIT EXCEEDS 70 FEET (21 METERS) USE #10 AWG TO FEED FIRST OUTLET.
 - ALL WIRING AND CABLES TO BE COLOUR CODED FOR PHASE AND NEUTRAL IDENTIFICATION AND IN ACCORDANCE WITH OESC.
 - SUPPLY, INSTALL, WIRE AND CONNECT ALL EQUIPMENT SHOWN, SPECIFIED OR MENTIONED.
 - WIRE AND CONNECT MOTORS, SUPPLIED BY OTHERS, AS INDICATED. H. CONTRACTOR TO CONFIRM CABLE AND CORD LENGTHS.
 - EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE, EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.
 - ALL CONDUCTORS: COPPER WITH TWH OR R-90 INSULATION, MINIMUM #12AWG, UNLESS OTHERWISE NOTED.
 - WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILING UNLESS OTHERWISE APPROVED.
- WIRING DEVICES
 - SWITCHES: PUSH-IN CONNECTIONS ARE NOT ACCEPTABLE, SCREW TERMINALS SHALL BE USED, CSA APPROVED, WHITE SPECIFICATION GRADE, 120VOLT AC, TO MATCH EXISTING.
 - RECEPTACLES OF ONE MANUFACTURER THROUGHOUT PROJECT.
 - RECEPTACLES: PUSH-IN CONNECTIONS ARE NOT ACCEPTABLE, SCREW TERMINALS SHALL BE USED, CSA APPROVED, WHITE SPECIFICATION GRADE, 120VOLT AC, 3-WIRE, GROUNDING, STRAIGHT BLADE, DUPLEX AS FOLLOWS: 15AMP HUBBELL HBL522
 - RECEPTACLES FED FROM STANDBY POWER SHALL HAVE RED COLOURED FACE.
 - ALL COVERPLATES OR WIRING DEVICES AND ALL OTHER ITEMS ARE TO BE MOUNTED STRAIGHT (I.E. WITH EDGES VERTICAL AND HORIZONTAL).
 - COVERPLATES: STAINLESS STEEL.
 - MOUNT ALL DEVICES AT HEIGHTS SHOWN ON DRAWINGS. COMPLY WITH NBC (NATIONAL BUILDING CODE), BARRIER FREE DESIGN.
 - IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE OWNER.
 - PROVIDE ALL CUTTING AND PATCHING REQUIRED TO CARRY OUT WORK UNDER THIS CONTRACT.
- JUNCTION BOXES & PULL BOXES
 - JUNCTION AND PULL BOXES: STEEL METAL ENCLOSURE, WELDED CORNERS AND FORMED HINGED COVER SUITABLE FOR LOCKING IN CLOSED POSITION.
 - COVERS WITH 1" (25mm) MINIMUM EXTENSION ALL AROUND, FOR FLUSH-MOUNTED PULL AND JUNCTION BOXES.
 - FIXTURE BOXES: ELECTRO-GALVANIZED STEEL 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
 - SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.
- OUTLET BOXES
 - BOXES FOR INDOOR USE: CODE GAUGE ELECTRO-GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERALOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.
 - FIXTURE BOXES: ELECTRO-GALVANIZED STEEL 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
- PANELBOARDS AND BREAKERS
 - USE EXISTING PANELBOARD(S) TO CONNECT NEW CIRCUITS. PROVIDE NEW BREAKERS AS REQUIRED. COORDINATE WITH OWNER.
 - BRANCH BREAKERS: MINIMUM 22,000A RMS SYMMETRICAL INTERRUPTING @ 240VAC, UNLESS OTHERWISE NOTED. WHEN BREAKER IS TRIPED AUTOMATICALLY, HANDLE TO ASSUME POSITION BETWEEN ON AND OFF. MINIMUM INTERRUPTING RATING SHALL NOT BE LESS THAN SWITCHBOARD OR PANEL RATING WHEREIN BREAKERS ARE INSTALLED.

FIXTURE SCHEDULE

- CONTRACTOR AND FIXTURE SUPPLIER ARE RESPONSIBLE TO PROVIDE ALL PLASTER AND FINISHING FRAMES, MOUNTING HARDWARE, AND ACCESSORIES TO SUIT ARCHITECTURAL CEILING SCHEDULE.
- LIGHT EMITTING DIODES (LED) WITH CURRENT TECHNOLOGY, MINIMUM COLOUR TEMPERATURE OF 3000K TO 4000K, A MINIMUM CRI OF 80, A RATED LIFE OF 50,000 TO 70,000 HOURS BASED ON 70% LUMEN DEPRECIATION LEVEL AND HEAT SINKS TO REMOVE HEAT FROM THE BOTTOM OF THE SEMICONDUCTORS.
- ALL LIGHT FIXTURE SHALL BE DLC OR ENERGY STAR RATED FOR OWNER'S REBATE ELIGIBILITY.
- MANUFACTURER TO NOTE ON SHOP DRAWINGS THAT DRIVERS, DIMMING SWITCHES AND PHOTOCONTROLLERS ARE ALL COMPATIBLE.
- ALL FIXTURES SHALL BE C/W 120V DRIVER AND 0-10V DIMMING CAPABILITY.
- CONTRACTOR TO CONFIRM LENGTH OF CABLE BASED ON MOUNTING HEIGHT BASED ON ARCHITECTURAL CEILING.
- CONTRACTOR TO COORDINATE EACH FIXTURE'S MOUNTING LOCATION WITH ARCHITECTURAL AND MECHANICAL PRIOR TO ROUGH-IN.

TYPE	DESCRIPTION	LAMPS	MTG HT
A	4" DIAMETER LED DOWNLIGHT, SUITABLE FOR INSTALLATION IN DRYWALL CEILING, 120V DIMMING DRIVER (0-10V). MODEL WF6-LED-30K40K50K-MVOLT-90CRI-MW OR EQUIVALENT	1190 LUMEN 4000K	RECESSED
B	1X4 LED TROFFER (SPEC GRADE), SHALLOW HOUSING 3", WHITE ENAMEL FINISH, OPTICAL GRADE ACRYLIC DIFFUSER ANGULAR PROFILE WITH ILLUMINATED SURFACE >70% OF FIXTURE FACE SUITABLE FOR INSTALLATION IN DRY WALL CEILING, 120V DIMMING DRIVER (0-10V). MODEL METALUX 14EN-LD2-33-UNV-L840-COI-U OR OR EQUIVALENT	3400 LUMEN 4000K	RECESSED

ELECTRICAL DRAWING LIST

E000	ELECTRICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS
E100	DEMOLITION AND NEW LIGHTING PLANS
E200	DEMOLITION AND NEW POWER AND SYSTEMS PLANS

LEGEND

SYMBOL	DESCRIPTION	MTG HT	CS
☐	LIGHT FIXTURE		AS NOTED
☐	LIGHT FIXTURE (DOWNLIGHT)		AS NOTED
☐	EMERGENCY LIGHTING HEADS		2286 (90")
⚡	15A, 125V SINGLE POLE SWITCH, \$ ₂ (TWO POLE), \$ ₃ (3-WAY), \$ ₄ (4-WAY), \$ ₅ (KEY OPERATED), \$ ₆ (DIMMER), \$ ₇ (C/W PILOT LIGHT), \$ ₈ (LOW VOLTAGE), \$ ₉ (TIMER), \$ ₀ (OCCUPANCY SENSOR SWITCH) \$ (SINGLE GANG), \$ (DOUBLE GANG), \$ (TRIPLE GANG), \$ (FOUR GANG), \$ (FIVE GANG), \$ (SIX GANG)		1100 (43")
☐	ELECTRICAL PANEL		1981 (78") TO TOP
☐	15AMP (20AMP WHERE NOTED) 125VOLT U-GROUND DUPLEX REC.		457 (18")
☐	15AMP (20AMP WHERE NOTED) 125VOLT U-GROUND DUPLEX RECEPTACLE ON EMERGENCY POWER		457 (18")
☐	15AMP (20AMP WHERE NOTED) 125VOLT U-GROUND SPLIT RECEPTACLE		457 (18")
☐	15AMP (20AMP WHERE NOTED) 125VOLT U-GROUND DOUBLE DUPLEX RECEPTACLE		457 (18")
☐	SURFACE RACEWAY		
☐	SPECIAL RECEPTACLE (REFER TO DRAWINGS)		457 (18")
☐	DATA OUTLET C/W 1" (27mm) CONDUIT TO ACCESSIBLE CEILING SPACE		457 (18")
☐	VOICE OUTLET C/W 1" (27mm) CONDUIT TO ACCESSIBLE CEILING SPACE		457 (18")
☐	VOICE/DATA OUTLET C/W 1" (27mm) CONDUIT TO ACCESSIBLE CEILING SPACE		457 (18")
OC	OVER COUNTER		
GFI	GROUND FAULT INTERRUPTER		
N.I.C	NOT IN CONTRACT		
☐	DISCONNECT SWITCH		
●	DIRECT CONNECTION		
☐	FIRE ALARM HORN WITH STROBE		2286 (90")
☐	MOTOR CONNECTION (SINGLE OR THREE PHASE)		
☐	DISCONNECT SWITCH		
☐	SINGLE PUSHBUTTON STATION		1100 (43")
MD	MOTION DETECTOR		AS NOTED
BS	ELECTRIC DOOR STRIKE		1200 (47")
OC	OVER COUNTER		
CL	CEILING		
FR	FRIDGE		

GENERAL NOTES

- DO NOT SCALE DRAWINGS FOR INSTALLATION PURPOSES. OBTAIN ALL DIMENSIONS FROM ARCHITECTURAL PLANS, MANUFACTURER'S SHOP DRAWINGS, AND ON SITE INSPECTIONS.
- PRIOR TO INSTALLATION OF BOXES IN WALLS, VERIFY THAT NO INTERFERENCES EXIST. CHECK ARCHITECTURAL PLANS AND ELEVATIONS.
- MECHANICAL AND ELECTRICAL TRADES SHALL WORK IN CONJUNCTION WITH ONE ANOTHER SO AS TO AVOID INTERFERENCES BETWEEN PIPING, DUCTWORK, CONDUIT, LIGHTING FIXTURES, ETC.
- WORK IN CONJUNCTION WITH ARCHITECTURAL REFLECTED CEILING PLAN WHEN LOCATING LIGHT FIXTURES.
- ALL EXISTING DEAD WIRING AND CONDUIT IN RENOVATED AREAS SHALL BE REMOVED IN ITS ENTIRETY WHERE ACCESSIBLE. WHERE NOT ACCESSIBLE, WIRING ONLY SHALL BE REMOVED AND CONDUIT SHALL REMAIN.
- REWORK ALL EXISTING WIRING, CONDUIT, ETC. REMAINING IN USE AND FALLING WITHIN EXISTING WALLS WHICH ARE BEING REMOVED, TO NEAREST EXISTING WALLS REMAINING. ALL REWORKED WIRING SHALL BE CONCEALED.
- DISCONNECT AND REMOVE ANY ELECTRICAL EQUIPMENT IN CEILING SPACE OR WALLS THAT CAUSES INTERFERENCES DURING RENOVATION WORK. ALL EQUIPMENT SHALL BE REPLACED AND RECONNECTED UPON COMPLETION OF RENOVATION WORK.
- ELECTRICAL EQUIPMENT BEING REMOVED AND NOT BEING REUSED WILL BE STORED ON SITE AND REMAIN THE PROPERTY OF THE OWNER. ANY SUCH EQUIPMENT THE OWNER DOES NOT WISH TO RETAIN WILL BE REMOVED FROM SITE AND DISPOSED OF BY THIS TRADE.
- REVIEW ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS AND DRAWING ON SITE INSPECTIONS TO DETERMINE FULL EXTENT OF PROJECT PRIOR TO SUBMITTING BID.

DEMOLITION NOTES

- ELECTRICAL SYSTEMS SHOWN ON DEMOLITION PLANS ARE BASED ON INFORMATION OBTAINED FROM ORIGINAL CONSTRUCTION CONTRACT/TENDER DOCUMENTS. THESE DRAWINGS ARE NOT BASED ON "AS-BUILT RECORDS" OR ON EXHAUSTIVE FIELD MEASUREMENT AND ARE PROVIDED TO ASSIST THE CONTRACTOR IN DETERMINING THE EXTENT OF WORK REQUIRED. THE CONTRACTOR SHALL MAKE ALLOWANCE IN THEIR TENDER PRICE FOR THE REMOVAL OF ADDITIONAL 10% OF REDUNDANT SERVICES AND THE PROTECTION OF EXISTING SERVICES THAT MUST REMAIN. RECORD THE LOCATION OF ALL EXISTING SERVICES THAT REMAIN ON AS-BUILT RECORD DRAWINGS.

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PROJECT NAME

CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE

ELECTRICAL DRAWING LIST, LEGEND, NOTES, SPECIFICATIONS & KEY PLANS

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PROJECT #: 20-105

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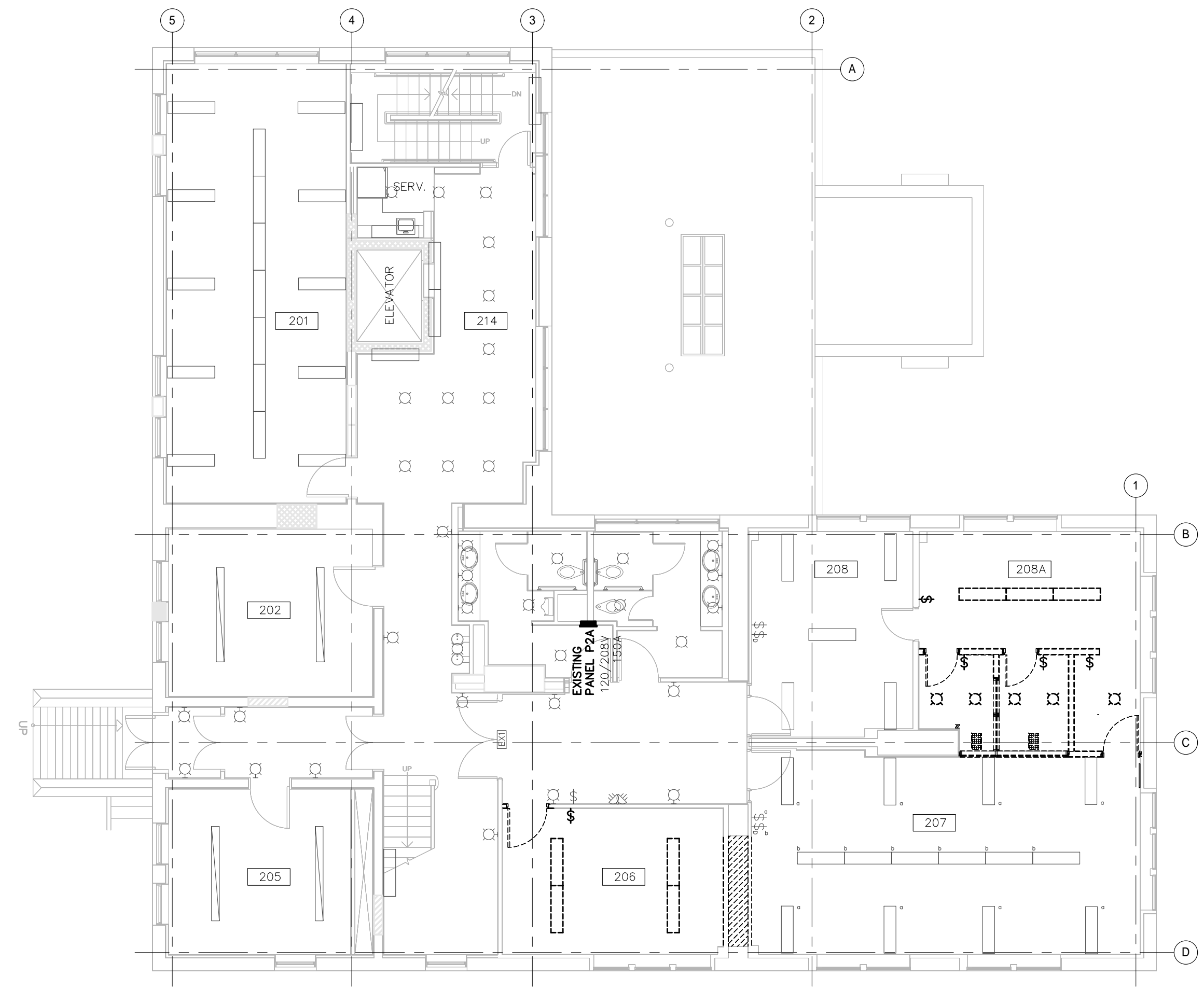
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SHEET

E-000

DEMOLITION NOTES:

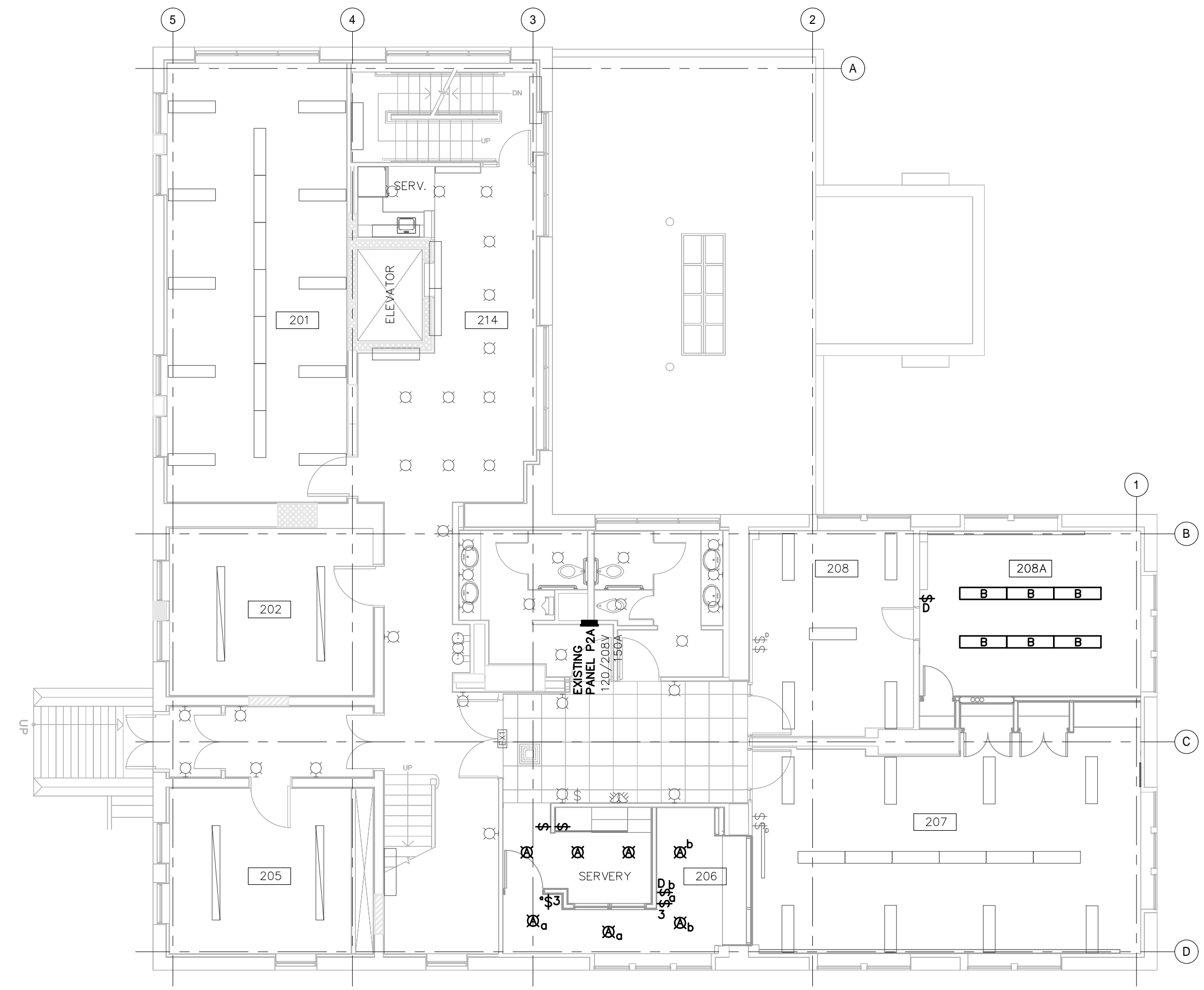
- DISCONNECT AND REMOVE LIGHT FIXTURES AND SWITCHES SHOWN IN BOLD DASHED LINES. REUSE EXISTING CIRCUITS UNDER NEW WORK. REMOVE ALL REDUNDANT WIRING.



1 LIGHTING DEMOLITION
E100 1:50

NEW NOTES:

- PROVIDE NEW FIXTURES AND SWITCHES SHOWN IN BOLD. CONNECT TO EXISTING CIRCUITS. REWORK WIRING AS NEEDED.



2 LIGHTING NEW
E100 1:100

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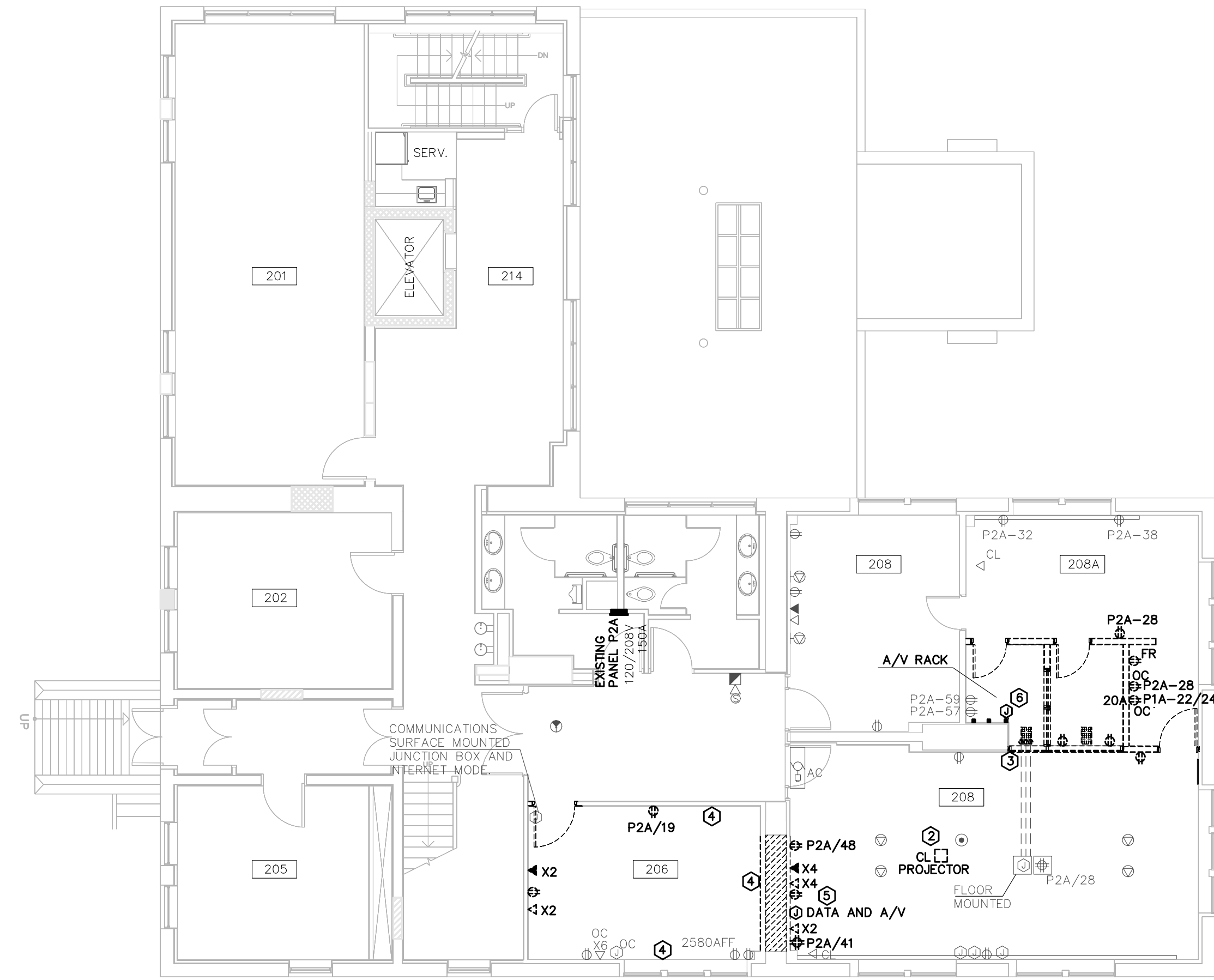
SHEET TITLE
LIGHTING DEMOLITION & NEW
LEVEL 2

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PROJECT #: 20-105
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E-100

- DEMOLITION NOTES:**
- DISCONNECT AND REMOVE EXISTING DEVICES SHOWN IN BOLD DASHED LINES. REUSE EXISTING CIRCUITS UNDER NEW WORK. REMOVE REDUNDANT WIRING AND RACEWAYS.
 - DISCONNECT EXISTING CEILING MOUNTED PROJECTOR. REMOVE ALL REDUNDANT WIRING AND RACEWAYS BACK TO PANEL.
 - REMOVE EXISTING CONDUIT STUBS. EXTEND TO NEW LOCATION UNDER NEW WORK.
 - REMOVE DATA CABLE AND SERVICE MOUNTED RACEWAY.
 - DISCONNECT AND REMOVE DATA AND A/V CABLES DROPS TO EXISTING TV.
 - DISCONNECT AND REMOVE EXISTING DATA CABLES JUNCTION BOX FOR RELOCATE UNDER NEW WORK.

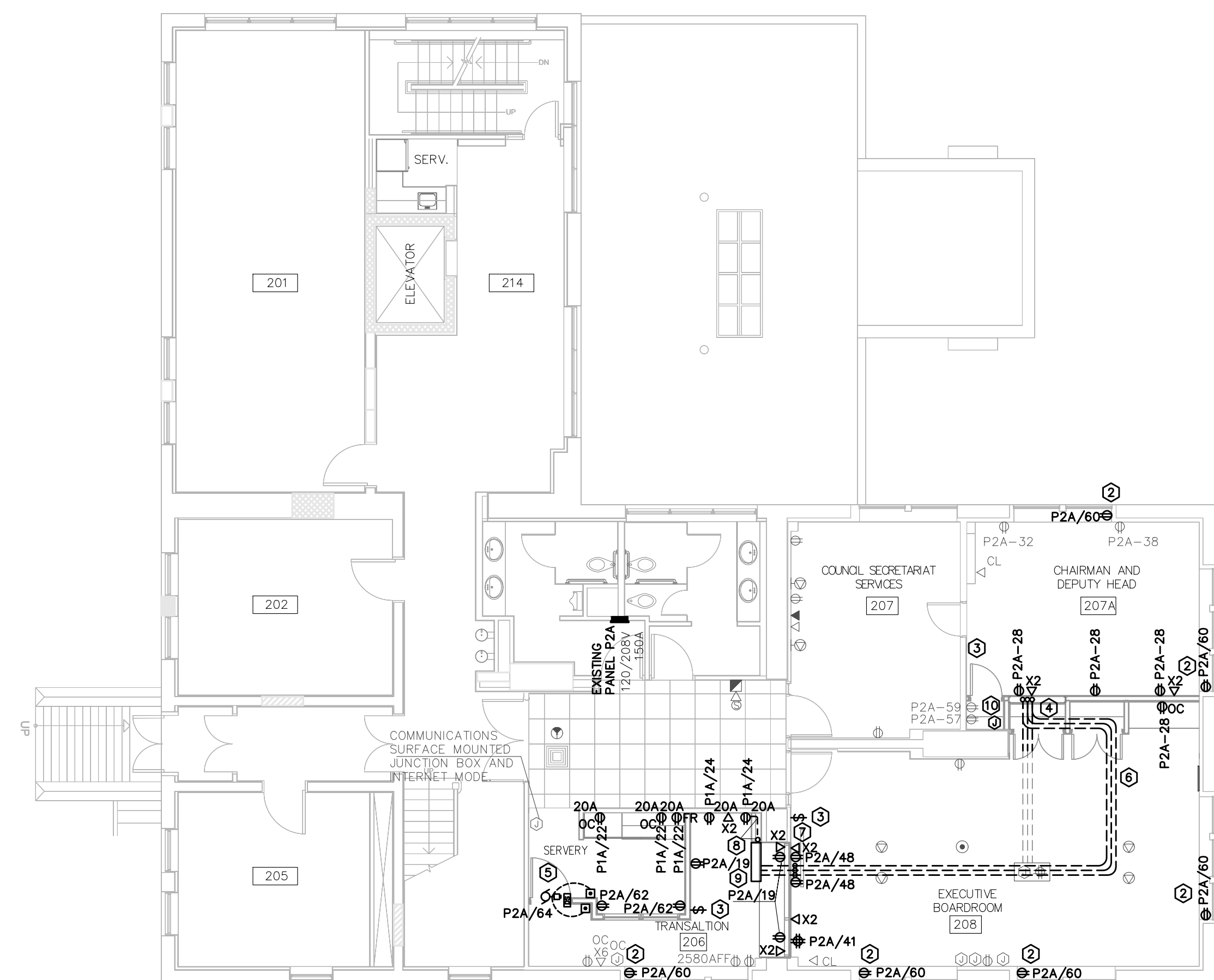


1 POWER & SYSTEMS DEMOLITION
E100 1:50

EXISTING PANEL- NEW SCHEDULE

P2A	150AMP 120/208V 3Ø 4W				RECESS MTD			
	NBLP	TYPE	WATTS	FOR				
UNKNOWN	1	15	1	2	15	1	UNKNOWN	
UNKNOWN	1	15	3	4	15	1	UNKNOWN	
UNKNOWN	1	15	5	6	15	1	UNKNOWN	
LADIES GFI RECEPTACLE	1	15	7	8	15	1	UNKNOWN	
UNKNOWN	1	15	9	10	15	1	UNKNOWN	
UNKNOWN	1	15	11	12	15	1	UNKNOWN	
UNKNOWN	1	15	13	14	15	1	UNKNOWN	
UNKNOWN	1	15	15	16	15	1	UNKNOWN	
UNKNOWN	1	15	17	18	15	1	UNKNOWN	
REC. TRANSLATION BOOTHS	1	15	19	20	15	1	UNKNOWN	
DISHWASHER	1	15	21	22	15	1	MICRO	
KIT PLUG	1	20	23	24	15	1	UNDER CAB LIGHTS	
KIT PLUG	1	25	25	26	15	1	UNKNOWN	
UNKNOWN	1	15	27	28	15	1	REC. DEPUTY CHAIR OFFICE 207A	
UNKNOWN	1	20	29	30	15	1	UNKNOWN	
UNKNOWN	1	15	31	32	15	1	UNKNOWN	
UNKNOWN	1	15	33	34	15	1	UNKNOWN	
UNKNOWN	1	15	35	36	15	1	UNKNOWN	
UNKNOWN	1	15	37	38	15	1	UNKNOWN	
QUAD REC. EXECUTIVE BOARD ROOM	1	15	39	40	15	1	UNKNOWN	
REC. EXECUTIVE BOARD ROOM	1	15	41	42	15	1	UNKNOWN	
UNKNOWN	1	15	43	44	15	2	UNKNOWN	
UNKNOWN	1	15	45	46				
UNKNOWN	1	15	47	48	15	1	REC. EXECUTIVE BOARD ROOM	
UNKNOWN	1	15	49	50	15	2	UNKNOWN	
UNKNOWN	1	15	51	52				
UNKNOWN	1	15	53	54	15	1	UNKNOWN	
UNKNOWN	1	15	55	56	30	2	SPLIT A/C (BOARDROOM)	
UNKNOWN	2	20	57	58				
UNKNOWN			59	60	15	1	REC. BLINDS (6)	600
UNKNOWN	1	20	61	62	15	1	REC. SERVERY (2)	400
UNKNOWN	1	20	63	64	15	1	DOOR OPERATOR (TRANSLATION)	500
UNKNOWN	1	15	65	66	1	1	SPAZZ	

* PROVIDE NEW BREAKER



2 POWER & SYSTEMS NEW
E100 1:100

- NEW NOTES:**
- PROVIDE NEW DEVICES AS SHOWN IN BOLD. COORDINATE EXACT LOCATIONS OF ALL ELECTRICAL RECEPTACLES, OUTLETS AND DATA CONNECTIONS WITH NEW LAYOUT.
 - PROVIDE POWER FOR AUTOMATIC BLINDS. EXACT MOUNTING LOCATION AND PLUG TYPE TO BE CONFIRMED DURING CONSTRUCTION.
 - PROVIDE NEW BLINDS CONTROL SWITCH.
 - EXTEND EXISTING CONDUITS BELOW SUB-FLOOR TO NEW LOCATION.
 - CONNECT NEW POWER DOOR OPERATOR AS INDICATED.
 - PROVIDE 3/4" CONDUITS ABOVE CEILING AS INDICATED. REFER TO ARCHITECTURAL ELEVATIONS AND SECTIONS FOR MORE DETAILS ON CONDUIT ROUTING.
 - RECEPTACLE AND DATA OUTLETS LOCATED BEHIND TV. REFER TO ARCHITECTURAL ELEVATION FOR EXACT MOUNTING HEIGHT.
 - PROVIDE 4" CONDUITS. REFER TO ARCHITECTURAL ELEVATIONS AND SECTIONS FOR MORE DETAILS ON CONDUIT ROUTING.
 - PROVIDE JUNCTION BOX BEHIND ARCHITECTURAL ACCESS PANEL.
 - RELOCATE EXISTING DATA CABLES JUNCTION BOX TO SUIT NEW ARCHITECTURAL LAYOUT.

SEAL

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KEY PLAN

#	ISSUE	DATE
01	ISSUED FOR 66% REVIEW	10/16/2020
02	ISSUED FOR 99% REVIEW	12/02/2020
03	ISSUED FOR TENDER	12/21/2020

PROJECT NAME
CENTRAL EXPERIMENTAL FARM
Building 59
OTTAWA, ON

SHEET TITLE
POWER & SYSTEMS
DEMOLITION & NEW
LEVEL 2

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PROJECT #: 20-105
DRAWN BY: AF/TP
CHECKED BY: SB

SHEET

D01) GENERAL

D01-1 GENERAL INFORMATION

1. THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE 2012 ONTARIO BUILDING CODE AS AMENDED JAN 01, 2020 & 2015 NATIONAL BUILDING CODE OF CANADA. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THIS AND ALL OTHER APPLICABLE CODES.
 - 1.1 STEEL STRUCTURE DESIGNED IN ACCORDANCE WITH CSA-S16-14
 - 1.2 WOOD STRUCTURE DESIGNED IN ACCORDANCE WITH CSA-086.14
2. CONTRACTOR IS TO VERIFY/COORDINATE ALL DIMENSIONS/PENETRATIONS WITH ARCHITECTURAL/MECHANICAL/ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT INCONSISTENCIES BEFORE PROCEEDING WITH WORK. ANY OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS ARE TO BE APPROVED BY STRUCTURAL ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO PROVIDE PRE-ENGINEERED SHORING AS REQUIRED TO ACCOMMODATE THE CONTRACTOR'S CONSTRUCTION ACTIVITIES AND TO PREVENT DAMAGE TO ANY ADJACENT PROPERTY. ALL CONSTRUCTION ACTIVITIES TO BE LIMITED TO THE LIMITS OF THE CONSTRUCTION SITE AND ALL DAMAGE TO EXISTING PROPERTIES MUST BE REINSTATED.
4. CONTRACTOR IS RESPONSIBLE FOR CO-ORDINATING & TIMING OF THE CONSTRUCTION WITH RESPECT TO THE VARIOUS TRADES.
5. PROPRIETARY SYSTEMS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. DO NOT SCALE THESE DRAWINGS.
7. DETAILS OF CONSTRUCTION ARE SHOWN BASED ON INFORMATION AVAILABLE AT THE TIME OF PREPARING DESIGN DRAWINGS. IF, DURING CONSTRUCTION, CONDITIONS ARE REVEALED THAT DIFFER FROM THE ASSUMED CONDITIONS, ADVISE THE CONSULTANT BEFORE PROCEEDING.
8. VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS ON SITE PRIOR TO FABRICATION.

D01-2 DEMOLITION

1. CONTRACTOR TO SCAN FOR ALL SERVICES AND CALL FOR LOCATES PRIOR TO DEMOLITION.
2. CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE DEMOLISHING EXISTING STRUCTURE AS TO NOT DAMAGE THOSE PORTIONS OF THE STRUCTURE THAT ARE TO REMAIN.
3. CONTRACTOR SHALL MAKE GOOD, TO THE SATISFACTION OF THE CONSULTANT, ANY DAMAGE THAT OCCURS DUE TO THE DEMOLITION PHASE.
4. ALL DEMOLISHED MATERIALS MUST BE DISPOSED OF OFF-SITE AT THE END OF EACH WORKING DAY.

D01-6 SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE CONSTRUCTION MANAGER. OBTAIN ARCHITECT'S & ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE FABRICATION.
2. EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE (PLUS OTHER DRAWINGS AS NOTED).
 - a) DRAWINGS FOR ANY TEMPORARY WORK.
 - b) DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTOR'S FORCES
 - c) STRUCTURAL STEEL/JOIST
 - d) STEEL TO STEEL CONNECTIONS.
 - e) FORMWORK
3. SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE CONTRACTOR BEFORE ISSUING TO THE ARCHITECT/ENGINEER. SHOP DRAWINGS NOT STAMPED BY THE CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NONCOMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SHOP DRAWINGS ARE REVIEWED FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT IMPLY APPROVAL OF THE DETAILED DESIGN OR QUANTITIES DESCRIBED IN THE SHOP DRAWINGS. THE RESPONSIBILITY FOR THE QUANTITIES AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS AS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.

D05) STEEL

D05-1 STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL COMPLY WITH CSA S16 UNLESS OTHERWISE NOTED.

ITEM	APPLICABLE SPECIFICATION (UNLESS OTHERWISE NOTED)
ROLLED SECTIONS	CSA G40 21 - 350W
HSS (TUBE) SECTIONS	CSA G40 21 - 350W (CLASS C)
CONNECTION BOLTS	ASTM A325 (BEARING TYPE)
ANCHOR BOLTS	ASTM A307 (UNLESS OTHERWISE NOTED IN BASEPLATE SCHEDULE)
BRACE FRAME/BEARING PLATES	CSA G40 21-300W

1. ALL STEEL WORK SHALL BE GIVEN ONE COAT OF APPROVED PRIMER.
2. FIELD AND SHOP CONNECTIONS SHALL BE WELDED OR HIGH TENSILE BOLTED (ASTM STANDARD A325).
3. WELDING SHALL CONFORM TO LATEST CSA SPECIFICATION W59 AND BE UNDERTAKEN BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA SPECIFICATION W47.1.
4. ALL EXPOSED WELDS SHALL BE CONTINUOUS AND BE GROUND SMOOTH.
5. STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED UNLESS APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.
6. WHERE STRUCTURAL STEEL MEMBERS SPECIFIED ON THE STRUCTURAL DRAWINGS ARE UNAVAILABLE TO THE CONTRACTOR, THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE MEMBERS HAVING ALL SECTION PROPERTIES EQUAL TO OR BETTER THAN THAT OF THE SPECIFIED MEMBERS AT NO ADDITIONAL COST. CONTACT ENGINEER FOR ACCEPTANCE OF ANY AND ALL SUBSTITUTIONS.
7. DESIGN DETAILS AND CONNECTIONS IN ACCORDANCE WITH REQUIREMENTS OF CSA S16 AND CAN/CSA S136 TO RESIST FORCES, MOMENTS, SHEARS AND ALLOW FOR MOVEMENTS INDICATED.

SHEAR CONNECTIONS:

- a. SELECT FRAMED BEAM SHEAR CONNECTIONS FROM AN INDUSTRY ACCEPTED PUBLICATION SUCH AS "HANDBOOK OF THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION" WHEN CONNECTION FOR SHEAR ONLY (STANDARD CONNECTION) IS REQUIRED.
- b. SELECT OR DESIGN CONNECTIONS TO SUPPORT REACTION FROM MAXIMUM UNIFORMLY DISTRIBUTED LOAD THAT CAN BE SAFELY SUPPORTED BY BEAM IN BENDING, PROVIDED NO POINT LOADS ACT ON BEAM, WHEN SHEARS ARE NOT INDICATED.

D01) GÉNÉRALITÉS

D01-1 RENSEIGNEMENTS GÉNÉRAUX

1. LES RENSEIGNEMENTS PRÉSENTÉS DANS CES DESSINS ONT FAIT L'OBJET DE DÉTAILS DE CONCEPTION ET D'ANALYSES CONFORMES AU CODE NATIONAL DU BÂTIMENT DU CANADA (ÉDITION DE 2015). ENTREPRENDRE LA CONSTRUCTION EN CONFORMITÉ AVEC LES PRÉSENTES DONNÉES AINSI QU'AVEC LES EXIGENCES DE TOUS LES AUTRES CODES PERTINENTS.
 - 1.1 STRUCTURE EN ACIER CONÇU SELON CSA-S16-14
 - 1.2 STRUCTURE EN BOIS CONÇU SELON CSA-086.14
2. L'ENTREPRENEUR SE DEVRA DE VÉRIFIER ET (OU) DE COORDONNER TOUTES LES DIMENSIONS ET (OU) TOUTES LES PÉNÉTRATIONS ET CE, EN EXAMINANT ET EN ÉTUDIANT LES DESSINS D'ARCHITECTURE, DE MÉCANIQUE ET D'ÉLECTRICITÉ AVANT LA MISE EN ROUTE DE SES TRAVAUX DE CONSTRUCTION. SIGNALER TOUTE INCONSISTANCE AVANT LA MISE EN ROUTE DE SES TRAVAUX. TOUTE OUVERTURE NON INDIQUÉE DANS LES DESSINS DE CHARPENTE DEVRA ÊTRE APPROUVÉE PAR ÉCRIT PAR L'INGÉNIEUR EN CHARPENTE ET CE, AVANT LA CONSTRUCTION PROPREMENT DITE.
3. L'ENTREPRENEUR SE DEVRA DE PRÉVOIR DES OUVRAGES DÉTAYAGE PRÉCONÇUS ET PRÉCALCULÉS ET CE, EN CONFORMITÉ AVEC LES EXIGENCES, AFIN D'ACCOMMODER SES ACTIVITÉS DE CONSTRUCTION ET DE SORTIE À EMPÊCHER D'ENDOMMAGER TOUTE AUTRE PROPRIÉTÉ ADJACENTE. L'ON SE DEVRA AUSSI DE LIMITER TOUTES LES ACTIVITÉS DE CONSTRUCTION À L'INTÉRIEUR DES DÉLIMITATIONS DU SITE DE CONSTRUCTION; EN OUTRE, L'ENTREPRENEUR SE DEVRA DE RESTAURER TOUTE PROPRIÉTÉ EXISTANTE ENDOMMAGÉE PAR SUITE DE SES TRAVAUX.
4. L'ENTREPRENEUR EST RESPONSIBLE DE LA COORDINATION ET DU SÉQUENCÉMENT DE LA CONSTRUCTION ET CE, EN RAPPORT AVEC LES DIVERS CORPS DE MÉTIER IMPLIQUÉS.
5. SYSTÈMES EN EXCLUSIVITÉ, DEVANT ÊTRE INSTALLÉS EN STRICTE CONFORMITÉ AVEC LES RECOMMANDATIONS DU FABRICANT.
6. NE PAS SE SERVIR DES PRÉSENTS DESSINS POUR PRÉLEVER DES MESURES À L'ÉCHELLE.
7. LES DÉTAILS ET LA CONSTRUCTION SONT FONDÉS SUR LES RENSEIGNEMENTS DISPONIBLES AU MOMENT DE LA PRÉPARATION DES DESSINS DE CONCEPTION. SI, AU COURS DE LA CONSTRUCTION, IL SE PRÉSENTAIT DES CONDITIONS DIFFÉRENTES DE CE QUE L'ON SUPPOSAIT AUPARAVANT, IL FAUDRA ALORS EN FAIRE PART À L'EXPERT-CONSEIL AVANT D'ALLER PLUS LOIN DANS LA POURSUITE DE SES TRAVAUX.
8. VÉRIFIER TOUTES LES DIMENSIONS ET CONDITIONS EXISTANTES AVANT LA FABRICATION D'ÉLÉMENTS.

D01-2 DÉMOLITION

1. L'ENTREPRENEUR SE DEVRA DE LOCALISER TOUS LES SERVICES ET D'APPELER LES AUTORITÉS EN CAUSE POUR LE PRÉLÈVEMENT ET LA LOCALISATION DES SERVICES AVANT LA MISE EN ROUTE DE SES TRAVAUX DE DÉMOLITION.
2. L'ENTREPRENEUR SE DEVRA DE PRENDRE TOUTES LES MESURES NÉCESSAIRES LORS DE SA DÉMOLITION DE LA STRUCTURE EXISTANTE ET CE, AFIN DE NE PAS ENDOMMAGER LES PORTIONS DE LA STRUCTURE QUI SE DOIVENT D'ÊTRE CONSERVÉES.
3. L'ENTREPRENEUR DEVRA REMETTRE À NEUF TOUT OUVRAGE ENDOMMAGÉ PAR SUITE DE LA PHASE DE DÉMOLITION ET CE, À LA SATISFACTION DE L'EXPERT-CONSEIL.
4. À LA FIN DE CHAQUE JOURNÉE DE TRAVAIL, TOUS LES MATÉRIAUX DÉMOLIS SE DEVRONT D'ÊTRE EXPÉDIÉS HORS SITE ET ÉLIMINÉS SELON LES RÈGLES EN VIGUEUR.

D01-2 DESSINS D'ATELIER

1. PRODUIRE DES DESSINS D'ATELIER POUR TOUS LES TRAVAUX DE CHARPENTE ET TOUS LES TRAVAUX AFFECTANT LA STRUCTURE ET LES PRÉSENTER À LA PERSONNE CHARGÉE DE GÉRER LA CONSTRUCTION. LES FAIRE APPROUVER PAR L'ARCHITECTE ET PAR L'INGÉNIEUR AVANT D'ENTREPRENDRE LA FABRICATION.
2. CHACUN DES DESSINS D'ATELIER DOIT PORTER LE SCAU ET LA SIGNATURE D'UN INGÉNIEUR QUALIFIÉ ET DUMENT AUTORISÉ À PRATIQUER DANS LA PROVINCE OU EFFECTUENT LES TRAVAUX (ET CE, COMPTE TENU DES AUTRES DESSINS ANNOTÉS).
 - a) DESSINS POUR TOUS LES TRAVAUX TEMPORAIRES.
 - b) DESSINS POUR TOUTE PARTIE STRUCTURELLE CONÇUE PAR LES PERSONNES REPRÉSENTANT L'ENTREPRENEUR
 - c) ACIER DE CONSTRUCTION
 - d) ASSEMBLAGES DE L'ACIER
 - e) OSSATURES PORTÉES À POTAUX MÉTALLIQUES POUR CLOISONS PLEINE HAUTEUR
3. LES DESSINS D'ATELIER DEVRONT ÊTRE PASSÉS EN REVUE ET ESTAMPILLÉS PAR L'ENTREPRENEUR ET CE, AVANT DE LES PRÉSENTER À L'EXAMEN DE LA PERSONNE REPRÉSENTANT LA CCN. LES DESSINS D'ATELIER NON ESTAMPILLÉS PAR L'ENTREPRENEUR SERONT TOUT SIMPLEMENT REJETÉS. TOUT DÉLAI DANS LA CONSTRUCTION QUI POURRAIT ÊTRE PROVOQUÉ PAR LE FAIT DE NE PAS SE CONFORMER À LA PRÉSENTE EXIGENCE DEVRA ÊTRE ASSUMÉ PAR L'ENTREPRENEUR.
4. LA RÉVISION DES DESSINS D'ATELIER EST FONDÉE SUR LE FAIT QUE LE TOUT DOIT ÊTRE CONFORME AUX EXIGENCES DE CONCEPTION GÉNÉRALE. CETTE RÉVISION NE CONSTITUE PAS UNE APPROBATION DE LA CONCEPTION DÉTAILLÉE NI DES QUANTITÉS AVANCÉES DANS LES DESSINS D'ATELIER. LA RESPONSABILITÉ PAR RAPPORT AUX QUANTITÉS ET À LA CONCEPTION DÉTAILLÉE DES MATÉRIAUX ET DES PIÈCES COMPOSANTES QUI S'AVÈRENT NÉCESSAIRES POUR EN ARRIVER À UN OUVRAGE EN TOUT POINT COMPLET ET SATISFAISANT ET CE, EN CONFORMITÉ AVEC LES PRÉCISIONS COMPRISSES DANS LES DOCUMENTS DE CONCEPTION, RELEVANT TOUT SIMPLEMENT DU PRÉSENT ENTREPRENEUR.

D02) ACIER

D02-1 ACIER DE CONSTRUCTION :

À MOINS D'INDICATIONS CONTRAIRES, L'ACIER DE CONSTRUCTION DEVRA ÊTRE CONFORME AUX EXIGENCES PERTINENTES DE LA NORME CAN/CSA-S16-14.
ARTICLE DEVIS PERTINENT (À MOINS D'INDICATIONS CONTRAIRES)

SECTIONS OU PROFILS ROULÉS	CSA G40 21M - 350W
SECTION DE PROFILS CREUX EN	CSA G40 21M-350W (CLASSE C)
ACIER DE CONSTRUCTION	
BOULONS DE CONNEXION	CSA A325 (TYPE D'APPU)
PLAQUES, CORNIÈRES OU PROFILÉS C	CSA G40 21M-300W

1. REVÊTIR D'UNE COUCHE D'APPRÊT APPROUVÉ L'ENSEMBLE DES TRAVAUX EN ACIER.
2. LES CONNEXIONS DE CHANTIER ET EN USINE DEVRONT ÊTRE DE TYPE SOUDÉ OU BOULONNÉ ET À GRANDE VALEUR DE TENSION, SELON LA NORME ASTM A325.
3. LES TRAVAUX DE SOUDAGE DEVRONT ÊTRE CONFORMES À LA PLUS RÉCENTE ÉDITION DE LA NORME CSA W59 ET LEUR RÉALISATION DEVRA RELEVÉ D'UN FABRICANT APPROUVÉ PAR LE BUREAU CANADIEN DE SOUDAGE ET CE, EN CONFORMITÉ AVEC LES EXIGENCES DE LA NORME CSA W47.1.
4. TOUTES LES SOUDURES APPARENTES DEVRONT ÊTRE FAÇONNÉES EN CONTINU ET ÊTRE LISSÉES JUSQU'À L'OBTENTION D'UN FINI LISSE.
5. L'ENSEMBLE DE L'ACIER DE CONSTRUCTION APPARENT ET À L'EXTÉRIEUR DEVRA ÊTRE GALVANISÉ OU PEINT ET CE, EN SE SERVANT D'UNE PEINTURE ANTI-ROUILLE APPROUVÉE.
6. NE PAS ÉPISER LES MEMBRURES EN ACIER DE CONSTRUCTION, SAUF SI L'INGÉNIEUR EN CHARPENTE APPROUVE LA CHOSE PAR ÉCRIT.
7. ADVENANT QU'IL S'AVÈRE IMPOSSIBLE POUR L'ENTREPRENEUR D'OBTENIR DES MEMBRURES EN ACIER DE CONSTRUCTION QUI SONT PRÉSCRITES DANS LES DESSINS DE CHARPENTE, L'ENTREPRENEUR CHARGÉ DE L'ACIER DE CONSTRUCTION SE DEVRA ALORS DE PRÉVOIR DES MEMBRURES AVANT AU MOINS LES MÊMES PROPRIÉTÉS EN COUPE QUE CELLES DES MEMBRURES PRÉSCRITES ET CE, SANS QUE LA CHOSE N'ENTRAÎNE DES COÛTS ADDITIONNELS. L'ON SE DEVRA DE COMMUNIQUER AVEC L'INGÉNIEUR RELATIVEMENT À L'ACCEPTATION DE N'IMPORTE QUEL PRODUIT DE SUBSTITUTION.
8. CONCEVOIR LES DÉTAILS ET LES CONNEXIONS EN CONFORMITÉ AVEC LES EXIGENCES DES NORMES SUIVANTES : CSA S16 ET CAN/CSA S136. LESQUELLES NORMES ÉTANT ÉTABLIES POUR OFFRIR LA RÉSISTANCE VOULUE AUX FORCES, AUX MOMENTS ET AUX CISAILLEMENTS PERTINENTS; AUSSI, AFIN DE TENIR COMPTE DES MOUVEMENTS INDIQUÉS.

CONNEXIONS DE CISAILLEMENT :

- a. LORSQU'IL S'AGIT DU BESOIN DE PRATIQUER D'UNE CONNEXION EN RAPPORT AVEC DU CISAILLEMENT SEULEMENT (CONNEXION STANDARD), CHOISIR LES CONNEXIONS DE CISAILLEMENT DE POUTRES ASSORTIES D'OUVRAGES D'OSSATURE ET CE, EN SE FONDANT SUR UNE PUBLICATION ACCEPTÉE DE L'INDUSTRIE; PAR EXEMPLE, LE MANUEL DE L'INSTITUT CANADIEN DE LA CONSTRUCTION EN ACIER.
- b. LORSQU'AUCUN CISAILLEMENT N'EST INDIQUÉ, CHOISIR OU CONCEVOIR LES CONNEXIONS POUR QUELLES PUISSENT SUPPORTER LES RÉACTIONS EN PROVENANCE DE CHARGES MAXIMALES ET UNIFORMÉMENT DISTRIBUÉES, LESQUELLES CHARGES DOIVENT ÊTRE SUPPORTÉES EN TOUTE SÛRETÉ PAR LA POUTRE QUI OFFRE UNE CERTAINE CAPACITÉ DE PLIAGE, DANS LA MESURE À PARTIR DE LAQUELLE AUCUNE CHARGE PAR POINT N'AGIT CONTRE LA POUTRE.

SEAL

CONSULTANTS



KEY PLAN

#	ISSUE	DATE
01	ISSUE FOR 66% REVIEW	10/16/2020
02	ISSUE FOR 99% REVIEW	12/02/2020
03	ISSUE FOR TENDER	12/16/2020

PROJECT NAME / NOM DU PROJET

CENTRAL EXPERIMENTAL FARM
FERME EXPÉRIMENTALE
CENTRALE
Building/Bâtisse
59
OTTAWA, ON

SHEET TITLE / TITRE DE LA FEUILLE

GENERAL NOTES
NOTES GÉNÉRALES

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PROJECT # / # DU PROJET: 20-2329
DRAWN BY / DESSINÉ: M.E.
PAR:
CHECKED BY / EXAMINÉ: C.F./C.L.
PAR:

SHEET / FEUILLE

S-000

SEAL

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KEY PLAN

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PROJECT NAME / NOM DU PROJET

CENTRAL EXPERIMENTAL FARM
 FERME EXPÉRIMENTALE CENTRALE
 Building/Bâtisse 59
 OTTAWA, ON

SHEET TITLE / TITRE DE LA FEUILLE

PARTIAL PLANS & DETAILS
 PLANS PARTIELS & DÉTAILS

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 DRAWN BY / DESSINÉ: M.E.
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SHEET / FEUILLE

S-100

