



#### Partners

Barry J. Hobin  
OAA, FRAIC, Hon. Fellow AIA

William A. Davis  
OAA, MRAIC, Associate AIA

Gordon Lorimer  
OAA, FRAIC, Associate AIA

Wendy Brawley  
OAA, MRAIC, Associate AIA

Douglas Brooks  
Senior Arch. Tech.

#### Associates

Bryan Bonell  
OAA, MRAIC, Associate AIA

Marc Thivierge  
OAA, MRAIC

William Ritcey  
MRAIC

Reinhard Vogel  
Senior Arch. Tech.

Dan Henhoeffter  
Senior Arch. Tech.

#### Hobin Architecture Incorporated

63 Pamilla Street  
Ottawa, Ontario  
Canada K1S 3K7

t 613-238-7200

f 613-235-2005

**hobinarc.com**

# ADDENDUM

Project:	Turnbull School - Music Room Addition	Addendum No.:	A02
Tender #	N/A	No. of Pages:	43 (incl. Cover Page and drawings)
Project #	Hobin #1705	Date:	August 09, 2018

The following change(s) in the Tender Documents are effective immediately.  
This Addendum forms part of the Contract Documents.

Acknowledge receipt of this Addendum by signing and dating this cover sheet and return via email or facsimile to Reinhard Vogel (reinhard@hobinarc.com). Failure to do so may subject bidder to disqualification.

#### Item Description

- 1.1 Incorporate Changes identified in **Architectural Addendum A02 (37 pages)** prepared by Hobin Architecture Incorporated and attached.
- 1.2 Incorporate Changes identified in **Electrical Addendum ADD-E01 (6 pages)** prepared by WSP and attached.

Signed

Date



**HOBIN**  
ARCHITECTURE

The following information supplements and/or supersedes the bid documents.

This addendum forms part of the contract documents and is to be read, interpreted, and coordinated with all other parts of the contract documents.

The costs of all contained herein are to be included in the contract sum. The following revisions contained in the Addendum supersede the information (*being revised*) contained in the original drawings and specifications issued for the above-named project to the extent referenced and shall become part thereof. Acknowledge receipt of this Addendum by inserting its number and date on the Tender Form. Failure to do so may subject bidder to disqualification.

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[hobinarc.com](http://hobinarc.com)

Item No.	Drawing or Spec Section	Description
<b>1.0 GENERAL</b>		
1.01	CCDC2	<b><u>Stipulated Price Contract:</u></b> The successful bidder will enter into a Stipulated Price Contract, CCDC-2-2008 Agreement with the Owner (Turnbull School).
1.02	Stipulated Price Bid Form	<b><u>Stipulated Price Bid Form:</u></b> Submit Bid on attached Stipulated Price Bid Form, Section 00 40 00, CCDC Model Bid Form for Stipulated Price Contract.
1.03	Insurance and Bid Bond	<b><u>Insurance and Bid Bonds:</u></b> Refer to the attached Specification Section 00 80 50 – Supplementary Conditions for insurance and bid bonding requirements to be submitted with bid submission at Tender Close.
1.04	Tender Submission	<p><b><u>Tender Submission and Deadline Extension</u></b>  <b><u>Deadline for submitting bids has been extended to Thursday August 16, 2018 at 2:00pm.</u></b> Per the attached Stipulated Price Form, bids shall be submitted no later than 2:00:00pm at:</p> <p>Hobin Architecture Incorporated 63 Pamilla Street, Ottawa, ON, K1S 3K7 Tel: 613-238-7200</p> <p>Bid must be submitted in a sealed envelope, marked as to its contents (Turnbull School Music Room Addition, Hobin Project No.1705), and be directed to the attention of:</p> <p>Hobin Architecture Incorporated ATTN: Reinhard Vogel 63 Pamilla Street Ottawa, ON, K1S 3K7</p> <p>Bid Submission shall include the following:</p> <p>1. Completed Stipulated Price Bid Form (included with this Addendum).</p>

		<p><b>2. Security Deposit:</b> Bids are to be accompanied by a security deposit (Bid Bond CCDC 220-2008) in an amount no less than 10% of the bid price; or certified cheque. Endorse Bid Bond or certified cheque in the name of Owner as obligee, signed and sealed by the Principal (Contractor) and surety.</p> <p><b>3. Agreement to Bond</b> stating that Surety providing the bid Security is willing to supply 50% Performance Bond and 50% Labour and Materials Payment Bond as required by the Contract Documents (the "Agreement to Bond"). Include cost of bonds in Bid Price.</p> <p><b>4. Insurance:</b> Successful General Contractor to provide signed "Undertaking of Insurance" on standard form provided by insurance company stating intention to provide insurance in accordance with insurance requirements of Contract Documents. Provide original documents.</p> <p>Tenders will not be opened publicly. Bid submissions will be opened at a time subsequent to the Tender Close Deadline. In the event of a tie bid, following bid evaluation by the Owner and Hobin Architecture Incorporated, and all things being equal, the Owner will make a decision using the standard coin toss.</p> <p>Use most current edition CCDC approved bond forms. All documents must be originals, not photocopies.</p> <p>Security deposit will be returned after deliver to Owner of required Performance and Labour Materials Payment bond(s) by accepted Bidder.</p> <p>If not contract is awarded, security deposits will be returned.</p>
1.05	Card Readers	<p><b><u>Card Reader Information:</u></b> For doors requiring card reader access, consult ADT Protection. Contact: Paul Clouthier (819-360-0934). See also Item 2.03 below.</p>
1.06	Acoustic Panels	<p><b><u>Hemisphere Model 180 3D Sound Diffusers:</u></b> Acoustic Panels noted in Addendum No, A01 are supplied in packs of four. Current panel layout will leave four additional tiles. Tile pattern to remain as shown in Addendum No. A01. Remaining tiles to be turned over to Turnbull School.</p>
1.07	Finish Schedule	<p>A Finish Schedule will not be submitted for this project. Flooring material is a single product as specified, used throughout all Music Room spaces. Ceiling tile &amp; grid system as specified for ancillary rooms. Paint finishes to be determined at time of construction. As specified in Interior Painting Section 09 91 23, allow for 5 colours.</p>

2.0 SPECIFICATIONS		
2.01	00 80 00	<b><u>Supplementary Conditions:</u></b> <i>Insert</i> the attached Section 00 80 00 – Supplementary Conditions into the Tender Documents.
2.02	Section 01 11 00	<b><u>Summary of Work:</u></b> Subsection 1.2 Contract Method: <b><i>Replace</i></b> Sentence 1.2.1 in its entirety as follows:  <i>“1 Construct work under a Stipulated Price Contract, CCDC2-2008.”</i>  See also item 1.1 above.
2.03	Section 01 21 00	<b><u>Cash Allowances:</u></b> Insert the attached specification section into the Tender Document to identify Cash Allowances to be carried into the Stipulated Price Bid.
2.04	Section 04 22 00	<b><u>Concrete Unit Masonry:</u></b> Where imperial block sizes are noted, replace with metric block sizes to match existing.
2.05	Section 08 71 00	<b><u>Door Hardware:</u></b> Refer to the attached Door Hardware Addendum Section 08 71 00 for revisions to door hardware.
3.0 DRAWINGS		
3.01	C-001 & A1.01	<b><u>Ramp Guard Rail:</u></b> Length of steel guard rail to match length of landing at bottom of ramp (+/-6.4m). Guard only required where grade difference greater than 600mm. Guard not required for length of ramp portion. Detailed drawing to be issued at time of construction.
3.02	4/A6.01	<b><u>Plan Detail @ Window Jamb 1:</u></b> Composition of wall assembly adjacent to W1-type corner window jamb shall be W2-type with horizontal wood siding per Exterior Elevations
3.02	S100	<b><u>Pier Schedule (P2):</u></b> Pier P2 size shall be 325 x 550mm as indicated in the Pier Schedule. Set pier to within upstand foundation wall to allow for setting of 225mm wide baseplate. See BP2 detail on S100.
4.0 ELECTRICAL		
4.01	Electrical Addendum E-01	<b><u>Electrical Addendum E-01:</u></b> Refer to the attached Electrical Addendum ADD-E01, dated 2018-08-02 for drawing revisions to Electrical Set.

End of Addendum A02

CCDC Model Bid Form for Stipulated Price Contract

**STIPULATED PRICE BID FORM**

**BID FORM TO BE DEPOSITED AT:**

**Hobin Architecture Incorporated (Reinhard Vogel)**  
63 Pamilla Street  
Ottawa, ON, K1S 3K7  
Tel: 613.238.7200

**NO LATER THAN 2:00:00pm LOCAL TIME, THURSDAY AUGUST 16, 2018**

**Project/Contract:** Turnbull School Music Room Addition  
**Project Contract No.:** Hobin Project No. 1705

**From (Bidder):**

\_\_\_\_\_  
*company name*

\_\_\_\_\_  
*street address or postal box number*

\_\_\_\_\_  
*city/town, province and postal code*

\_\_\_\_\_  
*Telephone*

\_\_\_\_\_  
*email address*

**To (Owner):**

Turnbull School  
1132 Fisher Avenue  
Ottawa, ON, L1Z 6P7

CCDC Model Bid Form for Stipulated Price Contract

We, the undersigned, having examined the Bid Documents for the above-mentioned project/contract, including Addendum Numbers as listed below, and having visited the Place of the Work, hereby offer to perform the work in accordance with the Bid Documents, for the stipulated [base bid] price of:

- .1 **TOTAL CASH ALLOWANCES IDENTIFIED IN SECTION 01 21 00** \$ \_\_\_\_\_
- .2 **TOTAL STIPIULATED PRICE** (price for all work to be done, including Total Cash Allowances noted above, exclusive of HST):
- \$ \_\_\_\_\_

Repeat **TOTAL STIPULATED PRICE** in writing:

\_\_\_\_\_  
*Canadian Dollars*

I/We acknowledges having received, reviewed and provided in its Tender Price for all work and costs associated with the following addenda:

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

We, the undersigned, declare that:

- {{(a) we agree to perform the Work within the required completion time specified in the Bid Documents,}  
{or}
- {{(a) we agree to attain Substantial Performance of the Work within \_\_\_\_\_[months] [weeks] [days]  
after receiving notice of contract award.
- (b) we have arrived at this bid without collusion with any competitor,
- (c) this bid is open to acceptance by the Owner for a period of 30 days from the date of this bid closing,
- (d) all bid form supplements called for by the Bid Documents for an integral part of this bid.

CCDC Model Bid Form for Stipulated Price Contract

**Signatures:**

Signed and submitted by:

\_\_\_\_\_  
*company name*

\_\_\_\_\_  
*name and title of authorized signing officer*

\_\_\_\_\_  
*signature of authorized signing officer*

\_\_\_\_\_  
*name of witness*

\_\_\_\_\_  
*signature of witness*

\_\_\_\_\_  
*name and title of authorized signing officer*

\_\_\_\_\_  
*signature of authorized signing officer*

\_\_\_\_\_  
*name of witness*

\_\_\_\_\_  
*signature of witness*

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

**BIDDERS CORPORATE SEAL:**

The Standard Construction Document CCDC 2 2008 for a Stipulated Price *Contract*, English version, consisting of the Agreement Between *Owner* and *Contractor*, Definitions and General Conditions of the Stipulated Price *Contract*, Parts 1 to 14 inclusive, governing same is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

## **AGREEMENT BETWEEN OWNER AND CONTRACTOR**

### **ARTICLE A-3 – CONTRACT DOCUMENTS**

3.1 Add the following to the list of *Contract Documents* in paragraph 3.1:

- *Supplementary Conditions to CCDC 2 – 2008 Section 00 80 50*
- *Specifications*
- *Drawings*
- *Performance Bond*
- *Labour and Material Payment Bond*
- *Tender Form*

### **ARTICLE A-5 – PAYMENT**

5.1.3 Amend paragraph 5.1.3, in the first line, by deleting the words " the issuance of the " and replacing them with "receipt of the *Consultant's*..."

5.3.1 Delete paragraph 5.3.1 and replace with the following:

Should either party fail to make payments as they come due under the terms of the *Contract* or in an award by arbitration or court, interest on such unpaid amounts shall be calculated at the rate of 2 percent per annum above the annual rate of interest quoted by the Bank of Canada for prime business loans as it may change from time to time.

### **DEFINITIONS**

4. Amend Definition 4 by adding the following to the end of the Definition:

For the purposes of the *Contract*, the terms "*Consultant*", "*Architect*" and "*Engineer*" shall be considered synonymous.

16. Amend Definition 16 by adding the following to the end of the Definition:

*Provide* has this meaning whether or not the first letter is capitalized.

Add the following new definitions:

27. **Confidential Information**

*Confidential Information* means all the information or material of the *Owner* that is of a proprietary or confidential nature, whether it is identified as proprietary or confidential or not, including but not limited to information and material of every kind and description (such as drawings and move-lists) which is communicated to or comes into the possession or control of the *Contractor* at any time, but *Confidential Information* shall not include information that:

- 1) is or becomes generally available to the public without fault or breach on the part



- of the *Contractor*, including without limitation breach of any duty of confidentiality owed by the *Contractor* to the *Owner* or to any third party, but only after that information becomes generally available to the public;
- 2) the *Contractor* can demonstrate to have been rightfully obtained by the *Contractor* from a third party who had the right to transfer or disclose it to the *Contractor* free of any obligation of confidence;
  - 3) the *Contractor* can demonstrate to have been rightfully known to or in the possession of the *Contractor* at the time of disclosure, free of any obligation of confidence; or
  - 4) is independently developed by the *Contractor* without use of any *Confidential Information*.

28. **Construction Schedule**

*Construction Schedule* means the schedule for the performance of the *Work* provided by the *Contractor* pursuant to GC 3.5, including any amendments to the *Construction Schedule* made pursuant to the *Contract Documents*.

29. **Force Majeure**

*Force Majeure* means any cause, beyond the *Contractor's* control, other than bankruptcy or insolvency, which prevents the performance by the *Contractor* of any of its obligations under the *Contract* and the event of *Force Majeure* was not caused by the *Contractor's* default or active commission or omission and could not be avoided or mitigated by the exercise of reasonable effort or foresight by the *Contractor*. *Force Majeure* includes *Labour Disputes*, fire, unusual delay by common carriers or unavoidable casualties, civil disturbance, acts, orders, legislation, regulations or directives of any government or other public authority, acts of a public enemy, war, riot, sabotage, blockage, embargo, lightning, abnormally adverse weather, earthquake, or acts of God.

30. **Install**

*Install* means install and connect. Install has this meaning whether or not the first letter is capitalized.

31. **Labour Dispute**

*Labour Dispute* means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, job action, slow down, lock-outs, picketing, refusal to work or continue to work, refusal to supply materials, cessation or work or other labour controversy which does, or might, affect the *Work*.

32. **Overhead**

*Overhead* means all site and head office operations and facilities, all site and head office administration and supervision; all duties and taxes for permits and licenses required by the authorities having jurisdiction at the *Place of the Work*; all requirements of Division 1, including but not limited to submittals, warranty, quality control, insurance and bonding; calculations, testing and inspections; meals and accommodations; and, tools, expendables and clean-up costs.

33. **Request for Information/RFI**

*Request for Information or RFI* means written documentation sent by the *Contractor* to the *Owner* or to the *Owner's* representative or the *Consultant* requesting written clarification(s) and/or interpretation(s) of the *Drawings* and/or *Specifications*, *Contract* requirements and/or other pertinent information required to complete the *Work* of the *Contract* without applying for a change or changes to the *Work*.

## GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

- 1.0 Where a General Condition or paragraph of the General Conditions of the *Contract* is deleted by these amendments, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

### GC 1.1 CONTRACT DOCUMENTS

- 1.1.6 Add the following to the end of paragraph 1.1.6:

The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Owner* or the *Consultant* to settle disputes among the Subcontractors and *Suppliers* with respect to such divisions. The *Drawings* are, in part, diagrammatic and are intended to convey the scope of the *Work* and indicate general and appropriate locations, arrangements and sizes of fixtures, equipment and outlets. The *Contractor* shall obtain more accurate information about the locations, arrangements and sizes from study and coordination of the *Drawings*, including *Shop Drawings* and shall become familiar with conditions and spaces affecting those matters before proceedings with the *Work*. Where site conditions require reasonable minor changes, where the change requires only additional labour of one half hour or less as indicated locations and arrangements, the *Contractor* shall make such changes at no additional cost to the *Owner*. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the *Contractor* shall include such relocation in the *Work*. The *Contractor* shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible. The schedules are those portions of the *Contract Documents*, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists.

- 1.1.7 Amend paragraph 1.1.7.1 by adding:  
"Amendments to CCDC 2 – 2008" before "the Agreement between the *Owner* and the *Contractor*"  
"Instructions to Tenderers" after "Supplementary Conditions"  
"Addenda to Instructions to Tenderers" after "Instructions to Tenderers"  
"Tender Form" after "Addenda to Instructions to Tenderers"

Add new paragraph 1.1.7.5 as follows:

.5 Should reference standards and *Specifications* conflict with each other or if certain requirements of the *Specifications* conflict with other requirements of the *Specifications*, the more stringent requirements shall govern.

- 1.1.8 Delete paragraph 1.1.8 in its entirety and substitute as follows:

The *Consultant*, on behalf of the *Owner* shall provide the *Contractor* without charge, twenty (20) copies of the *Contract Documents*, exclusive of those required by jurisdictional

authorities and the executed *Contract Documents*. Additional copies can be purchased by the *Contractor* at the *Consultant's* cost of reproduction, handling and applicable taxes. The *Consultants* shall provide the *Contractor* with one electronic set of PDF's of all drawings and specifications for the *Contractor* to print for the purpose of completing the *Work*. The *Contractor* may be required to sign an agreement with the *Consultant* for the use of these files.

1.1.11 Add new paragraph 1.1.11 as follows:

The *Contract Documents* shall be signed in triplicate (3) by the *Owner* and the *Contractor*, and each of the *Contractor*, the *Owner* and the *Consultant* shall retain one set of signed and sealed (if required by the governing law of the *Contract*) *Contract Documents*.

## **GC 1.5 EXAMINATION OF DOCUMENTS AND SITE**

Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:

1.5.1 The *Contractor* declares and represents that in tendering for the *Work*, and in entering into a *Contract* with the *Owner* for the performance of the *Work*, it has either investigated for itself, with reasonable due diligence, the local conditions and the character of the *Work* generally available from a site visit, or that it has elected not to undertake such an investigation, but that in either case the *Contractor* has assumed and does hereby assume all risk of conditions now existing or arising in the course of the *Work* which might or could make the *Work*, or any items thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the *Contract* signed.

## **GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT**

Add new GC 1.6 - TIME IS OF THE ESSENCE OF THE CONTRACT as follows:

1.6.1 All time limits stated in the *Contract Documents* are of the essence of the *Contract*. It is acceptable for the *Contractor* to propose an alternate sequence for the construction phases. Any change to the sequence of construction proposed by the *Contractor* must be approved by the *Owner* and *Consultant* within 4 weeks of award of contract. No additional costs will be considered to adjust the sequencing of the project.

## **GC 2.2 ROLE OF THE CONSULTANT**

2.2.7 Delete the words "Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER".

2.2.13 Amend paragraph 2.2.13 by the addition of the following to the end of that paragraph:

If, in the opinion of the *Contractor*, the *Supplemental Instruction* involves an adjustment in the *Contract Price* or in the *Contract Time*, it shall, within ten (10) *Working Days* of receipt of a *Supplemental Instruction*, provide the *Consultant* with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.13 shall be deemed an acceptance of the *Supplemental Instruction* by the *Contractor*, without any adjustment in the *Contract Price* or *Contract Time*.

Add new paragraph 2.2.1.9 as follows:

2.2.19 The *Consultant* or the *Owner*, acting reasonably, may from time to time require the *Contractor* to remove from the *Project* any personnel of the *Contractor*, including project

managers, superintendents or Subcontractors. Such persons shall be replaced by the *Contractor* in a timely fashion to the satisfaction of the *Consultant* or the *Owner*, as the case may be, at no cost to the *Owner*.

## **GC 2.3 REVIEW AND INSPECTION OF THE WORK**

2.3.2 Add new sentence to 2.3.3 as follows:

The Contractor shall provide the Consultants a minimum of 72 hours notice.

2.3.3 Delete paragraph 2.3.3 in its entirety and replace it with the following:

The *Contractor* shall furnish promptly two copies to the *Consultant* and one copy to the *Owner* of all certificates and inspection reports relating to the *Work*.

2.3.4 Insert the word "review" after the word "inspections" in the first, second and third lines of paragraph 2.3.4.

Add a new paragraph 2.3.8 as follows:

2.3.8 The *Consultant* will conduct periodic reviews of the *Work* in progress, to determine general conformance with the requirements of the *Contract Documents*. Such reviews, or lack thereof, shall not give rise to any claims by the *Contractor* in connection with construction means, methods, techniques, sequences and procedures, nor in connection with construction safety at the Place of *Work*, responsibility for which belongs exclusively to the *Contractor*.

## **GC 2.4 DEFECTIVE WORK**

2.4.1 Amend GC 2.4.1 by inserting ", the *Owner* and/or its agent" in the first sentence following "rejected by the *Consultant*".

Add new paragraph 2.4.1.1:

2.4.1.1 The *Contractor* shall prioritize the correction of any defective work, which, in the sole discretion of the *Owner*, adversely affects the day to day operations of the *Owner* or which, in the sole discretion of the *Consultant*, adversely affects the progress of the *Work*.

Add new paragraph 2.4.4 as follows:

2.4.4 Neither acceptance of the *Work* by the *Consultant*, nor any failure by the *Consultant* to identify, observe or warn of defective *Work* or any deficiency in the *Work* shall relieve the *Contractor* from the sole responsibility for rectifying such defect or deficiency at the *Contractor's* sole cost, even where such failure to identify, observe or warn is negligent.

## **GC 3.1 CONTROL OF THE WORK**

3.1.3 Add a new paragraph 3.1.3, 3.1.4 and 3.1.15 as follows:

Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify at the Place of the *Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact

locations are not apparent, the *Contractor* shall immediately notify the Consultant in writing and obtain written instructions from the Consultant before proceedings with any part of the affected *Work*.

- 3.1.4 Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the *Owner* shall have access to the site at all times to monitor all aspects of construction. Such access shall in no circumstances affect the obligations of the *Contractor* to fulfill its contractual obligations.
- 3.1.5 The *Contractor* shall not commence *Work* or procure any materials until both the *Contractor* and the *Owner* have either executed (signed) the *Contract*, or the *Contractor* has received a letter of acceptance of the Tender from the *Owner* or its agent AND the *Contractor* has delivered the required *Workplace Safety* and Insurance Board Certificate of Clearance, proof of insurance coverage, AND the *Owner* or its agent has unconditionally accepted such submissions, in writing, as being in compliance with the requirements of the *Contract Documents*.

### **GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS**

- 3.2.2.2 Delete paragraph 3.2.2.2 in its entirety.

- 3.2.3.2 Delete paragraph 3.2.3.2 and replace it with the following:

Co-ordinate and schedule the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contractor* and connect as specified or shown in the *Contract Documents*.

Add new paragraphs 3.2.3.4, 3.2.3.5 and 3.2.3.6 as follows:

- 3.2.3.4 Subject to General Condition 9.4 - CONSTRUCTION SAFETY, where paragraph 3.2.4 of General Condition 3.2 - CONSTRUCTION BY OWNER OR OTHER CONTRACTORS applies, for the *Owner's* own forces and for other contractors performing work identified in the *Contract Documents*, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation in the Place of the *Work*, including all of the responsibilities of the Constructor as that term is defined in the Occupational Health and Safety Act.
- 3.2.3.5 Provide for the coordination of the activities and work of other contractors and the *Owner's* own forces with the *Work* of the *Contract*, to the satisfaction of the *Owner*.
- 3.2.3.6 The following is a list of *Owner Supplied Contractors* that the *Contractor* will require to coordinate:
- 1) Security Installation
  - 2) IT Installation
  - 3) Communications Installation

### **GC 3.4 DOCUMENT REVIEW**

- 3.4.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:

The *Contractor* shall review the *Contract Documents* and shall report promptly to the Consultant any error, inconsistency, or omission the *Contractor* may discover. Such review by the *Contractor* shall be undertaken with the standard of care described in paragraph 3.14.1 of the *Contract*. Except for its obligation to make such review and report the result, the

*Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. Provided it has exercised the degree of care and skill described in this paragraph 3.4.1, the *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not have discovered through the exercise of the required standard of care.

Add new paragraph 3.4.2. as follows:

- 3.4.2 If, at any time, the *Contractor* finds errors, inconsistencies, or omissions in the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, including laying out of the *Work*, the *Contractor* shall immediately notify the *Consultant*, and request written instructions, a *Supplemental Instruction*, Change Order, or Change Directive, as the case may require, and the *Contractor* shall not proceed with the work affected until the *Contractor* has received such written instructions, a *Supplemental Instruction*, Change Order or Change Directive. Neither the *Owner* nor the *Consultant* will be responsible for the consequences of any action of the *Contractor* based on oral instructions that have not been confirmed in a proper written form in a timely manner.

Add new paragraphs 3.4.3 as follows:

- 3.4.3 Errors, inconsistencies and/or omissions in the *Drawings* and/or *Specifications* which do not allow completion of the *Work* of the *Contract* shall be brought to the *Consultant's* attention prior to the execution of the *Contract* by means of an *RFI*.

### **GC 3.8 LABOUR AND PRODUCTS**

- 3.8.3 Amend paragraph 3.8.3 by adding the words, “ , agents, Subcontractors and *Suppliers* ” after the word “employees” in the first line.

### **GC3.9 DOCUMENTS AT THE SITE**

Add new paragraph 3.9.2 as follows:

- 3.9.2 Record drawings:
- .1 The *Contractor* shall be required to produce and demonstrate to the *Consultant* on a monthly basis that the *Contractor* has kept the records of adjustments of the work on a set of Record Drawings kept on site.
  - .2 The *Contractor* shall on a monthly basis issue a certificate with their monthly progress draw that the Record drawings are complete and up to date as reflected in the work certified to date.
  - .3 As part of the project breakdown, the *Contractor* shall identify a schedule of values associated with the monthly Record drawing update with a value of 0.5% of the project and billed on a monthly basis.
  4. When the *Contractor* submits a request for Substantial Performance, the *Contractor* shall submit mark-up Record drawings.
  5. The *Contractor* will submit Operation and Maintenance Instruction Manuals updated and revised to show construction revisions. Operation and Maintenance Instruction Manuals shall be updated to reflect equipment and materials being used within each phase of construction.

### **GC 3.11 USE OF THE WORK**

- 3.11.1 In the second line between the words “permits” and “or” add, “by direction of the *Owner* or

Consultant, “.

Add new paragraph 3.11.3 as follows:

- 3.11.3 The *Owner* shall have the right to enter or occupy the *Work* in whole or in part for the purpose of placing fittings and equipment, or for other use before Substantial Performance of the *Work*, if, in the opinion of the Consultant, such entry and occupation does not prevent or substantially interfere with the *Contractor* in the performance of the *Contract* within the *Contract Time*. Such entry or occupation shall neither be considered as acceptance of the *Work*, nor in any way relieve the *Contractor* from its responsibility to complete the *Contract*.

Add new paragraph 3.11.4 as follows:

- 3.11.4 The Contractor shall abide by and enforce the Owner's directives and policies regarding Criminal Background Checks, signs, advertisements, fires and smoking at the Place of Work,

#### **GC 3.14 CONTRACTOR STANDARD OF CARE**

Add a new General Condition 3.14 – CONTRACTOR STANDARD OF CARE as follows:

- 3.14.1 In performing its services and obligations under the *Contract*, the *Contractor* shall exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that throughout the *Contract*, the performance of the *Contractor's* obligations, duties and responsibilities shall be judged against this standard. The *Contractor* shall exercise the same standard of care, skill and diligence in respect of any Products, personnel or procedures which it may recommend to the *Owner*.
- 3.14.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:
- .1 the personnel it assigns to the *Project* are appropriately experienced;
  - .2 there are no pending, threatened or anticipated claims, liabilities or contingent liabilities that would have a material effect on the financial ability of the *Contractor* to perform its work under the *Contract*.

#### **GC 3.15 OCCUPANCY OF THE WORK**

Add a new General Condition 3.15 – OCCUPANCY OF THE WORK as follows:

- 3.15.1 The *Owner* reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the *Project* even though the *Work* may not be substantially performed, provided that such taking possession and use will not interfere, in any material way, with the progress of the *Work*, having obtained all necessary approvals from the Authorities having Jurisdiction. The taking of possession or use of any such portion of the *Project* shall not be deemed to be the *Owner's* acknowledgment or acceptance of the *Work* or the *Project*, nor shall it relieve the *Contractor* of any of its obligations under the *Contract*.
- 3.15.2 Whether the *Project* contemplates *Work* by way of renovations in buildings which will be in use or be occupied during the course of the *Work* or where the *Project* involves *Work* that is adjacent to a structure which is in use or is occupied, the *Contractor*, without in any way limiting its responsibilities under the *Contract*, shall take all reasonable steps to avoid

interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise and to avoid conditions likely to propagate mould or fungus of any kind and all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of such structures or adjacent structures.

#### **GC 4.1 CASH ALLOWANCES**

4.1.1 Delete the second sentence in paragraph 4.1.1

4.1.4 Delete paragraph 4.1.4 in its entirety and substitute the following:

Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the Consultant's direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.

4.1.5 Delete paragraph 4.1.5 in its entirety and substitute the following:

The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by Change Order without any adjustment for the *Contractor's* overhead and profit on such amount.

Add new paragraphs 4.1.8 and 4.1.9 as follows:

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

4.1.9 Cash allowances cover the net cost to the *Contractor* of services, Products, Construction Equipment, freight, unloading, handling, storage, installation, All applicable taxes, and other authorized expenses incurred in performing any *Work* stipulated under the cash allowances but does not include any Value Added Taxes payable by the *Owner* and the *Contractor*.

#### **GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER**

5.1.1 Delete paragraph 5.1.1 in its entirety.

5.1.2 Delete paragraph 5.1.2 in its entirety.

#### **GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT**

5.2.2 Delete paragraph 5.2.2 in its entirety and substitute the following:

Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties. The amount claimed shall be for the value, proportionate to the amount of the *Contract*, or work performed and Products delivered and incorporated into the *Work* at that date. No amount claimed shall include products delivered and not incorporated into the work, unless the products are free and clear of all security interests, liens and other claims of third parties.



Each application for payment, except the first, shall include a statutory declaration, in the CCDC 9A – 2001 form, up to the date of the application for payment, in a form approved by the Consultant. Each application for payment (including the first), shall also include:

- .1 A certificate, issued by an agency or firm providing workers' compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making the application for payment, and that coverage will remain in force for at least sixty (60) days thereafter.
- .2 A declaration by the *Contractor*, in a form approved by the Consultant, verifying that the performance of the *Work* is in compliance with all applicable regulatory requirements respecting environmental protection, first safety, public safety and occupational health and safety.
- .3 A pre-approved schedule of values, supplied by the *Contractor*, for Divisions 1 through 14 and 31 through 33 of the *Work*, aggregating the total amount of the *Contract Price*. The schedule of values shall be broken down by Phase of the Contract.
- .4 A separate pre-approved schedule of values, supplied by each Subcontractor, for each of Division 20 through 28 of the *Work*, aggregating the total amount of the Subcontract Price.
- .5 Invoices to support all claims against the cash allowance.

## **GC5.2 APPLICATIONS FOR PROGRESS PAYMENT**

Add to the end of the paragraph 5.2.7 the following sentence:

Any Products delivered to the Place of the Work but not yet incorporated into the Work shall remain at the risk of the Contractor notwithstanding that title has passed to the Owner pursuant to General Condition 13.1 - OWNERSHIP OF MATERIALS.

Add paragraph 5.2.8 as follows:

- 5.2.8 The Contractor shall prepare current As-Built Drawings during the course of the Work, which current As-Built Drawings shall be maintained by the Contractor and made available to the Consultant for review with each application for progress payment. The Consultant may retain a reasonable amount and up to a maximum of the amounts outlined in paragraph 5.4.6, from any progress payments for the value of the As-Built Drawings not presented for review until the As-Built Drawings are presented for review.

## **GC 5.3 PROGRESS PAYMENT**

- 5.3.1.3 Delete subparagraph 5.3.1.3 in its entirety and substitute as follows:

The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT no later than 20 calendar days after the date that a complete certificate of payment is issued by the Consultant

Add new paragraphs 5.3.2 and 5.3.3 as follows:

- 5.3.2 If the *Contractor* fails to provide all documentation as required by GC 5.2 – APPLICATIONS

FOR PROGRESS PAYMENT, the Consultant or *Owner* shall be entitled to return the application for progress payment to the *Contractor* for completion. The 10 day review period by the Consultant and 20 day payment period by the *Owner* will commence upon receipt of a complete application for progress payment.

#### **GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK**

##### **5.4.2 Delete paragraph 5.4.2 in its entirety and substitute the following:**

The Consultant will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 20 calendar days after receipt of the *Contractor's* complete deficiency list and application:

.1 prepare a final deficiency list incorporating all items to be completed or corrected. Each item is to have an indicated value for correction or completion. Determination of the value is defined in GC 5.10 – DEFICIENCY HOLDBACK. The final deficiency list complete with values is to be included with the Consultant's draft verification.

.2 having completed 5.4.2.1, the Consultant shall:

.1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or

.2 state the date of Substantial Performance of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.

##### **5.4.3 Delete paragraph 5.4.3 in its entirety and substitute the following:**

Following the issuance of the certificate of Substantial Performance of the *Work*, the following shall apply to completing the *Work*:

.1 *Contractor* is to complete the *Work* within sixty (60) calendar days.

.2 No payments will be processed between Substantial Performance of the *Work* and the completion of the *Work*.

.3 The *Owner* reserves the right to *Contract* out any or all unfinished *Work* if it has not been completed within sixty (60) days of Substantial Performance of the *Work* without prejudice to any other right or remedy and without affecting the warranty period. The cost of completing the *Work* shall be deducted from the *Contract Price*.

Add new paragraphs 5.4.4, 5.4.5 and 5.4.6:

5.4.4 Within the time prescribed by the construction/builder's lien legislation in force at the Place of the *Work*, or where there is no legislation or no time prescribed, within a reasonable time of receiving a copy of the certificate of Substantial Performance of the *Work* signed by the Consultant, the *Contractor* shall take whatever steps are required to publish or post a signed copy of the certificate, as is required by such legislation. If the *Contractor* fails to comply with this provision, the *Owner* may take the required steps pursuant to the legislation and charge the *Contractor* for any costs so incurred.

5.4.5 Prior to submitting its written application for Substantial Performance of the *Work*, the *Contractor* shall submit to the Consultant all:

- .1 guarantees;
- .2 warranties;
- .3 certificates;
- .4 final testing and balancing reports;
- .5 distribution system diagrams;
- .6 spare parts;
- .7 maintenance manuals;
- .8 samples;
- .9 reports and correspondence from authorities having jurisdiction in the Place of the *Work*
- .10 shop drawings;
- .11 inspection certificates;
- .12 marked-up record or as-built drawings from the construction trailer and other materials or documentation required to be submitted under the *Contract*, together with written proof acceptable to the *Owner* and the Consultant that the *Work* has been substantially performed in conformance with the requirements of municipal, governmental, and utility authorities having jurisdiction in the Place of the *Work*. The Consultant shall refuse to certify Substantial Performance of the *Work* if the submittals referred to in this paragraph 5.4.5 are not provided by the *Contractor*. Alternatively a sum may be withheld pending the Consultant establishing a value for some or all of the remaining work to be completed from the list above.

- 5.4.6 The *Contractor* shall submit full and complete digital record or as-built drawings to the Consultant within forty-five (45) days of the issuance of the certificate of Substantial Performance of the *Work* and the *Owner* shall be at liberty to withhold, from amounts otherwise payable to the *Contractor*, an amount not to exceed one (1) percent of the *Contract Price* as security for the obligation of the *Contractor* to deliver such digital record or as built drawings.

Add new paragraph 5.4.7 as follows:

- 5.4.7 Together with the submission of its written application for Substantial Performance of the *Work*, the *Contractor* shall submit to the Consultant and to the *Owner* a statutory declaration setting forth in reasonable detail any then outstanding and unresolved disputes or claims between the *Contractor* and any Subcontractor or Supplier, including any claims allegedly arising from delay, which are, directly or indirectly, related to any then outstanding or anticipated disputes or claims between the *Contractor* and the *Owner*, and this disclosure shall, at a minimum:
- .1 identify the parties involved;
  - .2 identify the amount in dispute;
  - .3 provide a brief statement summarizing the position of each party;
  - .4 include copies of any correspondence or documents in support of either party's position;
  - .5 include copies of any documents of any court or arbitration process related to the matter;
  - .6 identify the dispute or claim between the *Contractor* and the *Owner* to which the matter relates; and
  - .7 include a copy of any written agreement or a summary of any oral agreement

between the parties related to resolution of the matter.

The disclosure requirements detailed herein are of a continuing nature and survive completion of the Work. Accordingly, the Contractor shall supplement the information provided with the original statutory declaration with additional materials pertaining to new or existing disputes or claims, as they become available. The Contractor shall not be entitled to recover from the Owner any amount pertaining to any claim or dispute referred to in this paragraph, if the provisions of this paragraph have not been fully complied with. For greater certainty, the Contractor is not obliged to make the aforementioned disclosure with respect to any dispute or claim that is not related to or does not touch upon any then outstanding and unresolved dispute or claim between the Contractor and the Owner.

## **GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK**

5.5.1.1 Add to end of sentence “, and the application by the *Contractor* shall be accompanied by:

.1 a certificate, issued by an agency or firm providing workers' compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making application for payment, and that coverage will remain in force for at least sixty (60) days thereafter; and,

.2 a declaration by the *Contractor*, in a form approved by the Consultant, verifying performance of the *Work* in compliance with all applicable regulatory requirements respecting environmental protection, fire safety, public safety and occupational health and safety.”

Add new subparagraph 5.5.1.3 as follows

5.5.1.3 submit a statement that no written notices of liens have been received by it

5.5.3 Delete paragraph 5.5.3 in its entirety.

5.5.5 Delete paragraph 5.5.5 in its entirety.

## **GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK**

Delete GC 5.6 in its entirety.

## **GC 5.7 FINAL PAYMENT**

5.7.1 Delete paragraph 5.7.1 in its entirety and substitute as follows:

When the *Contractor* considers that the *Work* is completed, as defined in the lien legislation applicable to the Place of the *Work* or if such definition does not exist, in accordance with other applicable legislation, industry practice or provisions which may be agreed to between the parties, the *Contractor* shall submit an application for final payment. The *Contractor's* application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraph 5.4.5, together with complete and final as-built drawings and:

.1 the *Contractor's* written request for release of the deficiency holdback, including a statement that no written notices of lien have been received by it;

- .2 a Statutory Declaration CCDC 9A-2001;
- .3 the evidence of workers' compensation compliance required by GC 10.4.1.

The *Work* shall be deemed not to be completed until all of the aforementioned documents have been delivered, completed to the satisfaction of the *Owner*, and the *Owner* may withhold payment in respect of the delivery of any documents in an amount determined by the Consultant in accordance with the provisions of GC 5.8 - WITHHOLDING OF PAYMENT.

- 5.7.2 Delete from the first line of paragraph 5.7.2 the words, "calendar days" and substitute the words "*Working Days*".
- 5.7.4 Delete from the second line of paragraph 5.7.4 the words, "5 calendar days after the issuance" and substitute the words "20 calendar days after receipt of".

#### **GC 5.10 DEFICIENCY HOLDBACK**

Add a new General Condition 5.10 - DEFICIENCY HOLDBACK as follows:

- 5.10.1 Notwithstanding any provisions contained in the *Contract Documents* concerning certification and release of monies to the *Contractor*, the *Owner* reserves the right to establish a deficiency holdback, at the time of the review for Substantial Performance, based on a 200% dollar value of the deficiencies listed by the Consultant. No individual deficiency will be valued at less than two hundred dollars (\$200.00). The *Owner* shall retain the entire deficiency holdback amount until completion of all of the deficiencies listed by the Consultant to the satisfaction of the Consultant.

#### **GC 6.1 OWNER'S RIGHT TO MAKE CHANGES**

Add new paragraphs 6.1.3., 6.1.4, 6.1.5, 6.1.6 and 6.1.7 as follows:

- 6.1.3 Labour costs shall be actual, prevailing rates at the Place of the *Work* paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension, vacation pay, hospitalization and medical insurance. The *Contractor* shall provide these rates, when requested by the Consultant, for review and/or agreement.
- 6.1.4 Quotations for changes to the *Work* shall be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from Subcontractors and *Suppliers*, submitted in a format acceptable to the Consultant and including any costs associated with extensions in *Contract Time*.
- 6.1.5 When both additions and deletions covering related *Work* or substitutions are involved in a change to the *Work*, payment, including Overhead and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the *Work*.
- 6.1.6 No extension to the *Contract Time* shall be granted for changes in the *Work* unless the *Contractor* can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the *Work*. Extensions of *Contract Time* and all associated costs, if approved pursuant to GC 3.4.2, are to be included in the relevant Change Order.
- 6.1.7 When a change in the *Work* is proposed or required, the *Contractor* shall within 10 calendar days submit to the Consultant for review a claim for a change in *Contract Price* and/or

*Contract Time*. Should 10 calendar days be insufficient to prepare the submission, the *Contractor* shall within 5 calendar days, advise the Consultant in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered.

## **GC 6.2 CHANGE ORDER**

### **6.2.1 Add after the last sentence in the paragraph:**

The adjustment in the *Contract Time* and the *Contract Price* shall include an adjustment, if any, for delay or for the impact that the change in the *Work* has on the *Work* of the *Contractor*, and once such adjustment is made, the *Contractor* shall be precluded from making any further claims for delay or impact with respect to the change in the *Work*, except for unforeseen conditions that arise in the process of completion of the change in the *Work*.

Add new paragraph 6.2.3 6.2.4, 6.2.5 and 6.2.6 as follows

### **6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the Consultant.**

- .1 by estimate and acceptance of a lump sum;
- .2 by negotiated unit prices which include the *Contractor's* Overhead and profit, or;
- .3 by the actual cost to the *Owner*, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs:
  - .1 for Change Orders with a value of \$0 to \$20,000 the total Subcontractor/Supplier mark-up including Overhead and profit shall be 15% and the total *Contractor* mark-up including overhead and profit shall be 10%.
  - .2 For Change Orders with a value in excess of \$20,000, the Subcontractor/Supplier and *Contractor* mark-up on the first \$20,000 shall be as in 6.2.3.3.1 above and the mark-up including Overhead and profit on the balance of the invoice shall, for Subcontractors and *Suppliers*, be 7.5 percent and for the *Contractor*, 5 percent.

### **6.2.4 All quotations will be submitted in a complete manner listing:**

- .1 quantity of each material,
- .2 unit cost of each material,
- .3 man hours involved,
- .4 cost per hour,
- .5 Subcontractor quotations submitted listing items 1 to 4 above and item 6 below.
- .6 mark-up

### **6.2.5 The *Owner* and the Consultant will not be responsible for delays to the *Work* resulting from**

late, incomplete or inadequately broken down valuations submitted by the *Contractor*.

- 6.2.6 Notwithstanding the foregoing, errors, inconsistencies, discrepancies and/or omissions shall not include lack of reference on the *Drawings* or in the *Specifications* to labour and/or Products that are required or normally recognized within respective trade practices as being necessary for the complete execution of the *Work*. The *Contractor* shall not use subsequent *RFIs*, issued during execution of the *Work* to establish a change and/or changes in the *Work* pursuant to Part 6 – CHANGES IN THE WORK. The contractor shall include the pricing for all work and all trades involved in the scope of the change.

### GC 6.3 CHANGE DIRECTIVE

- 6.3.6.1 Amend paragraph 6.3.6.1 by deleting the final period and adding as follows “which shall be calculated as follows”:

- .1 for Change Orders with a value of \$0 to \$20,000 the total Subcontractor/Supplier mark-up including Overhead and profit shall be 15% and the total *Contractor* mark-up including overhead and profit shall be 10%.
- .2 For Change Orders with a value in excess of \$20,000, the Subcontractor/Supplier and Contractor mark-up on the first \$20,000 shall be as in 6.3.6.1.1 above and the mark-up including Overhead and profit on the balance of the invoice shall, for Subcontractors and Suppliers, be 7.5 percent and for the Contractor, 5 percent.

- 6.3.6.2 Delete paragraph 6.3.6.2 and replace it with the following:

If a change in the *Work* results in a net decrease in the *Contract Price* in excess of \$20,000 the amount of the credit shall be the net cost, with deduction for Overhead and profit. If a change in the *Work* results in a net decrease in the *Contract Price* of \$20,000 or less, the amount of the credit shall be the net cost, without deduction for Overhead or profit.

- 6.3.7.1 In subparagraph 6.3.7.1 insert “while directly engaged in the work attributable to the change” after the words “in the direct employ of the *Contractor*”.

- 6.3.7 At the end of paragraph 6.3.7 add the following:

All other costs attributable to the change in the *Work* including the costs of all administrative or supervisory personnel are included in Overhead and profit calculated in accordance with the provisions of paragraph 6.1.5 of GC6.1 – OWNER'S RIGHT TO MAKE CHANGES.

### GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

Add new paragraph 6.4.5

- 6.4.5 If the Contractor was given access to the Place of the Work prior to submission of the bid on which the Contract was awarded, then the Contractor confirms that it carefully investigate the Place of the Work and, in doing so, applied to that investigation the degree of care and skill required by paragraph 3.14.1. In those circumstances, the Contractor is not entitled to an adjustment to the Contract Price or to an extension of the Contract Time for conditions which could reasonably have been ascertained by the Contractor by such careful investigation, or which could have been reasonably inferred

from the material provided with the Contract Documents. In those circumstances, should a claim arise, the Contractor will have the burden of establishing that it could not have discovered the materially different conditions from a careful investigation, because of restrictions placed on its access or inferred the existence of the conditions from the material provided with the Contract Documents. This clause in no way limits the Contractor's rights under GC6.4.1.

## **GC 6.5 DELAYS**

Add new paragraphs 6.5.6 and 6.5.7

- 6.5.6 The Costs which the Contractor may, from time to time, be entitled to pursuant to the provisions of paragraph 6.5.1, 6.5.2 or 6.5.3 shall not include loss of profits or consequential damages. "Reasonable costs", as referenced in paragraph 6.5.1, 6.5.2 and, or 6.5.3 shall be specifically defined as documented, itemized costs directly attributable to delay and categorized as follows: extended job supervision, extended site office overhead, extended use of construction equipment, wage and material escalation, extended office overhead and profit for the work at a reasonable rate demonstrated by the Contractor.
- 6.5.7 Upon notice of Delay, the Contractor shall demonstrate the impact of the delay clearly identified on each subsequent schedule update.

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

At paragraph 7.1.2 Add the following subsections.

- .1 If in the opinion of the Owner or Owner's Agent, the Contractor fails to satisfactorily carry out the obligations and duties of an employer and/or constructor as required under the Occupational Health and Safety Act, the Owner reserves the right to immediately notify the contractor in writing of the alleged default.
- .2 Upon issuance, the notice of alleged default shall be signed off by both the Contractor and the Owner or Owner's Agent.

At paragraph 7.1.3 Add the following subsections:

- .4 In the case of an alleged default under GC 7.1.2.1, upon receipt of written notice, the Contractor shall take action forthwith to correct the default to the satisfaction of the Owner, or the Owner's Agent.

At paragraph 7.1.4.2 Add the following subsections:

- .3 In the case of an alleged default under GC 7.1.2.1, and should the Contractor disagree with the alleged default, the Owner or the Owner's Agent reserves the right to stop all or part of the work and immediately contact the Ontario Ministry of Labour to render a decision.



- .4 In the case of an alleged default under GC 7.1.2.1, should it be determined by the Ontario Ministry of Labour that a default did not occur, the Owner will reimburse the Contractor for its reasonable costs arising from the termination of all or part of the work.

## **GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION**

- 8.2.1 Amend paragraph 8.2.1 by changing part of the second line from “shall appoint a *Project Mediator*” to “may appoint a *Project Mediator*, except that such an appointment shall only be made if both the *Owner* and the *Contractor* agree.”
- 8.2.4 Amend paragraph 8.2.4 by changing part of the second line from “the parties shall request the *Project Mediator*” to “and subject to paragraph 8.2.1 the parties may request the *Project Mediator*” and by adding after the word “dispute” at the end of the first sentence the words “such request to be effective only if it is made by both parties”.
- 8.2.6 Delete paragraphs 8.2.6 in its entirety and substitute with:
- The dispute may be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, provided that both the *Contractor* and the *Owner* agree. If the *Contractor* and the *Owner* agree to resolve the dispute by arbitration, the arbitration shall be conducted in the Town of Renfrew, Ontario or as the parties may agree.
- Delete paragraphs 8.2.7 and 8.2.8 in their entirety.

## **GC 9.1 PROTECTION OF WORK AND PROPERTY**

- 9.1.1.1 Delete subparagraph 9.1.1.1 in its entirety and substitute the following:
- errors in the *Contract Documents* which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1;
- 9.1.2 Delete paragraph 9.1.2 in its entirety and substitute as follows:
- Before commencing any *Work*, the *Contractor* shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the *Contract Documents*, or that are inferable from an inspection of the Place of the *Work* exercising the degree of care and skill described in paragraph 3.14.1.
- Add new paragraph 9.1.5 as follows:
- 9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the *Contractor* shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from either the *Owner* or the Consultant. Where, however, there is danger to life, the environment, or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger.

Add new paragraph 9.1.6 as follows:

- 9.1.6 The Contractor shall be responsible for securing the Place of Work at all times and shall take all reasonable precautions necessary to protect the Place of Work, its contents, materials (including Owner-supplied materials) and the public from loss or damage during and after working hours. Where the Consultant or the Owner deems the provision of security guard services to be necessary, to protect the Owner's interests, the Contractor shall provide those services at the Owner's expense. Where the Contractor cannot secure the perimeter of the construction zone because of the work in progress the Contractor shall provide those services at the Contractor's expense.

## **GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES**

Add a new subparagraph 9.2.5.5 as follows:

- 9.2.5.5 in addition to the steps described in subparagraph 9.2.5.3, take any further steps it deems necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances or materials.

- 9.2.6 Add the following to paragraph 9.2.6, after the word "responsible" in the second line:

or whether any toxic or hazardous substances or materials already at the Place of the *Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,

- 9.2.8 Add the following to paragraph 9.2.8, after the word "responsible" in the second line:

.. or whether any toxic or hazardous substances or materials already at the Place of the *Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,...

Add new paragraphs 9.2.10 and 9.2.11 as follows:

- 9.2.10 The *Contractor*, Subcontractors and *Suppliers* shall not bring on to the Place of the *Work* any toxic or hazardous substances and materials except as required in order to perform the *Work*. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the Place of the *Work*.
- 9.2.11 The *Contractor* shall indemnify and hold harmless the *Owner*, its parent, subsidiaries and affiliates, the Consultant and their respective partners, officers, directors, agents and employees from and against any and all liabilities, costs, expenses, and claims resulting from bodily injury, including death, and damage to property of any person, corporation or other body politic, that arises from the neglect or improper use by the *Contractor*, Subcontractors and *Suppliers* of any toxic or hazardous substances or materials at the Place of the *Work*.

## **GC 9.4 CONSTRUCTION SAFETY**

9.4.1 Delete paragraph 9.4.1 in its entirety and substitute as follows:

The *Contractor* shall be solely responsible for construction safety at the Place of the *Work* and for compliance with the rules, regulations, and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*. Add new paragraphs 9.4.2 to 9.4.10 as follows:

9.4.2 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- .1 the evidence of workers' compensation compliance required by GC 10.4.1;
- .2 copies of the *Contractor's* insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;
- .3 documentation setting out the *Contractor's* in-house safety programs;
- .4 copies of any documentation or notices to be filed or delivered to the authorities having jurisdiction for the regulation of occupational health and safety at the Place of the *Work*.

9.4.3 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, trustees, officers, directors, employees, consultants, successors, appointees, and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the occupational health and safety legislation in force at the Place of the *Work* including the payment of legal fees and disbursements on a substantial indemnity basis.

9.4.4 The *Owner* undertakes to include in its contracts with other contractors and in its instructions to its own forces the requirement that the other contractor or its own forces, as the case may be, comply with the policies and procedures of and the directions and instructions from the *Contractor* with respect to occupational health and safety and related matters.

9.4.5 If the *Owner* is of the reasonable opinion that the *Contractor* has not taken such precautions as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the *Owner* may take any remedial measures which it deems necessary, including stopping the performance of all or any portion of the *Work*, and the *Owner* may use its employees, the *Contractor*, any Subcontractor or any other contractors to perform such remedial measures.

9.4.6 The *Contractor* shall file any notices or any similar document required pursuant to the *Contract* or the safety regulations in force at the Place of the *Work*. This duty of the *Contractor* will be considered to be included in the *Work* and no separate payment therefore will be made to the *Contractor*.

9.4.7 Unless otherwise provided in the *Contract Documents*, the *Contractor* shall develop, maintain and supervise for the duration of the *Work* a comprehensive safety program that will effectively incorporate and implement all required safety precautions. The program shall, at a minimum, respond fully to the applicable safety regulations and general construction practices for the safety of persons or property, including, without limitation, any general safety rules and regulations of the *Owner* and any workers' compensation or occupational health and safety statutes or regulations in force at the Place of the *Work*.

9.4.8 The *Contractor* shall provide a copy of the safety program described in paragraph 9.4.7 hereof

to the Consultant for delivery to the *Owner* prior to the commencement of the *Work*, and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the *Project* complies with such program.

- 9.4.9 The *Contractor* shall arrange regular safety meetings, and shall supply and maintain, at its own expense, at its office or other well-known place at the job site, safety equipment necessary to protect the workers and general public against accident or injury as prescribed by the authorities having jurisdiction at the Place of the *Work*, including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any injured person to a hospital or a doctor's care.
- 9.4.10 The *Contractor* shall promptly report in writing to the *Owner* and the Consultant all accidents of any sort arising out of or in connection with the performance of the *Work*, whether on or adjacent to the job site, giving full details and statements of witnesses. If death or serious injuries or damages are caused, the accident shall be promptly reported by the *Contractor* to the *Owner* and the Consultant by telephone or messenger in addition to any reporting required under the applicable safety regulations.

#### **GC 10.1 TAXES AND DUTIES**

- 10.1.2 Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:

For greater certainty, the *Contractor* shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties and the *Owner* shall not be entitled to any credit relating to mark-up for overhead or profit on any decrease in such taxes. The *Contractor* shall provide a detailed breakdown of additional taxes if requested by the *Owner* in a form satisfactory to the *Owner*.

Add new paragraph 10.1.3 as follows:

- 10.1.3 Where the *Owner* is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or Value Added Taxes applicable to the Contract, the *Contractor* shall, at the request of the *Owner*, assist with the application for any exemption, recovery or refund of all such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit of the *Owner*. The *Contractor* agrees to endorse over to the *Owner* and cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

#### **GC 10.2 LAWS, NOTICES, PERMITS, AND FEES**

Add to the end of paragraph 10.2.4 as follows:

The *Contractor* shall notify the Chief Building Official or the registered code agency, where applicable, of the readiness, substantial completion, and completion of the stages of construction set out in the Ontario Building Code. The *Contractor* shall be present at each site inspection by and inspector or registered code agency. If any laws, ordinances, rules, regulations, or codes conflict, the more stringent shall govern.

- 10.2.5 Amend paragraph 10.2.5 by adding the words "Subject to paragraph 3.4" at the beginning of the paragraph. Add the following to the end of the second sentence:  
and no further *Work* on the affected components of the *Contract* shall proceed until these directives have been obtained by the *Contractor* from the Consultant.

Add new paragraph 10.2.8 as follows:

- 10.2.8 The *Contractor* shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the *Work* as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the *Owner's* occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the *Work*, in the event that such governmental authorities furnish such certificates.

#### **GC 10.4 WORKERS' COMPENSATION**

- 10.4.1 Delete paragraph 10.4.1 and replace with the following:

Prior to commencing the *Work*, and with each and every application for payment thereafter, including the *Contractor's* application for payment of the holdback amount following Substantial Performance of the *Work* and again with the *Contractor's* application for final payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation in force at the Place of the *Work*, including payments due there under.

#### **GC 11.1 INSURANCE**

- 1 Supplementary General Conditions, Delete GC 11.1 Insurance and replace with:

Refer to GC 11.1 Insurance in the CCDC 2 with the following:

2. Delete 11.1.1.

Replace with: Without restricting the generality of GC 12.1 INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the minimum requirements are not less than \$15,000,000 per occurrence, an aggregate limit of not less than \$15,000,000 within any policy.

3. Delete 11.1.1.1

Replace with: General Liability insurance in the joint name of the Contractor and the Owner, and the Consultants shall be named insureds as follows; Hobin Architecture Incorporated including sub-consultants Cunliffe and Associates, Goodkey Weedmark and Associates, but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the Contractor with regard to the Work. General Liability insurance shall be maintained from the date of commencement of the Work until one year from the date of Substantial Performance of the Work. Liability coverage shall be provided for completed operations hazards from the date of Substantial Performance of the Work, as set out in the certificate of Substantial Performance of the Work, on an ongoing basis for a period of 6 years following Substantial Performance of the Work.

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

Replace with: 11.1.3 "The Contractor shall be responsible to pay the deductible amounts for loss which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*."

5. Delete 11.1.1.4

Replace with:

11.1.1.4 ***The Owner shall*** provide "Broad Form" property insurance in the joint names of the *Contractor* and the *Owner* and the *Consultants* shall be named insureds as follows; Hobin Architecture Incorporated including sub-consultants Cunliffe and Associates, Goodkey Weedmark and Associates,. The policy shall include as insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the Work until the earliest of:

- (1) 10 calendar days after the date of Substantial Performance of the Work;
- (2) When left unattended for more than **90** consecutive calendar days or when construction activity has ceased for more than **90** consecutive calendar days.

## GC 11.2 CONTRACT SECURITY

11.2.2 Delete paragraph after the word "provided" and replace with the following:

Such bonds shall be issued by a duly licensed surety company, which has been approved by the *Owner*, authorized to transact a business of suretyship in the province or territory of the Place of the *Work* and shall be maintained in good standing until the fulfilment of the *Contract*, including all warranty and maintenance periods set out in the *Contract Documents*.

Add new paragraph 11.2.3 as follows:

11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the *Contractor's* obligations in the *Contract* Document and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The *Contractor* represents and warrants to the *Owner* that it has provided its surety with a copy of the *Contract Documents* prior to the issuance of such bonds.

11.2.4 Insert a new paragraph, numbered 11.2.4, to read as follows: "The Contractor shall provide a performance bond, and a labour and material payment bond, each issued by a bonding company acceptable to the Owner and the Lender and licensed to issue such instruments in the jurisdiction of the Place of the Work, in the amounts and forms as follows:".

11.2.4.1 Insert a new paragraph, numbered 11.2.4.1, to read as follows: "Amount of performance bond shall be equal to not less than 50% of the Contract Price.".

11.2.4.2 Insert a new paragraph, numbered 11.2.4.2, to read as follows: "The form of performance bond shall be Canadian Standard Construction Document CCDC 221.".

- 11.2.4.3 Insert a new paragraph, numbered 11.2.4.3, to read as follows: "Amount of labour and material payment bond shall be equal to not less than 50% of the Contract Price."
- 11.2.4.4 Insert a new paragraph, numbered 11.2.4.4, to read as follows: "The form of labour and material payment bond shall be Canadian Standard Construction Document CCDC 222."
- 11.2.5 Insert a new paragraph, numbered 11.2.5, to read as follows: "The bonds provided in accordance with paragraph 11.2.5 shall guarantee the faithful performance of the Contract in accordance with the Contract Documents including the requirements for warranties provided for the GC 12.3 WARRANTY, and the payment of all obligations incurred in the event of the Contractor's default, including, but not limited to, the following:"
- 11.2.5.1 Insert a new paragraph, numbered 11.2.5.1, to read as follows: "The payment of legal, accounting, architectural, engineering and other Consultant's expenses incurred by the Owner in determining the extent of Work executed and any additional Work required as a result of the interruption of the Work, and its Completion."
- 11.2.5.2 Insert a new paragraph, numbered 11.2.5.2, to read as follows: "The payment of additional expenses to the Owner in the form of security guard services, light, heat, power, loss of use of premises, and other related costs, payable over the period between the default of the Contract and Completion of the Work."
- 11.2.6 Insert a new paragraph, numbered 11.2.6, to read as follows: "Without limiting the foregoing in any way, the bonds shall indemnify and hold harmless the Owner for and against costs and expenses (including legal and Consultant services and court costs) arising out of or as a consequence of any default of the Contractor under this Contract."
- 11.2.7 Insert a new paragraph, numbered 11.2.7, to read as follows: "The Contractor shall be responsible for notifying the surety company of any changes made to the Contract during the course of construction."
- 11.2.8 Insert a new paragraph, numbered 11.2.8, to read as follows: "The premiums for bonds required by the Contract Documents shall be included in the Contract Price."
- 11.2.9 Insert a new paragraph, numbered 11.2.9, to read as follows: "Should the Owner or Lender require additional bonds by the Contractor or any of his Subcontractors, after the receipt of bids for the Work, the Contract Price shall be increased by all costs attributable to providing such bonds. The Contractor shall promptly provide the Owner or the Lender, through the Consultant, with any such bonds that may be required."

### **GC 12.3 WARRANTY**

- 12.3.2 Delete from the first line of paragraph 12.3.2 the word, "The" and substitute the words "Subject to paragraph 3.4.1, the.."

Add new paragraphs 12.3.7 to 12.3.11 as follows:

- 12.3.7 The *Contractor* shall provide to the *Owner* fully and properly completed and signed copies of all warranties and guarantees required by the *Contract Documents* containing the following:

- .1 the proper name of the *Owner*;
  - .2 the proper name and address of the *Project*;
  - .3 the date the warranty commences, which shall be at the "date of an Occupancy Permit being received for that phase of the Work " unless otherwise agreed upon by the Consultant in writing.
  - .4 a clear definition of what is being warranted and/or guaranteed as required by the *Contract Documents*; and
  - .5 the signature and seal (if required by the governing law of the *Contract*) of the company issuing the warranty, countersigned by the *Contractor*.
- 12.3.9 The *Contractor* shall ensure that its Subcontractors are bound to the requirements of GC 12.3 – WARRANTY for the Subcontractor's portion of the *Work*.
- 12.3.10 The *Contractor* shall ensure that all warranties, guarantees or other obligations for *Work*, services or Products performed or supplied by any Subcontractor, Supplier or other person in connection with the *Work* are obtained and available for the direct benefit of the *Owner*. In the alternative, the *Contractor* shall assign to the *Owner* all warranties, guarantees or other obligations for *Work*, services or Products performed or supplied by any Subcontractor, Supplier or other person in connection with the *Work* and such assignment shall be with the consent of the assigning party, where required by law, or by the terms of that party's *Contract*. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the *Owner* under the *Contract Documents*.
- 12.3.11 The *Contractor* shall commence or correct any deficiency within 2 *Working Days* after receiving a notice from the *Owner* or the Consultant, and shall complete the *Work* as expeditiously as possible, except in the case where the deficiency prevents maintaining security or where basic systems essential to the ongoing business of the *Owner* and/or its tenants cannot be maintained operational as designed. In those circumstances all necessary corrections and/or installations of temporary replacements shall be carried out immediately as an emergency service. Should the *Contractor* fail to provide this emergency service within 8 hours of a request being made during the normal business hours of the *Contractor*, the *Owner* is authorized, notwithstanding GC 3.1, to carry out all necessary repairs or replacements at the *Contractor's* expense.

## **PART 13 OTHER PROVISIONS**

Add new Part 13 and 14 OTHER PROVISIONS as follows:

### **GC 13.1 OWNERSHIP OF MATERIALS**

- 13.1.1 Unless otherwise specified, all materials existing at the Place of the *Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All *Work* and Products delivered to the Place of the *Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials as its property when notified in writing to do so by the Consultant.

### **GC 13.2 CONSTRUCTION LIENS**

- 13.2.1 In the event that a claim for lien is registered against the *Project* by a



Subcontractor, Sub-subcontractor or Supplier, and provided the *Owner* has paid all amounts properly owing under the *Contract*, the *Contractor* shall, at its own expense:

- .1 within 10 calendar days, ensure that any and all claims for lien and certificates of action are discharged, released, or vacated by the posting of security or otherwise; and
  - .2 in the case of written notices of lien, ensure that such notices are withdrawn, in writing.
- 13.2.2 In the event that the *Contractor* fails to conform with the requirements of paragraph 13.2.1, the *Owner* may fulfill those requirements without Notice in Writing to the *Contractor* and set off and deduct from any amount owing to the *Contractor*, all costs and associated expenses, including the costs of posting security and all legal fees and disbursements associated with discharging or vacating the claim for lien or certificate of action and defending the action, unless caused by the owner. If there is no amount owing by the *Owner* to the *Contractor*, then the *Contractor* shall reimburse the *Owner* for all of the said costs and associated expenses.
- 13.2.3 Notwithstanding any other provision in the *Contract*, the Consultant shall not be obligated to issue a certificate and the *Owner* shall not be obligated to make payment to the *Contractor* if, at the time such certificate or payment was otherwise due:
- .1 a claim for lien has been registered against the *Project* lands, or
  - .2 if the *Owner* or mortgagee of the *Project* lands has received written notice of a lien.. or
  - .3 the *Owner* or Consultant reasonably believe that any party has purported to retain title to Products or materials in respect of which an application for payment has been made.
- 13.2.4 Without limiting the foregoing, the *Contractor* shall, if requested by the *Owner*, defend, indemnify and save the *Owner* harmless from the amount of all such claims and the costs of defending any and all actions commenced against the *Owner* pursuant to the construction/builder's lien legislation in force at the Place of the *Work*, including the legal costs of the *Owner*, unless the lien was a direct result of a breach of the *Contract* by the *Owner* or the non-payment by the *Owner* of a valid charge or claim under the *Contract*.
- 13.2.5 GC 13.2 – CONSTRUCTION LIENS does not apply to construction/builder's liens claimed by the *Contractor*.

#### **GC 14 CONFLICT OF INTEREST**

- 14.1 The *Contractor*, all of the Subcontractors and *Suppliers* and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the *Owner*) with the provision of the *Work* pursuant to the *Contract*. The *Contractor* acknowledges and agrees that a conflict of interest, as described in this Article A-9, includes, but is not limited to, the use of Confidential Information where the *Owner* has not specifically authorized such use.
- 14.2 The *Contractor* shall disclose to the *Owner*, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential

conflict of interest, including the retention of any Subcontractor or Supplier that is directly or indirectly affiliated with or related to the *Contractor*.

- 14.3 The *Contractor* covenants and agrees that it will not hire or retain the services of any employee or previous employee of the *Owner* where to do so constitutes a breach by such employee or previous employee of the *Owner's* conflict of interest policy, as it may be amended from time to time, until after completion of the *Work* under the *Contract*.
- 14.4 Notwithstanding paragraph 7.1.2 of GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE *CONTRACT*, a breach of this Article by the *Contractor*, any of the Subcontractors, or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the *Owner* to terminate the *Contract*, in addition to any other rights and remedies fails to comply with the requirements of the *Contract*, and if the Consultant has given a written statement to the *Contractor* that sufficient cause exists to justify such action, the *Owner* may notify the *Contractor*, in writing, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the five (5) *Working Days* immediately following the receipt of such notice that the *Owner* has in the *Contract*, in law, or in equity.

**END OF AMENDMENTS TO CCDC 2 - 2008**

## **PART 1 - GENERAL**

### **1.1 REFERENCES**

- .1 Canadian Construction Documents Committee (CCDC)
  - .1 CCDC 2-2008 Stipulated Price Contract.

### **1.2 CASH ALLOWANCES**

- .1 Refer to CCDC 2, GC 4.1.
- .2 Include in Contract Price specified cash allowances.
- .3 Cash allowances, unless otherwise specified, cover net cost to Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage installation and other authorized expenses incurred in performing Work.
- .4 Contract Price, and not cash allowance, includes Contractor's overhead and profit in connection with such cash allowance.
- .5 Contract Price will be adjusted by written order to provide for excess or deficit to each cash allowance.
- .6 Where costs under a cash allowance exceed amount of allowance, Contractor will be compensated for excess incurred and substantiated plus allowance for overhead and profit as set out in Contract Documents.
- .7 Include progress payments on accounts of work authorized under cash allowances in Consultant's monthly certificate for payment.
- .8 Prepare schedule jointly with Consultant and Contractor to show when items called for under cash allowances must be authorized by Consultant for ordering purposes so that progress of Work will not be delayed.
- .9 Amount of each allowance, for Work specified in respective specification Sections is as follows:
  - .1 **CASH ALLOWANCE 1 – Music Room PA work:**  
Carry **\$3,000.00** to include mandatory site visit by Owner Designated Audio work to review the existing main P.A. system. Cash Allowance to include supply and installation of new wiring to new PA phone, PA speakers and call switch in Music Room Addition.
  - .2 **CASH ALLOWANCE 2 – Music Room Data/IT work:**  
Carry a cash allowance of **\$5,000.00** for Owner Designated Cabling work to include all associated cabling, conduit, data outlets and connections in Music Room Addition to existing IT

location.

**.3 CASH ALLOWANCE 3 – Security Work:**

Carry a cash allowance of **\$1,500.00** for mandatory site visit by ADT Protectron (Paul Clouthier, Tel: 819-360-0394) to provide card reader access to new exit door location.

**.4 CASH ALLOWANCE 4 – Remedial Interior Finishing Work:**

Carry a cash allowance of **\$10,000.00** for remedial wall, floor, ceiling and painting work required when existing exit door and entry door into Music Room Addition are relocated. Allowance to include all supply & installation of finishes. Drywall infill of existing windows as detailed shall not be included under this Allowance and shall otherwise form part of the base bid. Demolition work to remove existing door and window frames as noted shall not be included under this Allowance and shall otherwise form part of the base bid.

**.4 TOTAL CASH ALLOWANCES: \$19,500.00**

1.3 CONTINGENCY  
ALLOWANCE

.1 Refer to CCDC 2, GC 4.2.

.2 Do not Include in Contract Price contingency allowance.

**PART 2 - PRODUCTS**

2.1 NOT USED

.1 Not Used.

**PART 3 - EXECUTION**

3.1 NOT USED

.1 Not Used.

**END OF SECTION**

## ADDENDUM

2.4 LOCKS AND LATCHES .1 Cylindrical type. Schlage 'AL' series.  
Saturn (SAT) lever design. Functions as specified.  
Provide dust boxes behind all strikes.

should read : .1 Heavy duty cylindrical type. Schlage 'ND' series.  
Rhodes (RHO) lever design. Functions as specified.  
Provide dust boxes behind all strikes.

ITEM #2 1 SGLE DOOR 101.1 CORRIDOR TO MUSIC ROOM 101 LH

delete: 1 EA LOCKSET AL70PD x SAT 626

add: 1 EA LOCKSET ND70PD x RHO 626

ITEM #3 1 SGLE DOOR 102.1 MUSIC ROOM 101 FROM STORAGE 102 LHR

delete: 1 EA LOCKSET AL70PD x SAT 626

add: 1 EA LOCKSET ND70PD x RHO 626

ITEM #4 1 SGLE DOOR 103.1 MUSIC ROOM 101 TO OFFICE 103 RH

delete: 1 EA LOCKSET AL70PD x SAT 626

add: 1 EA LOCKSET ND70PD x RHO 626

ITEM #5 1 SGLE DOOR 104.1 MUSIC ROOM 101 FROM PRACTICE ROOM 104 RHR

ITEM #6 1 SGLE DOOR 105.1 MUSIC ROOM 101 FROM PRACTICE ROOM 105 RHR

delete: 2 EA LOCKSET AL70PD x SAT 626

add: 2 EA LOCKSET ND70PD x RHO 626



## ELECTRICAL ADDENDUM

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**Project Name:** Turnbull School  
Music Room Addition

**Electrical Addendum No.:** ADD-E01

**Revision:** Rev 00

**Issue Date** 2018-08-02

**Issued with Architectural Addendum No. 2**

**Architect:**

Hobin  
Architecture  
Incorporated

**Owner:**

Turnbull School

**WSP Project Number:** 181-04865-00

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The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents. Include in bid amount for the following items of addition, deletion or clarification. Indicate in the space provided on the bid form that you have received and included for the requirements of this addendum.

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**Reference drawings attached:**

**E001 Rev C Electrical Legend and Drawing List**

**E002 Rev C Electrical Specification Sheet 1 of 2**

**E003 Rev C Electrical Specification Sheet 2 of 2**


**E101 Rev C Electrical Lighting and Power Systems**


























**E201 Rev C Electrical schedules and Details**





















**Description of Work:**









1. Refer to Rev clouds on the drawings,  
E101- Added outdoor wall sconce lighting, door operator and security back box at exit door.
2. E201 - Added lighting circuit and Type 'W' wall sconce specification.

**Signed by:**

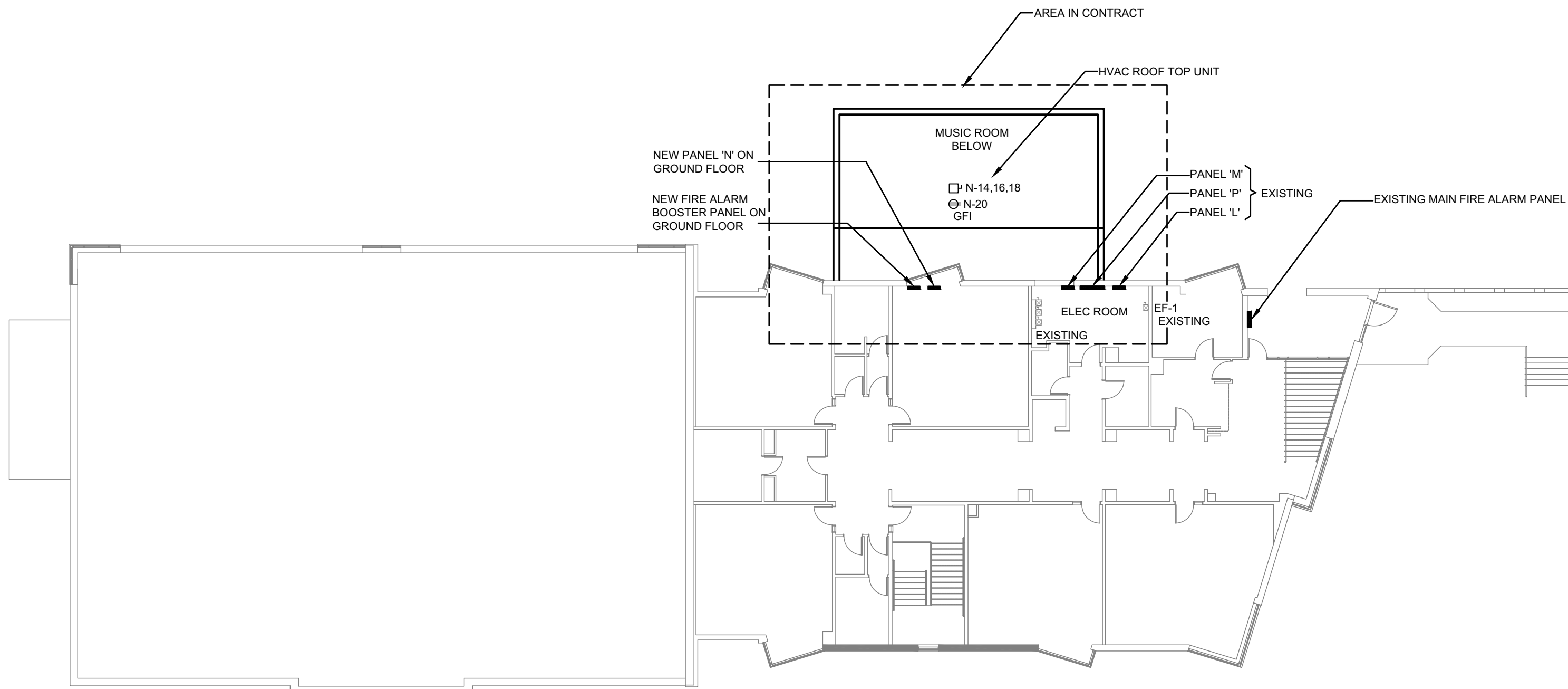
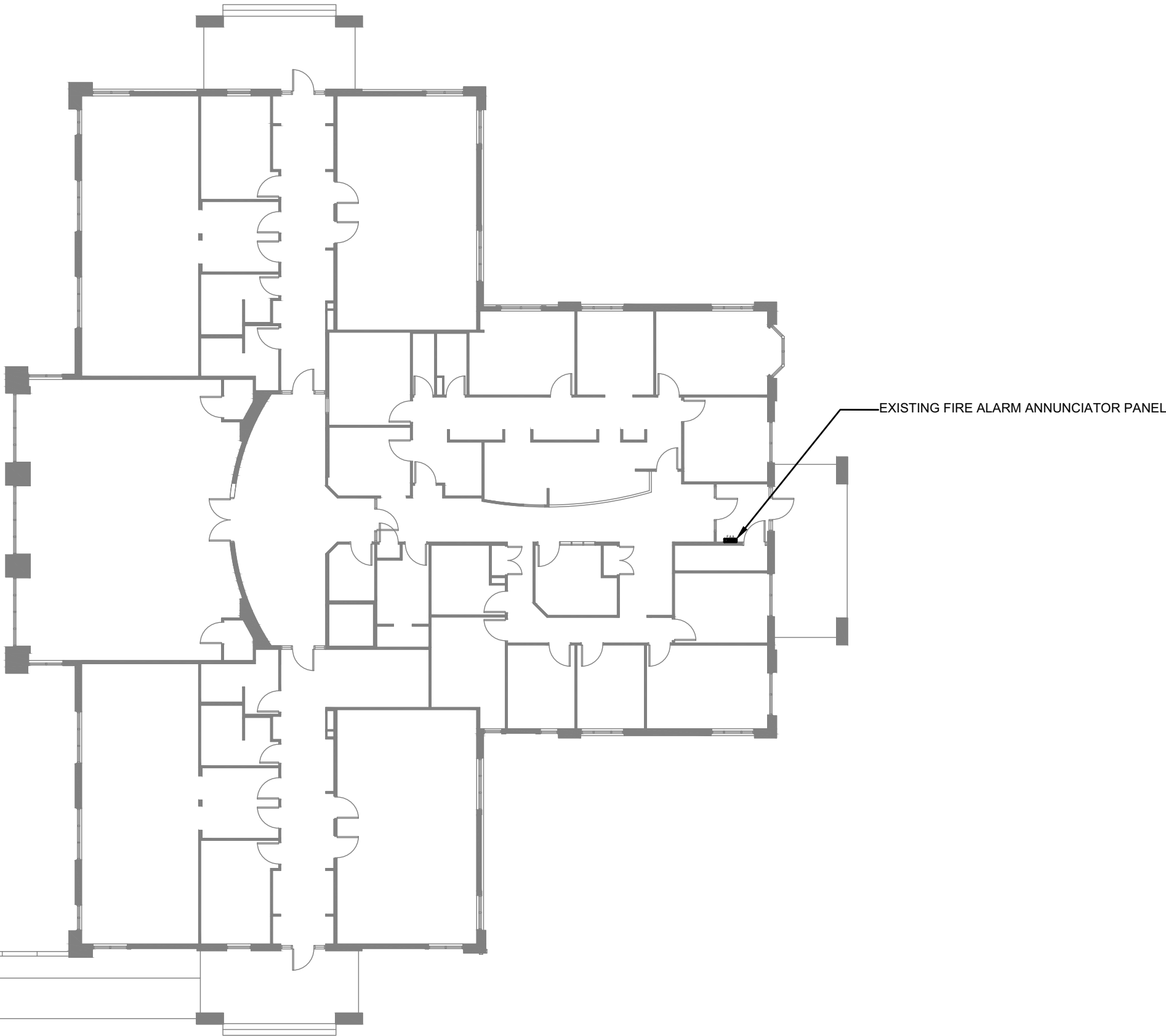
  
\_\_\_\_\_  
Ken MacIntosh

POWER SYMBOLS	
SYMBOL	DESCRIPTION
	DUPLEX U-GROUND 5-20R - 15A/20A, 125 VOLT, 2 POLE, 3 WIRE GROUNDING RECEPTACLE MOUNTED 400 mm ABOVE FINISHED LEVEL, UNLESS OTHERWISE NOTED
GFI	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
C	DEVICE MOUNTED IN CEILING
F	DEVICE MOUNTED IN FLOOR MONUMENT
	SIMILAR TO ABOVE, BUT MOUNTED APPROXIMATELY 3'-6" (1050 mm) ABOVE FINISHED FLOOR LEVEL OR ABOVE COUNTER, UNLESS OTHERWISE NOTED
	QUAD (TWO DUPLEX) U-GROUND 15A, 125 VOLT, 2 POLE, 3 WIRE GROUNDING RECEPTACLE MOUNTED 400 mm ABOVE FINISHED FLOOR LEVEL (IN COMMON FACEPLATE) UNLESS OTHERWISE NOTED
	DATA OUTLET
L6-20R 	20A-250V 2P-3W GROUNDED SINGLE RECEPTACLE (CSA L6-20R) TWIST LOCK MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
L6-30R 	30A-250V 2P-3W GROUNDED SINGLE RECEPTACLE (CSA L6-30R) TWIST LOCK MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
	FURNITURE SYSTEM CONNECTION POLE
	120V CONNECTION TO EQUIPMENT
	208V, 1PH CONNECTION TO EQUIPMENTS
	208V, 3PH CONNECTION TO EQUIPMENT
	SINGLE SURFACE MOUNTED PANELBOARD,
	SINGLE RECESSED MOUNTED PANELBOARD
	JUNCTION BOX
	HORSE POWER RATED SWITCH
	PULL BOX
	DUAL CHANNEL (POWER AND DATA) SURFACE RACEWAY IN CARPET WIRE WAY - REFER TO SPECIFICATION - AT THE TRANSITION WALL BOX PROVIDE A 53MM (2") CONDUIT UP TO THE CEILING SPACE FOR DATA
	MOTOR
	DISCONNECT SWITCH UNLESS NOTED OTHERWISE
	MOTOR STARTER - MAGNETIC
	MAGNETIC STARTER & DISCONNECT SWITCH (COMBINATION STARTER)
	MOTOR STARTER - MANUAL
	DISCONNECT SWITCH AND CONNECTION TO DOOR OPERATOR
	DOOR OPERATOR BUTTON - BACK BOX AND 21MM EMT FOR LV CONTROL
	MOTOR c/w STARTER
	ELECTRIC BASEBOARD HEATER

LIGHTING SYMBOLS	
SYMBOL	DESCRIPTION
	(1200MM x 600MM) 2'X4' LUMINAIRE, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	(1200MM x 600MM) 2'X4' LUMINAIRE, SUPPLIED FROM EMERGENCY POWER SOURCE
	(1200MM x 600MM) 2'X4' LUMINAIRE, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE. NUMBER INDICATES CONTROLS (DAYLIGHT HARVESTING)
	STRIP LUMINAIRE, 1200MM, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	STRIP LUMINAIRE, 2400MM, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	RECESSED DOWNLIGHT, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	WALL MOUNTED LIGHT, LETTER INDICATES LUMINAIRE TYPE AS PER LUMINAIRE SCHEDULE.
	ONE, TWO, THREE AND FOUR GANG LINE VOLTAGE TOGGLE SWITCH MOUNTED 4'-0" (1200MM) ABOVE FINISHED FLOOR LEVEL, UNLESS OTHERWISE NOTED.
	3 - WAY SWITCH
	4 - WAY SWITCH
	LOW VOLTAGE SWITCH
	OCCUPANCY SENSOR - SWITCH MOUNTED
	VACANCY SENSOR - SWITCH MOUNTED
	OCCUPANCY SENSOR - CEILING MOUNTED
	DIMMER SWITCH WITH ON / OFF
	EXIT SIGN - WALL MOUNTED GREEN PICTOGRAM
	EXIT SIGN - CEILING MOUNTED GREEN PICTOGRAM
	EMERGENCY LIGHTING BATTERY PACK (BAT1) C/W TWO HEADS, RECEPTACLE CONNECTED TO LOCAL LIGHTING CIRCUIT
	EMERGENCY LIGHTING REMOTE SINGLE HEAD, CONNECTED TO BAT1
	EMERGENCY LIGHTING REMOTE TWIN HEAD, CONNECTED TO BAT1

FIRE ALARM SYMBOLS	
SYMBOL	DESCRIPTION
	RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL.
	RECESSED OR SURFACE MOUNTED FIRE ALARM ANNUNCIATOR PANEL.
	FIRE ALARM PULL STATION MOUNTED 4'-0" (1200) ABOVE FINISHED FLOOR LEVEL UNLESS OTHERWISE NOTED.
	SIMILAR TO ABOVE, EXCEPT 'CG' WHERE SHOWN, DENOTES DEVICE c/w CLEAR GUARD.
	FIRE ALARM SMOKE DETECTOR.
	FIRE ALARM HORN
	FIRE ALARM STROBE HORN COMBINATION.
	FIRE ALARM SHUTDOWN RELAY

GENERAL NOTES:	
1.	THIS IS A COMPREHENSIVE LEGEND AND NOT ALL ITEMS APPEAR ON ELECTRICAL DRAWINGS



1 SECOND FLOOR PLAN LAYOUT  
E100 1:200

ELECTRICAL DRAWING LIST	
SHEET NO.	DRAWING TITLE
E001	ELECTRICAL LEGEND AND, DRAWING LIST
E002	ELECTRICAL SPECIFICATION SHEET 1 OF 2
E003	ELECTRICAL SPECIFICATION SHEET 2 OF 2
E101	ELECTRICAL LIGHTING & POWER SYSTEMS
E201	ELECTRICAL SCHEDULES AND DETAILS

C	2018 08 02	ISSUED WITH ADDENDUM No.2
B	2018 07 05	ISSUED FOR PERMIT & TENDER
A	2018 06 28	ISSUED FOR CO ORDINATION
no.	date	revision

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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1800-2611-01/ENHANCE DRIVE  
OTTAWA, ONTARIO CANADA K1S 5K2  
TEL: 1-613-829-2800 | FAX: 1-613-829-8298 | WWW.WSP.COM

**Hobin Architecture Incorporated**  
63 Pamela Street  
Ottawa, Ontario  
Canada K1S 3K7  
T: 613-238-7200  
F: 613-235-2005  
E: mail@hobinarc.com  
hobinarc.com



PROJECT/LOCATION:  
**TURNBULL SCHOOL  
MUSIC ROOM ADDITION**  
1132 Fisher Avenue, Ottawa

DRAWING TITLE:  
**ELECTRICAL  
LEGEND  
AND DRAWING LIST**

DRAWN BY: K. McI.	DATE: APR. 2018	SCALE: AS SHOWN
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PROJECT: 181-04865-00
DRAWING NO.: <b>E001</b>
REVISION NO.:



1	GENERAL	1.1	COMPLY WITH LATEST REQUIREMENTS OF BUILDING MANAGER'S WORKING REGULATIONS, OBTAIN REGULATIONS AND COMPLY WITH REQUIREMENTS WHILE WORKING ON SITE. UNLESS OTHERWISE NOTED, BASE BUILDING STANDARDS AND SPECIFICATIONS TO BE MINIMUM BASIS FOR WORK. OBTAIN COPY OF DOCUMENTS AND REVIEW.	1.2	CONFORM TO OWNERS/LANDLORDS' TENANT DESIGN CRITERIA AND CONSTRUCTION MANUAL AND TENANT LEASE AGREEMENT. WORK SUBJECT TO REVIEW WITH AND/OR APPROVAL OF OWNER/LANDLORD AND BUILDING MANAGER AND/OR BUILDING SUPERVISOR.	1.3	SUPPLY LABOUR, TOOLS, SERVICES AND EQUIPMENT, AND PROVIDE PRODUCTS AND MATERIALS REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH THIS SPECIFICATION AND DRAWINGS. COMPLY WITH LAWS, REGULATIONS, AND CODES OF AUTHORITIES HAVING JURISDICTION. CONFORM TO REQUIREMENTS OF DIVISIONS 10 AND 11 AND REQUIREMENTS OF DIVISIONS 10 AND 11 AND REQUIREMENTS HEREIN SPECIFIED WHICH ARE SUPPLEMENTARY TO THOSE REQUIREMENTS. PERFORM WORK IN ACCORDANCE WITH LOCAL APPLICABLE GOVERNING CODES AND AUTHORITIES INCLUDING BUT NOT LIMITED TO THE CANADIAN ELECTRICAL SAFETY CODE (CESC) AND ISSUED BULLETINS AND SUPPLEMENTARY STANDARDS.	1.4	WHERE CODES AND/OR REQUIREMENTS CONFLICT, OR THERE IS DISCREPANCY IN DOCUMENTS, INCLUDE FOR MORE STRINGENT AND COSTLY REQUIREMENTS FOR PRICING. ADVISE CONSULTANT AND OBTAIN APPROVAL PRIOR TO STARTING WORK.	1.5	SUBMIT TO CONSULTANT, CHANGE NOTICE QUOTATIONS FOR EXTRA OR DELETED WORK TO COMPLETE WITH ITEMIZED COST BREAKDOWN OF LABOUR AND MATERIALS. FAILURE TO PROVIDE WILL RESULT IN REJECTION. UNLESS OTHERWISE NOTED IN DIVISION 01, ELECTRICAL CHANGE NOTICES TO BE PRICED IN ACCORDANCE WITH NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA) AND LABOR UNITS AND "ALP" PRICES LESS 2% DISCOUNT FOR OWNERS AND MATERIAL COST. UNLESS OTHERWISE NOTED, ALLOWABLE MAXIMUM PERCENTAGES FOR OVERHEAD AND PROFIT ARE TO BE 7% AND 5% RESPECTIVELY.	1.6	COMPLY WITH EQUIPMENT MANUFACTURERS' INSTALLATION RECOMMENDATIONS AND INSTRUCTIONS UNLESS OTHERWISE NOTED HEREIN OR ON DRAWINGS, OR UNLESS SUCH INSTRUCTIONS AND RECOMMENDATIONS CONTRADICT OR CONTRADICTORY TO THE DRAWINGS. WHERE STANDARDS OF WORK ARE SPECIFIED OR IMPLIED OR WORK DOES NOT COMPLY WITH PERFORMANCE SPECIFIED OR IMPLIED, CORRECT SUCH DEFICIENCY AS DIRECTED BY CONSULTANT OR GOVERNING AUTHORITY. ANY SUBSEQUENT TESTING TO VERIFY PERFORMANCE TO BE PROVIDED AT CONTRACTOR'S EXPENSE. ANY CHARGES FOR OWNERS' STAFF, CONSULTANT OR OTHER PERSONNEL RELATED TO SUCH RETESTING, ARE TO BE AT THE CONTRACTOR'S EXPENSE.	1.7	FOR COMPLIANCE/SUBSTANTIAL COMPLETION LETTER, SUBMIT FOLLOWING APPLICABLE ELECTRONIC DOCUMENTS (PDFS) AS ONE COMPLETE PACKAGE: 1. FIRE ALARM VERIFICATION REPORT WITH SOUND PRESSURE READINGS (MIN. 15 READINGS AT DIFFERENT LOCATIONS WITH DOOR OPEN) AND CERTIFICATE. 2. EQUIPMENT DATA SHEETS. 3. EQUIPMENT TESTING REPORTS. 4. WARRANTIES. 5. ESA INSPECTION CERTIFICATE. 6. ELECTROMAGNETIC TEST TEST CERTIFICATE WARRANTY. 7. PERMIT NUMBERS. 8. AS-BUILT DRAWINGS. 9. CONFIRMATION THAT DEFICIENCIES WERE RECTIFIED.	1.8	ELECTRICAL ENCLOSURES IN CLIMATE CONTROLLED AREAS TO BE UNLESS OTHERWISE NOTED. MINIMUM MINIMUM NECA 1 TYPE WIRING METHODS AND FEATURES. PROVIDE PROTECTION OF DRIP SHIELD WHEN SURFACE MOUNTED, GASKETING AND VENTILATION LOUVRES DESIGNED TO PREVENT EXCESS OF WATER SPRAY ONTO LIVE COMPONENTS.	1.9	PRIOR TO SUBMITTING BID, CAREFULLY EXAMINE CONDITIONS AT SITE WHICH WILL OR MAY AFFECT WORK, DRAWINGS, AND SPECIFICATIONS, AND BECOME FAMILIAR WITH BUILDING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE BUILDING WORK IN ORDER THAT BID INCLUDES FOR EVERYTHING NECESSARY FOR COMPLETION OF WORK.	1.10	BEFORE ANY EQUIPMENT IS ROUGHED IN, DETERMINE ITS INTENDED LOCATION FROM DRAWINGS AND COORDINATE FINAL LOCATIONS WITH SERVICES AND STRUCTURAL CONDITIONS. IF IT IS NOT SHOWN ON DRAWINGS, VERIFY FINAL LOCATION. LOCATIONS OF SERVICES ON DRAWINGS ARE FOR INFORMATION ONLY. REVIEW WITH CONSULTANT AND COORDINATE WITH RESPECTIVE TRADES TO ENSURE THAT EQUIPMENT IS FULLY ACCESSIBLE FOR MAINTENANCE. FAILURE TO DO SO WILL NOT BE GROUNDS FOR ADDITIONAL COSTS. PROPERLY PLAN AND COORDINATE LOCATION AND ROUTING OF SERVICES PRIOR TO ANY INSTALLATION TO AVOID OBSTRUCTIONS TO OTHER SERVICES AND EQUIPMENT REQUIRING ACCESS. CONCEAL SERVICES IN WALLS, CEILING SPACE AND FLOOR SPACE UNLESS OTHERWISE NOTED.	1.11	MAKE APPLICATION FOR, PAY FOR AND OBTAIN, PERMITS AND INSPECTION CERTIFICATES TO COMPLETE WORK. WHEN WORK IS COMPLETE, SUPPLY AND TURN OVER INSPECTION CERTIFICATES FROM GOVERNING AUTHORITIES, INCLUDING ESA, TO CONSULTANT. PAY FEES AND CHARGES BY MUNICIPALITY AND OTHER GOVERNING AUTHORITIES FOR PERMITS, INSPECTIONS, AND CERTIFICATES. RETAIN COPY OF SUCH PERMITS AND CERTIFICATES, ETC., ON JOB SITE. WHERE WORK INVOLVES ELECTROMAGNETIC LOCAL WORK, PROVIDE PERMITS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.	1.12	COORDINATE WORK WITH WORK OF EACH TRADE TO ENSURE PROPER AND COMPLETE INSTALLATION. CONSIDER ALL LOCAL REQUIREMENTS FOR OPENINGS, SLEEVES, INSERTS AND OTHER HARDWARE NECESSARY IN COORDINATION OF WORK, AND, WHERE WORK IS INTEGRATED WITH WORK OF OTHER TRADES OR IS INSTALLED IN CLOSE PROXIMITY WITH WORK OF OTHER TRADES, CAREFULLY COORDINATE WORK PRIOR TO AND DURING INSTALLATION.	1.13	PROPERLY PLAN, COORDINATE AND ESTABLISH EXACT LOCATIONS AND ROUTING OF SERVICES WITH AFFECTED TRADES PRIOR TO INSTALLATION SUCH THAT THEY EACH GET OTHER AS WELL AS ANY OBSTACLE, PIONS, GROUNDWORK, ETC., AND PROVIDE CLEARANCE PRIOR TO GOING OFF WAY, WITH OTHER SERVICES LOCATED AND ARRANGED TO SUIT.	1.14	SCHEDULE WORK WHICH MAY CAUSE NOISE DISTURBANCES AT TIMES APPROVED BY OWNER AND REVIEWED WITH CONSULTANT. COORDINATE WORK WITH TRADES TO MINIMIZE NOISE DISTURBANCES.	1.15	DURING CONSTRUCTION, KEEP SITE REASONABLY CLEAR OF RUBBISH AND WASTE MATERIAL, RESULTING FROM WORK ON DAILY BASIS. AFTER COMPLETION OF WORK, REMOVE RUBBISH AND DEBRIS FROM SITE, ARRANGE AND PAY FOR REPAIR OF DAMAGES CAUSED AND LEAVE PREMISES AND WORK IN GOOD ORDER.	1.16	PROTECT AND STORE EQUIPMENT AND MATERIALS ON SITE FROM DAMAGE. BE RESPONSIBLE FOR SAFE STORAGE OF EQUIPMENT AND GOODS TO BE RELOCATED AND REPAIR OR REPLACE DAMAGED EQUIPMENT AND GOODS AT DISCRETION OF OWNER.	1.17	ALLOW CONSULTANT ACCESS TO WORK. NOTIFY CONSULTANT AT AGREED UPON TIMES OF STAGES OF WORK.	1.18	WHERE STANDARDS OF WORK ARE SPECIFIED OR IMPLIED OR WORK DOES NOT COMPLY WITH PERFORMANCE SPECIFIED OR IMPLIED, CORRECT SUCH DEFICIENCY AS DIRECTED BY CONSULTANT. INCLUDE ANY SUBSEQUENT TESTING TO VERIFY PERFORMANCE. ANY CHARGES FOR OWNERS' STAFF, CONSULTANT OR OTHER PERSONNEL RELATED TO SUCH RETESTING TO ALSO BE AT EXPENSE OF CONTRACTOR.	1.19	PRODUCTS LISTED AND/OR SPECIFIED ON CONTRACT DOCUMENTS ARE SELECTED TO ESTABLISH DESIGN STANDARDS. IN MOST CASES, ACCEPTABLE MANUFACTURERS ARE LISTED. BASE YOUR BID PRICE ON BASE SPECIFIED PRODUCTS OR PRODUCTS SUPPLIED FROM ACCEPTABLE MANUFACTURERS. ENSURE PRODUCTS SUPPLIED FROM MANUFACTURERS OTHER THAN BASE SPECIFIED MANUFACTURERS ARE EQUIVALENT TO SPECIFIED PRODUCTS. CHANGES TO MANUFACTURERS OF PRODUCTS MAY BE PROPOSED TO CONSULTANT FOR ACCEPTANCE PRIOR TO CLOSING OF BIDS. LISTING IN EACH CASE CORRESPONDING CREDIT. CONSULTANT HAS SOLE DISCRETION IN ACCEPTING ANY PROPOSED SUBSTITUTION. INCLUDE IN BID PRICE ANY ADDITIONAL COSTS FOR CHANGES TO ASSOCIATED OR ADJACENT WORK RESULTING FROM PROVISION OF REPLACEMENT MATERIALS. REPAIR OR REPLACE MATERIALS DAMAGED BY MANUFACTURER, ANY PROPOSED CHANGES INITIATED BY CONTRACTOR AFTER AWARD OF CONTRACT MAY BE CONSIDERED BY CONSULTANT AT CONSULTANTS DISCRETION, WITH COSTS FOR SUCH CHANGES IF ACCEPTED BY OWNER, AND COSTS OF SUCH REVIEW BY CONSULTANT TO BE PAID FOR BY CONTRACTOR.	1.20	UNLESS OTHERWISE NOTED IN DIVISION 01, WARRANTY WORK TO BE IN STRICT ACCORDANCE WITH CONTRACT DOCUMENTS AND FREE FROM DEFECTS FOR 1 YEAR PERIOD FROM DATE OF WRITTEN ACCEPTANCE BY CONSULTANT. REPAIR AND/OR REPLACE ANY SUCH DEFECTS WHICH APPEAR IN WORK PRIOR TO THE END OF THE WARRANTY PERIOD. REPAIR AND/OR REPLACE ANY SUCH DEFECTS BY CARELESSNESS OF OWNERS STAFF OR AGENTS EXCEPTED, WITHOUT ADDITIONAL EXPENSE TO OWNER WHERE SUCH DEFECTS OCCUR. BE RESPONSIBLE FOR COSTS INCURRED IN MAKING DEFECTIVE WORK REPAIR OR REPLACEMENT OF BUILDING FINISHES, OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT CAUSED BY SUCH DEFECTS, OR BY SUBSEQUENT REPLACEMENT OR REPAIRS.	1.21	ENSURE THAT THE INSTALLATION OF EQUIPMENT CONFORMS TO THE APPLICABLE SEISMIC RESTRAINT PROVISIONS INCLUDED IN THE LOCAL GOVERNING BUILDING CODE.	2	INTERRUPTIONS TO AND SHUT DOWNS OF EXISTING SERVICES AND SYSTEMS	2.1	COORDINATE AND PERFORM SHUT DOWNS AND INTERRUPTIONS TO EXISTING SYSTEMS AND SERVICES AT TIMES ACCEPTABLE TO OWNER. OBTAIN WRITTEN APPROVAL MINIMUM 5 WORKING DAYS IN ADVANCE OF SHUT DOWN OR INTERRUPTION. INCLUDE FOR PREMIUM TIME TO PERFORM WORK DURING NIGHTS, WEEKENDS OR OTHER TIME OUTSIDE OF NORMAL WORKING HOURS, AS NECESSARY TO MAINTAIN SERVICES IN OPERATION OR WITH MINIMUM INTERRUPTIONS AND TO COMPLY WITH OWNERS REQUIREMENTS. PERFORM WORK IN ASSOCIATION WITH SHUT DOWNS AND INTERRUPTIONS. PROVIDE FOR MINIMUM WORKING TIME TO SHUT DOWN TIME AND TO REINSTATE SYSTEMS AS SOON AS POSSIBLE, AND, PRIOR TO SHUT DOWN, ENSURE MATERIALS AND LABOUR REQUIRED TO COMPLETE WORK TO BE AVAILABLE AT SITE.	2.2	CUTTING, PATCHING AND CORE DRILLING	2.3	PROVIDE CUTTING, PATCHING AND CORE DRILLING OF BUILDING REQUIRED FOR INSTALLATION OF WORK. PERFORM CUTTING IN NEAT AND TRUE FASHION, WITH PROPER TOOLS AND EQUIPMENT TO OWNER'S APPROVAL. PATCH SURFACES TO EXACTLY MATCH EXISTING FINISHES. UTILIZE TRADESMEN SKILLED IN PARTICULAR TRADE OR APPLICATION WORKING KNOWN TO OWNERS APPROVAL.	2.4	IN FIRE RATED CONSTRUCTION, PACK AND SEAL VOID BETWEEN OPENING AND CONDUIT FOR LENGTH OF OPENING WITH FIRESTOP FREE ELASTOMERIC AND INTUMESCENT UL LISTED AND LABELLED MATERIALS. INSTALL FIRESTOP AND SMOKE SEAL MATERIALS IN ACCORDANCE TO UL CERTIFICATION, OBC AND MANUFACTURERS REQUIREMENTS TO PROVIDE FIRESTOP RATINGS OF OPENINGS IN ACCORDANCE WITH BUILDING CODE REQUIREMENTS. SUBMIT WITH SHOP DRAWINGS, SPECIFIC UL DESIGNATED NUMBER FOR EACH APPLICATION AND SDS SHEET. ACCEPTABLE MANUFACTURERS ARE 3M, SPECIFIED TECHNOLOGIES, TREMCO, HILTI, AND TYCO FIRE STOP SYSTEMS.	2.5	FOR EXTERIOR AND/OR UNDERGROUND PENETRATIONS, PROVIDE WATERPROOF, WEATHER-TIGHT, FIRE RATED MATERIALS IN COMPLIANCE WITH LOCAL GOVERNING AUTHORITY AND CODE REQUIREMENTS TO SEAL OPENINGS.	2.6	COMPLY WITH PRODUCT MANUFACTURERS' RECOMMENDATIONS FOR PRODUCT THAT SUITS EACH SPECIFIC INSTALLATION. TYPICALLY, PROVIDE 1/2" THICK CONCRETE OR MASONRY AND DEVIATIONS INCLUDING THOSE MADE BY ADDENDUM, CHANGE ORDERS, AND SITE INSTRUCTIONS, AND CHANGES AND DEVIATIONS INDICATED ON SUPPLEMENTAL DRAWINGS ISSUED WITH ADDENDUM, CHANGE ORDERS, AND SITE INSTRUCTIONS. MAINTAIN "AS-BUILT" WHITE PRINTS AT SITE FOR PERIODIC INSPECTION BY CONSULTANT THROUGHOUT DURATION OF WORK. PAY PARTICULAR ATTENTION TO ACCURATELY DIMENSIONING LOCATION OF CONCEALED SERVICES TERMINATED FOR FUTURE EXTENSION, BURIED WORK AND SERVICES, AND WORK CONCEALED WITHIN BUILDING IN INACCESSIBLE LOCATIONS. LOCATE AND IDENTIFY FIRE ALARM DEVICES WITH ADDRESSES, AS APPLICABLE.	2.7	WHEN WORK ENDS AT SITE, UPDATE A COMPUTER FILE COPY OF CONTRACT DOCUMENT DRAWING SET SO THAT IT REFLECTS DEVIATIONS FROM ORIGINAL CONTRACT DOCUMENT DRAWING SET. PART LIST WITH NUMBERS AND DESCRIPTIONS OF DEVIATIONS TO BE SUBMITTED TO CONSULTANT. SUBMITTED DRAWINGS TO BE OF SAME QUALITY AS ORIGINAL CONTRACT DOCUMENT DRAWINGS.	2.8	SHOP DRAWINGS AND OPERATING/MAINTENANCE INSTRUCTION MANUALS	2.9	SUBMIT SHOP DRAWINGS FOR PRODUCTS, PROPERLY IDENTIFY SHOP DRAWINGS FOR REVIEW AND SHOW IN DETAIL EQUIPMENT AND MATERIALS. ENDORSE EACH DRAWING, INCLUDE COMPANY NAME AND SUBMITTAL DATE.	2.10	PROVIDE OPERATING AND MAINTENANCE (O&M) INSTRUCTION MANUALS AS INDEXED, IDENTIFIED, HARD COVER 3 RING BINDERS COMPLETE WITH: 1. TITLE SHEET AND LIST OF CONTENTS. 2. A COPY OF EACH "REVIEWED" SHOP DRAWING. 3. EXPLANATIONS OF OPERATING PRINCIPLES AND SEQUENCES. 4. PART LIST WITH NUMBERS AND DESCRIPTIONS OF DEVIATIONS TO BE SUBMITTED TO CONSULTANT. 5. RECOMMENDED MAINTENANCE PRACTICES AND PRECAUTIONS. 6. COPIES OF INSPECTION CERTIFICATES ISSUED BY GOVERNING AUTHORITIES. 7. WIRING AND CONNECTION DIAGRAMS. 8. COPIES OF ADDITIONAL AND REVISED PANELBOARD DIRECTORIES.	2.11	OUTLET BOXES, PULLBOXES AND JUNCTION BOXES	2.12	PROVIDE CSA APPROVED STAMPED GALVANIZED STEEL ELECTRICAL BOXES FOR EACH LUMINAIRE, DEVICE AND OTHER PRODUCT FOR WIRING TERMINATIONS AS REQUIRED. REFER TO DRAWINGS FOR TYPICAL LOCATIONS OF OUTLETS, CONFIRM EXACT LOCATIONS WITH SEVICES TO ROUGHING IN. BOXES FOR RIGID STEEL CONDUITS TO BE CAST F55D TYPES. PROVIDE PVC BOXES FOR PVC
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- 24.4

CONNECT LUMINAIRES TO CIRCUITS AND NEW OR EXISTING LIGHTING CONTROL EQUIPMENT AS REQUIRED. DO NOT OVERLOAD CIRCUITS BEYOND FIXTURE MANUFACTURER'S RECOMMENDATIONS.
- 24.5

ENSURE THAT PRODUCTS THAT ARE TO BE DIMMED ARE COMPATIBLE WITH EACH OTHER, AND OF ONE MANUFACTURER. ENSURE DIMMING PERFORMANCE LEVELS ARE ACCEPTABLE TO CONSULTANT, UNLESS OTHERWISE NOTED. LIGHTING TO BE DIMMED FROM 100% DOWN TO 10%.
- 24.6

ACCEPTABLE DRIVER MANUFACTURERS ARE ADVANCE, OSRAM SYLVANIA, AND UNIVERSAL.
- 25

WALL BOX DIMMERS
- 25.1

PROVIDE WALL BOX DIMMERS TO MATCH THE LIGHTING BEING CONTROLLED ( I.E. OF THE SAME MANUFACTURER OR AS RECOMMENDED BY THE LIGHTING MANUFACTURER). DIMMERS TO BE OF TYPE AND CAPACITY TO SUIT INTENDED LOADS. EACH COMPLETE WITH CALIBRATED LINEAR SLIDE CONTROL WITH SILVER CONTACTS AND SILENT POSITIVE ON/OFF; FACEPLATE, EMI AND RFI FILTERING; REVIEW FINISHES WITH CONSULTANT PRIOR TO ORDERING.
- 25.2

INSTALL FLUSH WALL BOX DIMMERS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, AND CONNECT TO CONTROL LIGHTING. REVIEW EXACT LOCATIONS WITH CONSULTANT PRIOR TO ROUGHING IN. EQUIP EACH DIMMER WITH FACEPLATE. WHEN INSTALLATION IS COMPLETE, CHECK AND TEST OPERATION OF DIMMERS AND ADJUST AS REQUIRED.
- 26

LOW VOLTAGE RELAYS/CONTACTORS
- 26.1

NOT USED
- 26.2

MAGNETIC, FULL VOLTAGE CONTACTORS, SUITABLE FOR APPLICATIONS;
- 26.3

ELECTRICAL ENCLOSURES/ BOXES SUITABLE FOR HOUSING COMPONENTS.
- 27

OCCUPANCY SENSORS
- 27.1

PROVIDE DEVICES TO MATCH THE LIGHTING BEING CONTROLLED. DEVICES TO BE CSA APPROVED AND TO PROVIDE AUTOMATIC CONTROL OF LIGHTING WITH FOLLOWING COMPONENTS:
- 1

POWER AND SLAVE PACKS; LOW VOLTAGE OR LINE VOLTAGE OPERATION TO SUIT SPECIFIC APPLICATIONS;
- 2

DUAL TECHNOLOGY OCCUPANCY SENSORS;
- 3

OVERRIDE SWITCHES TO BE WALL MOUNTING IN SINGLE GANG RECESSED OUTLET BOXES;
- 4

DAY LIGHT SENSORS TO BE PROVIDED WHERE REQUIRED FOR DIMMING OR CONTROLLING LIGHTS IN AREAS WITH WINDOWS AND ATRIUMS/SKY LIGHTS;
- 5

MOUNTING HARDWARE AND ANCILLARY DEVICES AS REQUIRED;
- 6

WIRING IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND APPLICABLE LOCAL GOVERNING CODES AND STANDARDS.
- 27.2

DUAL TECHNOLOGY TYPE SENSORS AS FOLLOWS:
- 1

COMBINATION PASSIVE INFRARED AND ULTRASONIC TECHNOLOGIES;
- 2

WHEN BOTH PIR AND ULTRASONIC TECHNOLOGIES DETECT OCCUPANCY, LIGHTS TURN ON AUTOMATICALLY; ONCE LIGHTS ARE ON, DETECTION BY EITHER TECHNOLOGY HOLDS LIGHTS ON UNTIL OCCUPANCY IS NO LONGER DETECTED AND TIME DELAY ELAPSES;
- 3

360° LENS AREA COVERAGE, EXTENDING OUT UP TO 6 M AND AREA OF 92.9 M2;
- 4

LOW PROFILE CEILING MOUNTING DESIGN; INTEGRAL LIGHT SENSOR;
- 5

ADJUSTABLE SENSITIVITY AND DIGITAL TIME DELAY; WALK-THROUGH MODE; LED INDICATION OF OCCUPANCY DETECTION;
- 6

ISOLATED RELAY FOR INTERCONNECTION TO AUXILIARY CONTROL SYSTEMS WHERE REQUIRED.
- 27.3

FOR APPLICATIONS IN WASHROOMS AND SMALL STORAGE ROOMS: WALL MOUNTED DUAL TECHNOLOGY SENSORS AS FOLLOWS:
- 1

WALL SWITCH SENSOR TURNS LIGHTS OFF AND ON BASED ON OCCUPANCY;
- 2

FACTORY DEFAULT OPERATION IS FOR MANUAL-ON MODE, SO THAT USERS TURN LIGHT ON ONLY WHEN NEEDED;
- 3

VARIETY OF CONTROL OPTIONS INCLUDING AUTO-ON OPERATION, WALK-THROUGH AND TEST MODE; ADDITIONAL SETTINGS ALLOW CHOICE OF WHICH SENSING TECHNOLOGIES HOLD ON OR RETRIGGER LIGHTING;
- 4

COLOUR MATCHED LENS AND LOW PROFILE DESIGN;
- 5

WIDE DISPERSION LENS AREA COVERAGE, EXTENDING OUT UP TO 10 M AND AREA OF 37 M2;
- 6

INFRARED AND ULTRASONIC TECHNOLOGIES;
- 7

ADJUSTABLE TIME DELAYS AND SENSITIVITY; MANUAL PUSHBUTTON OPERATION (OVERRIDE).
- 27.4

EXACT TYPE OF OCCUPANCY SENSORS AND TYPE OF LENSES TO BE VERIFIED BY MANUFACTURER/SUPPLIER TO ENSURE PROPER COVERAGE IN SENSED AREAS ONLY, AND COMPATIBILITY TO INTERCONNECTED SYSTEMS. CONFIRM WITH RESPECTIVE MANUFACTURERS.
- 27.5

PROVIDE, LOCATE, AND AIM APPROPRIATE SENSORS IN CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN RANGE OF COVERAGE OF CONTROLLED AREAS PER MANUFACTURERS RECOMMENDATIONS. ADJUST SENSITIVITY AND TIME DELAYS TO SUIT.
- 27.6

ACCEPTABLE MANUFACTURERS INCLUDE HUBBELL, PHILIPS, SENSOR SWITCH; LEVITON, WATTSSTOPPER AND GE.
- 28

EMERGENCY LIGHTING BATTERY UNITS
- 28.1

PROVIDE EMERGI-LITE 12V DC, "ESL" SERIES LONG LIFE (10 YEAR) SEALED LEAD, BATTERY UNITS. UNITS SHALL BE COMPLETE WITH AUTO-DIAGNOSTIC CONTROLLER, SOLID STATE CHARGER, AC LINE CORD AND PLUG SET, NO. 18 GAUGE STEEL CABINET AND INTEGRAL 12V/6W LED ADJUSTABLE LAMP HEADS. UNLESS OTHERWISE NOTED, REMOTE SURFACE LAMP HEADS TO BE DISTINCTION DESIGNER SERIES TYPE EF150, 12V/6W MR16 LED SURFACE MOUNTED SINGLE/DUAL LAMP HEADS AND RECESSED UNIT TO MATCH BATTERY PACK, 12V/6W MR16 LED SURFACE, WITH ADJUSTABLE AIM. CONNECT COMPLETE, BACK TO BATTERY UNIT. CHARGER TO RESTORE BATTERIES TO FULL CHARGE WITHIN 12 HOURS. SYSTEM TO HAVE OBC REQUIRED DURATION OF OUTPUT CAPACITY FOR LOAD OF SYSTEM (BUT MINIMUM 30 MINUTES).
- 28.2

MOUNT UNIT IN AREA AS REQUIRED AND PLUG UNIT INTO ADJACENT RECEPTACLE. PROVIDE REMOTE LAMP HEADS WHERE REQUIRED AND PROVIDE WIRING IN CONDUIT TO BATTERY UNIT. CONFIRM EXACT LOCATIONS, SIZE CIRCUIT WIRING IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS FOR VOLTAGE DROP PROTECTION. TEST, CHECK, AND ADJUST AS REQUIRED.
- 28.3

INCLUDE FOR MANUFACTURER TO PROVIDE TESTING OF SYSTEM AND MEASUREMENT OF LIGHT LEVELS TO OBTAIN LOCAL INSPECTION APPROVALS AND PERMITS. MANUFACTURER'S AUTHORIZED TECHNICIAN TO PREPARE AND PROVIDE SIGNED TEST REPORT VERIFYING THAT SYSTEM IS PROPERLY WORKING AND THAT LIGHT LEVELS MEET LOCAL CODE REQUIREMENTS. INCLUDE REQUIRED TEST MEASUREMENTS IN REPORT AND SUBMIT TO CONSULTANT.
- 28.4

ACCEPTABLE MANUFACTURERS INCLUDE LUMACELL, AMLITE, BEGHELLI AND EMERGI-LITE.
- 29

LOW VOLTAGE LIGHTING CONTROL COMPONENTS
- 29.1

NOT USED
- 30

EXISTING FIRE ALARM SYSTEM WORK
- SIEMENS CONTACT: STEVE.WOZNY@SIEMENS.COM
- Existing system: Edwards EST-6616 and Siemens TXL-1000
- 30.1

ENGAGE EXISTING FIRE ALARM SYSTEM VENDOR AS APPROVED BY OWNER, TO PROVIDE SYSTEM WORK, DISCONNECT, RELOCATE, AND RECONNECT REQUIRED DEVICES. WORK TO BE AN EXTENSION OF EXISTING SYSTEM. PROVIDE ADDITIONAL DEVICES, CONDUCTORS IN CONDUIT AND END OF LINE RESISTORS. PROVIDE ULC LISTED DEVICES TO MATCH EXISTING DEVICES AND BE COMPLETELY COMPATIBLE WITH EXISTING SYSTEM. PERFORM WORK IN ACCORDANCE WITH LATEST EDITION OF CANULC S524. SEQUENCE OF OPERATION OF NEW WORK TO FUNCTION AS PER EXISTING SYSTEM UNLESS OTHERWISE NOTED. CONNECT ADDITIONAL DEVICES TO EXISTING ZONES SERVING AREA, AS PER SYSTEM MANUFACTURER'S INSTRUCTIONS, TO EXISTING STANDARDS AND AS APPROVED BY LOCAL FIRE AUTHORITY. PROVIDE WIRING OF MINIMUM NO. 18 AWG IN CONDUIT AND AS PER OESC REQUIREMENTS. RUN ALARM INITIATING CIRCUITS IN SEPARATE CONDUITS FROM ALARM SIGNALLING CIRCUITS.
- 30.2

PROVIDE ADDITIONAL DEVICES OF TYPE TO SUIT APPLICATIONS AS RECOMMENDED BY SYSTEM SUPPLIER. INCLUDE REQUIRED ACCESSORIES FOR PROPER OPERATION AND INSTALLATION. RE-PROGRAM SYSTEM TO ACCOMMODATE ADDITIONS AND MODIFICATIONS. RE-BURN SOFTWARE AS REQUIRED BY LOCAL FIRE AUTHORITY. MODIFY ANNUNCIATOR PANELS AS REQUIRED TO INCORPORATE REVISIONS AND ADDITIONS. PROVIDE AUDIBLE DEVICES AND ADJUST TO SOUND AT LEVELS AS PER LOCAL FIRE AUTHORITY REQUIREMENTS. PROVIDE ADDITIONAL DEVICES AS REQUIRED TO ACHIEVE SOUND LEVEL STANDARDS.
- 30.3

DURING WORK TO EXISTING FIRE ALARM SYSTEM, TIME AND DURATION OF INTERRUPTION TO BE APPROVED BY OWNER AND ONLY ONE ZONE SHALL BE INTERRUPTED AT ANY ONE TIME. IN AREAS WHERE RENOVATION WORK REQUIRES SHUTDOWN OF ANY PART OF FIRE ALARM PROTECTION SYSTEM, PROVIDE MANUAL FIRE ALARM PROTECTION (FIRE WARDEN) BY MEANS OF SUPERVISING AREA AS APPROVED BY GOVERNING AUTHORITIES. AT NO TIME SHALL FIRE ALARM SYSTEM OR ANY ONE ZONE BE LEFT INOPERATIVE OVERNIGHT. PROVIDE REQUIRED BYPASS WIRING AND TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN ENTIRE FIRE ALARM SYSTEM OPERATIVE DURING CONSTRUCTION AND ALTERATIONS.
- 30.4

COVER EXISTING DETECTORS TO PROTECT FROM DEMOLITION/CONSTRUCTION DUST. REMOVE COVERS WHEN ALTERNATIVE FIRE ALARM PROTECTION IN AREA IS NOT AVAILABLE OVERNIGHT.
- 30.5

COORDINATE WORK WITH MECHANICAL DIVISION WITH REGARDS TO INTERCONNECTIONS TO AIR HANDLING SYSTEMS, FIRE SUPPRESSION SYSTEMS, SUPERVISORY VALVES AND FLOW SWITCHES, BUILDING AUTOMATION SYSTEM, ETC. PERFORM SUCH INTERCONNECTIONS TO STANDARDS OF EXISTING SYSTEMS AND DOCUMENT IN SHOP DRAWINGS.
- 30.6

WHEN FIRE ALARM SYSTEM WORK IS COMPLETE AND READY FOR ACCEPTANCE, EXISTING SYSTEM MANUFACTURER/VENDOR TO INSPECT, TEST, VERIFY AND CERTIFY WORK AND EQUIPMENT, INCLUDING INITIATING DEVICES, SIGNALLING DEVICES, CONTROL DEVICES AND WIRING.
- 30.7

TEST AND VERIFY THAT AUDIBLE SIGNALS ARE AT LEVELS ACCEPTABLE TO LOCAL FIRE AUTHORITY AND THAT BATTERIES ARE OF SUFFICIENT CAPACITY AS PER OBC. PROVIDE CERTIFICATE OF LIABILITY INSURANCE REGISTERED FOR THIS PROJECT TO SHOW SATISFACTORY PROOF OF MANUFACTURER'S LIABILITY COVERAGE FOR BOTH HIS PRODUCT AND PERSONNEL. CONDUCT WORK IN ACCORDANCE WITH LATEST EDITIONS OF CANULC S536 AND S537. TESTS TO BE CONDUCTED IN PRESENCE OF OWNER AND/OR CONSULTANT. PROVIDE TO CONSULTANT MINIMUM ONE HARD COPY AND ELECTRONIC COPY OF TEST REPORT WITH DETAILED SCHEDULES OF TESTED DEVICES. REPORTS SHALL BE SIGNED BY AUTHORIZED CERTIFIED TESTING TECHNICIAN. DIGITAL COPY OF REPORT TO BE PROVIDED IN COMPATIBLE FORMAT CONFIRMED WITH CONSULTANT.
- 30.8

OBTAIN FROM LOCAL FIRE AUTHORITY, APPROVAL CERTIFICATE AND SUBMIT TO CONSULTANT WITH REPORTS.
- 30.9

EMPLOY TECHNICIANS CERTIFIED BY CANADIAN FIRE ALARM ASSOCIATION AND/OR ONTARIO FIRE MARSHALL AS APPLICABLE AND TO REQUIREMENTS OF ONTARIO FIRE CODE.
- 31

GENERAL ELECTRICAL WORK TESTING
- 31.1

IN ADDITION TO TESTS REQUIRED BY GOVERNING AUTHORITIES AND REGULATIONS, TEST WORK TO ENSURE THERE ARE NO GROUNDS OR CROSSES. ENSURE DEVICES ARE COMMISSIONED AND OPERABLE. CONNECT CIRCUITS TO PANELBOARDS SO AS TO BALANCE ACTUAL LOADS (WATTAGE) WITHIN 3%, IF REQUIRED, TRANSPOSE CIRCUITS WHEN WORK IS COMPLETE TO MEET THIS REQUIREMENT.
- 31.2

IN ADDITION, PERFORM FOLLOWING:
- 1

CHECK COMPONENT CONNECTIONS AND OVERALL INSTALLATION;
- 2

ENSURE THAT DEVICES ARE COMMISSIONED AND OPERABLE;
- 3

TEST AND ADJUST SYSTEM AND ASCERTAIN THAT COMPONENTS ARE AS SPECIFIED AND ENSURE THAT PRODUCTS OPERATE AS DESIGNED;
- 4

PREPARE, DOCUMENT AND EVALUATE TEST RESULTS;
- 5

AUTHENTICATE TEST RESULTS WITH SIGNATURE OF AUTHORIZED TESTING ENGINEER/TECHNICIAN.
- 31.3

SUBMIT SIGNED REPORTS TO CONSULTANT.
- 32

SYSTEM TESTING, CO-ORDINATION AND VERIFICATION
- 32.1

PROVIDE ON-SITE ENGINEERING INSPECTION, TESTING AND VERIFICATION OF DISTRIBUTION EQUIPMENT AND OTHER SYSTEMS. REVIEW AND SURVEY EXISTING DISTRIBUTION SYSTEM PROTECTIVE DEVICES AS REQUIRED TO PROPERLY CO-ORDINATE ADDITIONAL SYSTEM DEVICES. FOR MAJOR DISTRIBUTION EQUIPMENT, PROVIDE PRELIMINARY COORDINATION STUDY AND AVAILABLE FAULT CURRENT CALCULATIONS AND SUPPLY TO CONSULTANT DURING SHOP DRAWING REVIEW PROCESS.
- 32.2

ENGINEERING INSPECTION AND TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING COMPANY AND INCLUDE WHERE APPLICABLE:
- 1

TESTING, CLEANING WHEN NECESSARY, AND CALIBRATING RELAYS AND CIRCUIT BREAKER TRIP DEVICES (CALIBRATION OF PROTECTIVE DEVICES SHALL CONFORM TO REQUIREMENTS OF APPROVED COORDINATION CURVES);
- 2

FUNCTION TEST OF ASSOCIATED CONTROL DEVICES;
- 3

PROVIDE A COORDINATION STUDY PREPARED TO REVIEW REVISED DISTRIBUTION SYSTEM DEVICES INCLUDING EXISTING MAIN OVER CURRENT PROTECTION DEVICES FEEDING RESPECTIVE MCCS OR PANELS WHERE ADDITIONAL LOADS HAVE BEEN ADDED; REVIEW COORDINATION OF DEVICES AND RESET/ADJUST WHERE POSSIBLE AND AS REQUIRED;
- 4

REPLACEMENT OF FUSES DESTROYED DURING TESTING;
- 5

AN ACCEPTANCE TEST IN PRESENCE OF AND AT SATISFACTION OF CONSULTANT;
- 6

PRESENCE, FOR LENGTH OF TIME REQUIRED, OF QUALIFIED AND COMPETENT EQUIPMENT MANUFACTURER'S SERVICE REPRESENTATIVE DURING START UP;
- 7

ADJUSTMENTS, START-UP PROCEDURES AND VERIFICATION OF EQUIPMENT;
- 8

TESTING OF INSTALLED ELECTRICAL DEVICES, WHETHER OR NOT SUPPLIED BY ELECTRICAL DIVISION.
- 32.3

PROVIDE VISUAL AND MECHANICAL INSPECTION OF GROUND SYSTEM AND VERIFY THAT IT IS IN COMPLIANCE WITH ISSUED DOCUMENTS AND OESC REQUIREMENTS.
- 32.4

TESTING SHALL BE DOCUMENTED IN A REPORT SIGNED BY PROFESSIONAL ENGINEERS OF ONTARIO LICENSED TESTING ENGINEER AUTHORIZED BY TESTING COMPANY. INCLUDE FOR MINIMUM 2 HARD COPIES AND ELECTRONIC VERSION OF REPORT SUBMITTED TO CONSULTANT FOR REVIEW. REPORT TO INCLUDE TEST RESULTS WITH PROPERLY PLOTTED CURVES, IDENTIFIED TROUBLE AREAS OF COORDINATION, EXTENSIVE COMMENTS REGARDING TEST RESULTS AND RECOMMENDATIONS ON BEST REMEDIAL COURSE OF ACTION.
- 32.5

PRODUCT MANUFACTURER TO EXAMINE PLANS AND SPECIFICATIONS TO ENSURE THAT RELAYS AND PROTECTIVE DEVICES BEING INSTALLED IN DISTRIBUTION SYSTEM WILL PROVIDE SATISFACTORY COORDINATION.
- 32.6

ACCEPTABLE TESTING COMPANIES TO BE INDEPENDENT OF EQUIPMENT MANUFACTURERS/SUPPLIERS AND ARE G.T. WOODS LTD., AC TESLA, PELIKAN, EATON ELECTRIC AND SCHNEIDER ELECTRIC.

END


C	2018 08 02	ISSUED WITH ADDENDUM No.2
B	2018 07 05	ISSUED FOR PERMIT & TENDER
A	2018 06 28	ISSUED FOR CO ORDINATION

no.	date	revision
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It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the architect.

All contractors must comply with all pertinent codes and by-laws.

Do not scale drawings.

This drawing may not be used for construction until signed.

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400-2611, QUEENSWAY DRIVE  
OTTAWA, ONTARIO, CANADA K1B 1K2  
TEL: 1-613-829-2800 / FAX: 1-613-829-8399 / WWW.WSP.COM

Hobin Architecture  
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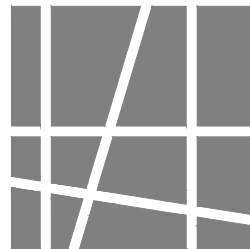
63 Pamela Street  
Ottawa, Ontario  
Canada K1S 3K7

T: 613-236-7200

F: 613-235-2005

E: mail@hobinarc.com

hobinarc.com



HOBIN  
ARCHITECTURE

PROJECT/LOCATION:

TURNBULL SCHOOL  
MUSIC ROOM ADDITION

1132 Fisher Avenue, Ottawa

DRAWING TITLE:

ELECTRICAL  
SPECIFICATION  
SHEET 2 OF 2

DRAWN BY: K. McI.	DATE: APR. 2018	SCALE: N.T.S.
		PROJECT: 181-04865-00
		DRAWING NO.:
		E003
		REVISION NO.:



1. RELOCATE FIRE ALARM PULL STATION TO NEW DOOR OPENING.
2. FOR DATA OUTLETS PROVIDE DEVICE BOX AND 21mm EMPTY CONDUIT UP TO CEILING SPACE. TERMINATE IN A BOX.
3. AT THE EXISTING DOOR OPERATOR LOCATION, DISCONNECT POWER AND MAKE SAFE FOR REMOVAL.
4. DOOR OPERATOR: EXTEND POWER FROM THE REDUNDANT LOCATION TO THE NEW DOOR OPERATOR LOCATION AND PROVIDE FINAL CONNECTION. COORDINATE BACK BOXES FOR LOW VOLTAGE CONTROL PUSH BUTTONS WITH DOOR OPERATOR INSTALLER.
5. SECURITY CARD READER: PROVIDE BACK BOX AND CONDUIT THROUGH WALL AND UP TO CEILING SPACE. TERMINATE IN A BOX. COORDINATE WITH SECURITY CONTRACTOR.

1. CO ORDINATE DEVICE LOCATIONS AND HEIGHTS AFF WITH THE ARCHITECTURAL DRAWINGS AND DETAILS



1. RELOCATE EXIT SIGN TO NEW DOOR OPENING.
2. LIGHTING CONTROL AS FOLLOWS:  
CLASSROOMS - OCCUPANCY CONTROL AND DIMMING  
STORAGE ROOM - OCCUPANCY  
PRACTICE ROOMS - VACANCY CONTROL  
OFFICE, DIMMING AND VACANCY CONTROL
3. WIRELESS LIGHT SWITCHES -  
THE FUNCTION OF THE SWITCH IS INDICATED ON THE DRAWING:  
D = DIMMER, OCCUPANCY, DAYLIGHT HARVESTING  
V = DIMMER, VACANCY, DAYLIGHT HARVESTING

1. CO ORDINATE DEVICE LOCATIONS AND HEIGHTS AFF WITH THE ARCHITECTURAL DRAWINGS AND DETAILS

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OTTAWA ONTARIO CANADA K2B 8K2  
TEL: 1-613-829-2800 | FAX: 1-613-829-8299 | WWW.WSP.COM

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REVISION NO.:

SCHEDULE OF LUMINAIRES						
TYPE	DESIGN BASED ON SPECIFIED MANUFACTURER AND CATALOG NUMBER	PRODUCT DESCRIPTION	VOLTS	LAMPS LUMENS WATTS COLOUR TEMPERATURE	MOUNTING	NOTES
A	PHILIPS DAYBRIGHT CFI FluxGrid 2FG-G-42B-835-4D-120 DIM DAY OCC	610mm X 1220mm RECESSED SOFT OPAL DIFFUSER OL	120V	LED MODULE 4276 LUMENS 36.2 WATTS 3500K	RECESSED IN CEILING GRID	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
B	PHILIPS LEADALITE TRUGROOVE 2901LBGQN0471EW DIM DAY OCC	1200mm X 100mm RECESSED LINEAR	120V	LED MODULE 4576 LUMENS 40.9 WATTS 3500K	SUSPENDED	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
C	PHILIPS LEADALITE TRUGROOVE 3901LBGQS40471EW DIM SWZDT	1200mm X 100mm RECESSED LINEAR	120V	LED MODULE 4114 LUMENS 41.8 WATTS 3500K	RECESSED IN DRYWALL FEATURE	DAYLIGHT SENSING C/W DIMMING AND SELECTABLE OCCUPANCY (SPACEWISE)
§	PHILIPS WIRELESS SWITCH UID8451/10	SINGLE GANG SWITCH PROVIDES SELECTABLE FUNCTIONS DIMMER, VACANCY AND OCCUPANCY	SELF POWERED	N/A	RECESSED IN ELECTRICAL WALL BOX OR SURFACE MOUNTING	WIRELESS
T	PHILIPS LIGHTOLIER LYTESPAN 6001NVH	1200mm LONG BASIC ONE CIRCUIT TRACK	120V	N/A	SUSPENDED (TBD)	CONTROLLED BY DIMMER TRAILING EDGE (ELV) DIMMING COMPATIBILITY PHILIPS CONTROLS SR400RPC120
T1	PHILIPS LIGHTOLIER CorePro LT-08 RWF 830 WH VA	MICRO CYLINDER 57mm Dia X 114mm H COLOUR WHITE MOUNTED ON PIVOTING ARM	120V	LED MODULE 963 LUMENS 9 WATTS 3000K	MOUNTED ON TRACK	DIMMABLE TRACK LIGHTS
W	PHILIPS KEENE LytePro LPW167-BZ	315mm W X 130mm H X 145MM D WALL SCONCE COLOUR BRONZE	120V	LED MODULE 3374 LUMENS 36 WATTS TYPE 3 DISTRIBUTION	MOUNTED SURFACE AT 3538MM AFF	PHOTO CELL CONTROL P105A

1

SCHEDULE OF LUMINAIRES

E201

N.T.S.

LIGHTING FIXTURE SCHEDULE

NOTES:

1. DESIGN IS BASED ON THE LUMINAIRES SPECIFIED. IN ALL CASES, ALTERNATIVE LUMINAIRES SHALL BE COMPARABLE TO THE SPECIFIED LUMINAIRE IN QUALITY, PERFORMANCE, AND VISUAL CHARACTERISTICS. ACCEPTABILITY WITH RESPECT TO VISUAL CHARACTERISTICS SHALL BE AT THE SOLE DISCRETION OF THE CONSULTANT. IF A PROPOSED ALTERNATIVE LUMINAIRE IS DEEMED TO BE NOT VISUALLY COMPARABLE, THE SPECIFIED LUMINAIRE SHALL BE PROVIDED.
2. SUBJECT TO NOTE 1, ALTERNATIVES TO NOTED LUMINAIRES MANUFACTURED BY PHILIPS (AND AFFILIATES) OR BY LITHONIA ARE ACCEPTABLE, AND MAY BE SUPPLIED WITHOUT CREDIT TO CONTRACT AMOUNT. LUMINAIRES NOT SO NOTED SHALL BE PROVIDED AS SPECIFIED; PROPOSED ALTERNATIVES MAY BE ACCEPTED BY THE CONSULTANT, AND, IF THEY ARE, SHALL RESULT IN A CREDIT TO THE CONTRACT AMOUNT.
3. SUBJECT TO NOTE 1, ALTERNATIVES TO NOTED LUMINAIRES MANUFACTURED BY EMERGH-LITE, COOPER (AND AFFILIATES), CANLYTE (AND AFFILIATES) OR BY LITHONIA ARE ACCEPTABLE, AND MAY BE SUPPLIED WITHOUT CREDIT TO CONTRACT AMOUNT. LUMINAIRES NOT SO NOTED SHALL BE PROVIDED AS SPECIFIED; PROPOSED ALTERNATIVES MAY BE ACCEPTED BY THE CONSULTANT, AND, IF THEY ARE, SHALL RESULT IN A CREDIT TO THE CONTRACT AMOUNT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHT OF LUMINAIRES.

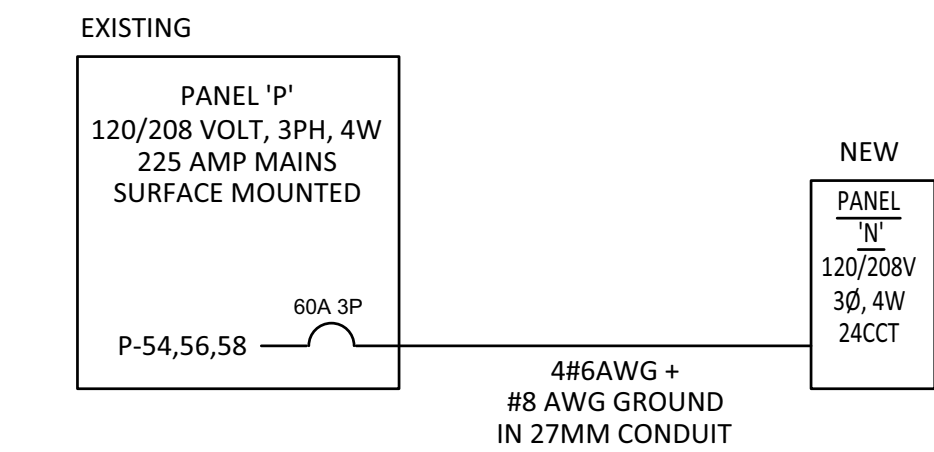
BATTERY PACK SCHEDULE							
TAG	DC VOLTS	TWIN HEAD ON BATTERY PACK	# OF TWIN REMOTE HEADS	# OF SINGLE REMOTE HEADS	# OF EXIT LIGHTS	EBU WATTAGE	DESCRIPTION
EBU-1	12VDC	1 OF 2 x 5W	1 OF 2 x 5W	4 OF 5W	1 SIGN 2W	72	EQUAL TO THOMAS & BETTS, EMERGH-LITE 12ESL72 U/2 LI WHITE FINISH
NOTES: 1. EMERGENCY BATTERY UNIT TO HAVE MINIMUM OF 60 MINUTES BACK UP POWER. 2. CONNECT EMERGENCY LIGHTING BATTERY PACKS TO LOCAL (UNSWITCHED) LIGHTING CIRCUIT.							

4

BATTERY PACK SCHEDULE

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N.T.S.

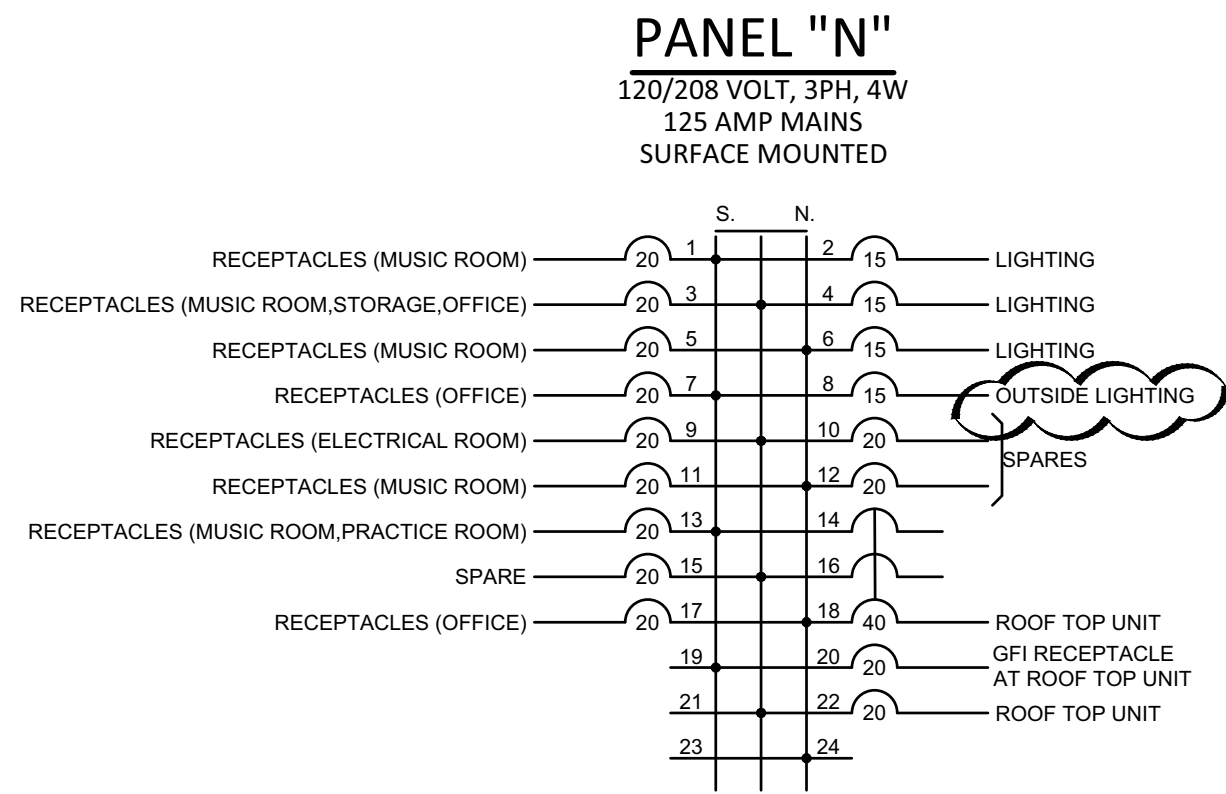


2

PARTIAL SINLGE LINE DIAGRAM

E201

N.T.S.



3

PANEL 'N'

E201

N.T.S.

MAXIMUM BRANCH WIRING DISTANCE FOR 120 VOLT SYSTEM AT 2% VOLTAGE DROP											
WIRE SIZE	BREAKER SIZE (AMPERES)	15	20	30	40	50	60	70	80	100	
	MAX LOAD AT 80% (AMPERES)	12	16	24	32	40	48	56	68	80	
NO.12	-----	16.8	12.2	-----	-----	-----	-----	-----	-----	-----	
NO.10	-----	25.9	19.0	12.9	-----	-----	-----	-----	-----	-----	
NO.8	-----	39.6	30.4	20.5	15.2	-----	-----	-----	-----	-----	
NO.6	-----	62.4	47.2	32.0	23.6	19.0	16.0	-----	-----	-----	
NO.4	-----	99.0	73.1	50.2	38.1	30.4	24.3	21.3	19.0	-----	
NO.2	-----	-----	114.3	77.2	57.9	47.2	38.8	33.5	28.9	22.8	
NO.1	-----	-----	-----	96.0	73.1	57.9	47.2	42.6	36.5	27.4	
NO.1/0	-----	-----	-----	-----	85.3	68.5	56.3	48.7	41.9	33.5	
NO.2/0	-----	-----	-----	-----	102.8	80.7	67.0	57.9	50.2	40.3	
NO.3/0	-----	-----	-----	-----	-----	95.2	79.2	68.5	59.4	47.2	
NO.4/0	-----	-----	-----	-----	-----	-----	92.9	79.2	70.1	56.3	
250 MCM	-----	-----	-----	-----	-----	-----	102.8	86.8	76.2	60.9	
300 MCM	-----	-----	-----	-----	-----	-----	-----	100.5	88.3	70.1	

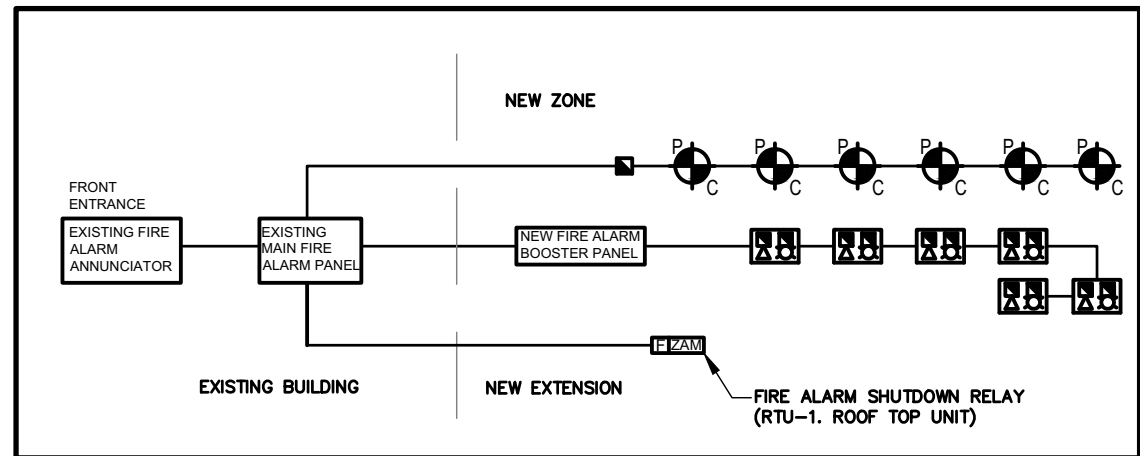
NOTE: DISTANCES INDICATED IN METRES FROM PANEL TO LOAD FOR SINGLE PHASE.

5

120 VOLT SYSTEM AT 2% VOLTAGE DROP TABLE

E201

N.T.S.



6

PARTIAL FIRE ALARM DIAGRAM

E201

N.T.S.