



**DEPARTMENT OF FACILITIES MANAGEMENT**

**REQUEST FOR PROPOSALS (OPEN)**

**FOR**

**ENGINEERING CONSULTING SERVICES**

**FOR**

**VAR-505-23: St Johns Campus Arc Flash Corrective Work**

**Open Call Number: RFP-001-25**

**Issued: Thursday, January 16, 2025**

**Submission Deadline: Thursday, February 13,  
2025 @ 3:00 PM NDT**

Request for Proposal (RFP)			
Title:	<b>VAR-505-23: St Johns Campus Arc Flash Corrective Work</b>		
RFP Number:	<b>RFP-001-25</b>	Issue Date:	<b>Thursday, January 16, 2025</b>
Questions Deadline:	<b>8 calendar days prior to close time at 3:00PM NDT</b>	Closing Date and Time:	<b>Thursday, February 13, 2025 @ 3:00PM NDT</b>
		Proposal Submission Format:	<b>opencalls@mun.ca</b>
		Opening Date & Time:	<b>Thursday, February 13, 2025 @ 3:30 PM NDT</b>
			<b>Via Conference line: 1-416-915-6530 (toll free) Access Code: 2771 771 9849 Attendee ID: Please press Pound(#)</b>
Proposals Irrevocable Period after Submission Deadline:		90 days	
<b>Proposal Submission: Responses to this solicitation must be submitted by email to opencalls@mun.ca. Email subject line must read: VAR-505-23: St Johns Campus Arc Flash Corrective Work</b>			
Inquiries and Communication			
<b>Inquiries and communication:</b> Strategic Procurement Office, Financial and Administrative Services, Memorial University of Newfoundland, <a href="mailto:opencalls@mun.ca">opencalls@mun.ca</a> . Inquiries accepted only via email. No phone calls will be accepted.			
<b>Please reference VAR-505-23: St Johns Campus Arc Flash Corrective Work in subject line. Emails not containing this requirement information in the subject line will NOT be responded to.</b>			
<b>Proposals submitted by fax, mail, courier, drop-off or by any other means of delivery other than by email stated above shall not be accepted.</b>			

## ABOUT MEMORIAL UNIVERSITY

As Newfoundland and Labrador's only university, Memorial has a special obligation to the people of this province. Established as a memorial to the Newfoundlanders who lost their lives on active service during the First and Second World Wars, Memorial University draws inspiration from these shattering sacrifices of the past as we help to build a better future for our province, our country and our world.

We are a multi-campus, multi-disciplinary, public university committed to excellence in teaching and learning, research and scholarship, and to public engagement and service. We strive to have national and global impact, while fulfilling our social mandate to provide access to university education for the people of the province and to contribute to the social, cultural, scientific and economic development of Newfoundland and Labrador and beyond.

The Memorial experience goes beyond academics; it invites a discovery of self, community and place. At Memorial, we celebrate our unique identity through the stories of our people – the work of scholars and educators, the ingenuity of students, the achievements of alumni – and the impact we collectively make in the province, the country and the world. Memorial is the natural place where people and ideas become.

Memorial University has more than 18,500 students and 3,600 faculty and staff spread across four campuses and nearly 100,000 alumni active throughout the world. From local endeavors to research projects of national importance, Memorial's impact is felt far and wide.

### ***Mission, Vision and Values***

#### **Vision**

Memorial University will be one of the most distinguished public universities in Canada and beyond, and will fulfill its special obligation to the people of Newfoundland and Labrador.

#### **Mission**

Memorial University is an inclusive community dedicated to innovation and excellence in teaching and learning, research, scholarship, creative activity, service and public engagement. Memorial welcomes and supports students and scholars from all over the world and contributes knowledge and expertise locally, nationally and internationally.

#### **Values**

*Excellence:* Encouraging and promoting excellence through innovation and creativity, rigor and pragmatism.

*Integrity:* Being honest and ethical in all interactions, maintaining the highest ethical standards in teaching, research, public engagement and service.

*Collegiality:* Engaging others with respect, openness and trust in pursuit of a common purpose, having regard for individuals, ideals and the institution as a whole.

*Inclusiveness and diversity:* Embracing and acting on responsibility to guarantee diversity and equity.

*Responsiveness:* Being receptive to individuals and communities.

*Accountability:* Accepting responsibility for achievement of common goals and objectives.

*Freedom and Discovery:* Supporting the freedom to pursue knowledge that is based on individual and collective intelligence, curiosity, ingenuity and creativity.

*Recognition:* Acknowledging, tangibly, all aspects of university enterprise including teaching and learning, research, scholarship, creative activity and public engagement.

*Responsibility to place:* Valuing and fulfilling the special obligation to the people of Newfoundland and Labrador by supporting and building capacity for excellence that:

- addresses needs and opportunities for Newfoundland and Labrador;
- engages the university community on matters of national and international significance;
- produces and delivers academic programs of national and international caliber and,
- Recognizes the dynamic opportunities presented by a multi-campus institution.

*Responsibility to learners:* Recognizing students as a first priority and providing the environment and support to ensure their academic and personal success.

*Interdisciplinary collaboration:* Supporting overarching themes in all pursuits that cut across academic units and address significant opportunities and challenges for which Memorial is particularly well positioned to build nationally and internationally recognized capacity.

*Sustainability:* Acting in a manner that is environmentally, economically and socially sustainable in administration, academic and research programs.

Memorial's exceptional staff and students contribute to the vitality and positive environment of the university through active community engagement. Memorial University has always been a publicly engaged institution. Since the founding of the University in 1949, the work of many of Memorial's students, faculty and staff has emphasized the importance of strong, sustained partnerships with members of the public of Newfoundland and Labrador and beyond.

## **Faculty and Staff**

Memorial is one of the largest employers in the province, with approximately 3,600 faculty and staff. Memorial has been recognized as an Employer of Distinction by the Newfoundland and Labrador Employers' Council, which is reflective of its investment in comprehensive benefits, services such as childcare and recreation facilities, emphasis on work-life balance, and its vibrant work environment.

## **Governance and Administration**

The management, administration and control of the property, revenue, business and affairs of the University are vested in a Board of Regents. The Board is appointed under the *Memorial University Act* and is responsible for the management, administration, and control of the property, revenue, business and affairs of the university. Matters of an academic character are in general charge of the Senate of the University.

For more information on Memorial University of Newfoundland, please visit: Memorial home page:

<http://www.mun.ca/>

## **Territory Acknowledgements at Memorial:**

We acknowledge that the lands on which Memorial University's Campus are situated are in the traditional territories of diverse Indigenous groups and we acknowledge with respect the diverse histories and cultures of the Beothuk, Mi'kmaq, Innu, and Inuit of this province.

# PART 1 – SUBMISSION INSTRUCTIONS

## 1.1 Proposals to be Submitted on Time

Proposals must be submitted as set out above on or before the Submission Deadline. Proposals submitted after the Submission Deadline will be rejected. Onus and responsibility rests solely with the proponent to submit its Proposal to the email indicated in the Request for Proposal on or before the Submission Deadline. The Owner does not accept any responsibility for any proposals submitted by means other than the email listed above. Proponents making submissions near the deadline do so at their own risk due to server availability. The time for the closing will be determined according to the inbox time stamp on [opencalls@mun.ca](mailto:opencalls@mun.ca) . Proposals received after the closing time based on this time stamp, will NOT be considered.

## 1.2 Proposals to be Submitted in Prescribed Format

Proponents should submit **One (1)** email submission as a single file in PDF format. **Please note: File size cannot exceed 15 MB. Otherwise server may reject proposal submission due to size.** Proposals submitted by fax, mail, courier, drop off or by any other means of delivery other than by email stated above shall not be accepted.

## 1.3 Amendment of Proposals

Proponents may amend their Proposals after they have been submitted if, and only if, the amendment is emailed prior to the Submission Deadline marked PROPOSAL SUBMISSION AMENDMENT followed by **VAR-505-23: St Johns Campus Arc Flash Corrective Work**. Proposal revisions, changes and alterations may be made only by completing a new proposal. Previous submissions will be cancelled and the submission with the most recent date and time will be considered the final proposal.

Email inquiries and requests for clarification shall be accepted up to **8 calendar days** prior to the closing time. Inquiries and requests for clarification received after this date shall not be addressed. The Strategic Procurement Office will be the only official source of information regarding this Open Call for Proposals and information from any other source shall be considered unofficial and may not be correct.

To ensure consistency and quality in the information provided to Proponents the Owner shall provide, by way of amendment to this request for proposals in the form of an addendum, any relevant information with respect to the Request for Proposal inquiries received in writing without revealing the source of those inquiries. Proponents are cautioned that it is their responsibility to ensure that they receive all information relevant to this Request for Proposal. The Owner shall not be responsible for Proponents who fail to inform themselves regarding the scope and nature of the work. The Owner shall publish all amendments on Memorial University's website at [https://www.mun.ca/finance/strategic\\_procurement/](https://www.mun.ca/finance/strategic_procurement/) or current service providers: MERX: [www.merx.com](http://www.merx.com), Bids: [www.bids.ca](http://www.bids.ca) and PODS: [www.pods.net](http://www.pods.net) .Proponents should check on a regular basis for Request for Proposal updates. Proponents are solely responsible for ensuring they are aware of and have complied with all amendments by proposal submission closing time. **In the event there is discrepancy between the service providers, MERX, Bids, and PODS and the [https://www.mun.ca/finance/strategic\\_procurement/](https://www.mun.ca/finance/strategic_procurement/) website, the official website is [https://www.mun.ca/finance/strategic\\_procurement](https://www.mun.ca/finance/strategic_procurement).** Proponents are welcome to register their email address through [opencalls@mun.ca](mailto:opencalls@mun.ca) to receive addendum notifications from Open Calls as a matter of courtesy. This does not relieve any Proponent of their responsibility to ensure all addenda has been received.

## 1.4 Withdrawal of Proposals

Proponents may withdraw their Proposals prior to the Submission Deadline. To withdraw a Proposal, a notice of withdrawal must be sent to the [opencalls@mun.ca](mailto:opencalls@mun.ca) prior to the Submission Deadline and must be signed by an authorized representative of the Proponents. The Owner is under no obligation to return withdrawn Proposals.

## 1.5 Proposals Irrevocable after Submission Deadline

Proposals shall be irrevocable for a period of **90** days running from the moment that the Submission Deadline passes.

## 1.6 Delivery

Time is of the essence and delivery schedule(s) are legally binding. Memorial University reserves the right to assess penalties or cancel awards to Bidders who fail to meet the stated delivery or completion dates. Delivery of all materials and services must be DAP (delivered at place) or DDP (delivered duty paid (all locations) and local environs).

## 1.7 Signature

Memorial University, in consideration of section 11 of the Electronic Commerce Act, confirms its acceptance of electronic signatures, or other acceptable form of electronic consent, in satisfaction of the signature requirement for proposal submissions. The electronic form of signature or consent must be directly related to the relevant proposal submission at issue and must be reliable, in a manner as determined by Memorial University, for the purpose of identifying the person submitting the proposal response. By submitting a proposal under this process, the proponent confirms that the signatory has the appropriate and proper authority to bind the proponent to its submission, a confirmation upon which Memorial University relies in the processing of the proposal submission. **Proponents must complete Appendix B – Submission Form. Proposals received without Appendix B completed will be deemed non-compliant.**

## 1.8 Closure

In the event that the University is closed earlier than normally expected prior to a scheduled Request for Proposal closing for that day, or for the full day, the closing date for those Request for Proposal will be extended to the next business day for the University at the same time as listed originally.

## 1.9 Corporations Act

The Corporations Act of Newfoundland and Labrador requires that an extra-provincial company be registered before it begins or carries on business in the Province. If your company is not registered, please apply for the appropriate forms and procedures to:

Commercial Registrations Division  
Department of Government Services  
PO Box 8700

St John's, NL Canada A1B 4J6  
Phone: 709-729-3317, Fax: 709-729-0232

Website: [http://www.gs.gov.nl.ca/registries/companies/corp\\_art\\_inc.html](http://www.gs.gov.nl.ca/registries/companies/corp_art_inc.html)

[End of Part 1]



## **PART 2 – EVALUATION AND AWARD**

### **2.1 Stages of Evaluation**

The Owner will conduct the evaluation of Proposals in the following stages:

### **2.2 Stage I – Mandatory Submission Requirements**

Stage I will consist of a review to determine which Proposals comply with all of the mandatory submission requirements. Proposals that do not comply with all of the mandatory submission requirements as of the Submission Deadline will, subject to the express and implied rights of the Owner, be disqualified and not evaluated further. The submission form (**Appendix B**) must be completed. Submission without **Appendix B completed will be disqualified.**

### **2.3 No Amendment to Forms**

Other than inserting the information requested on the mandatory submission forms set out in the Request for Proposal, a Proponent may not make any changes to any of the forms. Any Proposal containing any such changes, whether on the face of the form or elsewhere in the Proposal shall be disqualified.

**Stage II will consist of the following:**

### **2.4 Mandatory Technical Requirements**

The Owner will review the proposals to determine whether the mandatory technical requirements as set out in **Appendix A** been met. Proposals that do not comply with all of the mandatory technical requirements will, subject to the express and implied rights of the Owner, be disqualified and not evaluated further.

### **2.5 Rated Criteria**

The Owner will evaluate each qualified proposal on the basis of the rated criteria set out in **Appendix C.**

### **2.6 Selection of Proponent**

After the completion of Stage II proponents will be ranked based on their total scores, all scores from will be added together and proponents will be ranked based on their total scores. Subject to the reserved rights of the Owner, the top-ranked proponent may be selected to enter into the Agreement in accordance with the following section.

Provincial suppliers, suppliers with a place of business in Newfoundland and Labrador, will be given provincial supplier preference provision. This mandates an allowance of ten percent for provincial suppliers for all procurement below trade agreement thresholds.

Please note, the supplier preference does not apply when the estimated value of the commodity is above the trade agreement threshold shown below.

Public Body	Thresholds			
	Goods	Services	Public Works	Lease of Space
Memorial University	\$133,800	\$133,800	\$334,400	\$100,000

**2.7 Notification**

Notice of selection by the Owner to the preferred supplier(s) shall be in writing.

**2.8 Failure to Enter into Agreement**

If a preferred supplier fails to satisfy the pre-conditions of award within fifteen (15) days of notice of selection, the Owner may, without incurring any liability, proceed with the selection of another proponent and pursue all remedies available to the Owner

**2.9 Payment Terms**

The University's standard payment terms are net 30 days after delivery of goods, or net 15 days after successful completion of installation as applicable. In the case of services, payment terms are also net 30 days after successful completion of the service. These terms shall also apply in the case of sub-contracted items. Prepayments will not be considered unless the supplier provides an irrevocable standby letter of credit, or the supplier provides a credit reference from its banker satisfactory to the Director of Financial and Administrative Services.

[End of Part 2]

## **PART 3 – TERMS AND CONDITIONS OF THE OPEN CALL PROCESS**

### **3.1 Incorporated into Proposal**

All of the provisions of this Request for Proposal are deemed to be accepted by each Proponent and incorporated into each Proponents' Proposal. A Proponent who submits conditions, options, variations or contingent statements to the terms as set out in this Request for Proposal, either as part of its Proposal or after receiving notice of selection, unless otherwise indicated, may be disqualified. If a Proponent is not disqualified despite such changes or qualifications, the provisions of this Request for Proposal, including any agreement set out in will prevail over any such changes or qualifications in the Proposal.

### **3.2 Proponents to Follow Instructions**

Proponents should structure their Proposals in accordance with the instructions in this Request for Proposal. Where information is requested in this Request for Proposal, any response made in a Proposal should reference the applicable section numbers of this Request for Proposal.

### **3.3 Proposals in English**

All Proposals are to be in English only.

### **3.4 No Incorporation by Reference**

The entire content of the Proponent's Proposal should be submitted in a fixed form, and the content of websites or other external documents referred to in the proponent's Proposal but not attached will not be considered to form part of its Proposal.

### **3.5 References and Past Performance**

In the evaluation process, the Owner may include information provided by the Proponents references and may also consider the Proponents past performance or conduct on previous contracts with the Owner or other institutions.

### **3.6 Information in Request for Proposal Only an Estimate**

The Owner and its advisers make no representation, warranty or guarantee as to the accuracy of the information contained in this Request for Proposal or issued by way of addenda. Any quantities shown or data contained in this Request for Proposal or provided by way of addenda are estimates only, and are for the sole purpose of indicating to Proponents the general scale and scope of the Deliverables. It is the Proponents' responsibility to obtain all the information necessary to prepare a Proposal in response to this Request for Proposal.

### **3.7 Proponents to Bear Their Own Costs**

The Proponent will bear all costs associated with or incurred in the preparation and presentation of its Proposal, including, if applicable, costs incurred for interviews or demonstrations.

### **3.8 Proposal to be Retained by the Owner**

The Owner will not return the Proposal or any accompanying documentation submitted by a Proponent.

### **3.9 Trade Agreements**

Proponents should note that procurements falling within the scope of the Canadian Free Trade Agreement and/or the Canada-European Union Comprehensive Economic Trade Agreement are subject to those trade agreements but that the rights and obligations of the parties will be governed by the specific terms of this Request for Proposal.

### **3.10 No Guarantee of Volume of Work or Exclusivity of Contract**

The Owner makes no guarantee of the value or volume of work to be assigned to the successful Proponent.

### **3.11 Proponent to Review Request for Proposal**

Proponents shall promptly examine all of the documents comprising this Request for Proposal, and

- (a) shall report any errors, omissions or ambiguities; and
- (b) may direct questions or seek additional information

in writing by email to the Request for Proposal contact on or before the Deadline for Questions. All questions or comments submitted by Proponents by email to the Contact shall be deemed to be received once the email has entered into the contact's email inbox. No such communications are to be directed to anyone other than the Request for Proposal Contact, and the Owner shall not be responsible for any information provided by or obtained from any source other than the Request for Proposal Contact. The Owner is under no obligation to provide additional information. It is the responsibility of the Proponent to seek clarification from the Request for Proposal Contact on any matter it considers to be unclear. The Owner shall not be responsible for any misunderstanding on the part of the Proponents concerning this Request for Proposal or its process.

### **3.12 All New Information to Proponents by Way of Addenda**

This Request for Proposal may be amended only by addendum in accordance with this section. If the Owner, for any reason, determines that it is necessary to provide additional information relating to this Request for Proposal, such information will be communicated to all Proponents by addenda. Each addendum forms an integral part of this Request for Proposal and may contain important information, including significant changes. Proponents are responsible for obtaining all addenda issued by the Owner. In the Submission Form (**Appendix B**), Proponents shall confirm their receipt of all addenda by setting out the number of each addendum in the space provided. Proponents who **fail** to acknowledge all posted addenda will be deemed non-compliant and disqualified.

### **3.13 Addenda and Extension of Submission Deadline**

Any addendum added within four (4) calendar days of the Request for Proposals closing (Including on closing day) will extend closing by a reasonable period to be determined by Memorial University

### **3.14 Verify, Clarify and Supplement**

When evaluating Proposals, the Owner may request further information from the Proponent or third parties in order to verify, clarify or supplement the information provided in the Proponent's Proposal. The response received by the Owner shall, if accepted by the Owner, form an integral part of the Proponent's Proposal.

### **3.15 Notification to Other Proponents**

In accordance with section 30 of the *Public Procurement Regulations*, once the Agreement is awarded by the Owner, the outcome of the Request for Proposal will be publicly posted at Public Procurement Agency Website.

### **3.16 Debriefing**

Unsuccessful Proponents may request a debriefing within ten (10) business days after the award has been posted. The request must be sent in writing to the Request for Proposal Contact. The intent of the debriefing information session is to aid the Proponent in presenting a better Proposal in subsequent procurement opportunities. The debriefing process is not for the purpose of providing an opportunity to challenge the procurement process or its outcome.

### **3.17 Supplier Complaint Process**

If a Proponent wishes to register a complaint with respect to the Request for Proposal process, it should provide it in writing and within the parameters established by section 25 of the *Public Procurement Regulations*, as amended. The notice must provide a detailed explanation of the Proponent's concerns with the procurement process or its outcome, in addition to such other information as may be required by the *Regulations*. Proponents should note that these complaint procedures are separate and distinct from any dispute resolution processes that may be provided for under applicable trade agreements. If a Proponent wishes to dispute a matter under an applicable trade agreement, the Proponent must follow the process set out in the trade agreement.

### **3.18 Conflict of Interest**

The Owner may disqualify a Proponent for any conduct, situation or circumstances, determined by the Owner, in its sole and absolute discretion, to constitute a conflict of interest.

The Owner reserves the right to disqualify any Proponent that in the Owner's sole opinion has an actual or potential conflict of interest or an unfair advantage, or may permit the Proponent to continue and impose such terms and conditions, as the Owner in its sole discretion may require.

For the purposes of this Request for Proposal, the term "Conflict of Interest" includes, but is not limited to, any situation or circumstance where in relation to the Request for Proposal process, the Proponent has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to: (i) having, or having access to, confidential information of the Owner in the preparation of its Proposal that is not available to other

Proponents, (ii) communicating with any person with a view to influencing preferred treatment in the Request for Proposal process (including but not limited to the lobbying of decision makers involved in the Request for Proposal process), or (iii) engaging in conduct that compromises, or could be seen to compromise, the integrity of the open and competitive Request for Proposal process or render that process non-competitive or unfair.

Proponents are required to disclose, to the Request for Proposal Contact, any potential or perceived conflict of interest issues prior to Request for Proposal closing date and time.

### **3.19 Disqualification for Prohibited Conduct**

The Owner may disqualify a Proponent, rescind a notification of selection or terminate a contract subsequently entered into if the Owner determines that the Proponent has engaged in any conduct prohibited by this Request for Proposal.

### **3.20 Proponents Not to Communicate with Media**

Proponents must not at any time directly or indirectly communicate with the media in relation to this Request for Proposal or any agreement entered into pursuant to this Request for Proposal without first obtaining the written permission of the Request for Proposal Contact.

### **3.21 No Lobbying**

Proponents must not, in relation to this Request for Proposal or the evaluation and selection process, engage directly or indirectly in any form of political or other lobbying whatsoever to influence the selection of the successful Proponent(s).

### **3.22 Illegal or Unethical Conduct**

Proponents must not engage in any illegal business practices, including activities such as Proposal-rigging, price-fixing, bribery, fraud, coercion or collusion must not engage in any unethical conduct, including lobbying, as described above, or other inappropriate communications; offering gifts to any employees, officers, agents, elected or appointed officials or other representatives of the Owner; deceitfulness; submitting Proposals containing misrepresentations or other misleading or inaccurate information; or any other conduct that compromises or may be seen to compromise the competitive process provided for in this Request for Proposal.

### **3.23 Past Performance or Past Conduct**

The Owner may prohibit a supplier from participating in a procurement process based on past performance or based on inappropriate conduct in a prior procurement process, including but not limited to the following:

- (a) illegal or unethical conduct as described above;
- (b) the refusal of the supplier to honour submitted pricing or other commitments; or
- (c) any conduct, situation or circumstance determined by the Owner, in its sole and absolute discretion, to have constituted a Conflict of Interest.

In addition, the Owner may suspend the proposal privileges of a supplier in regard to non-compliant

or substandard performance in accordance with section 26 of the *Public Procurement Regulations*.

### **3.24 Confidential Information of the Owner**

All information provided by or obtained from the Owner in any form in connection with this Request for Proposal either before or after the issuance of this Request for Proposal:

- (a) is the sole property of the Owner and must be treated as confidential;
- (b) is not to be used for any purpose other than replying to this Request for Proposal and the performance of the Agreement;
- (c) must not be disclosed without prior written authorization from the Owner; and
- (d) must be returned by the Proponent to the Owner immediately upon the request of the Owner.

### **3.25 Confidential Information of Proponents**

This procurement process is subject to the *Access to Information and Protection of Privacy Act, 2015 (ATIPPA, 2015)*. A Proponent must identify any information in its Proposal or any accompanying documentation supplied in confidence for which confidentiality is requested to be maintained by the Owner. The confidentiality of such information will be maintained by the Owner, except as otherwise required by law or by order of a court or tribunal. Proponents are advised that their Proposal will, as necessary, be disclosed, on a confidential basis, to advisers retained by the Owner to advise or assist with the Request for Proposal process, including the evaluation of Proposals.

The Proponent agrees that any specific information in its submission that may qualify for an exemption from disclosure under subsection 39(1) of the *ATIPPA, 2015* has been identified in its submission. If no specific information has been identified it is assumed that, in the opinion of the Proponent, there is no specific information that qualifies for an exemption under the subsection 39(1) of the *ATIPPA, 2015*.

Contracting with the Owner is a public process. Information provided through this process will be disclosed when requested under the *ATIPPA, 2015*, except where disclosure of that information is harmful to the business' interests, as set out in the three-part test in the *ATIPPA, 2015*.

Information, including the financial value of a contract resulting from this procurement process, will be publicly released as part of the award notification process, in accordance with section 30 of the *Public Procurement Regulations*.

If a Proponent has any questions about the collection and use of personal information pursuant to this Request for Proposal, questions are to be submitted to the Request for Proposal Contact. Further information relating to subsection 39(1) of the *ATIPPA, 2015* is provided in guidance documents available through the Office of the Information and Privacy Commissioner at <https://oipc.ni.ca/guidance/documents>.

### **3.26 Reserved Rights of the Owner**

The Owner reserves the right to:

- (a) make public the names of any or all Proponents as well as Proposal price and value of contract;
- (b) make changes, including substantial changes, to this Request for Proposal provided that those changes are issued by way of addendum in the manner set out in this Request for Proposal;
- (c) request written clarification or the submission of supplementary written information in relation to the clarification request from any Proponent and incorporate a Proponent's response to that request for clarification into the Proponent's Proposal. This shall not be an opportunity for Proposal repair;
- (d) assess a Proponent's Proposal on the basis of: (i) a financial analysis determining the actual cost of the Proposal when considering factors including quality, service, price and transition costs arising from the replacement of existing goods, services, practices, methodologies and infrastructure (howsoever originally established); and (ii) in addition to any other evaluation criteria or considerations set out in this Request for Proposal, consider any other relevant information that arises during this Request for Proposal process;
- (e) waive formalities and accept Proposals that substantially comply with the requirements of this Request for Proposal;
- (f) verify with any Proponent or with a third party any information set out in a Proposal;
- (g) check references other than those provided by any Proponent;
- (h) disqualify a Proponent, rescind a notice of selection or terminate a contract subsequently entered into if the Proponent has engaged in any conduct that breaches the process rules or otherwise compromises or may be seen to compromise the competitive process;
- (i) cancel this Request for Proposal process at any stage;
- (j) cancel this Request for Proposal process at any stage and issue a new Request for Proposal for the same or similar deliverables;
- (k) accept any Proposal in whole or in part; or
- (l) reject any or all Proposals;

and these reserved rights are in addition to any other express rights or any other rights that may be implied in the circumstances.

### **3.27 Limitation of Liability**

By submitting a Proposal, each Proponent agrees that:

- (a) neither the Owner nor any of its employees, officers, agents, elected or appointed officials,



advisors or representatives will be liable, under any circumstances, for any claim arising out of this Request for Proposal process including but not limited to costs of preparation of the Proposal, loss of profits, loss of opportunity or for any other claim; and

- (b) the Proponent waives any right to or claim for any compensation of any kind whatsoever, including claims for costs of preparation of the Proposal, loss of profit or loss of opportunity by reason of the Owner's decision not to accept the Proposal submitted by the Proponent, to enter into an agreement with any other Proponent or to cancel this open call process, and the Proponent shall be deemed to have agreed to waive such right or claim.

### **3.28 Governing Law and Interpretation**

These Terms and Conditions of the Request for Proposal Process (Part 3):

- (a) are intended to be interpreted broadly and independently (with no particular provision intended to limit the scope of any other provision);
- (b) are non-exhaustive and shall not be construed as intending to limit the pre-existing rights of the Owner; and
- (c) are to be governed by and construed in accordance with the laws of the Province of Newfoundland & Labrador and the federal laws of Canada applicable therein.

### **3.29 Facility Compliance Requirement**

- (a) Equipment, power tools, instruments and appliances intended for use within Memorial University's facilities must comply with all regulatory requirements related to use and/or installation in University facilities. This includes but is not limited to certification/listing by recognized agencies, Pressure Vessel Act of Newfoundland and Labrador and similar.
- (b) Items provided related to this open call that receive power from the University's electrical system must be certified or listed for use within Canada by a recognized agency such as Canadian Standards Association (CSA) or Underwriter Laboratories Canada (ULC). A full list of agencies recognized by Memorial University is available upon request.
- (c) Equipment, tools, instruments and appliances that generate pressure may require registration as a pressure system with the Province of Newfoundland and Labrador. Compliance with the Boiler, Pressure Vessel and Compressed Gas Regulations under the Public Safety Act of Newfoundland and Labrador and the Boiler, Pressure Vessel, and Pressure Piping Code CSA B51:19 shall be demonstrated.

The vendor is responsible for all costs associated with ensuring the system is compliant with legislative requirements and for the application and registration processes. Field certifications may be considered but all costs and efforts for such scenarios are the responsibility of the vendor.

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# APPENDIX A – SPECIFICATIONS & SCOPE

## Background

Memorial University is seeking a qualified consultant for development of three construction packages for arc flash corrective work, for a number of buildings in the St John's campus. Through this RFP process a consultant will be engaged for provision of services identified herein.

## Scope of Project

- Package 1: QEII Library & Physical Education
  - Consultant to review Existing Arc flash coordination studies & E-Tap Model for QEII Library (Appendix I) and Physical Education (Appendix J).
  - Consultant to provide design package of corrective work to lower arc flash values of existing system equipment, to below 40cal/cm<sup>2</sup>. Scope to include all deliverables as listed in Appendix B, Table 4: Scope of services deliverables acknowledgement.
  - Corrective work including but not limited to; Replacement of existing infrastructure, addition of new infrastructure, modification of existing infrastructure.
  - The Following equipment is deemed to be at end of life, the replacement of this equipment should be included in this package (In addition to the arc flash corrective work.
    - QEII Library Main Switchgear
- Package 2: Facilities Management & School of Music
  - Consultant to review Existing Arc flash coordination studies & E-Tap Model for Facilities Management (Appendix K) and School of Music (Appendix L).
  - Consultant to provide design package of corrective work to lower arc flash values of existing system equipment, to below 40cal/cm<sup>2</sup>. Scope to include all deliverables as listed in Appendix B, Table 4: Scope of services deliverables acknowledgement.
  - Corrective work including but not limited to; Replacement of existing infrastructure, addition of new infrastructure, modification of existing infrastructure.
- Package 3:Burtons Pond Apartments
  - Consultant to review Existing Arc flash coordination studies & E-Tap Model for Guy (Appendix M), Gilbert (Appendix N), Cabot (Appendix O), Cartier (Appendix P) & Baltimore (Appendix Q). Consultant to provide design package of corrective work to lower arc flash values of existing system equipment, to below 40cal/cm<sup>2</sup>. Scope to include all deliverables as listed in Appendix B, Table 4: Scope of services deliverables acknowledgement.
  - Corrective work including but not limited to; Replacement of existing infrastructure, addition of new infrastructure, modification of existing infrastructure.
  - The Following equipment is deemed to be at end of life, the replacement of this equipment should be included in this package (In addition to the arc flash corrective work.
    - Guy Court Main Switchgear
    - Gilbert Court Main Switchgear
    - Cabot Court Main Switchgear
    - Cartier Court Main Switchgear
    - Baltimore Court Main Switchgear

Additional consulting and/or contract administration services may be required and will be completed on a per diem basis. Please submit a schedule of rates with your proposal.

Memorial University will provide any and all existing building drawings on file.

**Form of Agreement**

The form of agreement can be found in **Appendix G – Department of Facilities Management Consultants Services Agreement** of this document.

**Prime Consultant’s Summary of Services**

*Table 1: Scope of Services Summary* summarizes and amends the Scope of Services for the engagement:

**TABLE 1: SCOPE OF SERVICES SUMMARY**

<b>Section</b>		<b>Included</b>
3.1	General Principles	<input checked="" type="checkbox"/>
3.2	Additional Services	<input checked="" type="checkbox"/>
3.3	Work Schedule	<input type="checkbox"/>
3.4	Cost Control	<input type="checkbox"/>
3.5	Sub-Consultants	<input type="checkbox"/>
3.6	Functional Programming Development and Advisory Services	<input checked="" type="checkbox"/>
3.7	Concept Design (Includes Schematics)	<input checked="" type="checkbox"/>
3.8	Design Development	<input checked="" type="checkbox"/>
3.9	Construction Contract Documents	<input checked="" type="checkbox"/>
3.10	Bidding and Construction Contract Award	<input checked="" type="checkbox"/>
3.11	Construction Contract Administration	<input checked="" type="checkbox"/>
3.12	Resident Supervision (Additional Services)	<input type="checkbox"/>
3.13	Insurance	<input checked="" type="checkbox"/>
<b>Conditions/Amendments</b>		
3.6	Include the following subsections only: (a) Prepare a functional program for the Project to examine and define the Owner’s needs and objectives for the Project and establish criteria for evaluating potential design solutions or strategic alternatives;	
3.10	Preparation of tender documents, addenda and tender award recommendation by Consultant; issuing of tender documents and addenda by the Owner	

3.11	<p>Include the following subsections only:</p> <p>(g) – Preparation of Change Orders by Consultant, issuance by the Owner;</p> <p>(j) – Organize, through the Contractor, a complete commissioning of all the components of the Project to determine that the various parts are operating in the manner as intended by the Contract Documents. The Substantial Performance Certificate will not be issued until the final commissioning of the work has been successfully completed and so certified by the Consultant;</p> <p>(k) – Upon achievement of Substantial Performance by the Contractor prepare, sign and deliver to the Owner the Substantial Performance Certificate. Prior to issuance of such Substantial Performance Certificate, the Consultant shall ensure that the Owner has been provided with all Deliverables related to the Contract and shall provide any remaining Deliverables forthwith including, without limitation, a complete set of the contract drawings revised to record all changes “as-builts”;</p> <p>(l) – Upon achievement of Total Performance by the Contractor (including the rectification of any deficiencies), prepare a Total Performance Certificate for issuance to the Contractor. The Total Performance Certificate, in order to be valid, will require the signature of the Consultant, the Contractor and the Owner.</p>
------	--

**Deliverables**

See *Table 4: Scope of Services Deliverables Acknowledgement* in **Appendix B – Submission Form**.

**Concept Parameters**

As described but not limited to the following:

1. Develop in accordance with current building design and code standards, including, but not limited to:
  - A. National Building Code
  - B. Life Safety
  - C. Canadian Electrical Code
  
2. All existing Memorial University standards to be reviewed and incorporated into the design package where applicable, including but not limited to:
  - A. Memorial University Point Naming Conventions (Honeywell EBI)
  - B. Memorial University Electrical Panel Color Code Panels
  - C. Memorial University Title Blocks (AutoCAD)
  - D. MUNet Specification (Communications)
  - E. Zero Energy Isolation Program

Above documents/templates will be made available to the successful Proponent after contract award, unless requested otherwise;

3. All existing reports to be reviewed and incorporated into the design where necessary, including but not limited to:

- A. Arc Flash/ Coordination studies
  - B. E-Tap Models.
  - C. Electrical Single Line Diagrams
4. If available, Electrical Single Line as-built drawings (in .dwg format) will be made available to the successful Proponent upon request;
  5. Proponents should be prepared to interview end users for specific user requirements including room, programming and furniture layouts;
  6. The Proponent should note that all design finishes, materials, fixtures and furnishing throughout the building shall be incorporated into this fit up plan. This will include but not limited to washrooms, electrical design, mechanical design and architectural design details;
  7. The Proponent is expected to ensure access to existing services is maintained and incorporated into the design. Allow allowances for relocations where necessary;
  8. The Department of Facilities Management will complete the Furniture fit up of the space outside of this RFP. The Proponent is expected to provide concept layouts with furniture, as per Memorial University's furniture standards, shown.

**Project Construction Budget:**

The Proponent is hereby notified that the project construction budget does not represent a figure against which a percentage of fees should be set. The Owner specifically requires the fee to be based on a level of effort and no additional fee shall be requested or paid as a result of construction cost escalation.

The Proponent is advised of their responsibilities under Section 3.4 of the Consultant's Services Agreement Terms and Conditions (**see Appendix G**), where so engaged, and their requirement to complete the services within the construction cost budget.

## APPENDIX B – SUBMISSION FORM

### Proponent’s Information

Please complete *Table 2: Proponent’s Information*:

**TABLE 2: PROPONENT’S INFORMATION**

Please fill out the following form, naming one person to be the Proponent’s contact for the Open Call process and for any clarifications or communication that might be necessary	
Full Legal Name of Proponent:	
Any Other Relevant Name under which Proponent Carries on Business:	
Street Address:	
City, Province/State:	
Postal Code:	
Phone Number:	
Company Website (if any):	
Proponent’s Contact Name and Title:	
Proponent’s Contact Phone:	
Proponent’s Contact Email:	

### Offer

The Proponent has carefully examined the Open Call documents and has a clear and comprehensive knowledge of the Deliverables required under the RFP. By submitting a Proposal, the Proponent agrees and consents to the terms, conditions and provisions of the RFP, including the Form of Agreement, and offers to provide the Deliverables in accordance therewith at the rates set out in the pricing section.

### Rates

The Proponent has submitted its rates in accordance with the instructions in the RFP. The Proponent confirms that it has factored all the provisions of **Appendix A – Specifications & Scope**, including insurance and indemnity requirements, into its pricing assumptions and calculations.

### Addenda

The Proponent is deemed to have read and accepted all addenda issued by the Owner. The onus is on Proponents to make any necessary amendments to their Proposals based on the addenda. The Proponent is required to confirm that it has received all addenda by listing the addenda numbers in *Table 3: Addenda Received*: **(For example, if Addendum 1 has been issued, enter 1 in the table, if there are two addenda, enter 1,2.)**

**NOTE: FAILURE TO COMPLETE TABLE 3 BELOW SHALL RESULT IN BID DISQUALIFICATION:**

**TABLE 3: ADDENDA RECEIVED**

Addenda Number(s)

Proponents who fail to complete this section will be deemed to have not received all posted addenda and shall be deemed **NON-COMPLIANT**.

**Deliverables**

Memorial University is seeking a team to help in establishing the items listed in *Table 4: Scope of Services Deliverables Acknowledgement*. Please initial next to each item in Table 4 to acknowledge its inclusion in the Proponent’s proposal:

**NOTE: FAILURE TO COMPLETE TABLE 4 BELOW SHALL RESULT IN BID DISQUALIFICATION:**

**TABLE 4: SCOPE OF SERVICES DELIVERABLES ACKNOWLEDGEMENT**

Section	Item Description	Proponent Initials
A	Review of existing Arc Flash Studies	
B	Development of conceptual design	
C	Class D cost estimate (+/- 20%), prior to moving into detailed design (see Consultant’s Services Agreement, Section 3.7)	
D	Issued for Tender construction contract documents (see Consultant’s Services Agreement, Section 3.9)	
E	Class A cost estimate (+/- 5%), pre-tender estimate (see Consultant’s Services Agreement, Section 3.9)	
<b>Section A to Section E to be completed simultaneously, Section F to Section Q to be completed at owner’s direction, and will be based on continuation of package 1, 2 and/or 3 as a whole</b>		
F	Tender support, including Request for Information responses, preparation of Addenda, recommendation of tender award	
G	Memorial will administer all facets of tendering	
H	Issued for Construction documents	
I	Review and recommendation of Owner or Consultant generated Contemplated Change Orders, Contractor generated Change Order Requests and Progress Claims	
J	Preparation of Non-compliance Reports	
K	Review and tracking of all required submittals, including shop drawings, as outlined in the construction contract package.	



L	Response to and tracking of all Request for Information (RFI) generated by the general contractor during the construction phase. Will be facilitated by mun, and response from consultant.	
M	Generation of contemplated change orders resulting from RFI Responses. And review and recommendation of contractor's pricing in response these contemplated change orders.	
N	Consultant representation at the construction kick-off meeting and all subsequent biweekly construction meetings.	
O	Transcribe "as-built" information from the Project, as provided by the Contractor, to the original drawings, provide a set of such documents to the Owner in electronic format acceptable to the Owner in original, editable format (.dwg)	
P	Organize, through the Contractor, a complete commissioning of all the components of the Project and certify commissioning results prior to issuance of Substantial Performance Certificate	
Q	Updated ETAP Model & Results Table, reflecting the implemented changes	

\* Includes but not limited to the items listed above, full scope as described in the RFP documents

\*\* The scope noted in the above table is to be completed for three (3) separate construction packages. Noted in the scope of project section in Appendix A.

### **No Prohibited Conduct**

The Proponent declares that it has not engaged in any conduct prohibited by this RFP.

### **Disclosure of Information**

The Proponent hereby agrees that any information provided in this Proposal, even if it is identified as being supplied in confidence, may be disclosed where required by law or by order of a court or tribunal. The Proponent hereby consents to the disclosure, on a confidential basis, of this Proposal by the Owner to the advisers retained by the Owner to advise or assist with the RFP process, including with respect to the evaluation of this Proposal.

### **Proposal Irrevocable**

The Proponent agrees that its proposal shall be irrevocable for a period of 90 Days following the submission deadline.

### **Required Signatures**

Failure to submit this signature section will render the Proposal **NON-COMPLIANT** and the Proposal will be disqualified.

\_\_\_\_\_  
Signature of Proponent's Representative

\_\_\_\_\_  
Name of Proponent's Representative

\_\_\_\_\_  
Title of Proponent's Representative

\_\_\_\_\_  
Date

**I have the authority to bind the  
Proponent**

**IN SIGNING THIS PAGE AND  
SUBMITTING YOUR  
PROPOSAL, THE PROPONENT  
ACKNOWLEDGES HAVING  
READ AND UNDERSTOOD AND  
AGREED TO THE TERMS AND  
CONDITIONS OF THIS  
DOCUMENT.**

## APPENDIX C – PROPOSAL EVALUATION & RATED CRITERIA

### Proposal Evaluation

Proposals will be evaluated by the Owners RFP Evaluation Committee. The Committee will first evaluate and score each firm's Technical Proposal using the criteria as outlined in Appendix C. Upon completion of the Technical Proposal evaluations, the Price Proposals will be opened and scored. All Proposals will then be ranked based upon the Technical and Price Proposal combined score, the Total Score, with the highest scoring Proposal being considered for award.

Proponents who do not meet a minimum technical threshold score of 40 Points will not proceed to the price evaluation stage of the evaluation process.

### Evaluation Criteria and Weighting

The following sets out the categories, weightings and descriptions of the rated criteria of the RFP.

**TABLE 5: RATED CRITERIA**

<b>Rated Criteria Category</b>	<b>Weighting (Points)</b>
Project Manager	5
Lead Designer/Project Team	10
Past Technical Experience	15
Understanding of Scope	15
Local Presence of Team	5
Duration (Appendix F)	5
Schedule	5
<b>Technical Score</b>	<b>60</b>
<b>Price Proposal</b>	<b>40</b>
<b>Total Score</b>	<b>100</b>

### Experience and Qualifications

Each Proponent should provide the following in its proposal:

1. A brief description of the Proponent;
2. A description of its knowledge, skills and experience relevant to the Deliverables;
3. The roles and responsibilities of the Proponent and any of its agents, employees and sub-contractors who will be involved in providing the Deliverables, together with the identity of those who will be performing those roles and their relevant respective expertise.

There is no maximum page number allotment for Proposal submittals though the Proposal shall not exceed the file size limits as stated in **Appendix D**.

### **Technical Proposal Evaluation**

Technical proposal submissions will be evaluated based on the following qualification criteria, which should be highlighted by the submission:

1. **Project Manager**: A description of the proposed Project Manager (PM) shall be provided which clearly identifies their experience and formal project management credentials, if any, or other qualifications which enable them to oversee and direct the full delivery of the scope of the services while emphasizing quality, schedule and stakeholder management. The full project is anticipated to require several years and ability to provide continuity of project management should be highlighted as part of the submission. The PM must be located in the greater St. John's area and be reasonably able to commit themselves to a project of this duration. The PM duties may not be delegated to an alternate team member during the course of the project. The proposed PM may be replaced during the course of the project, by agreement with Memorial University, as to the qualifications of the proposed replacement PM. The PM is expected to attend all meetings and relevant project inspections and is required to review all correspondence and approved submissions. **The Project Manager shall not be the Architect or Engineer of Record;**
2. **Lead Designer/Project Team**: The balance of the Project Team should be made up of those individuals and/or firms which have been identified by the Prime Consultant as providing value and technical skills required to deliver per the understanding of the scope of work. The lead designer shall demonstrate a history of arc flash experience in the field of systems analysis & design. Each of the sub-consultants within the design team must provide a brief description of their company, its history, size, organizational structure, range of expertise, past projects and past working relationships with the design team as well as those individuals to be utilized for this project. Provide an organizational chart explaining the overall prime/sub-consultants' relationships, the project manager(s), the quality assurance system, the discipline leaders and other key design personnel within each discipline.

It is recognized that certain key personnel and skill sets may be required from firms or individuals located outside of the province and all staff should define their primary physical location in their submission;

3. **Past Technical Experience**: The Proponent should highlight their technical skill and experience designing and delivering projects of similar scale, complexity and duration completed within the past five years. As well the system design configurations, with an emphasis on operating infrastructure, should be outlined. In cases where the firm did not act as the prime consultant, the Proponent should specifically identify their role and proportionate involvement. (i.e. Electrical was 25% of \$5M project construction value.). Projects referenced are to be relevant to the proposed team members included in the Proposal;

The Proponent must demonstrate their technical skill and experience designing and delivering other fit up projects. The proposal should identify the industry (commercial, industrial, governmental etc.) and, where possible, the client;

4. **Understanding of Scope**: The Proponent should attempt to interpret the scope of work as it has been provided and, in their own words, provide an overview of the goals and methodologies of the project. The Proponent must have a clear and concise understanding of the objectives of the project which will be demonstrated by providing a review of the conceptual methodology and highlight or expand upon the solution or provide an alternate approach. The solution should introduce as low a risk as possible to Memorial University's operations and utilities while providing the highest value.

The response should indicate any positive or negative risks, potential mitigation measures, or alternative approaches that reflect their value added to the undertaking.

5. **Local Presence of Team**: The complexity of this project, along with the requirement for interfacing with Memorial University's Facilities Management and Stakeholder groups, will require a project team that is agile and responsive to the changing demands this project will introduce.
6. **Duration and Schedule**: The Proponent shall complete and submit the **Duration Form (Appendix F)** and shall include a schedule in Gantt chart format for completing the items as described in the Scope of Services.

Memorial University will not prescribe durations however for the purpose of comparative analysis of the submissions, it is reasonable to require a level of effort assessment and corresponding duration and schedule submittal **for those tasks which are within the consultant's controls and responsibility**. It is expected the Proponent will be available to start performing the Services included within two weeks of receiving the purchase order.

**Duration** is scored based on a relative duration formula with each Proponent receiving a percentage of the total possible points allocated to duration in accordance with the following formula:

$$\text{Lowest Total Duration} \div \text{Proponent's Total Duration} \times \text{Weighting} = \text{Proponent's Evaluation Points}$$

The Proponent is advised of their responsibilities under Section 3.3 of the Consultant's Services Agreement Terms and Conditions (**see Appendix G**), where so engaged, and the service requirements referenced within.

**Schedule** is scored based on level of detail and quality of the schedule submitted with the proposal.

7. **Price Proposal**: Pricing is scored based on a relative pricing formula using the rates set out in Appendix E – Pricing Form. Each Proponent will receive a percentage of the total possible points allocated to price in accordance with the following formula:

$$\text{Lowest Price} \div \text{Proponent's Price} \times \text{Weighting} = \text{Proponent's Evaluation Points}$$

### **Evaluation Committee**

Members of the Evaluation Committee (or their designate) are as follows:

1. Director Engineering & Construction (Facilities Management)
2. Manager, Minor Capital Projects (Facilities Management)
3. Project Coordinator, Minor Capital Projects (Facilities Management)
4. Electrical Shop Representative (Facilities Management)

Committee members will review the Technical Proposals individually prior to meeting as a group to discuss and score the Technical Proposals as per the rated criteria as described in Appendix C and throughout the RFP.

### **Interview Request**

The Owner may, at its discretion, short list Proponents to participate in a 30 minute interview and/or presentation.

## APPENDIX D – PROPOSAL PARTICULARS

### Negotiations

Memorial University reserves the right to conduct negotiations with more than one vendor simultaneously.

### Proposal Submission

Proponents should submit **One (1)** email submission, with the subject as stated on the RFP cover page, containing **two** separate PDF attachments titled as per the below:

1. St Johns Campus ARC Flash Corrective Work RFP Response (Company Name)
2. St Johns Campus ARC Flash Corrective Work RFP Fee Schedule (Company Name)

Please note: File size cannot exceed 15 MB. Otherwise server may reject proposal submission due to size. Proposals submitted by fax, mail, courier, drop off or by any other means of delivery other than by email stated above shall not be accepted.

### Fee Proposal

Submissions of fees should be broken down into:

1. **Scope of Services:**

Lump sum (maximum upset) fee for all services included in Table 1: Scope of Services Summary (**see Appendix A**), including that of any sub-consultants;

2. **Expenses:**

Expenses will be paid as a disbursement at cost with per diems for meals. Backup for travels costs is required to be submitted with expense claims. Proponents should provide an estimate of anticipated travel expenses as a separate line item of the fee proposal. Additional information can be found in **Appendix G**;

Include in the fee proposal the completed Pricing Form (**Appendix E**).

Submit a schedule of per diem rates for additional design and/or contract administration services.

Fees submitted for this work are to be calculated in accordance with the respective fees schedules (where applicable) for associations which may govern the discipline. Where such schedules are used their source should be identified.

### Proposal Award

The successful proponent will enter into good faith negotiations with the Owner towards the conclusion of a Consultant's Agreement in a form acceptable to the Owner. The Owner attaches a copy of its Prime Consultant's Summary of Services (**see Appendix A**), and the Consultant's Services Agreement (**see Appendix G**), to be executed.





## APPENDIX E – PRICING FORM

### Instructions on How to Complete the Pricing Form

Rates must be provided in Canadian funds, inclusive of all applicable duties and taxes except for HST, which should be itemized separately.

Rates quoted by the Proponent must be all-inclusive and must include all labour and material costs, all travel and carriage costs, all insurance costs, all costs of delivery, and all other overhead, including any fees or other charges required by law.

Please complete *Table 6: Pricing Form*:

**TABLE 6: PRICING FORM**

Item	Service	Fee
A	All Construction Packages (1,2 &3) to Class A (Section A to E, Table 4, Appendix B)	
B1	Construction Package 1 (Section F to Q, Table 4, Appendix B)	
B2	Construction Package 2 1 (Section F to Q, Table 4, Appendix B)	
B3	Construction Package 3 1 (Section F to Q, Table 4, Appendix B)	
C1	Travel Expenses (estimated)	
C2	Other Reimbursable Expenses (estimated)	
C3	<b>SUBTOTAL OF ESTIMATED EXPENSES (E1+E2)</b>	
D	<b>EXPECTED TOTAL FEE (A-E) (Excludes HST)</b>	

The price evaluated shall be based upon line E of the Pricing Form.

## APPENDIX F – DURATION FORM

### Instructions on How to Complete the Duration Form

A duration to complete the contract deliverables listed below is required for evaluation. It is based on a finish to start relationship for each scope of services items, with no overlaps or gaps being considered (i.e. Owner review period). The successful proponent, once awarded, will be required to submit an updated schedule based on the actual relationship between activities and will include allowances for deliverable reviews and approvals. All durations in Table 7 below are to be in business days.

Please complete *Table 7: Duration Form*:

**TABLE 7: DURATION FORM**

<b>Item</b>	<b>Scope of Services</b>	<b>Duration</b>
1	DELIVER CONCEPT DESIGN PACKAGES 1,2 &3	
2	DELIVER ISSUED FOR REVIEW PACKAGE S 1,2 &3	
3	DELIVER ISSUED FOR TENDER PACKAGE S 1,2 &3	
4	DELIVER PRE-TENDER ESTIMATE PACKAGE 1,2 &3	
<b>Total Duration (business days)</b>		

**APPENDIX G – DEPARTMENT OF FACILITIES MANAGEMENT  
CONSULTANT’S SERVICES AGREEMENT TERMS &  
CONDITIONS**



**DEPARTMENT OF FACILITIES MANAGEMENT  
CONSULTANT'S SERVICES AGREEMENT**

**for**

Click here to enter text.

**THIS AGREEMENT** made in on the \_\_\_\_\_ day of \_\_\_\_\_

**BETWEEN:** Memorial University of Newfoundland (the "Owner")

**AND:** Click here to enter text. (the "Consultant")

**RECITALS:**

- A. The Owner issued a Request for Click here to enter text. on Click here to enter a date. (the "Request for Proposals"(RFP)) for the Services (defined below), as amended by the Addenda and Clarifications (defined below), if any.
- B. The Consultant submitted the Consultant Proposal (defined below).
- C. The Owner has agreed to accept the Consultant Proposal on the terms and conditions hereinafter set out, and the Consultant has agreed that it will provide the Services required by the RFP (as such term is defined in Appendix 1 – Terms and Conditions) and under this Agreement (as such term is defined in Appendix 1 – Terms and Conditions).
- D. This initial part of the Agreement, which is comprised of the Parties, Recitals, Section 1 and execution page(s), is referred to herein as the "Cover Pages", and the Agreement is comprised of the Cover Pages and all appendices thereto including the specific appendices and other items referred to in Section 1.2 of Appendix 1 – Terms and Conditions.

**NOW THEREFORE** this Agreement witnesses that in consideration for the mutual covenants and agreements contained herein, the Parties agree as follows:

1. That the Owner hereby engages the Consultant to perform the Services, and the Consultant hereby agrees to provide the Services, all in accordance with this Agreement, which for greater certainty includes the following additional specific details:

<b>TABLE 1 - DETAILS</b>	
RFP for <a href="#">Click here to enter text.</a> :	<p>The project description is as outlined in the RFP for the Services, as amended by the Addenda and Clarifications, if any, attached hereto as Appendix 2.</p> <p><a href="#">Click here to enter text.</a></p> <p>(the “Project”)</p>
Consultant Address for Service:	<p>The Consultant’s address for service for the purpose of Section 14.4 of Appendix 1 – Terms and Conditions is:</p> <p><a href="#">Click here to enter text.</a>  <a href="#">Click here to enter text.</a>  <a href="#">Click here to enter text.</a></p> <p>Attention: <a href="#">Click here to enter text.</a></p> <p>Facsimile: <a href="#">Click here to enter text.</a></p>
Consultant Proposal:	<p>Proposal dated <a href="#">Click here to enter a date.</a> comprised of a Technical Submission and a Financial Submission and Additional Services (if applicable) <a href="#">Click here to enter text.</a>, attached hereto as Appendix 3.</p> <p>(the “Consultant Proposal”)</p>
Description of Services:	<p>The services to be provided by the Consultant shall include the services marked below:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Work Schedule - Section 3.3 of Appendix 1 (if applicable, attach Appendix 5).</li> <li><input type="checkbox"/> Cost Control - Section 3.4 of Appendix 1</li> <li><input type="checkbox"/> Sub-consultants – Section 3.5 of Appendix 1</li> <li><input type="checkbox"/> Functional Program Development and Advisory Services – Section 3.6 of Appendix 1</li> <li><input type="checkbox"/> Concept Design (includes Schematics) – Section 3.7 of Appendix 1</li> <li><input type="checkbox"/> Design Development – Section 3.8 of Appendix 1</li> <li><input type="checkbox"/> Construction Contract Documents – Section 3.9 of Appendix 1</li> <li><input type="checkbox"/> Bidding and Construction Contract Award – Section 3.10 of Appendix 1</li> <li><input type="checkbox"/> Construction Contract Administration – Section 3.11 of Appendix 1</li> <li><input type="checkbox"/> Additional Services in accordance with the requirements of Section 3.2 of Appendix 1 (if applicable, attach in Appendix 3)</li> </ul>

	(collectively, the “Services”).						
Addenda and Clarifications:	<ul style="list-style-type: none"> <li>Click here to enter text.</li> </ul> <p>Attached hereto as Appendix 2 (collectively, the “Addenda and Clarifications”).</p>						
Specified Deliverables:	<p>Click here to enter text.</p> <p>(collectively, the “Specified Deliverables”)</p>						
University Guidelines, Policies and Specifications:	<p>The Consultant must request from the Owner all guidelines, policies and specifications of the Owner which relate or inform the Services being provided. Without limiting the generality of the foregoing, the Owner advises that the following guidelines, policies and specifications are applicable to the Services:</p> <ul style="list-style-type: none"> <li><b>Computing and Communication MUNet Specs;</b></li> <li><b>Memorial University of Newfoundland Campus Master Plan;</b></li> <li><b>University Space Standards and Guidelines;</b></li> <li>Click here to enter text.</li> </ul> <p>All guidelines, policies and specifications related to or informing the Services, including, without limitation, those specified above are referred to herein as the “University Guidelines, Policies and Specifications”).</p>						
Insurance Coverage:	<p>The Consultant is required to have insurance coverage as set out in Section 3.13 of Appendix 1 - Terms and Conditions.</p> <p>The Consultant is required to have Click here to enter text. of insurance coverage for this project.</p>						
Owner’s Representatives:	<p>The Owner advises that the person(s) listed below are the authorized representatives of the Owner for the Project with decision making authority to resolve on behalf of the Owner all matters that may arise during the performance of the Services.</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Position</th> <th>Contact Information (e-mail, telephone, fax, address)</th> </tr> </thead> <tbody> <tr> <td>Click here to enter text.</td> <td>Click here to enter text.</td> <td> e-mail: Click here to enter text.  Phone: Click here to enter text.  Fax: Click here to enter text. </td> </tr> </tbody> </table>	Name	Position	Contact Information (e-mail, telephone, fax, address)	Click here to enter text.	Click here to enter text.	e-mail: Click here to enter text. Phone: Click here to enter text. Fax: Click here to enter text.
Name	Position	Contact Information (e-mail, telephone, fax, address)					
Click here to enter text.	Click here to enter text.	e-mail: Click here to enter text. Phone: Click here to enter text. Fax: Click here to enter text.					

			<p>Room Click here to enter text.  Facilities Management Building  Memorial University  St. John's, NL A1C 5S7  Canada</p>
	<p>Click here to enter text.</p>	<p>Click here to enter text.</p>	<p>e-mail:  Phone:  Fax:    Room  Facilities Management Building  Memorial University  St. John's, NL A1C 5S7  Canada</p>
<p>Owner Address for Service:</p>	<p>The Owner's address for service for purpose of Section 14.4 of Appendix 1 – Terms and Conditions is:</p> <p>Click here to enter text.  Room Click here to enter text.  Facilities Management Building  Memorial University  St. John's, NL A1C 5S7  Canada</p> <p>Facsimile: Click here to enter text.</p>		
<p>Fee:</p>	<p>The total compensation for the performance of the Services (not including Additional Services) shall be \$Click here to enter text. + HST (the "Fee").</p> <p>The fee for Additional Services shall be determined in accordance with Section 8.2 of Appendix 1 – Terms and Conditions.</p>		
<p>Delivery of Payment Requirements:</p>	<p>Payment requirements under Subsection 8.5(b) of the Appendix 1 – Terms and Conditions shall be delivered to the attention of:</p> <p>Click here to enter text.</p> <p><b>by ONE (not both) of the following:</b></p> <p><b>E-mail at:</b> <a href="mailto:FMAdmin@mun.ca">FMAdmin@mun.ca</a></p>		

	<p><b>Or</b></p> <p><b>Mail to:</b> c/o Administrative Services Facilities Management Memorial University St. John's, NL A1C 5S7</p>
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**IN WITNESS WHEREOF** the Parties hereto have executed this Agreement on the date first written above.

\_\_\_\_\_  
Witness (Signature)

\_\_\_\_\_  
Authorized Signatory (Signature)  
Memorial University of Newfoundland

\_\_\_\_\_  
Witness (Print Name)

\_\_\_\_\_  
Authorized Signatory (Print Name and Title)  
Memorial University of Newfoundland

\_\_\_\_\_  
Witness (Signature)

\_\_\_\_\_  
Consultant (Signature)

\_\_\_\_\_  
Witness (Print Name)

\_\_\_\_\_  
Consultant (Print Name and Title)



**APPENDIX 1**  
**TERMS AND CONDITIONS**

## **INDEX OF APPENDIX 1 - TERMS AND CONDITIONS**

1. DEFINITIONS
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## 1. DEFINITIONS

- 1.1 "Addenda and Clarifications", if used, has the meaning ascribed on the Cover Pages hereof.
- 1.2 "Agreement" means this Services Agreement entered into between the Owner and the Consultant and consisting of the following:
- (a) The executed Cover Pages;
  - (b) The Terms and Condition attached to the Cover Pages in this Appendix 1, as may be amended, supplemented or restated in writing signed by the Parties from time to time;
  - (c) The Request for Proposals including all Addenda and Clarifications, if any, attached in Appendix 2;
  - (d) The Consultant Proposal attached in Appendix 3;
  - (e) The Protection of Privacy Requirements attached in Appendix 4;
  - (f) Initial Services Schedule attached in Appendix 5, if applicable;
  - (g) Applicable Reimbursement Requirements attached in Appendix 6;
  - (h) University Guidelines, Policies and Specifications included on the Cover Pages hereof.
- 1.3 "Approved Construction Cost Budget" means from time to time the latest budget for construction of the Project which has been approved in writing by the Owner, whether that be a Class D (+/- 20%), C (+/- 15%), B (+/- 10%) or A (+/- 5%) budget estimate.
- 1.4 "Consultant" has the meaning ascribed on the Cover Pages hereof.
- 1.5 "Consultant Proposal" has the meaning ascribed on the Cover Pages hereof.
- 1.6 "Contractor" means the person(s), firm(s) or corporation(s) contracting with the Owner to provide labour, materials and equipment for the execution of the Project.
- 1.7 "Contract" is the agreement between the Owner and the Contractor for the provision of the labour, materials and equipment for the execution of the Project by the Contractor.

- 1.8 "Contract Documents" consists of the executed agreement between the Owner and the Contractor, the general conditions of the Contract, the drawings and such other documents as are identified in the Contract and the general conditions as constituting part of the Contract Documents.
- 1.9 "Cover Pages" has the meaning ascribed on the Cover Pages hereof.
- 1.10 "Deliverables" shall include, where applicable, but are not limited to:
- (a) Land survey data and reports;
  - (b) Geotechnical surveys, data and reports;
  - (c) Fire and Life Safety code review documents;
  - (d) National Building Code of Canada long form and backup documentation for submission;
  - (e) Copies of (a) submissions made by the Consultant, and (b) materials used or prepared by the Consultant for submissions to be made by the Owner to the Government Services Centre of the Department of Service NL or the applicable department of the Government of Newfoundland and Labrador in respect of permits and accessibility;
  - (f) 33% drawings, 66% drawings and specifications and 99% drawings and specifications;
  - (g) Class "D", "C", "B" and "A" Estimates;
  - (h) Issued for tender drawings and specifications;
  - (i) Issued for constructions drawings and specifications;
  - (j) Cost and schedule forecasting reports;
  - (k) Commissioning Plan;
  - (l) Substantial Performance Certificate;
  - (m) Total Performance Certificate;
  - (n) As-built drawings;
  - (o) Samples, models, mock-ups and renderings;
  - (p) Operations and maintenance manuals;

- (q) Building Information Management (BIM) models;
  - (r) Shop drawings;
  - (d) Testing reports and inspections;
  - (t) Correspondence with contractors;
  - (u) Requests for information, contemplated change notices, change orders and all similar documents and associated drawings and supporting documentation;
  - (v) Meeting minutes;
  - (w) Inspection forms and notes (written or digital) and inspections shall use Unifomat;
  - (x) Substantial performance inspection report complete with valuation of deficiencies;
  - (y) Pre-warranty expiry inspection report complete with valuation of repairs/corrections; and
  - (z) Specified Deliverables identified on the Cover Pages hereof.
- 1.11 "Holdback" means an amount equal to 10% of a payment due to the Consultant plus any Liens.
- 1.12 "Fee" has the meaning ascribed to that term on the Cover Pages hereof.
- 1.13 "Liens" means all amounts claimed by any person(s) pursuant to the Mechanics' Lien Act of which the Owner has notice and any other lien.
- 1.14 "Losses" means collectively any and all manner of action and actions, cause and causes of action, proceedings, suits, debts, duties, liabilities, rights, sums of money, accounts, controversies, losses, penalties, damages, costs, agreements, promises, contracts, claims or demands of any type or nature whatsoever by any person including, without limitation, third parties, directors, officers, employees, servants and agents of any party, under the laws of all jurisdictions in contract, tort, by statute or otherwise and in law or in equity, whether known or unknown, suspected or unsuspected, conditional or unconditional, matured or unmatured, liquidated or unliquidated, fixed or contingent.
- 1.15 "Mechanics' Lien Act" means *Mechanics' Lien Act*, RSNL 1990 c. M-3, as amended (or any successor or replacement legislation).

- 1.16 "Owner" means Memorial University of Newfoundland.
- 1.17 "Party" or "Parties" means a party to this Agreement.
- 1.18 "Project" (i) if used, has the meaning ascribed on the Cover Pages hereof, or (ii) if "Project" is not defined on the Cover Pages, Project shall mean the Services.
- 1.19 "Request for Proposals" has the meaning ascribed on the Cover Pages hereof.
- 1.20 "RFP" means the Request for Proposals and any Addenda and Clarifications thereto.
- 1.21 "Reimbursement Requirements" means the requirements for the reimbursement of external consultants for expenses attached as Appendix 6.
- 1.22 "Services" means the provision and the execution of those Services for which the Consultant has been engaged by the Owner, as detailed on the Cover Pages hereof and set out throughout this Agreement.
- 1.23 "Specified Deliverables" has the meaning ascribed to such term on the Cover Pages hereof.
- 1.24 "Substantial Performance" has the meaning ascribed to that term in Section 2 of the Mechanics' Lien Act.
- 1.25 "Substantial Performance Certificate" means the certificate prepared by the Consultant certifying Substantial Performance by the Contractor.
- 1.26 "Total Performance" means, as the context requires, (i) the entire construction to be performed by the Contractor under the Contract Documents has been completed and is so certified by the Consultant, or (ii) the completion of all Services by the Consultant under this Agreement and is so certified by the Owner.
- 1.27 "Total Performance Certificate" means, as the context requires, (i) the certificate prepared by the Consultant and signed by the Owner and Contractor certifying Total Performance by the Contractor, or (ii) the certificate prepared by the Owner certifying Total Performance by the Consultant.
- 1.28 "University Guidelines, Policies and Specifications", if used, has the meaning ascribed on the Cover Pages hereof.
- 1.29 "Warranty Period" has the meaning ascribed to that term in Section 13.2.

## 2. THE OWNER'S RESPONSIBILITIES

### 2.1 Site Survey Information

If applicable to the services provided by the Consultant, the Consultant shall procure an accurate survey of the Contract site as necessary to perform the Work. The provision of such survey shall be an Additional Service (as defined below); however, no fee shall be charged by the Consultant for time spent by the Consultant, but all disbursements related to such survey shall be reimbursed by the Owner. The Owner shall furnish all relevant information in its possession for such purpose. The Owner agrees that the survey requirement does not require the Consultant to provide a legal real property survey.

If site survey required, the site survey will include all information required for the setting out of the Project, existing grades and lines of streets, pavements, curbs, sidewalks, manholes, catch basins, invert elevations, location of all underground sanitary sewer, storm sewer and water supply pipelines, above and underground electrical and other public utilities, adjoining properties, existing buildings and other structures, restrictions, easements, boundaries and topography of/or affecting the Contract site.

If site survey required, it shall be the Consultant's responsibility to ensure that all necessary data concerning the site conditions will be supplied by the surveyor.

The responsibility of data accuracy remains with the surveyor.

### 2.2 Soils Survey Information

If applicable to the Services provided by the Consultant, the Owner shall furnish all relevant soils survey information in its possession for review by the Consultant, and it shall be the Consultant's responsibility to determine if all necessary information is contained in such soil survey information and whether such soil survey information is sufficient and appropriate for the performance of the Work. Should the Consultant determine that additional soil survey information is required, it shall advise the Owner of the need for such additional information and the procurement of such shall be subject to the Owner's prior written approval. If the Owner determines that such additional information is required, the Consultant and the Owner, both acting reasonably, shall agree on the soils survey information required and the appropriate party to procure such additional soils survey. If the Consultant procures any such additional soils survey, such soils survey shall be an Additional Service (as defined below); however, no fee shall be charged by the Consultant for time spent by the Consultant, but all disbursements related to such soils survey shall be reimbursed by the Owner. If soil survey required, it shall be the Consultant's responsibility to determine that all of the necessary information is supplied by the soils consultant.

The responsibility of data accuracy remains with the soils consultant.

2.3 Owner's Decision

The Owner shall give due consideration to all sketches, drawings, specifications, tenders, proposals, contracts and other documents laid before the Owner by the Consultant, and wherever prompt action is necessary, the Owner shall inform the Consultant of its decisions in such reasonable time as not to delay the Services.

2.4 Owner's Representative

The Owner shall appoint an individual or individuals with decision-making authority and identified as such on the Cover Pages hereof as its official representative(s) for the term of this Agreement. Only the official representatives identified in the Cover Pages shall have the authority to resolve on behalf of the Owner all matters that may arise during the performance of the Services.

If the Owner engages a third party agent, the Owner will advise the Consultant in writing of such appointment and of the level of authority such third party agent has for and on behalf of the Owner.

**3. CONSULTANT'S SERVICES**

3.1 General Principles

The Consultant agrees to provide the Services as indicated on the Cover Pages and as required by the RFP. The Services shall be performed for the Fee. The Consultant agrees that the hourly rates set forth in the Consultant Proposal shall apply for the duration of the Services.

Throughout the provision of the Services, the Consultant shall provide the Owner with all Deliverables applicable to the Services, at such time as each such Delivery becomes available. All deliverables including drawings, operation and maintenance manuals, shop drawings, as-builts and subconsultant reports must be submitted in electronic format acceptable to the Owner at its sole discretion. Original, editable and workable file formats should be preserved and delivered to the Owner where possible. Acceptability of PDF files will be at the sole discretion of the Owner.

3.2 Additional Services

The Consultant shall also provide additional services as may be required from time to time by the Owner in writing (the "Additional Services").



This Agreement, including Article 8. FEES and Section 8.2 Additional Services, shall apply to the Additional Services. For greater certainty, reference in this Agreement to "Services" shall include any Additional Services.

### 3.3 Work Schedule

The agreed timeline for the performance of the Services by the Consultant is attached as Appendix 5 (the "Initial Services Schedule") which shall be updated by the Consultant within fourteen (14) days of the date hereof to include the detail required by the Owner (the "Updated Services Schedule"). The Updated Services Schedule and the Initial Services Schedule shall be referenced in this Agreement collectively as the "Services Schedule".

The Consultant shall perform the Services in accordance with the Services Schedule.

Where Work Schedule is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant will:

- (a) Ensure that Project meetings with other Consultants, sub-consultants and suppliers are called and held when necessary and attend all such meetings. In addition, the Consultant shall keep minutes at all such meetings and forward to the Owner within seven (7) days. Such meetings shall be held not less than once a month and notification by the Consultant shall be given not less than one (1) week in advance;
- (b) Prepare and issue instructional drawings as may be necessary for the proper execution of the Project; and
- (c) If applicable, undertake all other scheduling matters related to the Services that are identified in Section 3.11.

### 3.4 Cost Control

Where Cost Control is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall provide such Services in accordance with this Section 3.4.

The Consultant will adhere to the Approved Construction Cost Budget throughout all stages of the Project.

If at any time the Consultant considers its estimates indicate cost which exceed the Approved Construction Cost Budget limits, the Consultant will immediately advise the Owner. If, in the opinion of the Owner, the excess is due to design cost factors or matters under the control or reasonably foreseeable by the Consultant, the Owner may require the Consultant, at its expense and at no

additional cost to the Owner, forthwith to do everything by way of revision of design to bring the cost estimate within the Approved Construction Cost Budget limits.

If the lowest qualified and acceptable tender for the Project or any part or phase for which the Consultant has prepared the design(s) or estimate(s) exceeds the Approved Construction Cost Budget for reasons which, in the opinion of the Owner, the Consultant should have foreseen and could have guarded against, the Consultant, at its own expense and at no additional cost to the Owner, will, if required by the Owner, do everything necessary including redesign to bring the cost of the tendered work within the Approved Construction Cost Budget limits.

Cost control will culminate by adherence to the Approved Construction Cost Budget in the preparation of the final working drawings and specification. This is to be substantiated by a final, Class 'A' elemental cost analysis prepared by the Consultant and presented to the Owner with the final tender documents.

Any rework or redesign or revisions required by this Section shall not derogate from or in any way amend the Consultant's obligation to perform in accordance with the Work Schedule.

### 3.5 Sub-consultants

The Consultant acknowledges and agrees that it is taking full responsibility for the performance of this Agreement and that the Owner shall not be required to deal directly with any of the Consultant's sub-consultants. The Consultant shall not assign this Agreement or subcontract the whole or any part of the Services without the prior written consent of the Owner.

If the Owner consents in writing to the sub-contracting of the whole or any part of the Services, the terms of this Agreement shall apply to the sub-contract and the sub-consultant *mutatis mutandis*. The assignment of this Agreement, or the subcontracting of any Services, shall not relieve Consultant of its obligations under this Agreement.

The Consultant shall pay any permitted sub-consultants out of the Fee and no additional amounts shall be payable by the Owner to the Consultant or any sub-consultant for Services provided by sub-consultant.

### 3.6 Functional Program Development and Advisory Services

Where Functional Program Development and Advisory Services are indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall:

- (a) Prepare a functional program for the Project to examine and define the Owner's needs and objectives for the Project and establish criteria for evaluating potential design solutions or strategic alternatives;
- (b) Identify, research and observe, as part of the functional program process:
  - (i) The users of the proposed Project and their work activities (including, without limitation, function-by-function, room-by-room, or department-by-department activity plans, staffing plans and storage requirements);
  - (ii) The volume of activity planned for Project components (including, without limitation, throughput and flow patterns);
  - (iii) The planning impacts of the Project on local infrastructure;
  - (iv) The social impact of the program on the community; and
  - (v) The impact of the Project's occupants and processes on the built environment.
- (c) Prepare a functional program report, including, without limitation:
  - (i) The Owner's philosophy, value, goals and image;
  - (ii) Site requirements (such as parking, circulation, orientation);
  - (iii) Explicit space requirements;
  - (iv) Financial requirements and a preliminary budget;
  - (v) Scheduling and time frame for the project;
  - (vi) Other requirements relating to regulatory issues, authorities, community goals/concerns, or ecological or environmental concerns, as applicable; and
  - (vii) A recommended construction project delivery method.

### 3.7 Concept Design (includes Schematics)

Where Concept Design is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall provide such Services in accordance with this Section 3.7.

The Consultant shall investigate and review the RFP and all of the available documentation referenced therein and prepare schematic design studies consisting of drawings and other documents setting forth the general concept and functional requirements of the Project, identifying the fire and life safety and code issues and identifying the design criteria for the various systems.

These studies shall be summarized with recommendations in a concept/schematic design report to the Owner. Such a report shall include a Class 'D' budget and planning time schedule.

### 3.8 Design Development

Where Design Development is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall provide such Services in accordance with this Section 3.8.

Upon the Owner's selection of a definite scheme, the Consultant shall develop preliminary drawings and outline specifications which shall clearly define the design concept in terms of siting, functional planning, layouts, elevations, appearance and character, construction and materials as well as structural, mechanical and electrical systems.

Upon completion of the preliminary functional plans and routine specification, the Consultant will provide the Owner with a Class 'C' elemental cost estimate. An Approved Construction Cost Budget for future expenditure on the Project will be developed by the Consultant and based on this estimate and provided to the Owner for its review and approval in writing if acceptable.

The Consultant will prepare from the foregoing a "Design Development Package" and will submit five (5) copies to the Owner for approval in writing.

### 3.9 Construction Contract Documents

Where Construction Contract Documents is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall provide such Services in accordance with this Section 3.9.

The Consultant shall not proceed to prepare construction Contract Documents until it has received written authorization from the Owner. Upon receipt of the Owner's written notification to proceed, the Consultant shall prepare working drawings and specifications providing details required for tendering, construction and completion of the Project.

The Consultant shall keep the Owner informed, at all times, of any conditions or changes affecting the general process, the schedule or the cost of the Project and provide progress drawings when requested.

The Consultant shall find solutions and make all changes to ensure completion of the Project within the requirements of the Approved Construction Cost Budget and as expressed in this Agreement.

The Consultant shall submit 90% complete Contract Documents with a Class 'B' estimate to the Owner for review.

Space layouts will be prepared for all areas, based on the University Space Standards and Guidelines.

The Consultant shall submit to the Owner, for its written approval, the final working drawings and specifications and the pre-tender report which shall include the Consultant's final, Class 'A' estimate, all desirable applications for review of drawings by governmental and regulatory agencies, as well as all other items customarily included in a pre-tender report.

### 3.10 Bidding and Construction Contract Award

Where Bidding and Construction Contract Award is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall provide such Services in accordance with this Section 3.10.

The Consultant will prepare a draft of the tender call documents in accordance with the Owner's requirements, including without limitation instructions to bidders and general conditions. The Owner will provide the form of contract which is to be included as the Contract with the tender call documents.

The Consultant shall provide a draft of the tender call documents to the Owner for approval in writing. The Owner will advertise the tender call for the Project and will convene and administer a tender opening board.

The Consultant will provide the Owner with up to five (5) sets of plans and specifications for up to four (4) tender packages which are included within the Fee. Any required reproductions above this amount will be reimbursed by the Owner at cost. The Consultant will dispense plans and specifications and addenda thereto and will administer the Project during the tender period. The Consultant will prepare such addenda as is necessary during the tender period. The Consultant will advise the Owner on all requests for "alternate approvals" of equipment and materials.

Addenda to the tender call documents will be issued by the Consultant to reach bidders prior to the tender closing.

The Consultant will analyse the bids received from all bidders in response to the tender call and provide the Owner with a written recommendation based on its review within one (1) week of the tender opening.

It shall remain within the Owner's discretion to either accept or reject a bid.

3.11 Construction Contract Administration

Where Construction Contract Administration is indicated on the Cover Pages or in the RFP as one of the Services provided by the Consultant, the Consultant shall:

- (a) Provide for the administration and supervision of the Contract in the Consultant's office and at the location of the Project (the "Contract Site");
- (b) Keep detailed records of all aspects of the Project relating to the administration and supervision of the Project;
- (c) Prepare, within two (2) weeks prior to tender call, detailed administrative instructions to be submitted to the Owner for approval. Such administrative instructions, when approved in writing by the Owner, will be issued by the Consultant to all persons required to follow or be aware of such administrative instructions, and such procedures will be followed by such persons until the completion of the Project. The procedures will cover, but will not necessarily be limited to, correspondence, progress claims, final acceptance certificates, job meetings, as built drawings, etc.;
- (d) Provide general review and inspection of the Project to determine that its construction is in accordance with the working drawings and specifications. Such general review shall require that:
  - (i) The Consultant must have on its staff suitable and experienced field supervisory personnel who will be designated as responsible for the contract administration of the Project. Such staff will be subject to the prior written approval of the Owner;
  - (ii) The Consultant's designated field representatives shall make regular visits to the Contract Site to determine if the Project is proceeding in general accordance with the Contract Documents. The frequency of such visits shall be determined by the Owner; however, in no case shall it be less than two (2) weeks even where there is constant representation at the Contract Site;
  - (iii) During such visits, the Consultant will prepare a site visit report that includes notification of any non-conforming work observed for the

Project and will determine whether all deficiencies have been addressed in accordance with the Contract Documents. Copies of such lists will be forwarded to the Owner indicating what action has been taken.

- (e) Submit monthly reports to the Owner in narrative form, summarizing the progress of the Project construction and such other information as the Owner may require from time to time and will include digital photographs taken during the course of the scheduled site reviews demonstrating issues or non-conformances with the Work and digital photographs used specifically to demonstrate progress of the Project;
- (f) Review (or shall cause the review by its approved sub-consultants) all testing results called for under the Contract Documents and work with the Owner to identify the groups within the Owner who may be impacted by such testing and shall ensure that such groups are notified at least one (1) week in advance of any such tests;
- (g) Prepare and issue change orders as approved by the Owner;
- (h) Recommend to the Owner the amounts owing to the Contractor under the Contract based on the Consultant's observations and evaluation of the Contractor's application for payment;
- (i) Transcribe "as-built" information from the Project, as provided by the Contractor, to the original drawings, provide a set of such documents to the Owner in a form suitable for reproduction, and provide as-built information in electronic format acceptable to the Owner with workable file formats preserved and provided where possible. The cost of the Consultant's staff in the preparation of the as-built reproducible information will be part of the Fee;
- (j) Organize, through the Contractor, a complete commissioning of all of the components of the Project to determine that the various parts are operating in the manner as intended by the Contract Documents. The Substantial Performance Certificate will not be issued until the final commissioning of the work has been successfully completed and so certified by the Consultant;
- (k) Upon achievement of Substantial Performance by the Contractor, prepare, sign and deliver to the Owner the Substantial Performance Certificate. Prior to the issuance of such Substantial Performance Certificate, the Consultant shall ensure that the Owner has been provided with all Deliverables related to the Contract and shall provide any remaining Deliverables forthwith including, without limitation, a complete set of the contract drawings revised to record all changes "as-builts";

- (l) Upon achievement of Total Performance by the Contractor (including the rectification of any deficiencies), prepare a Total Performance Certificate for issuance to the Contractor. The Total Performance Certificate, in order to be valid, will require the signature of the Consultant, the Contractor and the Owner;
- (m) Carry out visual inspections at the request of the Owner during the Warranty Period to determine whether the Contractor has remedied all defects and failures and, when satisfied, to certify in writing to this effect. For greater certainty, any inspection which is recommended by the Consultant which involves imaging, demolition or other non-visual inspection work will be reviewed with the Owner and subject to the Owner's written approval prior to being undertaken. No fees will be charged by the Consultant for its time spent in respect of such inspections; however, any disbursements by the Consultant shall be reimbursed by the Owner in accordance with the Reimbursement Requirements;
- (n) Provide the Owner with a post-construction evaluation of the Project, including all buildings, building services and cost analysis, which will include a final cost of construction review, including all changes and amendments, and a report on the performance on the building which would include a guide for the Owner as well as a program or formula for use by the Owner in future years to determine the performance of the designed building. In addition, the Consultant will perform a post-occupancy evaluation of the completed building within one (1) year of its completion and occupancy. The post-occupancy evaluation will include:
  - (i) An analysis of energy performance over baseline, provided that the Owner releases all necessary energy consumption information to the Consultant required for such analysis;
  - (ii) A review of material selections for durability and condition;
  - (iii) A workshop with the Owner to discuss lessons learned from process and feedback received from users of the building, including the Owner's staff;
  - (iv) A review by the Owner and Consultant of any warranty issues that have arisen; and
  - (v) A review of control systems (building automation) to verify performance of control systems to design intent.



3.12 Resident Services (Additional Services)

Where requested in writing by the Owner, the Consultant shall provide resident services as Additional Services in accordance with this Section 3.12.

Particular aspects of the Project will require additional on-site services, e.g., review and inspection of structural components, mechanical systems and electrical systems.

The Owner will require a residential, full-time representative on the Project in order to ensure that the Project is constructed in accordance with the terms and conditions of the Contract Documents. Resident services do not take the place of any professional responsibilities of the Consultant to witness tests, review work, review submittals and comment on the work of the Contractor.

Resident staff is required to compile and preserve up-to-date records of execution of the Project including measurement of qualities/quantities of material used showing also the mode and location of use and inspect the Project continuously while the construction is in progress. Such residential staff must be experienced and qualified and acceptable to the Owner.

Resident staff will arrange for and witness all tests and evaluations of Project materials and equipment, maintain and keep available for examination by the Owner a continuous daily record showing the number of persons and items of equipment from time to time employed in connection with the Project by the Contractor, provide all other information and advice necessary to assess the progress, determine the causes of any delays, perform all required inspections and verify the claims and examine and verify any payment claims due to the Contractor for the progress of the construction on the Project.

An Owner's Coordinator acceptable to both the Owner and the Consultant may be engaged by either the Owner or Consultant at the discretion of the Owner, in which case the Owner shall approve the salary or fee to be paid for such services in advance and shall establish the duties to be carried out by the Owner's Coordinator.

3.13 Insurance

In performing the Services, the Consultant will obtain and maintain insurance as described below:

- (a) All insurance required to be maintained by the Consultant shall be primary with respect to other similar or complementary insurance maintained by Owner;

- (b) Prior to commencement of the Services, the Consultant shall provide evidence of insurance policies required to be procured by the Consultant hereunder in the form of a Certificate of Insurance. Similar evidence of renewals shall be provided to Owner upon request;
- (c) All amounts of claims, losses or damages otherwise covered but not recoverable from the Consultant's insurers by reason of: (i) application of deductible clauses pertaining to Consultant furnished insurance; or (ii) any breach by the Consultant of the terms of its insurance policies, shall be for the account of and paid by the Consultant;
- (d) Consultant purchased policies shall contain clauses which require notification to the Owner in writing at least thirty (30) days prior to any cancellation of such policies. Consultant shall notify the Owner in writing at least thirty days prior to any material change in such policies;
- (e) Insurance to be provided by the Consultant shall include, as a minimum, the following:
  - (i) Workplace compensation and/or employer's liability coverage to the full extent required by all laws (including, if applicable, maritime and international law) or \$5,000,000, whichever is the greater, applicable wherever the Services is to be performed under this Agreement and/or contracts of employment for Consultant's employees are made or expressed to be made;
  - (ii) Comprehensive general liability insurance for personal injury to or death of third parties and loss of or damage to property of third parties, including Consultant's contingent liability with respect to the operations of sub-consultants, and contractual liability assumed by the Consultant under this Agreement, arising out of or in any way connected with the performance of the Services, subject to a limit of not less than \$5,000,000 per occurrence and in the aggregate;
  - (iii) Comprehensive automobile liability insurance which complies with all applicable governmental requirements including coverage for all automotive equipment owned, hired or otherwise procured by the Consultant for the Services, subject to a limit of not less than \$5,000,000 per occurrence. In respect of vehicles not owned by the Consultant, it shall maintain and keep in force non-owned automobile liability insurance protecting its liability, including that assumed under this Agreement, subject to a limit of not less than \$5,000,000 per occurrence and in the aggregate;
  - (iv) Professional liability insurance covering negligent acts, errors and omissions arising out of the performance of design and engineering

Services under this Agreement. The professional liability insurance shall be continued to be maintained by the Consultant for a period at least equal to the Warranty Period, subject to a limit of not less than \$2,000,000 per occurrence and in the aggregate unless otherwise stated in Table 1 - Details; and

- (v) Any other insurance which it is required by law to provide.
- (f) Each Party shall afford the other all reasonable assistance as may be required for prompt notice to insurers and for preparation and negotiation of insurance claim;
- (g) The Consultant shall give to the Owner prompt notification, in any event no more than twenty-four (24) hours after the time of the incident, of any accident or incident occurring during the progress of the Services, whether or not it may result in a claim against the Owner's or the Consultant's insurance policies;
- (h) All such insurance shall be maintained by the Consultant during the term of this Agreement and up to the expiry of the Warranty Period;
- (i) All insurance shall be placed with insurers authorized to do business in the Province of Newfoundland and Labrador.

#### **4. CONSULTANT'S ACTIONS AND DECISIONS**

- 4.1 The Consultant acknowledges that it has had adequate discussion and access to sufficient information to enable them to undertake the Services contracted for the Fee.
- 4.2 The Consultant agrees to act promptly on all matters requiring an action or decision on its part affecting the provision of the Services.
- 4.3 The Consultant acknowledges that regulatory codes and standards applicable to the Services will be met and that it will obtain any required approvals from the regulatory authorities for the provision of the Services.

The Consultant acknowledges that the integration of capital work into existing mechanical, electrical, controls, data, space management, building services and equipment management systems is of paramount importance to the Owner, and the Consultant shall consult with the Owner's technical services, operations and maintenance and engineering groups to ensure that the Consultant meets existing standards and practices related to the Services. The Consultant must request from the Owner all University Guidelines, Policies and Specifications which relate to or inform the Services being provided. Throughout the term of the Agreement, the Consultant must request from the Owner any updates or

revisions to the University Guidelines, Policies and Specifications before using or relying on such documents in the Services.

Without limiting the generality of the foregoing, if applicable to the Services, all engineering drawings, plans and calculations shall be properly signed and stamped in accordance with the Engineers and Geoscientists Act (Newfoundland and Labrador) and any successor or replacement legislation thereto, the regulations thereunder and the guidelines from time to time established by the Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL) (or its successor from time to time). If applicable to the Services, the Consultant (or an approved sub-consultant) will stamp and approve all design calculations, drawings and other documents essential to the execution of the Services.

- 4.4 No acceptance or approval by the Owner, whether expressed or implied, shall be deemed to relieve the Consultant of its contractual, professional or technical responsibility for the Services.
- 4.5 If applicable to the provision of the Services, the Consultant is encouraged to specify local materials when the materials are available, of satisfactory quality and competitive in cost.
- 4.6 The Consultant hereby represents and warrants to the Owner as follows and acknowledges that the Owner is relying upon such representations and warranties in connection with entering into this Agreement and making payments due hereunder:
  - (a) The Consultant has all necessary corporate power and authority to enter into this Agreement and perform its obligations hereunder;
  - (b) All necessary corporate action and other action has been taken by the Consultant to authorize the execution and delivery of this Agreement by the Consultant and the performance by the Consultant of its obligations under this Agreement, and this Agreement has been duly executed and delivered by the Consultant and constitutes a legal, valid and binding obligation of the Consultant, enforceable against the Consultant in accordance with its terms;
  - (c) Neither the execution and delivery of this Agreement by the Consultant nor the performance by the Consultant of its obligations under this Agreement will conflict with or result in the violation of any of the terms and provisions of the constating documents or by-laws of the Consultant or of any agreement, obligation, contract, commitment, law or regulation to which the Consultant is a party or by which it is bound; and

(d) The Consultant is a resident of Canada for the purpose of Canadian income tax legislation. If the Consultant is or becomes a non resident, the Owner may withhold from any payment otherwise due and owing under the terms of this Agreement any percentage of any such payment as may be required by such legislation. The Consultant shall inform the Owner forthwith of any change in its residency status for income tax purposes and in any event the Consultant shall indemnify the Owner for any payment not withheld, but required to be paid pursuant to such legislation, including any interest and penalty assessed thereon.

4.7 The Consultant acknowledges that timely performance of the Services is of paramount importance to the Owner. Unless otherwise directed by the Owner in writing, the Consultant shall work diligently to reach completion of the Services and achieve any required milestones in accordance with the Services Schedule.

4.8 The Consultant shall use its best efforts to avoid and mitigate any delay in the performance or provision of the Services.

## **5. STAFF**

5.1 If applicable to the Services, the Consultant shall retain or employ professional staff licensed to practice in the Province of Newfoundland and Labrador by its respective professional associations for the conduct of the Services.

5.2 The Consultant shall assign to the performance of the Services, those personnel identified in the Consultant Proposal. The Consultant shall not replace such key personnel unless replacement becomes unavoidable, and in such case, the Consultant shall provide the Owner with the résumés and qualifications of potential candidates for such position(s). The Owner shall have the right to first approve any proposed replacement personnel.

5.3 At the request of the Owner, the Consultant will provide the Owner with a list of its employees and those of its sub-consultants who will be assigned to the provision of the Services. The list will include the classification of each employee and typical hourly rates to be paid. The purpose of such lists will be to assess the Consultant's staff for the Services and to establish rates for payments should the Services be abandoned or postponed by the Owner. The Consultant will notify the Owner's Representative of any additions or changes.

## **6. PROJECT MANAGEMENT/CONSTRUCTION MANAGEMENT**

The Owner may elect to retain a project manager or construction manager to carry out the work of this Project and, if such appointment occurs, the Owner (in its sole discretion) shall specify the scope of such services. On this basis, the Owner reserves the right to renegotiate the duties of the Consultant and the commensurate fee. The fees and expenses of a project manager will not be included as part of the Consultant's Fee.

**7. REIMBURSABLE EXPENSES**

The Consultant shall be reimbursed at cost for certain reimbursable expenses incurred in relation to the performance of this Agreement in accordance with the Reimbursement Requirements.

**8. FEES**

8.1 Services

The Consultant agrees that its total compensation for the performance of the Services, other than the Additional Services, shall be the Fee, which does not include Harmonized Sales Tax, and which is earned as set out in Section 8.3.

It is agreed by the Parties hereto that accounts payable under this Agreement shall be payable only when the Services has been performed to the satisfaction of the Owner within the cost limit established by the Agreement, and any payment in respect of a phase or part of a phase shall not be deemed a waiver of the Owner's rights of set-off at law or under this Agreement for costs or expenses arising from default or negligence of the Consultant or its sub-consultants.

8.2 Additional Services

Additional Services shall be provided at the rates described in the Consultant Proposal. If any of the Additional Services require services for which a rate is not included in the Consultant Proposal, then rates shall be negotiated between the Consultant and the Owner, and agreed upon in writing, before the commencement of any Additional Services. Payment shall be made in accordance with this Article 8.

8.3 Payments

The Fee shall be broken down and payments made in a manner hereinafter outlined:

- (a) Upon written approval by the Owner, up to the completion of the Concept Design Stage:

.15 x Fee

- (b) Upon written approval of the Owner, up to the completion of the Design Development Stage:

.15 x Fee

- (c) Upon written approval of the Owner, up to the completion of approved Construction Contract Documents suitable for tendering purposes and pre-tender estimate:

.40 x Fee

- (d) Upon written approval of the Owner, up to the completion of the bidding and completion of written recommendation for construction contract award:

.05 x Fee

- (e) During Construction Contract Administration upon written approval of the Owner, up to the completion of Construction Contract Administration:

.25 x Fee

#### 8.4 Holdbacks

As set out in Subsection 8.5 (b), the Owner shall retain the Holdback (as well as the other items referenced in Subsection 8.5 (b)) from each payment due to the Consultant hereunder upon:

- a) Achievement of Total Performance by the Consultant;
- b) The delivery to the Owner of a sworn Declaration (in the form provided by the Owner) signed by the Consultant and declaring that all payments have been made by the Consultant to its suppliers and sub-consultants with the exception of monies that are being withheld in accordance with the Mechanics' Lien Act or to satisfy deficiencies; and
- c) Confirmation from the Consultant to the Owner that the Owner has been provided with all Deliverables related to the Agreement, the Owner will prepare and issue to the Consultant a Total Performance Certificate. Upon issuance of the Total Performance Certificate, the Owner shall make all remaining payments to the Consultant out of the Holdback as are permitted by the Mechanics' Lien Act and the terms of this Agreement.

#### 8.5 Invoicing/Payment/Disputed Amounts

- (a) Invoicing

The Consultant shall invoice the Owner for the total amount payable as determined in accordance with Article 8. The invoice shall provide, at minimum, an arithmetic calculation of fees payable and a detailed list of expenses including copies of receipts, documentation and time sheets. All invoices shall clearly identify any amounts paid or charged in respect of Canadian import duties, sales taxes and Goods and Services Tax (GST) or Harmonized Sales Tax (HST). In addition, the Consultant's GST/HST registration number shall be quoted on all invoices. Invoices shall be

submitted to the Owner along with all reasonably necessary back-up documentation, and payment of the invoice by the Owner shall be as provided in Subsection 8.5 (b).

The Consultant may issue invoices monthly or at such other times which are agreed between the Owner and the Consultant in writing. Amounts for Additional Services may also be invoiced monthly or at such other times which are agreed between the Owner and the Consultant in writing.

(b) Payment

The invoice and all back-up documentation required hereunder shall be submitted for payment as indicated on the Cover Pages hereof.

The Consultant agrees that no payment made by the Owner under the terms of this Agreement shall constitute, or shall be construed to constitute, the acceptance of the accuracy of any invoice, the acceptance of the validity of any charge, or the waiver of any right to claim repayment, unless and until the Owner's audit rights with respect thereto, as set forth in Article 11 hereof, shall have expired and such invoice, charge or payment shall not have been challenged. The Consultant further agrees that no payment made by the Consultant under the terms of this Agreement shall constitute, or shall be construed to constitute, the acceptance of any faulty or defective Services.

The Owner shall pay the Consultant within forty-five (45) days of receiving a properly documented invoice from the Consultant the amount due on the invoice less:

- (i) The Holdback;
- (ii) All amounts of credit then owing to the Owner;
- (iii) Any withholding amounts required by any governmental authority, including any Holdback;
- (iv) Any disputed amounts; and
- (v) Any amounts not payable to the Consultant under Sections 8.1 or 8.2 hereof.

(c) Disputed Amounts

In the event of dispute, of any nature or kind, over any item or items in an invoice, the disputed amount shall be left unpaid until such time as the



Parties reach agreement regarding the disputed amount and failing such agreement thereon, the Owner and the Consultant shall:

- (i) Use their best efforts in good faith to reach a reasonable and equitable resolution of the dispute; or
- (ii) Proceed with good faith negotiations between managers of the Parties with decision making powers. If the Parties still fail to reach an agreement, the dispute shall be resolved in accordance with Article 10. The disputed amount, if payable, shall be paid within fifteen (15) days from the date resolution is reached regarding the disputed amount. Undisputed amounts, whether appearing on the same invoice or a different invoice as the disputed amount, shall be paid in accordance with Subsection 8.5 (b).

## 9. SPECIAL CONDITIONS

### 9.1 Force Majeure

- (a) For the purposes of this Article, "Force Majeure" means an occurrence beyond the reasonable control of the Party claiming suspension of an obligation hereunder, which has not been caused by such Party's negligence and which such Party was unable to prevent or provide against by the exercise of reasonable diligence at a reasonable cost and includes, without limiting the generality of the foregoing, an act of God, war, revolution, insurrection, blockage, riot, strike, a lockout or other industrial disturbance, fire, lightning, unusually severe weather, storms, floods, explosion, accident, government restraint, action, delay or inaction.
- (b) If any Party is prevented by Force Majeure from fulfilling any obligation hereunder, the obligations of the Party, in so far only as its obligations are affected by the force majeure, shall be suspended while the Force Majeure continues to prevent the performance of such obligation and for that time thereafter as that Party may reasonably require to commence to fulfil such obligation. A Party prevented from fulfilling any obligation by Force Majeure shall promptly give the other Party notice of the Force Majeure and the affected obligations, including reasonably full particulars in respect thereof.
- (c) The Party claiming suspension of an obligation, as aforesaid, shall promptly remedy the cause and effect of the applicable Force Majeure, in so far as it is reasonably able so to do, and such Party shall promptly give the other Party notice when the Force Majeure ceases to prevent the performance of the applicable obligation. The terms of settlement of any strike, lockout or other industrial disturbance shall be wholly in the discretion of such Party, notwithstanding this Section, and that Party shall not be required to accede to the demands of its opponents in any strike, lockout or industrial

disturbance solely to remedy promptly the Force Majeure thereby constituted.

If, within a reasonable time after a Force Majeure occurrence which has caused the Consultant to suspend or delay performance of the Services, the Consultant has failed to take such action as the Consultant could lawfully initiate to remove or relieve either the Force Majeure occurrence or its direct or indirect effects, the Owner may, in its sole discretion and after written notice to the Consultant, at Consultant's expense, initiate such measures, including but not limited to, the hiring of third parties designed to remove or relieve such Force Majeure occurrence or its direct or indirect effects and thereafter require the Consultant to resume full or partial performance of the Services. Alternatively, the Owner, in its sole discretion, may decide to terminate this Agreement without any liability whatsoever.

- (d) Notwithstanding anything contained in this Section, lack of finances shall not be considered a Force Majeure nor shall any Force Majeure suspend any obligation for the payment of money due hereunder.

## 9.2 Confidentiality

It is acknowledged by the Consultant that in the performance of this Agreement there will be disclosed to the Consultant information of the Owner (including without limitation all intellectual property, drawings, specifications, dies, patterns and the like supplied by the Owner or prepared or constructed by the Consultant in connection with the Services), which has not been generally disclosed to the public (the "Confidential Information"). It is acknowledged that it is necessary to the proper and efficient performance of the Agreement that disclosure of Confidential Information may need to be made to the employees of the Consultant ("Permitted Purposes").

The term "Confidential Information" does not include information which becomes:

- a) Generally available to the public other than as a result of a disclosure by the Consultant or its agents or employees;
- b) Available to the Consultant on a non-confidential basis from a source other than the Owner or its employees, provided that such source is not bound by a confidentiality agreement with the Owner. It is further agreed by each Party that money damages would not be sufficient remedy for any breach of this Section by the Consultant or its employees, and in addition to all other remedies, the Owner shall be entitled to specific performance and injunctive or other equitable relief as a remedy for any such breach, and the Consultant further agrees to waive and to use its best efforts to cause its employees to waive any requirement for the securing or posting of any bond in connection with such remedy.

It is agreed that the Confidential Information will not be used by the Consultant in any manner that may be detrimental, commercially or otherwise, to the Owner and that the Confidential Information will be kept confidential by the Consultant provided, however, that such Confidential Information may be disclosed to employees of the Consultant who need to know such information for the Permitted Purposes. It shall be the responsibility of the Consultant to inform such of its employees who have access to Confidential Information of the confidential nature of such information and to cause them to treat such information in the strictest of confidence and only for the Permitted Purposes.

Except as provided herein, the Confidential Information shall not be disclosed to others without prior written approval of the Owner, and upon completion of Services or upon termination of the Agreement, the Confidential Information shall be returned to the Owner.

In the event that the Consultant is requested in any proceeding to disclose any Confidential Information, the Consultant shall provide immediate notice of such request to the Owner so that it may seek an appropriate protective order. It is further agreed that, if in the absence of a protective order the Consultant is nonetheless compelled to disclose Confidential Information, such information may be disclosed without liability hereunder provided that the Consultant give written notice to the Owner of all information to be disclosed at the earliest possible time as is practicable and that the Consultant utilize its best efforts to obtain assurances that confidential treatment will be accorded to such information. The Consultant will be responsible for any breach of this Agreement by its employees. It is further agreed that upon request the Consultant will promptly redeliver to the Owner all copies of the Confidential Information and, furthermore, will destroy all memoranda, notes and other writings prepared by the Consultant or its employees based on the Confidential Information.

Failure or delay by the Owner in exercising any right, power or privilege under this Section shall not operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other further exercise thereof or the exercise of any right, power or privilege thereunder.

The Consultant acknowledges that the Owner is a public body subject to the *Access to Information and Protection of Privacy Act*, SNL 2002 Ch. A-1.1 and that this Agreement, the records of the Consultant supplied to the Owner and all related records in the custody or control of the Owner may be subject to a request for access under such legislation.

9.3 Default

- (a) The Consultant shall be in default ("Default") if any one of the following occur:
- (i) If the Consultant becomes insolvent or if insolvency, receivership or bankruptcy proceedings are commenced by or against the Consultant;
  - (ii) If the Consultant assigns, subcontracts or transfers this Agreement or any right or interest therein, except as expressly permitted hereunder;
  - (iii) If the interest of the Consultant under this Agreement is devolved to any person or corporation other than as specifically permitted herein;
  - (iv) If the Consultant fails to make prompt payment for labour or materials or to its sub-consultants, unless such failure of the Consultant to pay is as a result of a bona fide dispute as to amounts payable by the Consultant for labour or materials or to its sub-consultants (as the case may be) and provided that any undisputed amounts are promptly paid;
  - (v) If the Consultant breaches applicable laws or ordinances or the lawful requirements of any competent authority or instructions of the Owner or if, except for any of the reasons of Force Majeure (as defined herein), the Consultant fails, neglects, refuses or is unable at any time during the course of the Services to provide ample material, equipment, services or labour to perform the Services at a rate or in a manner deemed sufficient by the Owner to give reasonable assurance that the Consultant shall complete the Services in accordance with this Agreement;
  - (vi) If the Consultant fails to prosecute the Services in such a manner as to complete the Services in accordance with the Services Schedule, provided, however, that the Owner first provides the Consultant with thirty (30) days' notice of its intention to terminate their Agreement for default of this Subsection and a reasonable opportunity to cure such Default; or
  - (vii) If the Consultant defaults in its performance of a representation, warranty or guarantee or other provision of this Agreement provided, however, that the Owner first provides the Consultant with thirty (30) days' notice of its intention to terminate this Agreement for default of this Subsection and a reasonable opportunity to cure such Default.

If the Consultant is in Default, then the Owner, without prejudice to any other rights or remedies available to it under this Agreement or at law, may terminate this Agreement forthwith by giving written notice of termination to the Consultant, and/or the Owner shall have the right to finish the Services either directly or by using the services of other Consultants or the services of the Consultant's employees.

- (b) In the case of Default:
- (i) The Consultant shall execute all papers and take all other steps which may be required to vest in the Owner all rights, title, set offs and other benefits held by the Consultant in connection with the performance of the Services;
  - (ii) The Consultant shall be liable for actual Losses incurred by the Owner on account of the Consultant's Default, which actual Losses may be set-off against amounts due to the Consultant hereunder; and
  - (iii) The Owner shall be entitled to suspend payments to the Consultant until such time as 1) it has been determined by written agreement between Owner and the Consultant that amounts are due to the Consultant, 2) the Consultant cures the Default, or 3) it has been determined in accordance with Article 10 that amounts are due to the Consultant, in all cases taking into account the Owner's rights of set-off against any such payments.

9.4 Suspension of Services or Termination without Default

- (a) The Owner may, in its sole discretion and without or without reason, suspend the Services or any portion thereof at any time by providing twenty (20) days' written notice to the Consultant. Upon receipt of such written notice, the Consultant shall:
- (i) Stop all suspended Services and place no further sub-consultants or orders in relation to the suspended Services;
  - (ii) Forward to the Owner all complete or incomplete reports, data and other documents pertaining to such suspended Services or portion thereof;
  - (iii) If requested by the Owner, assign or suspend sub-consultants and orders to the extent they relate to the suspended portion of the Services;
  - (iv) Complete the performance of any unsuspending portions of the Services in accordance with this Agreement;

- (v) Cooperate and assist the Owner in respect of the best methods of mitigating any delays, costs or Losses arising from the suspended Services; and
- (vi) Maintain the key personnel identified in the Consultant Proposal for up to thirty (30) days from the Notice of Suspension as required by the Owner.

In the event of such suspension, the Consultant shall be paid by the Owner in accordance with Subsection 9.4 (c) hereof.

If the Owner requests the Consultant proceed with the Services within sixty (60) days or less from the date that the Owner requested the Services be suspended, the Consultant shall, upon the cessation of such suspension, and may, at its option if requested by the Owner when such suspension is longer than sixty (60) days, resume performance of the Services, and the Owner shall reimburse the Consultant in accordance with Subsection 9.4 (d) hereof.

If on or after sixty-one (61) days of suspension the Owner requests resumption of the Services, the Consultant may refuse to resume the Services.

- (b) In addition, the Owner, may in its sole discretion and without cause, terminate all or any part of the Services at any time upon ten (10) days' written notice to the Consultant. Upon receipt of such notice, the Consultant shall stop the Services, or portion thereof, and forward to the Owner all complete or incomplete reports, data and other documents pertaining to such cancelled Services, or portion thereof, and shall assign any subcontracts to the Owner if the Owner so requests.
- (c) In the event of suspension or termination of any part of the Services in accordance with the provisions of this Section 9.4, the Consultant shall be entitled to full payment for that part of the Services performed by the Consultant under the terms and conditions of this Agreement up to the effective date of such termination or suspension.

If this Agreement provides for the payment for Services upon the completion of milestones, then the following provision shall apply:

Should this Agreement be suspended or terminated by the Owner in accordance with the provisions of this Section prior to the completion of any or all of milestones for payment, the payment for any Services completed in addition to an approved milestone will be on the basis of hourly rates for the classification involved as set out in the Consultant Proposal.

The Owner shall not pay any cancellation fees or expenses related to cancellation, termination or suspension (unless the Consultant is entitled to payment of fees or expenses on resumption of the Services under Subsection 9.4 (a)) by the Owner under this Section 9.4 and shall not be liable for any Losses of the Consultant including, without limitation, loss of anticipated profits on account of such suspension or termination.

- (d) In the event of a resumption of suspended Services under Subsection 9.4 (a), the Consultant shall be paid:
- (i) Disbursements incurred in relation to the suspension of the Services;
  - (ii) Third party cancellation charges incurred by the Consultant to the date of the suspension; and
  - (iii) Any demobilization costs and remobilization costs.

#### 9.5 Provision of Materials on Termination

Upon suspension and/or termination of this Agreement, irrespective of the time, manner or cause of the said suspension and/or termination, the Consultant must provide the Owner with all Deliverables, including, without limitation, drawings, reports, specifications, bills of quantities, calculations, computer generated files and other documents and/or records related to the Services, including all copies except for one copy which the Consultant shall be entitled to retain subject to the confidentiality provisions of this Agreement.

#### 9.6 Survival of Agreement

The rights and obligations of the Owner and the Consultant, which by their nature survive termination or completion of this Agreement, including but not limited to those relating to confidentiality, liability, indemnification, warranty and other remedies, settlement of accounts, audit, taxes and disputes, shall survive any termination or suspension of the Services and expiration of this Agreement and remain enforceable thereafter, anything in this Agreement to the contrary notwithstanding.

#### 9.7 Suspension or Termination by Consultant

Failure by the Owner to make payments, other than those payments which may be delayed or withheld by the Owner pursuant to Sections 8.4 and 8.5 hereof, is substantial non-performance and cause for either termination or suspension of the Agreement. If the Owner fails to make timely payments to the Consultant of amounts due to the Consultant, other than those payments which may be delayed or withheld by the Owner pursuant to Sections 8.4 and 8.5 hereof, the

Consultant may upon forty-five (45) days' prior written notice to the Owner suspend performance of the Services under this Agreement.

## **10. DISPUTE RESOLUTION**

In the event of disagreement between the Parties as to the performance of the Services or the interpretation, application or administration of the Agreement, the Consultant shall continue to perform the Services as per the terms and conditions of the Agreement. All differences between the Parties not resolved by negotiation and all disputes and claims of either Party arising out of this Agreement and its performance shall be settled in accordance with this Article.

In the event of any dispute arising out of or in connection with this Agreement, the Parties shall make all best efforts to resolve all disputes and claims by negotiation and agree to provide, without prejudice, open and timely written disclosure of relevant facts, information and documents to facilitate these negotiations.

In the event that negotiation does not succeed in resolving the dispute, or if either one of the Parties refuses or chooses to opt out of the negotiation, the dispute will be resolved through confidential final and binding arbitration to be held in St. John's, Newfoundland and Labrador excluding any further legal procedure. Such arbitration will be governed by the rules of the *Arbitration Act* (Newfoundland and Labrador) by one arbitrator. The arbitrator shall be appointed in accordance with the said rules. The arbitration shall be conducted and all related communications shall be in the English language.

## **11. RIGHT OF AUDIT**

The Consultant will keep and maintain accurate time sheets and cost invoice records of its services performed under this Agreement including services performed on its behalf by a sub-consultant (if permitted) and, when required, make such material available for inspection and audit by the Owner.

The Consultant shall be responsible for ensuring that all of its records and its permitted sub-consultants' records specified above are preserved and made available at any time for audit, without additional compensation therefore, for a period of seven (7) years after the expiry of the Warranty Period. The Owner's right to audit such records shall continue for the period of time in which the Consultant is required to retain such records.

## **12. COPYRIGHT**

All surveys, reports, drawings, calculations, design, plans, specifications and other digital or hard copy data compiled and collected in connection with the Services are the property of the Owner and the copyright therein vests in the Owner. The Consultant may retain one (1) complete set of the above-described material for its records. The Owner will make available its originals to the Consultant for all proper and reasonable



purposes for a period of five (5) years following the completion or termination of the Consultant's services under this Agreement.

### **13. WARRANTY AND INDEMNITY**

#### **13.1 Warranty**

The Consultant hereby warrants to the Owner as follows and acknowledges that the Owner is relying upon such warranties in connection with entering into this Agreement and making payments due hereunder:

- (a) The Services will meet all of the requirements set forth in this Agreement. If errors and omissions arise in respect of the performance of the Services under this Agreement, Section 13.2 shall apply;
- (b) The Consultant has all of the required skills, facilities, equipment and capacity to perform the Services and will perform the Services with all due diligence and in a manner and to a standard which would normally be employed by a recognized reputable professional Consultant performing Services of a comparable nature; and
- (c) All deliverables including, if applicable to the Services, all design, engineering, drawings and specifications prepared or supplied by the Consultant will be accurate to the standards of skill, care and diligence referred to in Subsection 13.1 (b).

#### **13.2 Warranty Period and Remedy for Non-Performance**

The Warranty Period with regard to this Agreement is from the date on which the Services are performed by the Consultant up to where:

- (a) The Consultant has been engaged to provide construction contract administration services pursuant to Section 3.11 hereof, the date which is one (1) year from the issuance of the Substantial Performance Certificate; or
- (b) The Consultant has not been engaged to provide construction contract administration services as part of the Services, the date which is one (1) year from the issuance of the Total Performance Certificate to the Consultant for the Services provided hereunder.

(the applicable period, referred to herein as the "Warranty Period").

The Consultant shall, upon notice by the Owner, correct by re-performing the Services in which the deficiency or defect appeared or performing additional Services of the same nature as the Services at its own cost and expense, any

deficiencies or defect in its Services or any defect caused by the performance, purported performance or non-performance of the Services, which appear prior to or during the Warranty Period (the "Corrective Services") and for which the Owner has provided such notice to the Consultant no later than thirty (30) days after the end of the Warranty Period.

The Warranty Period is extended for an additional one (1) year period from the later of 1) the completion of the Corrective Services or 2) the end of the original Warranty Period in respect of any deficiencies caused by the performance, purported performance or non-performance of the Corrective Services.

13.3 Owner's Right to Complete

In the event the Consultant fails or refuses to correct such deficiencies or defect in a timely manner, the Consultant shall be in Default under this Agreement in which case the Owner reserves the right to complete any required remedial Services itself, or by others, and Section 9.3 shall apply.

13.4 Owner's Other Rights

The Owner's right to require the Consultant to re-perform the Services set forth in this Article 13 shall be in addition to, and not a waiver, reduction or restriction of, the Owner's other rights and remedies at law or in equity. Nothing contained in this Article 13 shall reduce or limit the otherwise applicable statutes of limitation for any action based upon the Consultant's breach of any representation, warranty or guarantee.

13.5 Consultant's Liability and Indemnity

- (a) The Consultant shall be liable to the Owner for and shall indemnify, defend and save harmless the Owner from and against all Losses which the Owner may suffer, pay or incur as a result of the Consultant's failure to comply with the terms of this Agreement and any negligence, negligent omission or wilful misconduct of the Consultant in connection with, related to or arising out of this Agreement.
- (b) Without limiting the generality of the foregoing, the Consultant shall be liable to the Owner for and shall indemnify, defend and save harmless the Owner from and against all Losses which the Owner may suffer, pay or incur in respect of:
  - (i) Any Lien placed by the Consultant or any sub-consultant or supplier or other person arising from the performance of the Services; and

- (ii) The actual or alleged infringement of any rights under patent, copyright or any other intellectual property right or any litigation based thereon, arising from the Services.

The Consultant's liability to indemnify or reimburse the Owner under this Agreement shall not limit or prejudice the Owner from relying on the provisions of applicable legislation.

**For greater certainty, the indemnity survives the end of the Warranty Period.**

#### **14. AGREEMENT**

- 14.1. This Agreement shall enure to the benefit of and be binding upon the Parties hereto, their successors and permitted assigns.
- 14.2. This Agreement may not be assigned in whole or in part without the prior written consent of the Owner.
- 14.3. This Agreement shall be governed by and construed in accordance with the laws of the Province of Newfoundland and Labrador and the federal laws of Canada applicable therein. The Parties irrevocably submit to the exclusive jurisdiction of the courts of the Province of Newfoundland and Labrador, as applicable, with respect to any matter arising hereunder or related hereto.
- 14.4. Any notice or communication required or permitted to be given under this Agreement must be in writing and shall be served either personally, by facsimile (with adequate proof of delivery), by deposit with an overnight courier with charges prepaid, or by prepaid registered post addressed 1) to the Owner at the address and facsimile number provided on the Cover Pages hereof, and 2) to the Consultant at the address and facsimile number provided on the Cover Pages hereof, or 3) such other address as either Party may give the other by written notice.

Any such notices shall be deemed to have been given 1) upon delivery in the case of personal delivery, 2) upon the first business day following facsimile receipt, 3) one (1) business day after deposit with an overnight courier, or 4) three (3) business days after deposit in the mail, provided that if such mail service shall be interrupted by strike or other irregularity before the deemed receipt of such notice as aforesaid, then such notice shall not be effective unless delivered or transmitted via facsimile.

- 14.5. This Agreement, together with any documents incorporated by reference herein, constitutes the entire agreement between the Consultant and the Owner in connection with the subject matter hereof and there are no other representations, warranties, undertakings, promises, covenants, conditions, terms, agreements or inducements by or between the parties hereto relating to the subject matter of this Agreement not embodied or contained in this Agreement.

In the process of selecting the Consultant, the Owner relied upon the Consultant Proposal. Notwithstanding the foregoing, for the purpose of clarification or interpretation, the Owner may rely upon the Consultant Proposal and any other documents and submissions made by the Consultant.

In the event of any conflict in the documents comprising this Agreement, the following shall apply:

- (a) The Cover Pages together with Appendix 1 – Terms and Conditions (without reference to the other Appendices) shall govern over all other Appendices; and
- (b) The RFP shall take precedence over the Consultant Proposal.

If any of the terms of the Consultant Proposal violate any of the terms, provisions or context of the RFP or a provision or context of the Cover Pages together with Appendix 1 – Terms and Conditions (without reference to the other Appendices), the parties agree that the terms, provisions or context of the RFP or the provision or context of the Cover Pages together with Appendix 1 – Terms and Conditions (without reference to the other Appendices) shall prevail, and the Consultant Proposal will be construed as having been altered to conform with such terms, provisions or context. If any of the terms of the Cover Pages together with Appendix 1 – Terms and Conditions (without reference to the other Appendices) conflict with the terms of the RFP, the terms and provisions of the Cover Pages together with Appendix 1 – Terms and Conditions (without reference to the other Appendices) prevail.

- 14.6 Headings used in this Agreement are provided for convenience only and shall not be used to construe meaning or intent.
- 14.7 This Agreement shall be interpreted according to the ordinary and usual meaning of the words herein, including any usage or custom in the industry which is relevant to the provisions of the Services.
- 14.8 Words importing the singular include the plural and vice versa, and words importing gender include all genders.
- 14.9 This Agreement may be amended only by written instrument executed by both Parties. No modification or change to this Agreement shall be binding upon any Party unless contained in writing signed by the other Party. No course of dealing, course of performance, or trade usage, and no parol evidence of any nature, shall be used to supplement or modify such agreement and understanding.
  - (a) No waiver or course of dealing shall extend to, or constitute a waiver of, any subsequent or other defaults or impair any right consequent thereon.

- (b) No failure or delay on the part of any Party in exercising any right, power, or privilege hereunder and no course of dealing between the parties shall operate as a waiver of any default or any such right, power or privilege.
- (c) No waiver to this Agreement shall be binding unless in writing signed by the waiving Party.

If any term or provision of this Agreement or the application thereof to any persons or circumstances shall to any extent or for any reason be invalid or unenforceable, the remainder of this Agreement and the application of such terms or provisions to persons or circumstances other than those as to which it is held invalid or unenforceable shall not be affected thereby, and each such remaining term or provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

- 14.10 This Agreement may be executed in one or more counterparts, each of which so executed will constitute an original and all of which together will constitute one and the same agreement. This Agreement may be executed and delivered by fax or email (pdf) and shall upon such execution and delivery be fully enforceable.

## **APPENDIX 2**

### **RFP**

**APPENDIX 3**  
**CONSULTANT PROPOSAL**

**APPENDIX 4**  
**PROTECTION OF PRIVACY**



## PROTECTION OF PRIVACY

This Appendix forms part of the agreement between:

MEMORIAL UNIVERSITY OF NEWFOUNDLAND (the "University")

and

the Consultant (as defined on the Cover Pages of this Agreement)

Respecting a Consultant's Agreement between the Owner and the Consultant dated as of the date hereof (the "Agreement").

### Definitions

1. In this Appendix,

- (a) "Act" means the Access to Information and Protection of Privacy Act of Newfoundland and Labrador, as amended from time to time;
- (b) "Contact Information" means information to enable an individual at a place of business to be contacted and includes the name, position name or title, business telephone number, business address, business email or business fax number of the individual;
- (c) "Personal Information" means recorded information about an identifiable individual, other than Contact Information, collected or created by the Consultant as a result of the Agreement or any previous agreement between the University and the Consultant dealing with the same subject matter as the Agreement.

### Purpose

2. The purpose of this Appendix is to:

- (a) Enable the University to comply with its statutory obligations under the Act with respect to Personal Information; and
- (b) Ensure that, as a service provider, the Consultant is aware of and complies with its statutory obligations under the Act with respect to Personal Information.

Collection of Personal Information

3. Unless the Agreement otherwise specifies or the University otherwise directs in writing, the Consultant may only collect or create Personal Information that is necessary for the performance of the Consultant's obligations, or the exercise of the Consultant's rights, under the Agreement.
4. Unless the Agreement otherwise specifies or the University otherwise directs in writing, the Consultant must collect Personal Information directly from the individual the information is about.
5. Unless the Agreement otherwise specifies or the University otherwise directs in writing, the Consultant must tell an individual from whom the Consultant collects Personal Information:
  - (a) the purpose for collecting it;
  - (b) the legal authority for collecting it; and
  - (c) the title, business address and business telephone number of the person designated by the University to answer questions about the Consultant's collection of Personal Information.

#### Accuracy of Personal Information

6. The Consultant must make every reasonable effort to ensure the accuracy and completeness of any Personal Information to be used by the Consultant or the University to make a decision that directly affects the individual the information is about.

#### Requests for access to Personal Information

7. If the Consultant receives a request for access to Personal Information from a person other than the University, the Consultant must promptly advise the person to make the request to the University unless the Agreement expressly requires the Consultant to provide such access and, if the University has advised the Consultant of the name or title and Contact Information of an official of the University to whom such requests are to be made, the Consultant must also promptly provide that official's name or title and Contact Information to the person making the request.

#### Correction of Personal Information

8. Within 5 business days of receiving a written direction from the University to correct or annotate any Personal Information, the Consultant must annotate or correct the information in accordance with the direction.
9. When issuing a written direction under section 8, the University must advise the Consultant of the date the correction request to which the direction relates was received by the University in order that the Consultant may comply with section 10.

10. Within 5 business days of correcting or annotating any Personal Information under section 8, the Consultant must provide the corrected or annotated information to any party to whom, within one year prior to the date the correction request was made to the University, the Consultant disclosed the information being corrected or annotated.
11. If the Consultant receives a request for correction of Personal Information from a person other than the University, the Consultant must promptly advise the person to make the request to the University and, if the University has advised the Consultant of the name or title and Contact Information of an official of the University to whom such requests are to be made, the Consultant must also promptly provide that official's name or title and Contact Information to the person making the request.

#### Protection of Personal Information

12. The Consultant must protect Personal Information by making reasonable security arrangements against such risks as unauthorized access, collection, use, disclosure or disposal, including any expressly set out in the Agreement.

#### Retention of Personal Information

13. Unless the Agreement otherwise specifies, the Consultant must retain Personal Information until directed by the University in writing to dispose of it or deliver it as specified in the direction.

#### Use of Personal Information

14. Unless the University otherwise directs in writing, the Consultant may only use Personal Information if that use is:
  - (a) for the performance of the Consultant's obligations, or the exercise of the Consultant's rights, under the Agreement; and
  - (b) in accordance with section 13.

#### Disclosure of Personal Information

15. Unless the University otherwise directs in writing, the Consultant may only disclose Personal Information inside Canada to any person other than the University if the disclosure is for the performance of the Consultant's obligations, or the exercise of the Consultant's rights, under the Agreement.

#### Inspection of Personal Information

16. In addition to any other rights of inspection the University may have under the Agreement or under statute, the University may, at any reasonable time and on reasonable notice to the Consultant, enter on the Consultant's premises to inspect any Personal Information in the possession of the Consultant or any of the Consultant's information management policies or practices relevant to its management of Personal Information or its compliance with this Schedule and the Consultant must permit, and provide reasonable assistance to, any such inspection.

#### Compliance with the Act and directions

17. The Consultant must in relation to Personal Information comply with:
  - (a) the requirements of the Act applicable to the Consultant as a service provider, and
  - (b) any direction given by the University under this Appendix.
18. The Consultant acknowledges that it is familiar with the requirements of the Act governing Personal Information that are applicable to it as a service provider.

#### Notice of non-compliance

19. If for any reason the Consultant does not comply, or anticipates that it will be unable to comply, with a provision in this Appendix in any respect, the Consultant must promptly notify the University of the particulars of the non-compliance or anticipated non-compliance and what steps it proposes to take to address, or prevent recurrence of, the non-compliance or anticipated non-compliance.

#### Termination of Agreement

20. In addition to any other rights of termination which the University may have under the Agreement or otherwise at law, the University may, subject to any provisions in the Agreement establishing mandatory cure periods for defaults by the Consultant, terminate the Agreement by giving written notice of such termination to the Consultant, upon any failure of the Consultant to comply with this Appendix in a material respect.

#### Interpretation

21. In this Appendix, references to sections by number are to sections of this Appendix unless otherwise specified in this Appendix.
22. Any reference to the "Consultant" in this Appendix includes any sub-consultant or agent retained by the Consultant to perform obligations under the Agreement and the Consultant must ensure that any such sub-consultants and agents comply with this Appendix.
23. The obligations of the Consultant in this Appendix will survive the termination of the Agreement.
24. If a provision of the Agreement (including any direction given by the University under this Appendix) conflicts with a requirement of the Act or an applicable order of the Commissioner under the Act, the conflicting provision of the Agreement (or direction) will be inoperative to the extent of the conflict.
25. The Consultant must comply with the provisions of this Appendix despite any conflicting provision of this Agreement or the law of any jurisdiction outside Canada.

**APPENDIX 5**  
**INITIAL SERVICES SCHEDULE**

**APPENDIX 6**  
**REIMBURSEMENT REQUIREMENTS**

**Department of Facilities Management**  
**Consultant Reimbursable Expenses Guidelines**

**Direct Expenses**

Expenses incurred by the Consultant on behalf of the Memorial University related to the provision of the Consultant's services and the production of instruments of services, such as computer models, drawings and specifications, as a result of designing, documenting, bidding and constructing a building shall be reimbursed at cost and not covered by professional fees. All reimbursable expenses shall be supported by copies of invoices for said costs.

Reimbursable expenses shall include, but are not limited to:

- Communication and shipping costs (long distance charges, courier, postage, dedicated web hosting, etc.);
- Reproduction costs for plans, sketches, drawings, graphic representations and other documents;
- Renderings, models, prints of computer-generated drawings, mock-ups specifically requested by the University;
- Special computer modeling and documentation;
- Certification and documentation costs for third party certification such as LEED;
- Fees, levies, duties or taxes for permits, licences, or approvals for Authorities Having Jurisdiction.

**Travel**

All travel at University expense must occur by the most economical mode of transportation that is available and practical, while considering the purpose and the urgency of the trip. Reasonable expenses will be reimbursed at cost. No markup or overhead charge will be paid. Consultants will be expected to follow the University policy Travel-General as applicable unless agreed otherwise. The policy is available at <http://www.mun.ca/policy/site/policy.php?id=232>. In addition the following shall apply:

1. Air travel should not exceed full economy fare. Business class (or equivalent) will not be reimbursed.
2. Meal per diems shall be as set out in the policy for Per Diem Allowances.
3. Alcohol will be not be reimbursed.
4. Hosting expenses or other entertainment expenses will not be reimbursed. These are considered the consultants' cost if incurred.
5. Mileage within a 25 kilometer radius of the Consultant's office is not considered a reimbursable expense. Mileage will only be reimbursed for travel beyond this 25 kilometer radius.

## **APPENDIX H – HEALTH AND SAFETY ORIENTATION**



# Health and Safety Orientation



www.mun.ca

MAY 2022

## Welcome to Memorial University

Memorial is committed to developing, maintaining, implementing and continuously improving a safe and healthy work, teaching and learning environment. Prior to starting work at Memorial it is important that you are aware of the following health and safety information.

## Health and Safety Information

### Emergency Response

- To report an emergency (dialed from a campus phone, otherwise dial 864-XXXX):
  - St. John's Campus – 4100
  - Health Sciences Centre - 4100
  - Ocean Sciences Centre – 9-911\*
  - Marine Institute – 9-911\*
  - Grenfell – 2888

\*when utilizing 911, a follow up call should be made to St. John's Campus Enforcement and Patrol (CEP) 4100.

### Incident Reporting and MUN Safe

- **All** health and safety incidents must be reported to your Memorial Representative and an incident report completed
- Download the MUN Safe app to quickly access campus resources 24/7 such as emergency push notifications, emergency procedures, incident reporting and more.
  - Report hazard observations and near misses via MUN Safe

### First Aid and AEDs

- In case of an injury, first aid kits are located in all office suites and laboratories
- All workplaces have AEDs as well as trained first aid responders, names posted throughout the buildings.

### Emergency Evacuations

- Ensure you are aware of the primary and secondary.
- The building fire alarm system can be activated at the nearest fire alarm pull station.
- Emergency evacuation and location plans are posted on each in each building. Exit the building immediately upon activation of the alarm and proceed to the building's assembly point.
  - Mobility impaired individuals must proceed to the nearest stairwell and inform an emergency warden of their location

### Working Alone

- If activities involve lone work then a check-in process must be developed in consultation with your Memorial Representative.

### Communicable Disease

- Practice good hand hygiene and cough/sneeze into your arm
- Do not come to campus if feeling unwell

### Other

- Memorial is a smoke-free campus
- Speed limit on Memorial road is 30 km/hr, be mindful of the many pedestrians on campus
- Obey all posted signage

## Contact us

Environmental Health and Safety  
Office of the Chief Risk Officer  
E: [health.safety@mun.ca](mailto:health.safety@mun.ca)  
www.mun.ca

This is one in a series of informational fact sheets highlighting Environmental Health and Safety.

## **APPENDIX I – QEII Library Arc Flash Coordination Study Results**

Project:  
 Location:  
 Contract:  
 Engineer:  
 Filename: LibraryETAPModel

**ETAP**  
 20.0.1C  
 Study Case: A\_SC

Page: 1  
 Date: 02-24-2021  
 SN:  
 Revision: Base  
 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

Faulted Bus				Fault Current			Trip Device				Arc Flash Boundary (ft)	Incident Energy (cal/cm²)	Working Distance (in)	Energy Level
ID	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	Source Trip Device ID	Trip (cycle)	Open (cycle)	FCT (cycle)					
ATS	0.600	Other	13	2.040	1.888	1.446	400Amp Genset	7581.47	0.00	7581.47	33.7	606.8	18	>Max.
DSW-03	0.600	Other	13	1.857	1.857	1.428	30amp	6.03	0.00	6.03	0.9	0.4	18	Level A
DSW-54	0.600	Other	13	1.860	1.860	1.430	40amp	11.08	0.00	11.08	1.2	0.8	18	Level A
EMG-01	0.600	Other	13	1.868	1.868	1.436	125Amp	66.58	0.00	66.58	3.0	4.9	18	Level C
EMG-02	0.208	Other	13	0.838	0.291	0.220	40Amp	461.03	0.00	461.03	5.1	13.9	18	Level D
EMG-03	0.208	Other	13	1.074	0.372	0.264	40Amp	318.01	0.00	318.01	4.7	11.7	18	Level D
EMG-06	0.208	Other	13	1.130	0.392	0.274	40amp	336.83	0.00	336.83	4.9	12.9	18	Level D
EMG-07	0.208	Other	13	1.544	0.535	0.346	30amp	113.26	0.00	113.26	3.2	5.6	18	Level C
EMG-08	0.208	Other	13	0.792	0.275	0.211	30AMP	319.18	0.00	319.18	4.2	9.2	18	Level D
EMG-09	0.208	Other	13	0.754	0.754	0.587	30Amp	28.94	0.00	28.94	1.2	0.8	18	Level A
EMG-10	0.208	Other	13	0.799	0.799	0.613	100Amp	479.74	0.00	479.74	5.1	14.0	18	Level D
L-DP-01A	0.600	Other	13	24.410	22.955	18.624	2000Amp Main	3.00	0.00	3.00	2.6	3.7	18	Level B
L-DP-04	0.600	Other	13	17.316	16.926	13.933	600Amp	1.50	0.00	1.50	1.6	1.3	18	Level A
L-DP-06	0.208	Other	13	3.810	1.321	0.674	100 AMP	730.10	0.00	730.10	11.8	74.0	18	Level F
L-DPE-01	0.600	Other	13	2.010	1.858	1.424	400Amp Main	6431.19	0.00	6431.19	30.8	507.0	18	>Max.
L-DPE-02	0.208	Other	13	1.218	0.422	0.290	40Amp	268.16	0.00	268.16	4.5	10.9	18	Level D
LP-08	0.600	Other	13	2.932	2.932	2.602	60amp	0.96	0.00	0.96	0.5	0.1	18	Level A
LP-09	0.600	Other	13	4.027	4.027	3.526	60AMP	0.96	0.00	0.96	0.6	0.2	18	Level A
LP-22	0.600	Other	13	3.014	3.014	2.672	60Amp	0.96	0.00	0.96	0.5	0.1	18	Level A
LP-23	0.600	Other	13	5.438	5.438	4.701	60A	0.96	0.00	0.96	0.7	0.3	18	Level A
LP-24	0.600	Other	13	2.932	2.932	2.602	60a	0.96	0.00	0.96	0.5	0.1	18	Level A
LP-34	0.600	Other	13	7.707	7.707	6.565	60 AmP	0.96	0.00	0.96	0.8	0.4	18	Level A
LP-36	0.600	Other	13	6.070	6.070	5.223	60 AmP	0.96	0.00	0.96	0.7	0.3	18	Level A
LP-37	0.208	Other	13	2.389	2.389	1.376	100amp	285.36	0.00	285.36	6.1	19.9	18	Level D
LP-40	0.208	Other	13	2.320	2.320	1.347	100AMP	297.23	0.00	297.23	6.2	20.3	18	Level D
LP-41	0.600	Other	13	9.559	9.559	8.068	60 amP	0.96	0.00	0.96	0.9	0.5	18	Level A
LP-43	0.208	Other	13	2.702	2.702	1.507	100 Amp	240.33	0.00	240.33	5.9	18.5	18	Level D
LP-44	0.600	Other	13	7.707	7.707	6.565	60 aMp	0.96	0.00	0.96	0.8	0.4	18	Level A
LP-47	0.208	Other	13	2.702	2.702	1.507	100 amp	240.33	0.00	240.33	5.9	18.5	18	Level D
LP-49	0.208	Other	13	3.610	3.610	1.867	125AMP	261.52	0.00	261.52	6.9	25.4	18	Level E
PP-02	0.600	Other	13	15.702	15.702	12.979	225Amp	1.50	0.00	1.50	1.5	1.2	18	Level A
PP-07	0.208	Other	13	1.826	0.633	0.391	50Amp	430.36	0.00	430.36	6.7	24.2	18	Level D
UPS-01	0.208	Other	13	1.146	0.397	0.277	40amp	329.32	0.00	329.32	4.9	12.8	18	Level D

Project: **ETAP**  
 Location: **20.0.1C**  
 Contract:  
 Engineer: Study Case: A\_SC  
 Filename: LibraryETAPModel

Page: 1  
 Date: 02-24-2021  
 SN:  
 Revision: Base  
 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

Faulted Bus				Fault Current			Trip Device			Arc Flash Boundary (ft)	Incident Energy (cal/cm <sup>2</sup> )	Working Distance (in)	Energy Level	
ID	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	Source Trip Device ID	Trip (cycle)	Open (cycle)	FCT (cycle)					
EMG-04	0.600	Other	13	5.206	5.206	4.509	125Amp	0.87	0.00	0.87	0.6	0.2	18	Level A
EMG-05	0.600	Other	13	10.189	10.085	8.489	400Amp Main	0.78	0.00	0.78	0.9	0.4	18	Level A

Project:  
 Location:  
 Contract:  
 Engineer:  
 Filename: LibraryPart2 Model

**ETAP**  
 20.0.1C  
 Study Case: A\_SC

Page: 1  
 Date: 03-01-2021  
 SN:  
 Revision: Base  
 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

ID	Faulted Bus			Fault Current			Trip Device			Arc Flash Boundary (ft)	Incident Energy (cal/cm²)	Working Distance (in)	Energy Level	
	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	PD Arc Fault (kA)	Source Trip Device ID	Trip (cycle)	Open (cycle)					FCT (cycle)
DSW-01	0.600	Other	13	24.002	24.002	19.487	100amp	0.96	0.00	0.96	1.5	1.2	18	Level A
HTP-01	0.600	Other	13	4.969	4.969	4.312	100 AMP	0.96	0.00	0.96	0.7	0.2	18	Level A
L-DP-01A	0.600	Other	13	24.559	22.955	18.619	2000Amp Main	3.00	0.00	3.00	2.7	3.8	18	Level B
L-DP-01B	0.600	Other	13	24.504	22.902	18.578	2000Amp Main	3.00	0.00	3.00	2.7	3.8	18	Level B
L-DP-02	0.208	Other	13	18.280	6.337	2.145	600Amp	3214.26	0.00	3214.26	46.2	1139.3	18	>Max.
L-DP-07	0.600	Other	13	14.301	13.899	11.534	300Amp	1.50	0.00	1.50	1.4	1.1	18	Level A
LP-01	0.208	Other	13	3.270	3.270	1.736	150amp	408.36	0.00	408.36	8.3	36.6	18	Level E
LP-02	0.208	Other	13	1.837	1.837	1.134	100 amP	424.89	0.00	424.89	6.7	24.0	18	Level D
LP-03	0.208	Other	13	3.663	3.663	1.887	100amP	164.38	0.00	164.38	5.5	16.1	18	Level D
LP-04	0.208	Other	13	2.487	2.487	1.418	125AMP	424.38	0.00	424.38	7.6	30.6	18	Level E
LP-05	0.600	Other	13	7.456	7.456	6.360	60Amp	0.96	0.00	0.96	0.8	0.4	18	Level A
LP-06	0.208	Other	13	2.107	2.107	1.255	125 AMP	538.86	0.00	538.86	8.0	34.0	18	Level E
LP-07	0.600	Other	13	7.849	7.849	6.681	125Amp	1.50	0.00	1.50	1.0	0.6	18	Level A
LP-10	0.208	Other	13	10.070	10.070	4.687	100AmP	1.13	0.00	1.13	0.7	0.3	18	Level A
LP-11	0.208	Other	13	1.610	1.610	1.028	100A	514.10	0.00	514.10	7.0	26.2	18	Level E
LP-13	0.208	Other	13	1.446	1.446	0.950	40Amp	19.50	0.00	19.50	1.3	0.9	18	Level A
LP-14	0.600	Other	13	5.713	5.713	4.929	100 Amp	0.96	0.00	0.96	0.7	0.3	18	Level A
LP-15	0.208	Other	13	2.075	2.075	1.240	125A	551.19	0.00	551.19	8.0	34.4	18	Level E
LP-16	0.208	Other	13	5.956	5.956	2.703	150 Amp	178.80	0.00	178.80	7.0	25.9	18	Level E
LP-17	0.208	Other	13	5.863	5.863	3.143	100 A	1.19	0.00	1.19	0.6	0.2	18	Level A
LP-18	0.208	Other	13	9.281	9.281	4.413	200 Amp	1.41	0.00	1.41	0.8	0.3	18	Level A
LP-19	0.208	Other	13	2.077	2.077	1.241	100a	357.10	0.00	357.10	6.5	22.3	18	Level D
LP-20	0.208	Other	13	4.489	4.489	2.580	200 amp	1.41	0.00	1.41	0.6	0.2	18	Level A
LP-21	0.600	Other	13	5.436	5.436	4.699	60 Amp	0.96	0.00	0.96	0.7	0.3	18	Level A
LP-25	0.600	Other	13	7.461	7.461	6.364	60Amp	0.96	0.00	0.96	0.8	0.4	18	Level A
LP-26	0.600	Other	13	3.394	3.394	2.993	60AMP	0.96	0.00	0.96	0.5	0.2	18	Level A
LP-27	0.208	Other	13	4.570	4.570	2.222	125 A	183.20	0.00	183.20	6.3	21.5	18	Level D
LP-28	0.600	Other	13	3.146	3.146	2.783	60amp	0.96	0.00	0.96	0.5	0.1	18	Level A
LP-29	0.600	Other	13	2.854	2.854	2.535	60A	0.96	0.00	0.96	0.5	0.1	18	Level A
LP-30	0.208	Other	13	2.738	2.738	1.522	125a	370.33	0.00	370.33	7.3	28.8	18	Level E
LP-31	0.208	Other	13	5.754	5.754	2.635	125 a	1.73	0.00	1.73	0.7	0.2	18	Level A
LP-32	0.208	Other	13	1.885	1.885	1.156	100Amp	409.35	0.00	409.35	6.7	23.6	18	Level D
LP-33	0.208	Other	13	4.192	4.192	2.085	100 AmpP	1.76	0.00	1.76	0.6	0.2	18	Level A
LP-50	0.600	Other	13	6.384	6.384	5.481	60 amp	0.96	0.00	0.96	0.7	0.3	18	Level A

Project:  
 Location:  
 Contract:  
 Engineer:  
 Filename: LibraryPart2 Model

**ETAP**  
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 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

Faulted Bus				Fault Current			Trip Device			Arc Flash Boundary (ft)	Incident Energy (cal/cm <sup>2</sup> )	Working Distance (in)	Energy Level	
ID	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	Source Trip Device ID	Trip (cycle)	Open (cycle)	FCT (cycle)					
LP-51	0.208	Other	13	2.782	2.782	1.540	150 AMP	515.32	0.00	515.32	8.7	40.6	18	Level F
LP-52	0.208	Other	13	1.494	1.494	0.973	100 amp	202.09	0.00	202.09	4.3	9.7	18	Level D
MCC	0.600	Other	13	11.769	11.675	9.768	100Amp	0.60	0.00	0.60	0.8	0.4	18	Level A
PP-01	0.600	Other	13	20.554	20.554	16.797	200Amp	1.50	0.00	1.50	1.7	1.6	18	Level A
PP-05	0.208	Other	13	1.448	1.448	0.951	100AMP	155.09	0.00	155.09	3.7	7.3	18	Level C
PP-06	0.208	Other	13	2.078	0.720	0.430	60A Fuse	62.71	0.00	62.71	2.7	3.9	18	Level B
PP-08	0.208	Other	13	4.666	4.666	2.655	100 AMP	1.13	0.00	1.13	0.5	0.2	18	Level A
PP-09	0.208	Other	13	1.294	1.294	1.030	30Amp	0.50	0.00	0.50	0.2	0.0	18	Level A

Project:  
 Location:  
 Contract:  
 Engineer:  
 Filename: LibraryPart3 Model

**ETAP**  
 20.0.1C  
 Study Case: A\_SC

Page: 1  
 Date: 02-23-2021  
 SN:  
 Revision: Base  
 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

Faulted Bus				Fault Current			Trip Device			Arc Flash Boundary (ft)	Incident Energy (cal/cm <sup>2</sup> )	Working Distance (in)	Energy Level	
ID	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	Source Trip Device ID	Trip (cycle)	Open (cycle)	FCT (cycle)					
DP-03	0.600	Other	13	15.035	14.795	12.251	600Amp	1.50	0.00	1.50	1.5	1.1	18	Level A
DP-05	0.208	Other	13	2.353	0.816	0.472	60a	557.50	0.00	557.50	8.5	38.4	18	Level E
HVSG-01	12.470	Other	13	10.145	10.073	9.774	MUN-07	0.96	5.00	5.96	2.1	2.3	18	Level B
L-DP-01A	0.600	Other	13	24.557	22.955	18.619	2000Amp Main	3.00	0.00	3.00	2.7	3.8	18	Level B
LP-35	0.600	Other	13	5.109	5.109	4.428	60Amp	0.96	0.00	0.96	0.7	0.2	18	Level A
LP-38	0.600	Other	13	5.353	5.353	4.630	60AMP	0.96	0.00	0.96	0.7	0.2	18	Level A
LP-39	0.208	Other	13	1.673	1.673	1.058	100Amp	470.44	0.00	470.44	6.8	24.7	18	Level D
LP-42	0.600	Other	13	5.483	5.483	4.738	60A	0.96	0.00	0.96	0.7	0.3	18	Level A
LP-45	0.600	Other	13	9.438	9.438	7.971	60amp	0.96	0.00	0.96	0.9	0.4	18	Level A
LP-46	0.208	Other	13	2.050	2.050	1.229	100AMP	353.43	0.00	353.43	6.4	21.8	18	Level D
LP-48	0.208	Other	13	2.221	2.221	1.304	100A	315.96	0.00	315.96	6.2	20.8	18	Level D
PP-03	0.600	Other	13	13.770	13.770	11.445	225Amp	1.50	0.00	1.50	1.4	1.0	18	Level A

## **APPENDIX J – School of Music Arc Flash Coordination Study Results**



Project:  
 Location:  
 Contract:  
 Engineer:  
 Filename: School of Music Model

**ETAP**  
**20.0.1C**  
 Study Case: A\_SC

Page: 1  
 Date: 06-28-2021  
 SN:  
 Revision: Base  
 Config.: Normal

**Bus Arc Flash Hazard Analysis Summary**

Faulted Bus				Fault Current			Trip Device			Arc Flash Boundary (ft)	Incident Energy (cal/cm <sup>2</sup> )	Working Distance (in)	Energy Level	
ID	Nom. kV	Equipment Type	Gap (mm)	Bolted Fault (kA) Bus	PD Arc Fault (kA) PD	Source Trip Device ID	Trip (cycle)	Open (cycle)	FCT (cycle)					
MU-DP-01	0.600	Other	13	16.101	15.511	12.807	1200Amp Main	7.50	0.00	7.50	3.4	6.1	18	Level C
MU-DP-02	0.600	Other	13	13.081	12.665	10.549	400A to DP02	0.96	0.00	0.96	1.1	0.6	18	Level A
MU-DP-03	0.208	Other	13	8.776	3.023	1.240	300A to DP03	1.31	0.00	1.31	0.7	0.3	18	Level A
MU-DP-04	0.208	Other	13	2.167	0.751	0.444	60 a	173.96	0.00	173.96	4.6	11.2	18	Level D
MU-DP-05	0.600	Other	13	9.746	9.669	8.155	Main DP05	0.79	0.00	0.79	0.8	0.4	18	Level A
MU-DP-06	0.208	Other	13	8.124	2.816	1.178	175A	626.43	0.00	626.43	14.8	116.2	18	Level G
MU-HTP-1A	0.600	Other	13	4.120	4.120	3.603	60A	0.83	0.00	0.83	0.6	0.2	18	Level A
MU-HTP-02	0.600	Other	13	5.190	5.190	4.496	60a	0.81	0.00	0.81	0.6	0.2	18	Level A
MU-HTP-03	0.600	Other	13	8.998	8.998	7.615	150A to HTP03	0.50	0.00	0.50	0.6	0.2	18	Level A
MU-HTP-04	0.600	Other	13	2.506	2.506	2.239	60 A	0.90	0.00	0.90	0.4	0.1	18	Level A
MU-HTP-05	0.600	Other	13	8.455	8.455	7.174	100 A	0.76	0.00	0.76	0.8	0.3	18	Level A
MU-HTP-06	0.600	Other	13	5.075	5.075	4.400	70A	0.82	0.00	0.82	0.6	0.2	18	Level A
MU-HTP-07	0.600	Other	13	9.068	8.995	7.610	Main DP05	0.81	0.00	0.81	0.8	0.4	18	Level A
MU-LP-01	0.600	Other	13	7.784	7.784	6.627	100a	0.77	0.00	0.77	0.7	0.3	18	Level A
MU-LP-02	0.600	Other	13	7.784	7.784	6.627	100A	0.77	0.00	0.77	0.7	0.3	18	Level A
MU-LP-03A	0.208	Other	13	5.849	5.849	3.138	100AM	1.05	0.00	1.05	0.6	0.2	18	Level A
MU-LP-04B	0.208	Other	13	4.127	4.127	2.425	60AM	1.07	0.00	1.07	0.5	0.1	18	Level A
MU-PP-01	0.208	Other	13	3.508	3.508	2.151	100Amp	1.00	0.00	1.00	0.5	0.1	18	Level A
MU-PP-02	0.208	Other	13	1.075	1.075	0.763	60Amp	80.24	0.00	80.24	2.4	3.0	18	Level B
MU-PP-03	0.208	Other	13	3.280	3.280	2.047	100amp	1.00	0.00	1.00	0.4	0.1	18	Level A
MU-PP-04	0.208	Other	13	4.780	4.780	2.703	60amp	1.00	0.00	1.00	0.5	0.1	18	Level A
MU-PP-05	0.208	Other	13	8.227	8.227	4.037	100 Amp	1.00	0.00	1.00	0.6	0.2	18	Level A
MU-PP-06	0.208	Other	13	4.715	4.715	2.676	150A	1.10	0.00	1.10	0.5	0.2	18	Level A
MU-PP-07	0.208	Other	13	4.078	4.078	2.404	150a	1.17	0.00	1.17	0.5	0.1	18	Level A
MU-PP-08	0.208	Other	13	1.227	1.227	0.990	70 A	1.00	0.00	1.00	0.3	0.0	18	Level A
MU-PP-09	0.208	Other	13	1.284	1.284	1.023	70 a	1.00	0.00	1.00	0.3	0.1	18	Level A
MU-PP-10	0.208	Other	13	2.460	0.853	0.488	40A	90.41	0.00	90.41	3.5	6.5	18	Level C

## **APPENDIX K – Facilities Management Arc Flash Coordination Study Results**

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
FM-HVTR-01_Pri	Cable Bus (153)	CX-HVACB-08	12,955	12,955	11,646	11,646	195	2,438	610	12.10
<b>480 Volt Busses</b>										
FM_PP-13	Panelboard (25)	FM-DSW-14_FS	779	1,798	476	1,099	62	152	457	0.12
FM-ATS-01	Panelboard (25)	FM-DSW-14_FS	746	1,723	441	1,017	91	76	457	0.08
FM-DSW-15	Panelboard (25)	FM-DSW-14_FS	647	1,493	396	914	162	229	457	0.27
FM-DSW-18	Panelboard (25)	FM-DSW-14_FS	679	1,567	415	959	124	204	457	0.22
FM-DSW-19	Panelboard (25)	FM-PP-02_CB_TRAN-04	739	1,707	524	1,210	8	52	457	0.02
FM-DSW-30	Panelboard (25)	FM-DSW-14_FS	730	1,685	446	1,030	85	152	457	0.14
FM-DSW-31	Panelboard (25)	FM-DSW-14_FS	730	1,685	446	1,030	85	152	457	0.14
FM-SPL-1035_480V	Panelboard (25)	FM-DSW-14_FS	745	1,720	456	1,051	77	152	457	0.14
FM-TRAN-01_Sec	Cable Bus (25)	FM-DSW-14_FS	900	2,078	550	1,269	31	101	457	0.07
FM-TRAN-03_Pri	Cable Bus (25)	FM-DSW-14_FS	641	1,479	392	905	170	229	457	0.26
FM-TRAN-04_Sec	Cable Bus (25)	FM-PP-02_CB_TRAN-04	761	1,756	539	1,245	8	52	457	0.02
FM-TRAN-05_Pri	Cable Bus (25)	FM-DSW-14_FS	673	1,553	412	950	131	204	457	0.21
<b>208 Volt Busses</b>										
FM-DP-01	Panelboard (25)	FM-DSW-13_FS	10,050	10,050	4,246	4,246	2,000	2,490	457	37.17
FM-DSW-12	Panelboard (25)	FM-HVTR-01_FS_BON	12,109	202	5,165	86	2,000	2,667	457	43.22
FM-DSW-13	Panelboard (25)	FM-DSW-12_FS	11,958	11,958	5,097	5,097	2,000	2,667	457	43.17
FM-DSW-14	Panelboard (25)	FM-DSW-12_FS	11,365	11,365	4,833	4,833	2,000	2,667	457	43.49
FM-DSW-16	Panelboard (25)	FM-DSW-14_FS	925	925	369	369	2,000	661	457	2.50
FM-DSW-17	Panelboard (25)	FM-DSW-14_FS	925	925	369	369	2,000	661	457	2.50
FM-EMG-01	Panelboard (25)	FM-DSW-16_FS	916	916	308	308	183	204	457	0.23
FM-EMG-02	Panelboard (25)	FM-DSW-17_FS	710	710	284	284	2,000	610	457	2.23
FM-EMG-03	Panelboard (25)	FM-DSW-14_FS	869	869	347	347	2,000	686	457	2.72
FM-EMG-04	Panelboard (25)	FM-EMG-03_CB_FM-UPS-01	826	826	330	330	2,000	686	457	2.65

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
FM-EMG-05	Panelboard (25)	FM-EMG-03_CB_HH-EMG-05	724	724	289	289	2,000	610	457	2.25
FM-HTP-01	Panelboard (25)	FM-DP-01_CB_FM-HTP-01	5,007	5,007	2,040	2,040	2,000	1,701	457	17.30
FM-HVTR-01_Sec	Cable Bus (25)	FM-HVTR-01_FS_BON	17,223	287	7,415	123	2,000	3,200	610	34.64
FM-PP-02	Panelboard (25)	FM-DP-01_CB_FM-PP-02	7,234	7,234	3,000	3,000	2,000	2,082	457	25.88
FM-PP-03	Panelboard (25)	FM-DP-01_CB_FM-PP-03	4,155	4,155	1,681	1,681	2,000	1,548	457	14.31
FM-PP-04	Panelboard (25)	FM-DP-01_CB_FM-PP-04	5,828	5,828	2,391	2,391	2,000	1,853	457	20.41
FM-PP-05	Panelboard (25)	FM-DP-01_CB_FM-PP-05	5,106	5,106	2,082	2,082	2,000	1,728	457	17.67
FM-PP-06	Panelboard (25)	FM-DP-01_CB_FM-PP-06	5,165	5,165	2,107	2,107	16	152	457	0.14
FM-PP-07	Panelboard (25)	FM-DP-01_CB_FM-PP-07	6,845	6,845	2,830	2,830	2,000	2,006	457	24.35
FM-PP-08	Panelboard (25)	FM-DP-01_CB_FM-PP-08	8,273	8,273	2,914	2,914	2,000	2,057	457	25.13
FM-PP-09	Panelboard (25)	FM-DP-01_CB_FM-PP-09	8,175	8,175	2,878	2,878	2,000	2,033	457	24.80
FM-PP-10	Panelboard (25)	FM-DP-01_CB_FM-PP-10	6,639	6,639	2,741	2,741	15	177	457	0.17
FM-PP-11	Panelboard (25)	FM-DP-01_CB_FM-PP-11	4,471	4,471	1,813	1,813	16	152	457	0.13
FM-PP-12	Panelboard (25)	FM-DP-01_CB_FM-PP-12	7,398	7,398	2,590	2,590	2,000	1,929	457	22.22
FM-PP-14	Panelboard (25)	FM-PP-04_CB_PP-14	5,278	5,278	2,155	2,155	17	152	457	0.15
FM-PP-15	Panelboard (25)	FM-PP-06_CB_PP-15	2,648	2,648	892	892	509	558	457	1.86
FM-PP-16	Panelboard (25)	FM-DP-01_CB_FM-PP-16	5,282	5,282	2,157	2,157	16	152	457	0.15
FM-PP-17	Panelboard (25)	FM-DP-01_CB_FM-PP-17	4,652	4,652	1,889	1,889	16	152	457	0.13
FM-SPL-1034	Panelboard (25)	FM-DSW-12_FS	12,033	12,033	5,131	5,131	2,000	2,795	457	47.19
FM-SPL-1035_208V	Panelboard (25)	FM-DSW-14_FS	937	937	373	373	2,000	710	457	3.06
FM-TRAN-01_Pri	Cable Bus (25)	FM-DSW-14_FS	10,437	10,437	4,418	4,418	10	177	457	0.19
FM-TRAN-03_Sec	Cable Bus (25)	FM-DSW-14_FS	942	942	376	376	2,000	710	457	2.97
FM-TRAN-04_Pri	Cable Bus (25)	FM-PP-02_CB_TRAN-04	5,952	5,952	2,444	2,444	8	128	457	0.09
FM-TRAN-05_Sec	Cable Bus (25)	FM-DSW-14_FS	894	894	356	356	2,000	686	457	2.81
FM-UPS-01	Panelboard (25)	FM-EMG-03_CB_FM-UPS-01	847	847	314	314	2,000	457	457	1.26

**APPENDIX L – Physical Education Arc Flash Coordination Study Results**

## Arc Flash Report - IEEE 1584 Calculations Worst case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
PE-HVTR-01_Pri	Cable Bus (153)	PE-HVTR-01_FS_CL	13,348	13,348	12,336	12,336	10	253	457	0.51
<b>480 Volt Busses</b>										
PE-ATS-01 PE-DP-01	Panelboard (25)	PE-DP-01_CB_ATS-01	9,346	9,346	7,124	7,124	50	357	457	0.80
PE-ATS-01 PE-EMG-01	Panelboard (25)	PE-DP-01_CB_ATS-01	9,346	9,346	7,124	7,124	50	357	457	0.80
PE-DP-01	Switchboard (32)	PE-BVTR-01_FS_BON	10,723	412	7,995	307	2,000	4,039	610	24.67
PE-DSW-01	Panelboard (25)	PE-DP-01_CB_DP-1	10,197	10,197	8,188	8,188	50	433	457	1.10
PE-DSW-22	Panelboard (25)	PE-DP-01_CB_DSW-22	8,409	8,409	6,695	6,695	17	152	457	0.20
PE-EMG-01	Panelboard (25)	PE-DP-01_CB_ATS-01	7,402	7,402	5,368	5,368	50	457	457	1.18
PE-EMG-02	Panelboard (25)	PE-EMG-01_CB_EMG-02	702	702	429	429	445	357	457	0.77
PE-HVTR-01_Sec	Cable Bus (32)	PE-BVTR-01_FS_BON	12,278	471	8,731	335	2,000	3,633	610	45.28
PE-LP-01	Panelboard (25)	PE-DP-01_CB_LP-01	6,958	6,958	5,498	5,498	50	329	457	0.66
PE-LP-02	Panelboard (25)	PE-DP-01_CB_LP-02	4,847	4,847	3,474	3,474	50	357	457	0.77
PE-LP-03	Panelboard (25)	PE-LP-02_CB1	2,749	2,749	2,125	2,125	17	101	457	0.07
PE-LP-04	Panelboard (25)	PE-LP-03_CB1	2,233	2,233	1,724	1,724	17	76	457	0.06
PE-LVSG-01	Switchboard (32)	PE-BVTR-01_FS_BON	10,723	412	7,597	292	2,000	3,530	610	42.21
PE-MCC-03	Panelboard (25)	PE-PP-03'_CB_MCC-01	7,320	7,320	5,795	5,795	17	177	457	0.21
PE-MCC-04	Panelboard (25)	PE-EMG-01_CB_EMCC-01	6,403	6,403	5,043	5,043	17	152	457	0.18
PE-PP-03 PE-1015	Panelboard (25)	PE-DP-01_CB_MCC-01	8,536	8,536	6,219	6,219	50	482	457	1.38
PE-PP-15	Panelboard (25)	PE-DP-01_CB_PP-15	3,385	3,385	2,409	2,409	50	305	457	0.51
PE-TRAN-01_Pri	Cable Bus (25)	PE-DP-01_CB_DP-02	8,377	8,377	6,099	6,099	50	482	457	1.30
PE-TRAN-04_Pri	Cable Bus (25)	PE-DP-01_CB_DP-03	9,294	9,294	6,790	6,790	50	509	457	1.52
PE-TRAN-05_Pri	Cable Bus (25)	PE-PP-03'_CB_TRAN-05	3,231	3,231	2,298	2,298	17	177	457	0.17
PE-TRAN-07_Pri	Cable Bus (25)	PE-DSW-01_FS	7,935	7,935	5,767	5,767	10	204	457	0.26
PE-TRAN-08_Pri	Cable Bus (25)	PE-DP-01_CB_DP-2	5,113	5,113	3,670	3,670	17	229	457	0.28
<b>208 Volt Busses</b>										
PE-DP-02	Panelboard (32)	PE-DP-01_CB_DP-02	6,488	2,811	3,045	1,320	500	762	610	1.85

## Arc Flash Report - IEEE 1584 Calculations Worst case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
PE-DP-03	Panelboard (25)	PE-DP-01_CB_DP-03	3,147	1,364	1,474	639	500	482	457	1.39
PE-EMG-03	Panelboard (25)		380		153			457	457	1.20
PE-PP-01	Panelboard (25)	PE-DP-01_CB_DP-02	3,401	1,474	1,153	499	2,000	1,271	457	9.55
PE-PP-04	Panelboard (25)		1,940		773			457	457	1.20
PE-PP-05	Panelboard (25)		1,463		683			457	457	1.20
PE-PP-06	Panelboard (25)	PE-DP-01_CB_DP-03	2,055	891	690	299	718	585	457	2.01
PE-PP-08	Panelboard (25)		1,284		511			457	457	1.20
PE-PP-09	Panelboard (25)	PE-DP-02_CB_PP-09	5,137	5,137	2,095	2,095	21	177	457	0.19
PE-PP-10	Panelboard (25)	PE-DSW-01_FS	2,064	894	822	356	2,000	1,067	457	6.70
PE-PP-11	Panelboard (25)		596		239			457	457	1.20
PE-PP-12	Panelboard (25)		1,555		619			457	457	1.20
PE-PP-14	Panelboard (25)		704		282			457	457	1.20
PE-PP-16	Panelboard (25)		1,107		441			457	457	1.20
PE-PP-17	Panelboard (25)	PE-PP-09_CB_PP-17	2,456	2,456	827	827	733	661	457	2.54
PE-TRAN-01_Sec	Cable Bus (25)	PE-DP-01_CB_DP-02	6,893	2,987	2,852	1,236	500	991	457	5.92
PE-TRAN-04_Sec	Cable Bus (25)	PE-DP-01_CB_DP-03	3,171	1,374	1,272	551	500	686	457	2.66
PE-TRAN-05_Sec	Cable Bus (25)		547		219			457	457	1.20
PE-TRAN-07_Sec	Cable Bus (25)	PE-DSW-01_FS	2,096	908	835	362	2,000	1,067	457	6.85
PE-TRAN-08_Sec	Cable Bus (25)		384		155			457	457	1.20

## **APPENDIX M – Guy Arc Flash Coordination Study Results (BPA)**



## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
GY-HVTR-01_P	Cable Bus (152)	CX-HVACB-09	12,542	12,542	11,275	11,275	113	1,728	610	6.76
<b>208 Volt Busses</b>										
GY-DP-01	Switchgear (32)	GY-HVTR-01 FS CL	22,619	376	9,056	151	1,276	3,149	610	33.60
GY-DSW-01	Panelboard (25)	GY-HVTR-01 FS CL	19,924	332	8,551	142	1,276	2,743	457	45.56
GY-HTP-01 2HPA	Panelboard (25)	GY-DP-01 FS HTP-01 RM-201	4,831	4,831	1,657	1,657	193	482	457	1.35
GY-HTP-02 2HPB	Panelboard (25)	GY-DP-01 FS HTP-02 RM-202	5,132	5,132	1,764	1,764	148	433	457	1.10
GY-HTP-03 2HPC	Panelboard (25)	GY-DP-01 FS HTP-03 RM-204	7,157	7,157	2,501	2,501	59	329	457	0.63
GY-HTP-04 2HPD	Panelboard (25)	GY-DP-01 FS HTP-04 RM-206	13,035	13,035	5,578	5,578	8	177	457	0.21
GY-HTP-05 2HPE	Panelboard (25)	GY-DP-01 FS HTP-05 RM-207	14,573	14,573	6,260	6,260	8	204	457	0.23
GY-HTP-06 2HPF	Panelboard (25)	GY-DP-01 FS HTP-06 RM-209	10,842	10,842	3,877	3,877	21	253	457	0.36
GY-HTP-07 2HPG	Panelboard (25)	GY-DP-01 FS HTP-07 RM-211	7,020	7,020	2,907	2,907	4	101	457	0.05
GY-HVTR-01_S	Cable Bus (25)	GY-HVTR-01 FS CL	28,243	470	11,640	194	1,276	3,225	610	35.42
GY-LVSG-01 Main	Switchgear (32)	GY-HVTR-01 FS CL	22,619	376	9,056	151	1,276	3,149	610	33.60
GY-PP-01 1RPA	Panelboard (25)	GY-DP-01 FS PP-01,12,25	3,180	3,180	1,076	1,076	892	838	457	4.07
GY-PP-02 1RPB	Panelboard (25)	GY-DP-01 FS PP-02,13,26	3,711	3,711	1,495	1,495	8	101	457	0.05
GY-PP-03 1RPC	Panelboard (25)	GY-DP-01 FS PP-03,14,27	4,451	4,451	1,522	1,522	148	405	457	0.97
GY-PP-04 1RPD	Panelboard (25)	GY-DP-01 FS PP-04,15,28	4,943	4,943	2,013	2,013	8	101	457	0.07
GY-PP-05 1RPE	Panelboard (25)	GY-DP-01 FS PP-05,16,29	5,171	5,171	1,778	1,778	10	128	457	0.08
GY-PP-06 1RPF	Panelboard (25)	GY-DP-01 FS PP-06,17,30	10,773	10,773	4,568	4,568	4	128	457	0.09
GY-PP-07 1RPG	Panelboard (25)	GY-DP-01 FS PP-07,18,31	13,099	13,099	5,607	5,607	4	128	457	0.11
GY-PP-08 1RPH	Panelboard (25)	GY-DP-01 FS PP-08,19,32	10,305	10,305	4,359	4,359	4	101	457	0.08
GY-PP-09 1RPJ	Panelboard (25)	GY-DP-01 FS PP-09,20,33	5,998	5,998	2,077	2,077	8	128	457	0.08
GY-PP-10 1RPK	Panelboard (25)	GY-DP-01 FS PP-10,21,34	5,293	5,293	2,161	2,161	8	101	457	0.08
GY-PP-11 1RPL	Panelboard (25)	GY-DP-01 FS PP-11,22,35	4,281	4,281	1,733	1,733	8	101	457	0.06
GY-PP-12 2RPA	Panelboard (25)	GY-DP-01 FS PP-01,12,25	3,322	3,322	1,125	1,125	721	762	457	3.45

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
GY-PP-13 2RPB	Panelboard (25)	GY-DP-01 FS PP-02,13,26	3,906	3,906	1,577	1,577	8	101	457	0.06
GY-PP-14 2RPC	Panelboard (25)	GY-DP-01 FS PP-03,14,27	4,734	4,734	1,622	1,622	114	381	457	0.80
GY-PP-15 2RPD	Panelboard (25)	GY-DP-01 FS PP-04,15,28	5,293	5,293	2,161	2,161	8	101	457	0.08
GY-PP-16 2RPE	Panelboard (25)	GY-DP-01 FS PP-05,16,29	5,554	5,554	2,273	2,273	8	128	457	0.08
GY-PP-17 2RPF	Panelboard (25)	GY-DP-01 FS PP-06,17,30	12,438	12,438	5,312	5,312	4	128	457	0.10
GY-PP-18 2RPG	Panelboard (25)	GY-DP-01 FS PP-07,18,31	15,491	15,491	6,664	6,664	4	152	457	0.13
GY-PP-19 2RPH	Panelboard (25)	GY-DP-01 FS PP-08,19,32	11,834	11,834	5,042	5,042	4	128	457	0.10
GY-PP-20 2RPJ	Panelboard (25)	GY-DP-01 FS PP-09,20,33	6,913	6,913	2,860	2,860	4	101	457	0.05
GY-PP-21 2RPK	Panelboard (25)	GY-DP-01 FS PP-10,21,34	5,998	5,998	2,077	2,077	8	128	457	0.08
GY-PP-22 2RPL	Panelboard (25)	GY-DP-01 FS PP-11,22,35	4,734	4,734	1,924	1,924	8	101	457	0.07
GY-PP-23 2RPM	Panelboard (25)	GY-DP-01 FS PP-23	8,490	8,490	3,552	3,552	8	152	457	0.13
GY-PP-24 2RPN	Panelboard (25)	GY-DSW-01 FS	19,689	19,689	8,454	8,454	10	253	457	0.38
GY-PP-25 3RPA	Panelboard (25)	GY-DP-01 FS PP-01,12,25	3,180	3,180	1,076	1,076	892	838	457	4.07
GY-PP-26 3RPB	Panelboard (25)	GY-DP-01 FS PP-02,13,26	3,711	3,711	1,495	1,495	8	101	457	0.05
GY-PP-27 3RPC	Panelboard (25)	GY-DP-01 FS PP-03,14,27	4,451	4,451	1,522	1,522	148	405	457	0.94
GY-PP-28 3RPD	Panelboard (25)	GY-DP-01 FS PP-04,15,28	4,943	4,943	2,013	2,013	8	101	457	0.07
GY-PP-29 3RPE	Panelboard (25)	GY-DP-01 FS PP-05,16,29	5,171	5,171	1,778	1,778	10	128	457	0.08
GY-PP-30 3RPF	Panelboard (25)	GY-DP-01 FS PP-06,17,30	10,773	10,773	4,568	4,568	4	128	457	0.09
GY-PP-31 3RPG	Panelboard (25)	GY-DP-01 FS PP-07,18,31	13,099	13,099	5,607	5,607	4	128	457	0.11
GY-PP-32 3RPH	Panelboard (25)	GY-DP-01 FS PP-08,19,32	10,305	10,305	4,359	4,359	4	101	457	0.08
GY-PP-33 3RPJ	Panelboard (25)	GY-DP-01 FS PP-09,20,33	5,998	5,998	2,077	2,077	8	128	457	0.08
GY-PP-34 3RPK	Panelboard (25)	GY-DP-01 FS PP-10,21,34	5,293	5,293	2,161	2,161	8	101	457	0.08
GY-PP-35 3RPL	Panelboard (25)	GY-DP-01 FS PP-11,22,35	4,281	4,281	1,733	1,733	8	101	457	0.06

## **APPENDIX N – Gilbert Arc Flash Coordination Study Results(BPA)**

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
GB-HVTR-01_Pri	Cable Bus (152)	CX-HVACB-09	12,385	12,385	11,133	11,133	113	1,701	610	6.67
<b>208 Volt Busses</b>										
GB-DP-01	Switchboard (32)	GB-HVTR-01 BON FS	23,289	388	9,300	155	2,000	3,911	610	52.38
GB-DSW-01	Panelboard (25)	GB-HVTR-01 BON FS	18,993	316	8,165	136	2,000	3,328	457	68.03
GB-HTP-01	Panelboard (25)	GB-DP-01_FS_GB-HTP-01	5,869	5,869	2,030	2,030	32	229	457	0.27
GB-HTP-02	Panelboard (25)	GB-DP-01_FS_GB-HTP-02	5,406	5,406	2,210	2,210	10	128	457	0.09
GB-HTP-03	Panelboard (25)	GB-DP-01_FS_GB-HTP-03	7,558	7,558	3,142	3,142	10	152	457	0.14
GB-HTP-04	Panelboard (25)	GB-DP-01_FS_GB-HTP-04	13,689	13,689	5,869	5,869	10	204	457	0.26
GB-HTP-05	Panelboard (25)	GB-DP-01_FS_GB-HTP-05	15,277	15,277	6,570	6,570	10	229	457	0.29
GB-HTP-06	Panelboard (25)	GB-DP-01_FS_GB-HTP-06	11,437	11,437	4,865	4,865	10	204	457	0.21
GB-HTP-07	Panelboard (25)	GB-DP-01_FS_GB-HTP-07	7,392	7,392	3,069	3,069	10	152	457	0.13
GB-HVTR-01_Sec	Cable Bus (25)	GB-HVTR-01 BON FS	28,230	470	10,970	183	2,000	4,115	610	57.82
GB-LVSG-01	Switchboard (32)	GB-HVTR-01 BON FS	23,289	388	9,300	155	2,000	3,911	610	52.38
GB-PP-01	Panelboard (25)	GB-DP-01_FS_PP-01/12/25	7,379	7,379	3,063	3,063	10	152	457	0.14
GB-PP-02	Panelboard (25)	GB-DP-01_FS_PP-02/13/26	8,225	8,225	3,436	3,436	10	152	457	0.15
GB-PP-03	Panelboard (25)	GB-DP-01_FS_PP-03/14/27	9,279	9,279	3,902	3,902	10	177	457	0.17
GB-PP-04	Panelboard (25)	GB-DP-01_FS_PP-04/15/28	9,907	9,907	4,182	4,182	10	177	457	0.19
GB-PP-05	Panelboard (25)	GB-DP-01_FS_PP-05/16/29	10,182	10,182	4,304	4,304	10	177	457	0.19
GB-PP-06	Panelboard (25)	GB-DP-01_FS_PP-06/17/30	17,824	17,824	7,672	7,672	10	253	457	0.35
GB-PP-07	Panelboard (25)	GB-DP-01_FS_PP-07/18/31	16,459	16,459	7,086	7,086	10	229	457	0.33
GB-PP-08	Panelboard (25)	GB-HVTR-01 BON FS	14,426		5,223			3,328	457	67.86
GB-PP-09	Panelboard (25)	GB-DP-01_FS_PP-09/20/33	10,470	10,470	4,433	4,433	10	177	457	0.20
GB-PP-10	Panelboard (25)	GB-DP-01_FS_PP-10/21/34	9,776	9,776	4,123	4,123	10	177	457	0.19
GB-PP-11	Panelboard (25)	GB-DP-01_FS_PP-11/22/35	9,279	9,279	3,902	3,902	10	177	457	0.17
GB-PP-12	Panelboard (25)	GB-DP-01_FS_PP-01/12/25	8,132	8,132	3,395	3,395	10	152	457	0.15

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
GB-PP-13	Panelboard (25)	GB-DP-01_FS_PP-02/13/26	9,163	9,163	3,851	3,851	10	177	457	0.17
GB-PP-14	Panelboard (25)	GB-DP-01_FS_PP-03/14/27	10,470	10,470	4,433	4,433	10	177	457	0.20
GB-PP-15	Panelboard (25)	GB-DP-01_FS_PP-04/15/28	11,261	11,261	4,786	4,786	10	204	457	0.22
GB-PP-16	Panelboard (25)	GB-DP-01_FS_PP-05/16/29	11,609	11,609	4,942	4,942	10	204	457	0.22
GB-PP-17	Panelboard (25)	GB-DP-01_FS_PP-06/17/30	16,785	16,785	7,227	7,227	10	229	457	0.33
GB-PP-18	Panelboard (25)	GB-DP-01_FS_PP-07/18/31	18,567	18,567	7,987	7,987	10	253	457	0.37
GB-PP-19	Panelboard (25)	GB-HVTR-01 BON FS	17,122	285	7,372	123	2,000	3,328	457	67.86
GB-PP-20	Panelboard (25)	GB-DP-01_FS_PP-09/20/33	13,214	13,214	5,658	5,658	10	204	457	0.26
GB-PP-21	Panelboard (25)	GB-DP-01_FS_PP-10/21/34	12,168	12,168	5,191	5,191	10	204	457	0.24
GB-PP-22	Panelboard (25)	GB-DP-01_FS_PP-11/22/35	10,470	10,470	4,433	4,433	10	177	457	0.20
GB-PP-23	Panelboard (25)	GB-DP-01_FS_PP-23	12,992	12,992	5,559	5,559	10	204	457	0.25
GB-PP-24	Panelboard (25)	GB-DSW-01_FS	14,194	14,194	6,093	6,093	10	204	457	0.27
GB-PP-25	Panelboard (25)	GB-DP-01_FS_PP-01/12/25	7,379	7,379	3,063	3,063	10	152	457	0.14
GB-PP-26	Panelboard (25)	GB-DP-01_FS_PP-02/13/26	8,225	8,225	3,436	3,436	10	152	457	0.15
GB-PP-27	Panelboard (25)	GB-DP-01_FS_PP-03/14/27	9,279	9,279	3,902	3,902	10	177	457	0.17
GB-PP-28	Panelboard (25)	GB-DP-01_FS_PP-04/15/28	9,907	9,907	4,182	4,182	10	177	457	0.19
GB-PP-29	Panelboard (25)	GB-DP-01_FS_PP-05/16/29	10,182	10,182	4,304	4,304	10	177	457	0.19
GB-PP-30	Panelboard (25)	GB-DP-01_FS_PP-06/17/30	14,169	14,169	6,082	6,082	10	229	457	0.28
GB-PP-31	Panelboard (25)	GB-DP-01_FS_PP-07/18/31	16,459	16,459	7,086	7,086	10	229	457	0.33
GB-PP-32	Panelboard (25)	GB-HVTR-01 BON FS	14,426		5,223			3,328	457	67.86
GB-PP-33	Panelboard (25)	GB-DP-01_FS_PP-09/20/33	10,470	10,470	4,433	4,433	10	177	457	0.20
GB-PP-34	Panelboard (25)	GB-DP-01_FS_PP-10/21/34	9,776	9,776	4,123	4,123	10	177	457	0.19
GB-PP-35	Panelboard (25)	GB-DP-01_FS_PP-11/22/35	9,279	9,279	3,902	3,902	10	177	457	0.17

## **APPENDIX O – Cabot Arc Flash Coordination Study Results (BPA)**

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
CT-HVTR-01_P	Cable Bus (152)	CX-HVACB-05	12,468	12,468	11,208	11,208	113	1,701	610	6.72
<b>208 Volt Busses</b>										
CT-DP-01	Switchgear (32)	CT-LVSG-01 FS Main	22,711	22,711	9,090	9,090	1,831	3,758	610	48.39
CT-DSW-01	Panelboard (25)	CT-LVSG-01 FS Main	20,910	20,910	8,951	8,951	1,995	3,682	457	82.69
CT-HTP-01 2HPA	Panelboard (25)	CT-DP-01 FS HTP-01 RM-201	6,268	6,268	2,175	2,175	21	177	457	0.20
CT-HTP-02 2HPB	Panelboard (25)	CT-DP-01 FS HTP-02 RM-202	5,867	5,867	2,029	2,029	44	253	457	0.38
CT-HTP-03 2HPC	Panelboard (25)	CT-DP-01 FS HTP-03 RM-204	9,116	9,116	3,830	3,830	8	152	457	0.14
CT-HTP-04 2HPD	Panelboard (25)	CT-DP-01 FS HTP-04 RM-206	12,618	12,618	4,546	4,546	8	177	457	0.17
CT-HTP-05 2HPE	Panelboard (25)	CT-DP-01 FS HTP-05 RM-207	15,835	15,835	6,815	6,815	4	152	457	0.13
CT-HTP-06 2HPF	Panelboard (25)	CT-DP-01 FS HTP-06 RM-209	10,867	10,867	4,610	4,610	8	177	457	0.17
CT-HTP-07 2HPG	Panelboard (25)	CT-DP-01 FS HTP-07 RM-211	7,331	7,331	2,565	2,565	103	433	457	1.13
CT-HVTR-01_S	Cable Bus (25)	CT-HVTR-01 FS BON	28,534	475	11,735	195	2,000	4,039	610	55.98
CT-LVSG-01 Main	Switchgear (32)	CT-HVTR-01 FS BON	22,711	378	9,090	151	2,000	3,938	610	52.86
CT-PP-01 1RPA	Panelboard (25)	CT-DP-01 FS PP-01,12,24	3,182	3,182	1,077	1,077	111	305	457	0.51
CT-PP-02 1RPB	Panelboard (25)	CT-DP-01 FS PP-02,13,25	3,713	3,713	1,497	1,497	8	101	457	0.05
CT-PP-03 1RPC	Panelboard (25)	CT-DP-01 FS PP-03,14,26	4,455	4,455	1,807	1,807	8	101	457	0.07
CT-PP-04 1RPD	Panelboard (25)	CT-DP-01 FS PP-04,15,27	4,948	4,948	2,015	2,015	8	101	457	0.07
CT-PP-05 1RPE	Panelboard (25)	CT-DP-01 FS PP-05,16,28	5,177	5,177	2,112	2,112	8	101	457	0.08
CT-PP-06 1RPF	Panelboard (25)	CT-DP-01 FS PP-06,17,29	13,136	13,136	5,623	5,623	4	128	457	0.11
CT-PP-07 1RPG	Panelboard (25)	CT-DP-01 FS PP-07,18,30	13,136	13,136	5,623	5,623	4	128	457	0.11
CT-PP-08 1RPH	Panelboard (25)	CT-DP-01 FS PP-08,19,31	10,328	10,328	4,369	4,369	4	101	457	0.08
CT-PP-09 1RPJ	Panelboard (25)	CT-DP-01 FS PP-09,20,32	6,006	6,006	2,080	2,080	40	253	457	0.36
CT-PP-10 1RPK	Panelboard (25)	CT-DP-01 FS PP-10,21,33	5,299	5,299	2,164	2,164	8	101	457	0.08
CT-PP-11 1RPL	Panelboard (25)	CT-DP-01 FS PP-11,22,34	4,455	4,455	1,807	1,807	8	101	457	0.07
CT-PP-12 2RPA	Panelboard (25)	CT-DP-01 FS PP-01,12,24	3,325	3,325	1,126	1,126	99	280	457	0.47

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
CT-PP-13 2RPB	Panelboard (25)	CT-DP-01 FS PP-02,13,25	3,909	3,909	1,578	1,578	8	101	457	0.06
CT-PP-14 2RPC	Panelboard (25)	CT-DP-01 FS PP-03,14,26	4,739	4,739	1,926	1,926	8	101	457	0.07
CT-PP-15 2RPD	Panelboard (25)	CT-DP-01 FS PP-04,15,27	5,299	5,299	2,164	2,164	8	101	457	0.08
CT-PP-16 2RPE	Panelboard (25)	CT-DP-01 FS PP-05,16,28	5,561	5,561	2,276	2,276	8	128	457	0.08
CT-PP-17 2RPF	Panelboard (25)	CT-DP-01 FS PP-06,17,29	12,471	12,471	5,327	5,327	4	128	457	0.10
CT-PP-18 2RPG	Panelboard (25)	CT-DP-01 FS PP-07,18,30	14,663	14,663	6,300	6,300	4	152	457	0.12
CT-PP-19 2RPH	Panelboard (25)	CT-DP-01 FS PP-08,19,31	11,864	11,864	5,056	5,056	4	128	457	0.10
CT-PP-20 2RPJ	Panelboard (25)	CT-DP-01 FS PP-09,20,32	6,923	6,923	2,415	2,415	23	204	457	0.24
CT-PP-21 2RPK	Panelboard (25)	CT-DP-01 FS PP-10,21,33	6,006	6,006	2,080	2,080	8	128	457	0.08
CT-PP-22 2RPL	Panelboard (25)	CT-DP-01 FS PP-11,22,34	4,739	4,739	1,926	1,926	8	101	457	0.07
CT-PP-23 2RPM	Panelboard (25)	CT-DP-01 FS PP-23	12,471	12,471	5,327	5,327	4	128	457	0.10
CT-PP-24 3RPA	Panelboard (25)	CT-DP-01 FS PP-01,12,24	3,182	3,182	1,077	1,077	111	305	457	0.51
CT-PP-25 3RPB	Panelboard (25)	CT-DP-01 FS PP-02,13,25	3,713	3,713	1,497	1,497	8	101	457	0.05
CT-PP-26 3RPC	Panelboard (25)	CT-DP-01 FS PP-03,14,26	4,455	4,455	1,807	1,807	8	101	457	0.06
CT-PP-27 3RPD	Panelboard (25)	CT-DP-01 FS PP-04,15,27	4,948	4,948	2,015	2,015	8	101	457	0.07
CT-PP-28 3RPE	Panelboard (25)	CT-DP-01 FS PP-05,16,28	5,177	5,177	2,112	2,112	8	101	457	0.08
CT-PP-29 3RPF	Panelboard (25)	CT-DP-01 FS PP-06,17,29	10,798	10,798	4,579	4,579	4	128	457	0.09
CT-PP-30 3RPG	Panelboard (25)	CT-DP-01 FS PP-07,18,30	13,136	13,136	5,623	5,623	4	128	457	0.11
CT-PP-31 3RPH	Panelboard (25)	CT-DP-01 FS PP-08,19,31	10,328	10,328	4,369	4,369	4	101	457	0.08
CT-PP-32 3RPJ	Panelboard (25)	CT-DP-01 FS PP-09,20,32	6,006	6,006	2,080	2,080	40	253	457	0.36
CT-PP-33 3RPK	Panelboard (25)	CT-DP-01 FS PP-10,21,33	5,299	5,299	2,164	2,164	8	101	457	0.08
CT-PP-34 3RPL	Panelboard (25)	CT-DP-01 FS PP-11,22,34	4,455	4,455	1,807	1,807	8	101	457	0.07
CT-PP-35 2RPN	Panelboard (25)	CT-DSW-01 FS	20,490	20,490	8,782	8,782	10	253	457	0.40



## **APPENDIX P – Cartier Arc Flash Coordination Study Results (BPA)**

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
CR-HVTR-01_P	Cable Bus (152)	CX-HVACB-05	12,071	12,071	10,850	10,850	113	1,676	610	6.49
<b>208 Volt Busses</b>										
CR-DP-01	Switchgear (32)	CR-LVSG-01 FS Main	23,704	23,704	7,965	7,965	2,000	3,682	610	46.11
CR-DSW-01	Panelboard (25)	CR-LVSG-01 FS Main	20,771	20,771	8,895	8,895	2,000	3,658	457	82.37
CR-HTP-01 2HPA	Panelboard (25)	CR-DP-01 FS HTP-01 RM-201	6,342	6,342	2,202	2,202	85	381	457	0.79
CR-HTP-02 2HPB	Panelboard (25)	CR-DP-01 FS HTP-02 RM-202	5,931	5,931	2,053	2,053	562	914	457	4.90
CR-HTP-03 2HPC	Panelboard (25)	CR-DP-01 FS HTP-03 RM-204	9,277	9,277	3,901	3,901	8	152	457	0.14
CR-HTP-04 2HPD	Panelboard (25)	CR-DP-01 FS HTP-04 RM-206	12,927	12,927	4,662	4,662	8	177	457	0.17
CR-HTP-05 2HPE	Panelboard (25)	CR-DP-01 FS HTP-05 RM-207	16,330	16,330	7,030	7,030	4	152	457	0.13
CR-HTP-06 2HPF	Panelboard (25)	CR-DP-01 FS HTP-06 RM-209	11,097	11,097	4,713	4,713	8	177	457	0.17
CR-HTP-07 2HPG	Panelboard (25)	CR-DP-01 FS HTP-07 RM-211	5,478	5,478	1,889	1,889	51	280	457	0.41
CR-HVTR-01_S	Cable Bus (25)	CR-HVTR-01 FS BON	28,204	469	11,628	193	2,000	4,014	610	55.44
CR-LVSG-01 Main	Switchgear (32)	CR-HVTR-01 FS BON	23,704	394	9,448	157	2,000	4,014	610	55.04
CR-PP-01 1RPF	Panelboard (25)	CR-DP-01 FS PP-01,12,24	11,550	11,550	4,915	4,915	4	128	457	0.09
CR-PP-02 1RPG	Panelboard (25)	CR-DP-01 FS PP-02,13,25	12,769	12,769	5,460	5,460	10	204	457	0.25
CR-PP-03 1RPH	Panelboard (25)	CR-DP-01 FS PP-03,14,26	10,077	10,077	4,257	4,257	4	101	457	0.08
CR-PP-04 1RPJ	Panelboard (25)	CR-DP-01 FS PP-04,15,27	5,758	5,758	2,361	2,361	8	128	457	0.09
CR-PP-05 1RPK	Panelboard (25)	CR-DP-01 FS PP-05,16,28	4,777	4,777	1,942	1,942	8	101	457	0.07
CR-PP-06 1RPL	Panelboard (25)	CR-DP-01 FS PP-06,17,29	4,581	4,581	1,860	1,860	8	101	457	0.07
CR-PP-07 2RPA	Panelboard (25)	CR-DP-01 FS PP-30,07,19	3,343	3,343	1,132	1,132	13	101	457	0.06
CR-PP-08 2RPB	Panelboard (25)	CR-DP-01 FS PP-31,08,20	3,615	3,615	1,456	1,456	8	101	457	0.05
CR-PP-09 2RPC	Panelboard (25)	CR-DP-01 FS PP-32,09,21	4,315	4,315	1,748	1,748	8	101	457	0.06
CR-PP-10 2RPD	Panelboard (25)	CR-DP-01 FS PP-33,10,22	5,347	5,347	2,185	2,185	8	101	457	0.08
CR-PP-11 2RPE	Panelboard (25)	CR-DP-01 FS PP-34,11,23	6,068	6,068	2,102	2,102	8	128	457	0.08
CR-PP-12 2RPF	Panelboard (25)	CR-DP-01 FS PP-01,12,24	10,527	10,527	4,458	4,458	4	128	457	0.08

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
CR-PP-13 2RPG	Panelboard (25)	CR-DP-01 FS PP-02,13,25	14,237	14,237	6,112	6,112	10	229	457	0.28
CR-PP-14 2RPH	Panelboard (25)	CR-DP-01 FS PP-03,14,26	10,077	10,077	4,257	4,257	4	101	457	0.08
CR-PP-15 2RPJ	Panelboard (25)	CR-DP-01 FS PP-04,15,27	6,798	6,798	2,369	2,369	8	128	457	0.09
CR-PP-16 2RPK	Panelboard (25)	CR-DP-01 FS PP-05,16,28	5,909	5,909	2,045	2,045	8	128	457	0.07
CR-PP-17 2RPL	Panelboard (25)	CR-DP-01 FS PP-06,17,29	5,478	5,478	2,240	2,240	8	101	457	0.08
CR-PP-18 2RPM	Panelboard (25)	CR-DP-01 FS PP-18	10,077	10,077	4,257	4,257	4	101	457	0.08
CR-PP-19 3RPA	Panelboard (25)	CR-DP-01 FS PP-30,07,19	3,199	3,199	1,082	1,082	17	128	457	0.08
CR-PP-20 3RPB	Panelboard (25)	CR-DP-01 FS PP-31,08,20	3,447	3,447	1,169	1,169	11	101	457	0.06
CR-PP-21 3RPC	Panelboard (25)	CR-DP-01 FS PP-32,09,21	3,736	3,736	1,506	1,506	8	101	457	0.05
CR-PP-22 3RPD	Panelboard (25)	CR-DP-01 FS PP-33,10,22	4,315	4,315	1,748	1,748	8	101	457	0.06
CR-PP-23 3RPE	Panelboard (25)	CR-DP-01 FS PP-34,11,23	4,777	4,777	1,942	1,942	8	101	457	0.07
CR-PP-24 3RPF	Panelboard (25)	CR-DP-01 FS PP-01,12,24	8,919	8,919	3,743	3,743	4	101	457	0.07
CR-PP-25 3RPG	Panelboard (25)	CR-DP-01 FS PP-02,13,25	11,550	11,550	4,915	4,915	10	204	457	0.22
CR-PP-26 3RPH	Panelboard (25)	CR-DP-01 FS PP-03,14,26	8,279	8,279	3,459	3,459	4	101	457	0.06
CR-PP-27 3RPJ	Panelboard (25)	CR-DP-01 FS PP-04,15,27	5,758	5,758	2,361	2,361	8	128	457	0.09
CR-PP-28 3RPK	Panelboard (25)	CR-DP-01 FS PP-05,16,28	4,990	4,990	2,033	2,033	8	101	457	0.07
CR-PP-29 3RPL	Panelboard (25)	CR-DP-01 FS PP-06,17,29	4,777	4,777	1,942	1,942	8	101	457	0.07
CR-PP-30 1RPA	Panelboard (25)	CR-DP-01 FS PP-30,07,19	3,199	3,199	1,082	1,082	17	128	457	0.08
CR-PP-31 1RPB	Panelboard (25)	CR-DP-01 FS PP-31,08,20	3,447	3,447	1,169	1,169	11	101	457	0.06
CR-PP-32 1RPC	Panelboard (25)	CR-DP-01 FS PP-32,09,21	3,935	3,935	1,589	1,589	8	101	457	0.06
CR-PP-33 1RPD	Panelboard (25)	CR-DP-01 FS PP-33,10,22	4,315	4,315	1,748	1,748	8	101	457	0.06
CR-PP-34 1RPE	Panelboard (25)	CR-DP-01 FS PP-34,11,23	4,777	4,777	1,942	1,942	8	101	457	0.07
CR-PP-35 2RPN	Panelboard (25)	CR-DSW-01 FS	20,516	20,516	7,411	7,411	50	533	457	1.67

## **APPENDIX Q – Baltimore Arc Flash Coordination Study Results (BPA)**

## Arc Flash Report - IEEE 1584 Calculations Worst Case Based on All Scenarios



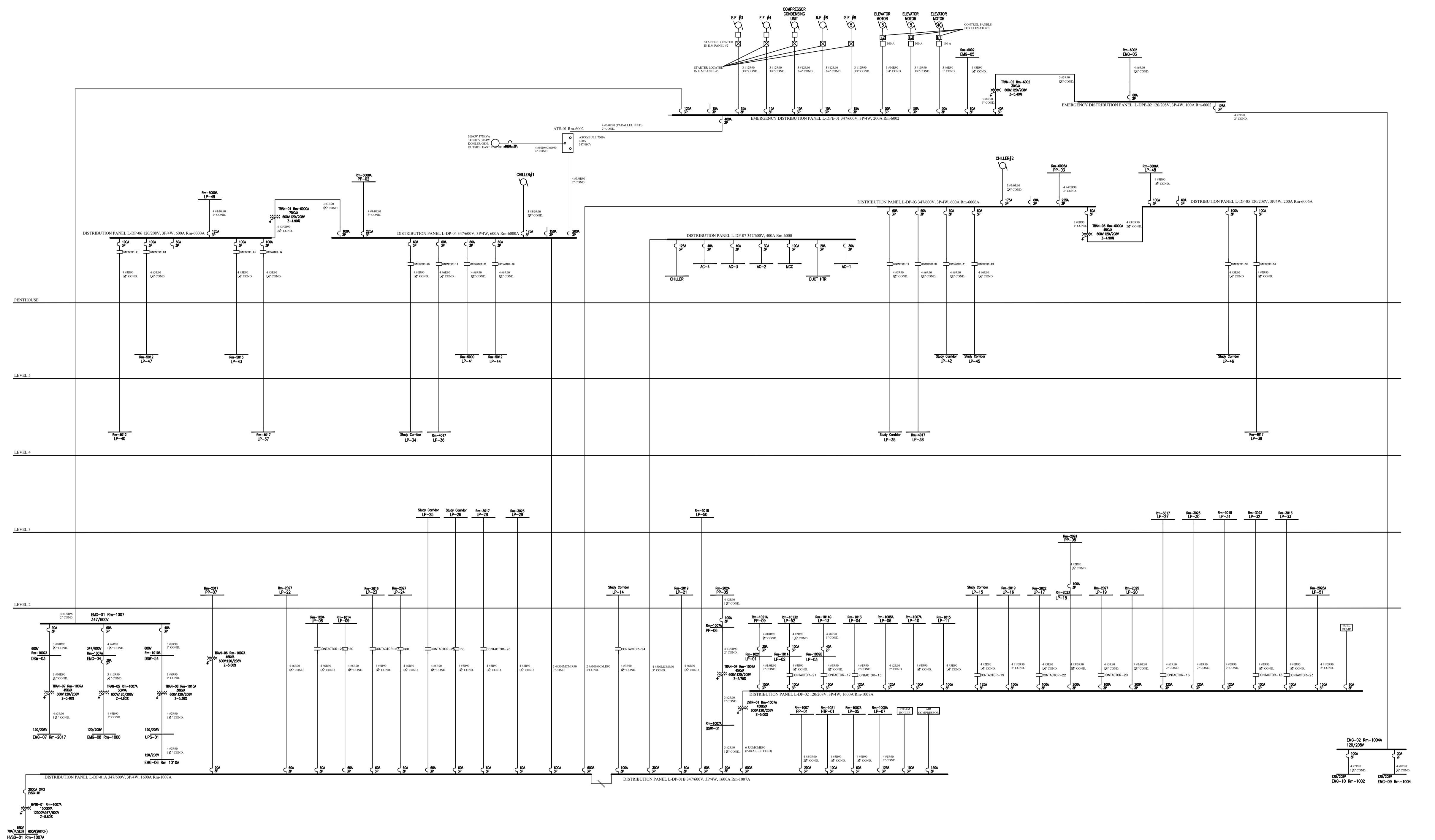
Bus Name	Equipment Type (Bus Gap (mm))	Upstream Protective Device Clearing Fault	Bolted Fault Current		Arcing Fault Current		Clearing Time (ms)	Arc Flash Hazard Analysis Results		
			@ Bus	Through Prot. Device	@ Bus	Through Prot. Device		FPB (mm)	WD (mm)	IE (cal/cm <sup>2</sup> )
<b>12,500 Volt Busses</b>										
BM-HVTR-01_Pri	Cable Bus (153)	CX-HVACB-08	12,731	12,731	11,444	11,444	113	1,728	610	6.88
<b>208 Volt Busses</b>										
BM-DP-01	Switchboard (32)	BM-HVTR-01 BON FS	16,185	269	6,550	109	2,000	3,176	610	34.26
BM-HVTR-01_Sec	Cable Bus (25)	BM-HVTR-01 BON FS	17,213	286	7,411	123	2,000	3,200	610	34.62
BM-LVSG-01	Switchboard (32)	BM-HVTR-01 BON FS	16,185	269	6,550	109	2,000	3,176	610	34.26
BM-PP-01	Panelboard (25)	BM-DP-01_CB_BM-PP-01	12,079	12,079	5,152	5,152	23	305	457	0.53
BM-PP-02	Panelboard (25)	BM-DP-01_CB_BM-PP-02	5,410	5,410	2,211	2,211	23	204	457	0.22
BM-PP-03	Panelboard (25)	BM-DP-01_CB_BM-PP-03	7,445	7,445	3,092	3,092	23	229	457	0.32
BM-PP-04	Panelboard (25)	BM-DP-01_CB_BM-PP-04	6,037	6,037	2,480	2,480	23	204	457	0.25
BM-PP-05	Panelboard (25)	BM-DP-01_CB_BM-PP-05	4,745	4,745	1,929	1,929	24	177	457	0.20
BM-PP-06	Panelboard (25)	BM-DP-01_CB_BM-PP-06	3,800	3,800	1,292	1,292	2,000	1,347	457	10.89
BM-PP-07	Panelboard (25)	BM-DP-01_CB_BM-PP-07	6,277	6,277	2,584	2,584	23	204	457	0.26
BM-PP-09	Panelboard (25)	BM-DP-01_CB_BM-PP-09	7,117	7,117	2,949	2,949	23	229	457	0.30
BM-PP-10	Panelboard (25)	BM-DP-01_CB_BM-PP-10	5,410	5,410	2,211	2,211	23	204	457	0.22
BM-PP-11	Panelboard (25)	BM-DP-01_CB_BM-PP-11	4,222	4,222	1,440	1,440	31	177	457	0.19
BM-PP-12	Panelboard (25)	BM-DP-01_CB_BM-PP-12	9,068	9,068	3,809	3,809	23	253	457	0.39
BM-PP-13	Panelboard (25)	BM-DP-01_CB_BM-PP-13	5,410	5,410	2,211	2,211	23	204	457	0.22
BM-PP-14	Panelboard (25)	BM-DP-01_CB_BM-PP-14	7,445	7,445	3,092	3,092	23	229	457	0.32
BM-PP-15	Panelboard (25)	BM-DP-01_CB_BM-PP-15	6,037	6,037	2,480	2,480	23	204	457	0.25
BM-PP-16	Panelboard (25)	BM-DP-01_CB_BM-PP-16	4,745	4,745	1,929	1,929	24	177	457	0.19

## APPENDIX R – Single Line Diagrams

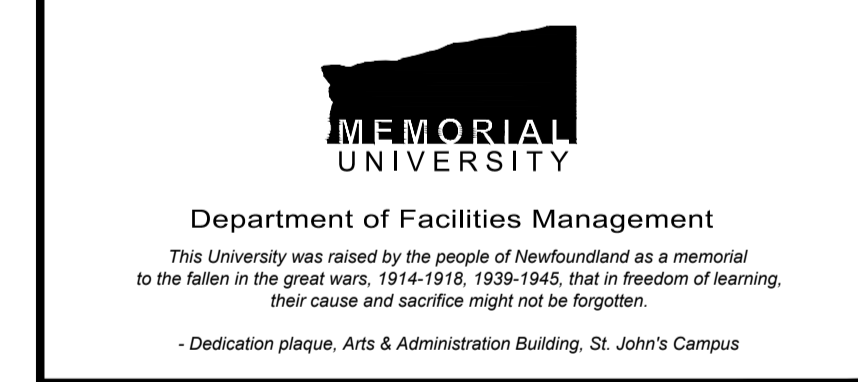
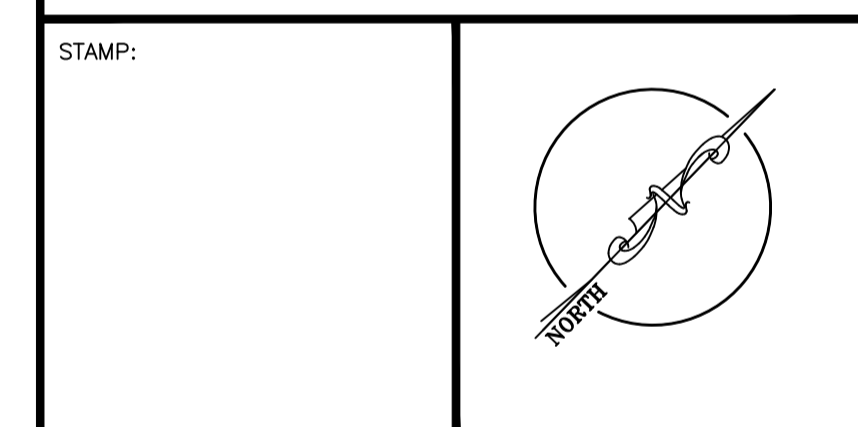
No.	REVISION	DATE
R0	ISSUED FOR REVIEW	JULY 14, 2020

**GENERAL NOTES**

- DO NOT SCALE FROM DRAWINGS.
- THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO SUBMISSION OF TENDERS.
- ALL DEFICIENCIES FOUND IN THIS DRAWING IS TO BE BROUGHT TO THE ATTENTION OF THE FACILITIES ENGINEERING AND DEVELOPMENT OFFICE OF THE DEPARTMENT OF FACILITIES MANAGEMENT, MEMORIAL UNIVERSITY OF NEWFOUNDLAND, PRIOR TO THE SUBMISSION OF THE TENDERS.



LIBRARY BUILDING RISER DIAGRAM  
SCALE: N.T.S



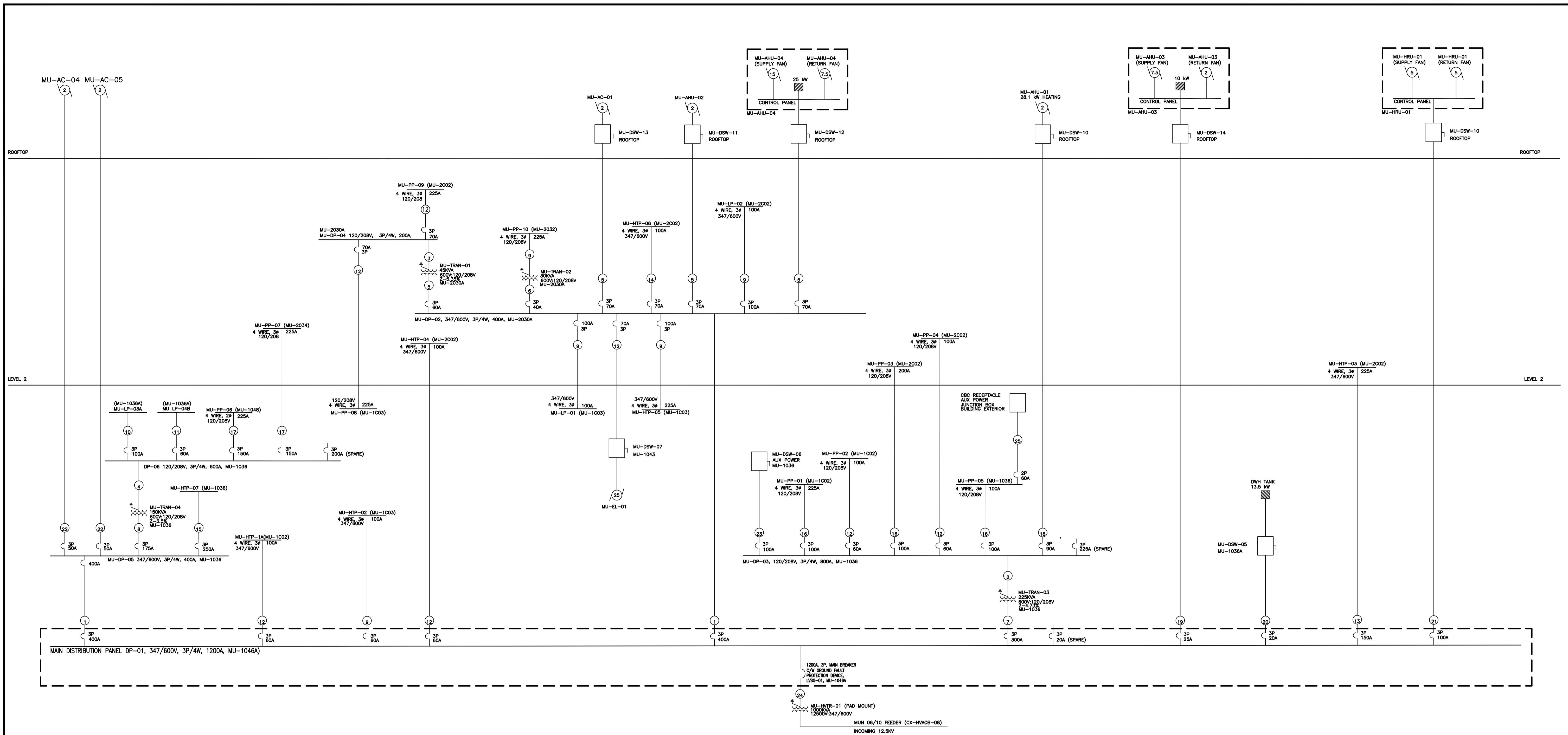
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**REVIEW AND REVISE  
ELECTRICAL RISER  
DIAGRAM**

DRAWING TITLE:  
**LIBRARY BUILDING SINGLE  
LINE RISER**

DESIGNED: XX	DRAWN: S.C
REVIEWED: S.L	APPROVED: XX
SCALE: AS SHOWN	DATE: JULY 14 2020
MUN PROJECT No. <b>XXX-XXX-XX</b>	DRAWING No. <b>E-1</b>



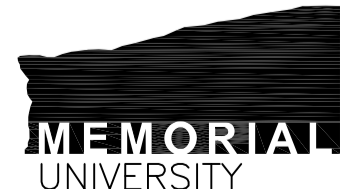




WIRE AND CONDUIT INFORMATION			
1	4 #500 MCM, 1 #500 MCM NEUTRAL, 1 #1 AWG GROUND IN 100MM CONDUIT	14	4 #6 AWG, 1 #6 AWG NEUTRAL, 1 #8 AWG GROUND IN 25MM CONDUIT
2	8 #500 MCM, 2 #500 MCM NEUTRAL, 2 #3 AWG GROUND IN 100MM FLEX	15	4 #250 MCM, 1 #250 MCM NEUTRAL, 1 #2 AWG GROUND IN 75MM CONDUIT
3	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, 1 #6 AWG GROUND IN 63MM FLEX	16	4 #3 AWG, 1 #3 AWG NEUTRAL, 1 #8 AWG GROUND IN 40MM CONDUIT
4	8 #4/0 AWG, 2 #4/0 AWG NEUTRAL, 2 #3/0 AWG GROUND IN 63MM FLEX	17	4 #1/0 AWG, 1 #1/0 AWG NEUTRAL, 1 #2 AWG GROUND IN 50MM CONDUIT
5	3 #6 AWG, 1 #8 AWG GROUND IN 25MM CONDUIT	18	3 #4 AWG, 1 #8 AWG GROUND IN 25MM CONDUIT
6	3 #8 AWG, 1 #10 AWG GROUND IN 25MM CONDUIT	19	3 #10 AWG, 1 #12 AWG GROUND IN 20MM CONDUIT
7	3 #300 MCM, 1 #4 AWG GROUND IN 75MM CONDUIT	20	3 #12 AWG, 1 #12 AWG GROUND IN 20MM CONDUIT
8	3 #3/0 AWG, 1 #6 AWG GROUND IN 50MM FLEX	21	3 #3 AWG, 1 #8 AWG GROUND IN 32MM CONDUIT
9	4 #3 AWG, 1 #3 AWG NEUTRAL, 1 #8 AWG GROUND IN 32MM CONDUIT	22	4 #8 AWG, 1 #8 AWG NEUTRAL, 1 #10 AWG GROUND IN 20MM CONDUIT
10	4 #2 AWG, 1 #2 AWG NEUTRAL, 1 #6 AWG GROUND IN 75MM CONDUIT	23	4 #4/0 AWG, 1 #4/0 AWG NEUTRAL, 1 #3/0 AWG GROUND IN 63MM CONDUIT
11	4 #6 AWG, 1 #6 AWG NEUTRAL, 1 #8 AWG GROUND IN 75MM CONDUIT	24	12 #500 MCM, 3 #500 MCM NEUTRAL, 3 #3/0 AWG GROUND IN 100MM FLEX
12	4 #6 AWG, 1 #6 AWG NEUTRAL, 1 #8 AWG GROUND IN 32MM CONDUIT	25	2 #1 AWG, 1 #6 AWG GROUND IN 25MM PVC
13	4 #1/0 AWG, 1 #1/0 AWG NEUTRAL, 1 #6 AWG GROUND IN 50MM CONDUIT		

REVISION DATE	INITIAL
JUNE 2021	ASJ
NEXT UPDATE: OCT 2021	

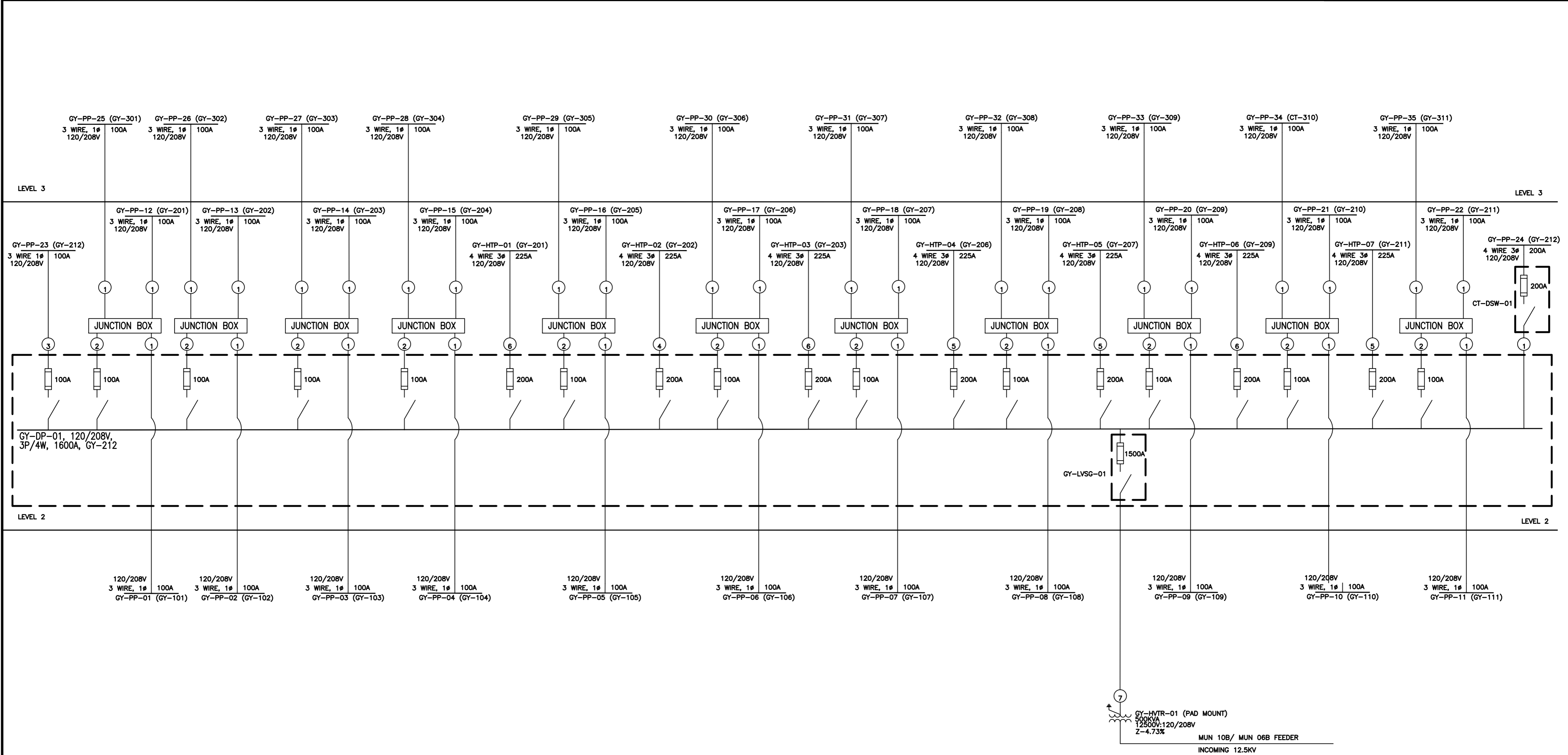
SCHOOL OF MUSIC ELECTRICAL SINGLE LINE DIAGRAM



Department of Facilities Management







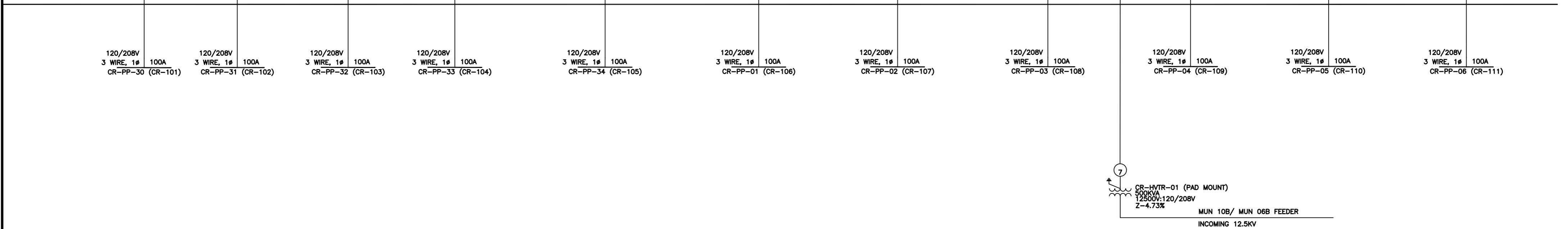
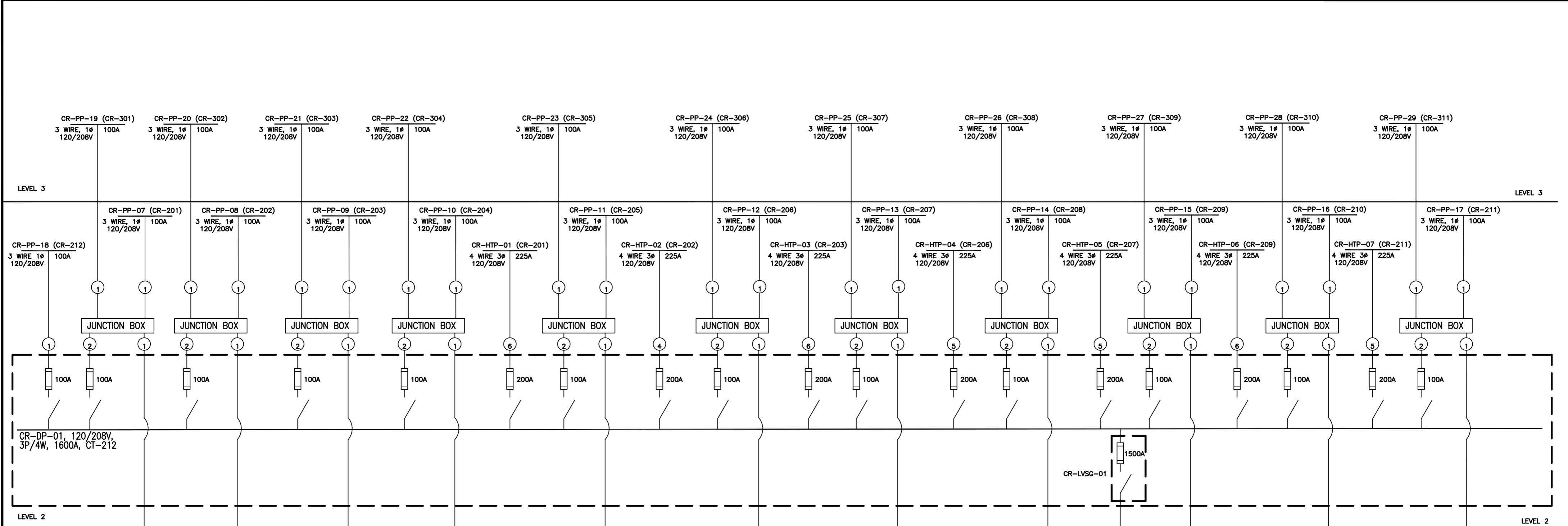
1	3 #1 AWG, 1 #1 AWG NEUTRAL, IN 38MM RIDGED
2	4 #1 AWG, 1 #1 AWG NEUTRAL, IN 38MM RIDGED
3	1 #4 AWG, 1 #4 AWG NEUTRAL, IN 32MM RIDGED
4	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, IN 63MM RIDGED
5	4 #2/0 AWG, 1 #2/0 AWG NEUTRAL, IN 63MM RIDGED
6	4 #4/0 AWG, 1 #4/0 AWG NEUTRAL, IN 76MM RIDGED
7	12 #500 MCM, 3 #500 MCM NEUTRAL, 3 #3/0 GROUND IN (3) 100MM RIDGED
WIRE AND CONDUIT INFORMATION	



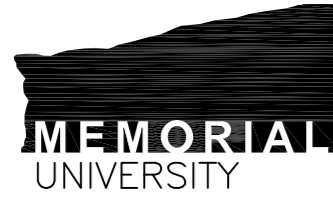
Department of Facilities Management

REVISION DATE	INITIAL
SEPTEMBER 2021	ASJ
NEXT UPDATE: JANUARY 2022	

BPA: GUY ELECTRICAL SINGLE LINE DIAGRAM



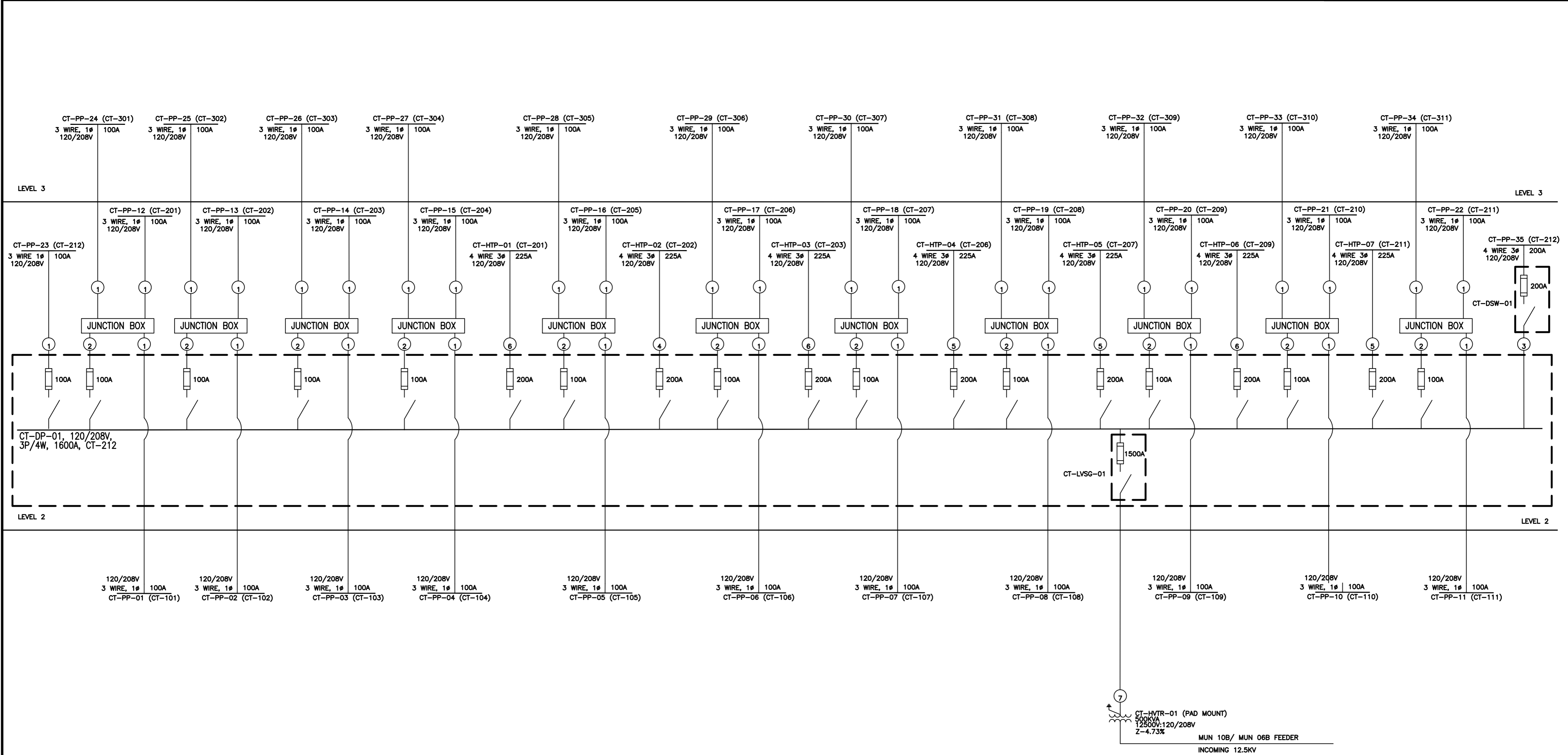
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2	4 #1 AWG, 1 #1 AWG NEUTRAL, IN 38MM RIDGED
3	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, 1 #6 AWG GROUND IN 50MM EMT
4	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, IN 63MM RIDGED
5	4 #2/0 AWG, 1 #2/0 AWG NEUTRAL, IN 63MM RIDGED
6	4 #4/0 AWG, 1 #4/0 AWG NEUTRAL, IN 76MM RIDGED
7	12 #500 MCM, 3 #500 MCM NEUTRAL, 3 #3/0 GROUND IN (3) 100MM RIDGED
WIRE AND CONDUIT INFORMATION	



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NEXT UPDATE: JANUARY 2022	

BPA: CARTIER ELECTRICAL SINGLE LINE DIAGRAM



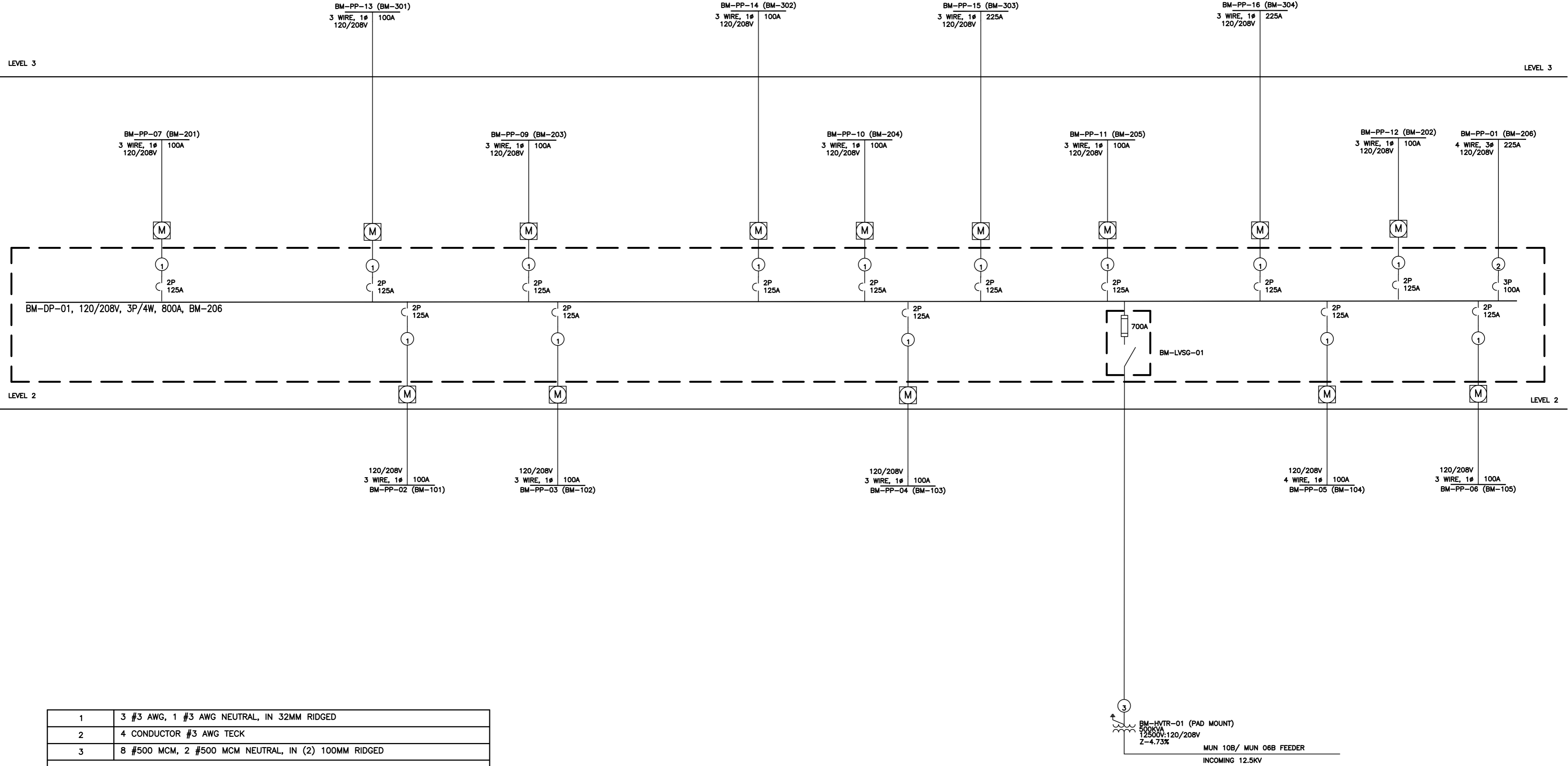
1	3 #1 AWG, 1 #1 AWG NEUTRAL, IN 38MM RIDGED
2	4 #1 AWG, 1 #1 AWG NEUTRAL, IN 38MM RIDGED
3	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, 1 #6 AWG GROUND IN 50MM EMT
4	4 #3/0 AWG, 1 #3/0 AWG NEUTRAL, IN 63MM RIDGED
5	4 #2/0 AWG, 1 #2/0 AWG NEUTRAL, IN 63MM RIDGED
6	4 #4/0 AWG, 1 #4/0 AWG NEUTRAL, IN 76MM RIDGED
7	12 #500 MCM, 3 #500 MCM NEUTRAL, 3 #3/0 GROUND IN (3) 100MM RIDGED
WIRE AND CONDUIT INFORMATION	



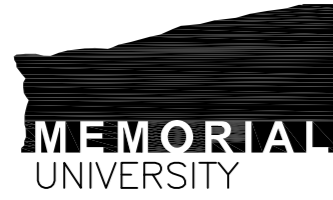
Department of Facilities Management

REVISION DATE	INITIAL
SEPTEMBER 2021	ASJ
NEXT UPDATE: JANUARY 2022	

BPA: CABOT ELECTRICAL SINGLE LINE DIAGRAM



1	3 #3 AWG, 1 #3 AWG NEUTRAL, IN 32MM RIDGED
2	4 CONDUCTOR #3 AWG TECK
3	8 #500 MCM, 2 #500 MCM NEUTRAL, IN (2) 100MM RIDGED
WIRE AND CONDUIT INFORMATION	



Department of Facilities Management

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SEPTEMBER 2021	ASJ
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### BPA: BALTIMORE ELECTRICAL SINGLE LINE DIAGRAM