



UNIVERSITY

**DEPARTMENT OF FACILITIES  
MANAGEMENT**

**LIMITED CALL FOR BIDS**

**FOR**

**TFM-003-23(A) AQ-004-19  
AQUARENA SPORTS FACILITY  
UPGRADES CP-1  
(DEHUMIDIFICATION  
PROCUREMENT)**

**The project generally consists  
of supply of two (2) indoor air  
handlers with dehumidification  
and dry cooling.**

**Issued Date: Thursday, January 27, 2023**

**Submission Deadline: Thursday, February 9, 2023 @ 03:00  
PM NST**

**REQUEST FOR LIMITED CALL FOR BIDS (LCB) INFORMATION SHEET**

Request for Open Call			
Title:	<b>AQ-004-19 Aquarena Sports Facility Upgrades CP-1 (Dehumidification Procurement)</b>		
Limited Call #:	<b>TFM-003-23(A)</b>	Issue Date:	<b>January 27, 2023</b>
Questions Deadline:	<b>72 hours prior to close time</b>	Closing Date & Time & :  Bid Submission Format:	<b>Thursday, February 9, 2023 @ 3:00 PM NST Time</b>  <b>opencalls@mun.ca</b>
<b>Bids Irrevocable Period after Submission Deadline:</b>			<b>30 days</b>
<p><b>Bid Submission: Responses to this solicitation must be submitted by email, as a single Adobe Acrobat (.pdf) file, to opencalls@mun.ca.</b></p> <p><b>Email subject line must read:</b>  <b>BID SUBMISSION: Open Call number and name.</b>  <b>For example: BID SUBMISSION: TFM-123-20 Renovations to Main Campus.</b></p>			
<b>Inquiries and Communication:</b>			
<p><b>Inquiries and communication:</b> Strategic Procurement Office, Memorial University of Newfoundland, opencalls@mun.ca. Inquiries accepted only via email. No phone calls will be accepted. <b>Please reference limited call Title and Limited Call # from above, ie: TFM-003-23(A) AQ-004-19 CP-1 in subject line. Emails not containing this requirement information in the subject line will NOT receive a response.</b></p> <p><b><u>Bids submitted by fax, mail, courier, drop off or by any other means of delivery other than by email stated above shall not be accepted.</u></b></p>			

## ABOUT MEMORIAL UNIVERSITY

Perched on Canada's North Atlantic coast, Memorial University of Newfoundland is a destination for discovery. A beacon for the 21st-century explorer, Newfoundland and Labrador's university is a unique learning community founded as a living memorial to those who lost their lives in the First World War — "that in freedom of learning their cause and sacrifice might not be forgotten." Today more than 18,000 students from nearly 110 countries come together to discover. From the classics to advanced technology, the university offers certificate, diploma, undergraduate, graduate and postgraduate programs across five campuses, numerous locations and online. A global network of almost 95,000 accomplished alumni throughout the world strengthens Memorial University's capacity and reputation for leadership in world-class research, teaching and public engagement.

## PART 1 – SUBMISSION INSTRUCTIONS

### 1.1 Bids to be Submitted on Time

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

### 1.2 Bids to be Submitted in Prescribed Format

Bidders should submit **one (1)** email submission in PDF format. Please note: File size cannot exceed 15 MB. Otherwise server may reject bid submission due to size. **Bids 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 Bids

Bidders may amend their bids after they have been submitted if, and only if, the amendment is emailed prior to the Submission Deadline marked BID SUBMISSION AMENDMENT followed by open call number and name. Bid revisions, changes and alterations may be made only by completing a new bid. Previous submissions will be cancelled and the submission with the most recent date and time will be considered the final bid.

Email inquiries and requests for clarification shall be accepted up to **72 hours** 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 Bids 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 bidders the Owner shall provide, by way of amendment to this Open Call for Bids, in the form of an addendum, any relevant information with respect to the Open Call inquiries received in writing without revealing the source of those inquiries. Bidders are cautioned that it is their responsibility to ensure that they receive all information relevant to this Open Call. The Owner shall not be responsible for bidders who fail to inform themselves regarding the scope and nature of the work. The Owner shall publish all amendments on Memorial University's 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) . In addition, all amendments will be published on [https://www.mun.ca/finance/strategic\\_procurement/](https://www.mun.ca/finance/strategic_procurement/) . Bidders should check on a regular basis for Open Call updates. Bidders are solely responsible for ensuring they are aware of and have complied with all amendments by tender closing time. In the event there is a 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 [https://www.mun.ca/finance/strategic\\_procurement/](https://www.mun.ca/finance/strategic_procurement/) is the official website. Bidders 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 Bidder of their responsibility to ensure all addenda has been received.

## APPENDIX B – SUBMISSION FORM

### 1. Bidder Information

Please fill out the following form, naming one person to be the bidder's contact for the Open Call process and for any clarifications or communication that might be necessary.	
Full Legal Name of Bidder:	<i>Mechanical Components Ltd.</i>
Any Other Relevant Name under which Bidder Carries on Business:	
Street Address:	<i>119 Clyde Ave</i>
City, Province/State:	<i>Mount Pearl, NL</i>
Postal Code:	<i>A1W 4R9</i>
Phone Number:	<i>709-747-9750</i>
Fax Number:	<i>709-747-7750</i>
Company Website (if any):	<i>www.mclimited.ca</i>
Bidder Contact Name and Title:	<i>Lee Wolfe Principal Manager</i>
Bidder Contact Phone:	<i>709-747-9750</i> <span style="background-color: black; color: black;">[REDACTED]</span>
Bidder Contact Fax:	<i>709-747-7750</i>
Bidder Contact Email:	<i>lee@mclimited.ca</i>

s. 40 (1)

### 2. Offer

The bidder has carefully examined the Open Call documents and has a clear and comprehensive knowledge of the Deliverables required under the Open Call. By submitting a bid, the bidder agrees and consents to the terms, conditions and provisions of the Open Call, including the Form of Agreement, and offers to provide the Deliverables in accordance therewith at the rates set out in the completed Pricing Form (Appendix C).

### 3. Rates

The bidder has submitted its rates in accordance with the instructions in the Open Call and in the Pricing Form (Appendix C). The bidder confirms that it has factored all of the provisions of Appendix A, including insurance and indemnity requirements, into its pricing assumptions and calculations.

### 4. Addenda

The bidder is deemed to have read and accepted all addenda issued by the Owner. The onus is on bidders to make any necessary amendments to their bids based on the addenda.

The bidder is required to confirm that it has received all addenda by listing the addenda numbers on the following line:

No addenda. Bidders who fail to complete this section will be deemed to have not received all posted addenda and shall be deemed **non-compliant**.



## APPENDIX C – PRICING FORM

### 1. 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 bidder must be all-inclusive and must include all labor and material costs, all travel and carriage costs, all insurance costs, all costs of delivery to the Owner, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, including any fees or other charges required by law.

DESCRIPTION	TOTAL COST (EXCL HST)
Supply two (2) indoor air handlers with dehumidification and dry cooling units in accordance with the specifications and requirements included in Appendix A.	\$ 1,080,205. <sup>00</sup>
<b>SUBTOTAL</b>	\$ 1,080,205. <sup>00</sup>
<b>HST</b>	\$ 162,030. <sup>75</sup>
<b>GRAND TOTAL</b>	\$ 1,242,235. <sup>75</sup>

### 2. THE DELIVERABLES:

AQ-004-19 AQUARENA SPORTS FACILITIES UPGRADES CP-1  
(DEHUMIDIFICATION PROCUREMENT)  
as per specifications listed in Appendix A

### 3. MANDATORY SUBMISSION REQUIREMENTS

1. **Specification Form (Appendix A)**  
As per instructions on form.
2. **Submission Form ( Appendix B)**  
Each bid must include a Submission Form (Appendix B) completed and signed by an authorized representative of the bidder.
3. **Pricing Form (Appendix C)**  
Each bid must include Pricing Form (Appendix C) as per instructions on form.

\* FOR INFORMATION ONLY, BID IS FOR SUPPLY OF 'BASIS OF DESIGN' DECTRON UNITS, AS PER APPENDIX A

#### 1.4 Withdrawal of Bids

Bidders may withdraw their bids prior to the Submission Deadline. To withdraw a bid, a notice of withdrawal must be sent to the [opencalls@mun.ca](mailto:opencalls@mun.ca) email address prior to the Submission Deadline. The Owner is under no obligation to return withdrawn bids.

#### 1.5 Bids Irrevocable after Submission Deadline

Bids shall be irrevocable for a period of **30** days running from the moment that the Submission Deadline passes.

#### 1.6 Delivery

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 bid submissions. The electronic form of signature or consent must be directly related to the relevant bid submission at issue and must be reliable, in a manner as determined by Memorial University, for the purpose of identifying the person submitting the bid response. By submitting a bid under this process, the bidder confirms that the signatory has the appropriate and proper authority to bind the bidder to its submission, a confirmation upon which Memorial University relies in the processing of the bid submission. **Bidders must complete Appendix B –Submission Form. Any bids received without Appendix B completed will be deemed non-complaint.**

#### 1.8 Closure

In the event that the University is closed earlier than normally expected prior to a scheduled open calls closing for that day, or for the full day, the closing date for those open calls 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

Dept 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 bids in the following stages:

### 2.2 Stage I – Mandatory Submission Requirements

Stage I will consist of a review to determine which bids comply with all of the mandatory submission requirements. Bids 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.

### 2.3 Stage II – Mandatory Technical Requirements

Stage II will consist of a review to determine which bids comply with all of the mandatory technical requirements. Bids that do not comply with all of the mandatory technical requirements as of the Submission Deadline will, subject to the express and implied rights of the Owner, be disqualified and not evaluated further. The mandatory technical requirements are listed in Appendix A - Specifications.

### 2.4 Stage III – Pricing

Stage III will consist of a scoring of the submitted pricing of each compliant bid in accordance with the evaluation method set out in the Pricing Form (Appendix C). The evaluation of price will be undertaken after the evaluation of mandatory requirements has been completed.

### 2.5 No Amendment to Forms

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

### 2.6 Selection of Lowest Compliant Bidder as Preferred Supplier

Subject to the Owner's reserved rights, the compliant bidder with the lowest pricing will be the preferred supplier, and will be selected to enter into the Agreement in accordance with the following section. In the event of a tie, the preferred supplier will be determined by way of a coin toss, in accordance with the Public Procurement Policy.

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	\$105,700	\$105,700	\$264,200	\$100,000

## **2.7 Notice to Bidder and Execution of Agreement**

Notice of selection by the Owner to the preferred supplier shall be in writing. The preferred supplier shall execute the Agreement, the form and content of which will be mutually agreed upon between the parties and satisfy any other applicable conditions of this open call within fifteen (15) days of notice of selection. This provision is solely for the benefit of the Owner and may be waived by the Owner.

## **2.8 Failure to Enter into Agreement**

If a selected bidder fails to execute the Agreement or satisfy the pre-conditions of award listed in the Open Call Particulars within fifteen (15) days of notice of selection the Owner may, without incurring any liability, proceed with the selection of another bidder 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 OCB PROCESS**

### **3.1 General Information and Instructions**

### **3.2 Open Call Incorporated into Bid**

All of the provisions of this Open call are deemed to be accepted by each bidder and incorporated into each bidder's bid. A bidder who submits conditions, options, variations or contingent statements to the terms as set out in this Open call, either as part of its bid or after receiving notice of selection, unless otherwise indicated, shall be disqualified.

### **3.3 Bidders to Follow Instructions**

Bidders should structure their bids in accordance with the instructions in this Open call. Where information is requested in this Open Call, any response made in a bid should reference the applicable section numbers of this Open Call.

### **3.4 Bids in English**

All bids are to be in English only.

### **3.5 No Incorporation by Reference**

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

### **3.6 References and Past Performance**

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

### **3.7 Information in Open Call Only an Estimate**

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

### **3.8 Bidders to Bear Their Own Costs**

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

### **3.9 Bid to be Retained by the Owner**

The Owner will not return the bid or any accompanying documentation or samples submitted by a bidder.

### **3.10 Trade Agreements**

Bidders 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 Open Call.

### **3.11 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 preferred supplier. The Agreement will not be an exclusive contract for the provision of the described Deliverables. The Owner may contract with others for goods and services the same as or similar to the Deliverables or may obtain such goods and services internally.

### **3.12 Communication after issuance of open call**

Bidders shall promptly examine all of the documents comprising this Open Call, and

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

in writing by email to [opencalls@mun.ca](mailto:opencalls@mun.ca) on or before the Deadline for Questions. All questions or comments submitted by bidders by email to the Open Call Contact shall be deemed to be received once the email has entered into the Open Call Contact's email inbox. No such communications are to be directed to anyone other than the Open Call Contact, and the Owner shall not be responsible for any information provided by or obtained from any source other than the Strategic Procurement Office. The Owner is under no obligation to provide additional information. It is the responsibility of the bidder to seek clarification from the Open Call Contact on any matter it considers to be unclear. The Owner shall not be responsible for any misunderstanding on the part of the bidder concerning this Open Call or its process.

### **3.13 All New Information to Bidders by Way of Addenda**

This Open Call 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 Open Call, such information will be communicated to all bidders by addenda. Each addendum forms an integral part of this Open Call and may contain important information, including significant changes to this Open Call. Bidders are responsible for obtaining all addenda issued by the Owner. In the Submission Form (Appendix B), bidders MUST confirm their receipt of all addenda by setting out the number of each addendum in the space provided.

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

Any addendum added within four (4) calendar days of the Open Call for Bids closing (Including on closing day) will extend closing by a reasonable period to be determined by Memorial University. Verify, Clarify and Supplement

When evaluating bids, the Owner may request further information from the bidder or third parties in order to verify, clarify or supplement the information provided in the bidder's bid.

The response received by the Owner shall, if accepted by the Owner, form an integral part of the bidder's bid.

### **3.15 Notification to Other Bidders**

In accordance with section 30 of the *Public Procurement Regulations*, once the Agreement is awarded by the Owner, the outcome of the Open Call will be publicly posted at [https://www.mun.ca/finance/strategic\\_procurement/](https://www.mun.ca/finance/strategic_procurement/). There will be no issuing of regret letters.

### **3.16 Debriefing**

In accordance with the Public Procurement Act and Regulations, unsuccessful bidders may request a debriefing within ten (10) business days after the award has been posted. The request must be sent in writing to the Open call contact. The intent of the debriefing information session is to provide the bidder an overview of their bid and why it was unsuccessful and to help the bidder in presenting a better bid in subsequent procurement opportunities. The debriefing process is not for the purpose of providing an opportunity to challenge the procurement process or its outcome. A debriefing shall not disclose information regarding another bidder's bid.

### **3.17 Supplier Complaint Process**

If a bidder wishes to register a complaint with respect to the Open Call process, the complaint should be provided 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 bidder's concerns with the procurement process or its outcome, in addition to such other information as may be required by the *Regulations*. Bidders 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 bidder wishes to dispute a matter under an applicable trade agreement, the bidder must follow the process set out in the trade agreement.

### **3.20 Conflict of Interest and Prohibited Conduct**

#### **3.21 Conflict of Interest**

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

The Owner reserves the right to disqualify any bidder that in the Owner's sole opinion has an actual or potential conflict of interest or an unfair advantage.

For the purposes of this Open Call, the term "Conflict of Interest" includes, but is not limited to, any situation or circumstance where in relation to the Open Call process, the bidder 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 bid that is not available to other bidders, (ii) communicating with any person with a view to influencing preferred treatment in the Open Call process (including but not limited to the lobbying of decision makers involved in the Open Call process), or (iii) engaging in conduct that compromises, or could be seen to

compromise, the integrity of the open and competitive Open Call process or render that process non-competitive or unfair.

Bidders are required to disclose, to the Open Call Contact, any potential or perceived conflict of interest issues prior to Open Call closing date and time.

### **3.22 Disqualification for Prohibited Conduct**

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

### **3.23 Bidder Not to Communicate with Media**

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

### **3.24 No Lobbying**

Bidders must not, in relation to this Open Call 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 bidder(s).

### **3.25 Illegal or Unethical Conduct**

Bidders must not engage in any illegal business practices, including activities such as bid-rigging, price-fixing, bribery, fraud, coercion or collusion. Bidders 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 bids 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 Open Call.

### **3.26 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 honor 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 bidding privileges of a supplier with regard to non-compliant or substandard performance in accordance with section 26 of the *Public Procurement Regulations*.

### 3.27 Confidential Information of the Owner

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

- (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 Open Call 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 bidder to the Owner immediately upon the request of the Owner.

### 3.28 Confidential Information of Bidder

This procurement process is subject to the *Access to Information and Protection of Privacy Act, 2015 (ATIPPA, 2015)*. A bidder must identify any information in its bid 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. Bidders are advised that their bids will, as necessary, be disclosed, on a confidential basis, to advisers retained by the Owner to advise or assist with the Open Call process, including the evaluation of bids.

The Bidder 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*. The Bidder acknowledges that contracting with the Owner is a public process and any information provided through this process and any records the Bidder supplies to the Owner, including the terms and conditions of any Agreement entered into, may be subject to requests under the *ATIPPA, 2015*. In the event of a request to Memorial for third party business information in its custody and control, information can be withheld only if it meets all parts of the 3-part harms test for non-disclosure as stated in section 39 of 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 bidder has any questions about the collection and use of personal information pursuant to this Open Call, questions are to be submitted to the Open Call 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.nl.ca/guidance/documents>.

### 3.29 Reserved Rights of the Owner

The Owner reserves the right to:

- (a) make public the names of any or all bidders as well as bid price and value of contract;
- (b) make changes, including substantial changes, to this Open Call provided that those changes are issued by way of addendum in the manner set out in this Open Call ;
- (c) request written clarification or the submission of supplementary written information in relation to the clarification request from any bidder and incorporate a bidder's response to that request for clarification into the bidder's bid. This shall not be an opportunity for bid repair;
- (d) assess a bidder's bid on the basis of: (i) a financial analysis determining the actual cost of the bid 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 Open Call consider any other relevant information that arises during this Open call process;
- (e) waive minor irregularities and formalities and accept bids that substantially comply with the requirements of this Open Call ;
- (f) verify with any bidder or with a third party any information set out in a bid;
- (g) check references other than those provided by any bidder;
- (h) disqualify a bidder, rescind a notice of selection or terminate a contract subsequently entered into if the bidder 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 Open Call process at any stage;
- (j) cancel this Open Call process at any stage and issue a new Open Call for the same or similar deliverables;
- (k) accept any bid in whole or in part; or
- (l) reject any or all bids;
- (m) not necessarily select the lowest or any bidder;

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

### 3.30 Limitation of Liability

By submitting a bid, each bidder 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 Open Call process including but not limited to costs of preparation of the bid, loss of profits, loss of opportunity or for any other claim; and
- (b) the bidder waives any right to or claim for any compensation of any kind whatsoever, including claims for costs of preparation of the bid, loss of profit or loss of opportunity by reason of the Owner's decision not to accept the bid submitted by the bidder for any reason, the Owner's decision to enter into an agreement with any other bidder or to cancel this bidding process, and the bidder shall be deemed to have agreed to waive such right or claim.

### **3.31 Governing Law and Interpretation**

These Terms and Conditions of the Open Call Process:

- (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.

### **3.32 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.
- (d) 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.

#### 4. Environmental Health And Safety Requirements

Maintaining a healthy and safe environment for all members of the campus community, as well as visitors, is a priority with the University. This involves a commitment from all sectors of the campus community and extends to outside agencies having occasion to come on campus to conduct business.

The following requirements will apply to all work undertaken by contractors and service personnel on any University property or for any work undertaken on behalf of the Owner.

##### 4.1.0 Regulations, Codes And Standards

Contractors shall be familiar with and abide by provisions of various safety codes and standards applicable to the work performed and should refer to 1.21.5 of General Conditions:

1.21.5 The Contractor shall be completely responsible for the safety of the Work as it applies to protection of the public and property and construction of the Work.

The codes that must be followed and enforced for safety are:

- a) The National Building Code, Part 8, Safety Measures at Construction and Demolition Sites (Latest Edition);
- b) Canadian Code for Construction Safety (Latest Edition) as issued by the Associate Committee of the National Building Code;
- c) The Occupational Health and Safety Act of Newfoundland and Labrador (most current version) and Regulations.

In particular, strict adherence to the Provincial Occupational Health and Safety Act and Regulations and with the National Building Code of Canada, Part 8 is required

##### 4.2.0 General Health And Safety Regulations

- a. Contractors/service agencies shall ensure that members of the campus community are not endangered by any work or process in which they may be engaged. Work areas shall be adequately barricaded, and if dust or fumes are generated, suitable enclosures shall be installed to contain such emissions.
- b. No material shall be stored in such a way as to obstruct walkways or represent a danger to pedestrian or vehicular traffic.
- c. Adequate protection shall be provided to prevent the possibility of goods falling from scaffolding or elevated areas. Areas where goods are being loaded or off loaded shall be barricaded or otherwise protected to prevent unauthorized entry. Appropriate warning signs must be posted.
- d. The work areas must be kept reasonably clean and free from debris which could constitute a fire hazard. Care must be taken to ensure that the work process does not activate fire alarm

detection devices. (Generation of dust and fumes can activate smoke detectors causing a false alarm).

- e. Due consideration shall be given to fire safety in buildings. Flammable goods must be kept away from sources of ignition. No work involving the use of open flame devices must be undertaken around flammable solvents or gases.
- f. Some University buildings contain asbestos and other hazardous materials. Do not alter or disturb any goods believed to contain asbestos (unless this is a duly authorized part of the project). Consult with University officials before proceeding with any work.
- g. Safety Data Sheets shall be procured for any hazardous product used on campus. Such sheets shall be made readily available for consultation as required under the Workplace Hazardous Materials Information System (WHMIS).

**NOTE:** The above requirements are not to be considered all-inclusive and are considered to be complementary to the safety requirements outlined in the agreement between the University and Supplier. Certain conditions and circumstances may require adherence to additional safety requirements.

As a general requirement, contract/service personnel are expected to conduct all work on campus in a professional and safe manner and to give priority to the safety and welfare of members of the campus community.

#### **4.3.0 Contractor Safety Management**

- 4.3.1 All Contractors and Subcontractors to be used by the Contractor in the execution of the Contract shall be required to submit confirmation of a current third party occupational health and safety program certification (Letter of Assurance). These may include, but not be limited to, Certificate of Recognition (COR), OHSAS 18001, and CSA Z.1000.
- 4.3.2 All Contractors and Subcontractors shall be required to review and follow all requirements of the MUN Contractor Safety Management Element in Appendix D.
- 4.3.3 **Prior to Contract award, the Contractor will be required to provide the information requested in 2.3.5 below.**
- 4.3.4 All Contractors and Subcontractors are required to give the Owner written permission to approach Provincial regulatory authorities for applicable safety-related information on their respective firms.
- 4.3.5 The Contractor must also provide the following:
  - (a) Health and Safety policy statement;
  - (b) Safety Program table of contents;
  - (c) Site Hazard Assessment;
  - (d) Letter of Assurance for Compliance;
- 4.3.6 In lieu of a Subcontractors third party program, Contractors shall be required to integrate the Subcontractor(s) into the Contractors program and provide proof of same.

- 4.3.7 Memorial reserves the right to request and audit the full health and safety program of Contractors and Subcontractors and their associated documentation. This documentation may include, but not be limited to the following:
- (a) Health and Safety Program and/or Manual
  - (b) Site Hazard Assessment
  - (c) Letter of Assurance for Compliance (third party certification)
  - (d) Applicable documented safe work practices;
  - (e) Inspection reports and schedules;
  - (f) Required employee safety training certifications and qualifications;
  - (g) Updated list of OHS Committee and/or a worker health and safety representative, or workplace health and safety designate;
  - (h) Proof of completion of the Owner's contractor safety orientation within the prior three years.
- 4.3.8 Memorial University reserves the right to refuse or cancel any contract with a Contractor that is not in compliance with Memorial's standards for Safety.
- 4.3.9 The University reserves the right to stop any work or portion of work where no documentation can be produced on site which identifies the hazards presented by a piece of work, safe work procedures for work or certification of employees performing work. The Contractor is liable for any costs incurred by affected parties associated with such a stoppage.
- 4.3.10 Prior to coming to site all workers must complete the Contractor Safety training found on the MUN website.

[https://www.mun.ca/health\\_safety/training/](https://www.mun.ca/health_safety/training/)

#### **4.4.0 Access To Site**

- 4.4.1 All Contractors and Subcontractors to be used in the execution of the Contract shall give advance notification of when they will be on site. Any work to be performed outside of Regular Time must have advance approval of the Owner.

Any discontinuation of the Work which causes a Contractor or their Subcontractors to suspend operations onsite will require the following:

- Contractor/Subcontractors shall notify the Owner of the stop work date.
- Contractor/Subcontractors shall ensure the site is left in a safe and secure condition.
- Contractor/Subcontractors shall ensure that locks and tags on mechanical and/or electrical systems are removed and, where necessary, replaced by the University.
- Contractor/Subcontractors shall not return to site without expressed prior permission from the Owner.

[End of Part 3]

## APPENDIX A – SPECIFICATIONS

### **Substitution of Materials:**

Limited Call for bids shall be based upon using the materials or products as specified without substitution, unless there is an “or approved alternate” clause. Where two or more brand names are specified, the choice shall be left to the Contractor or Supplier. Where only one brand name is stated, there shall be no substitution.

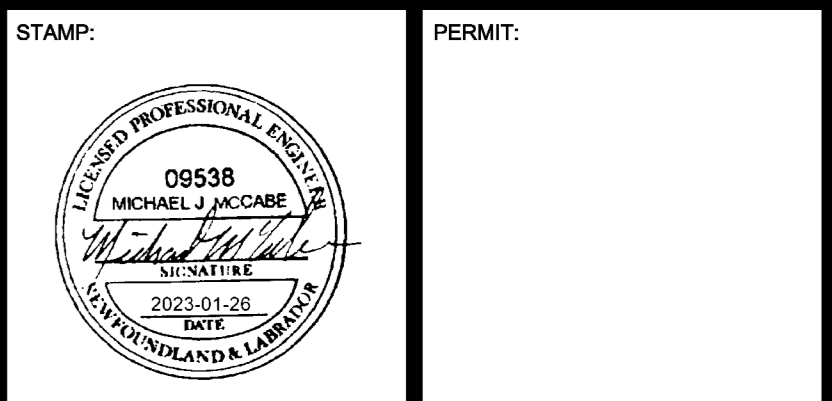
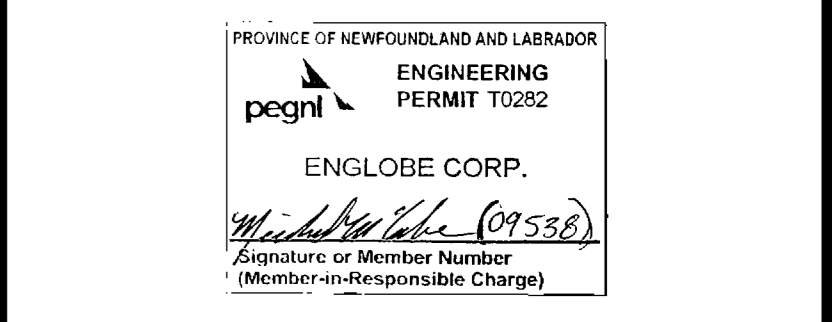
Where the specifications include the “or approved alternate” clause, substitutions may be proposed provided that the request for a substitution is received in writing at least eight (8) days prior to the tender closing date and shall clearly define and describe the product for which the substitution is requested.

It's the Bidders responsibility to ensure that the substituted article is equivalent to the specified article with regard to design, function, appearance, durability, operation and quality.

Approval of the substitution by the Engineer/Architect shall be in the form of an addendum to the Specifications issued at least four (4) days prior to the Tender closing date. The Engineer/Architect's decision on substitutions will be final.

### **Right to Assignment**

Please be advised that Memorial University of Newfoundland and Labrador is securing this equipment as part of a large construction project at the Aquarena building, on the St. John's campus, for the 2025 Canada Games. Coordination of delivery, commissioning, training and warranty of this equipment will lie with the General Contractor or approved designate, once the main construction tender package is awarded in spring 2023. Memorial reserves the right to assign the procurement of this equipment to the General Contractor at a later date.

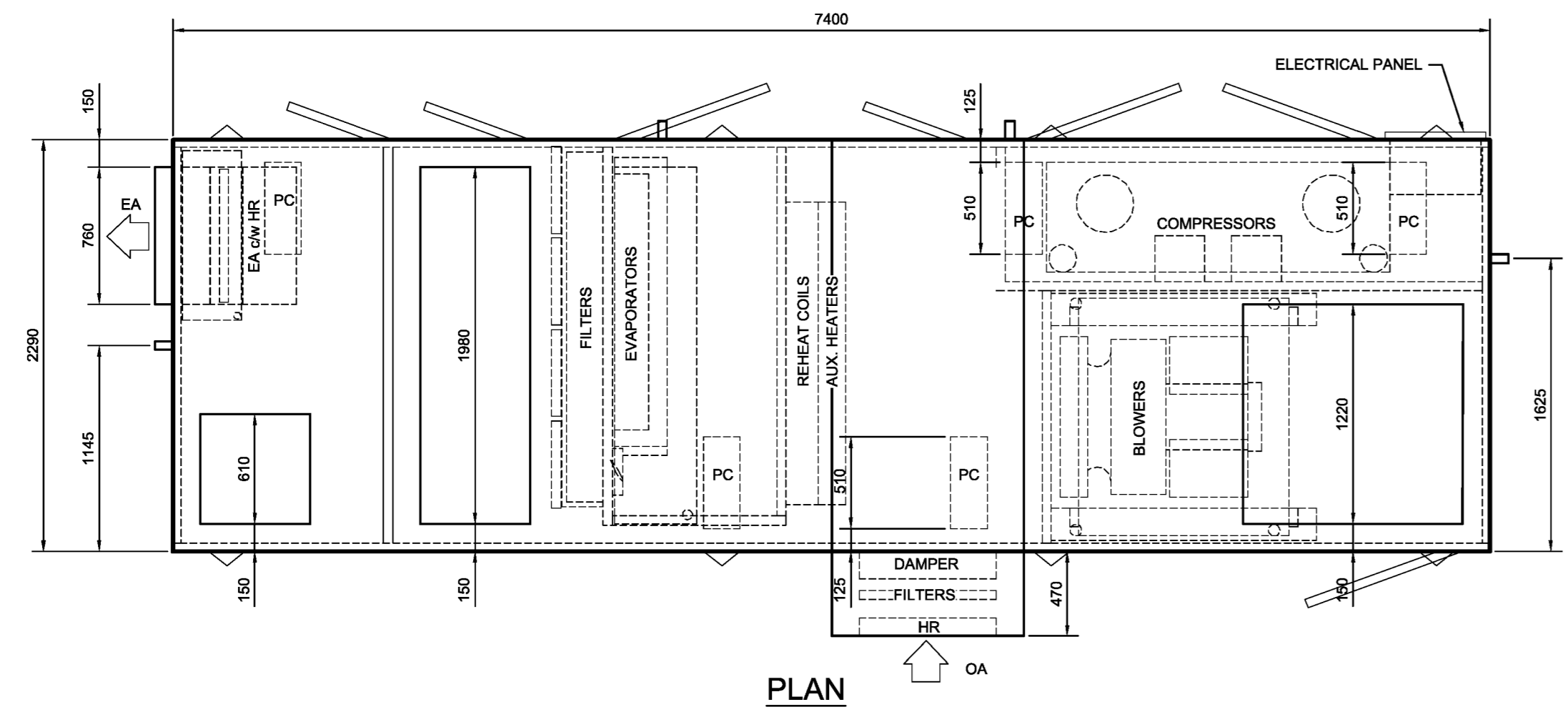


PROJECT NAME:  
**Canada Games Facilities**  
 21-1669

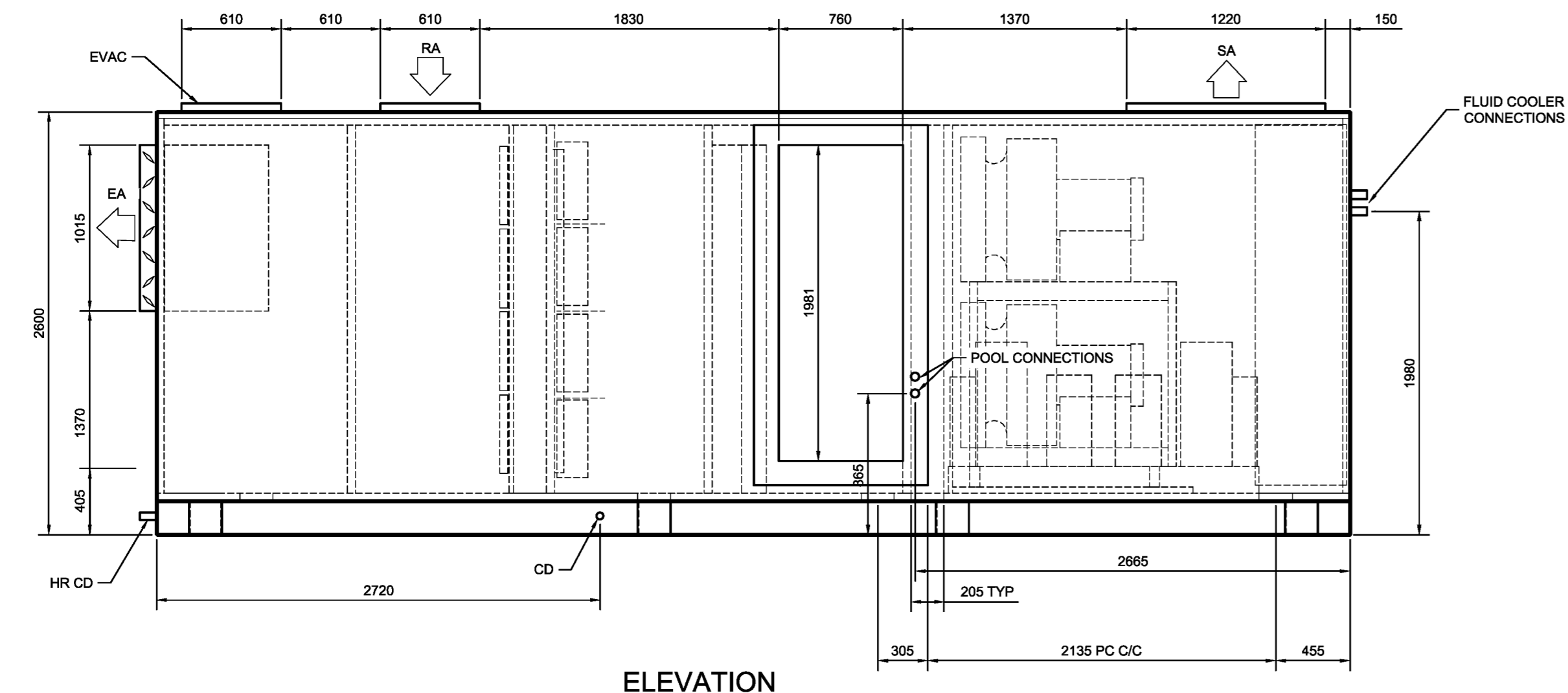
DRAWING TITLE:  
**PROCUREMENT PACKAGE  
 DEHUMIDIFIER DETAILS**

DESIGNED: CE	DRAWN: ZD
REVIEWED: MJM	APPROVED: MJM
SCALE: AS NOTED	DATE: 01/26/23
MUN PROJECT No. AQ-004-19	DRAWING No. M-700

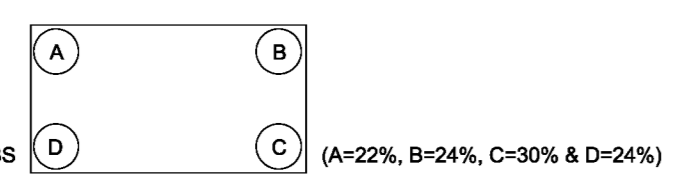
NOTE: DIMENSIONS SHOWN ARE MAXIMUM ALLOWED, AND DUCT CONNECTION CONFIGURATION MUST MATCH AS SHOWN.



PLAN



ELEVATION  
 (DOORS NOT SHOWN FOR CLARITY)

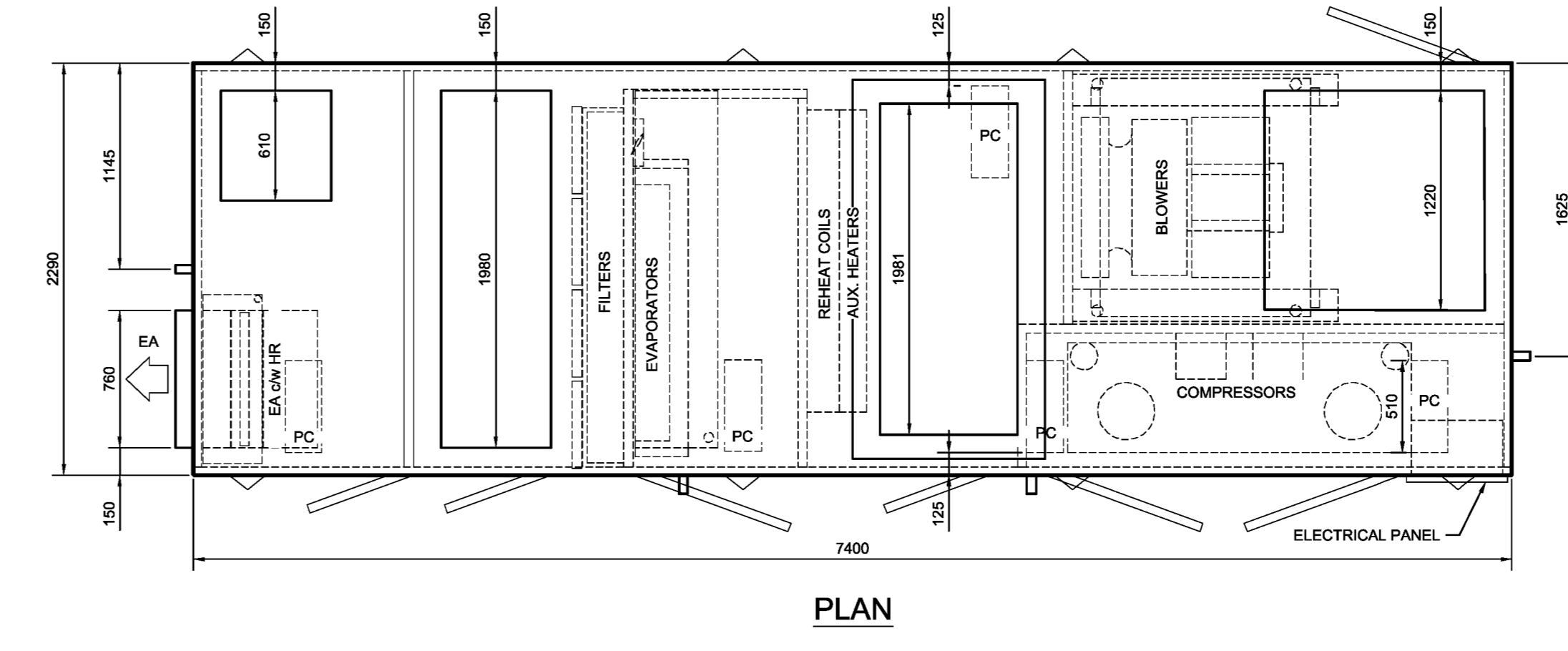


UNIT OPERATING WEIGHT: 13 100LBS  
 (A=22%, B=24%, C=30% & D=24%)

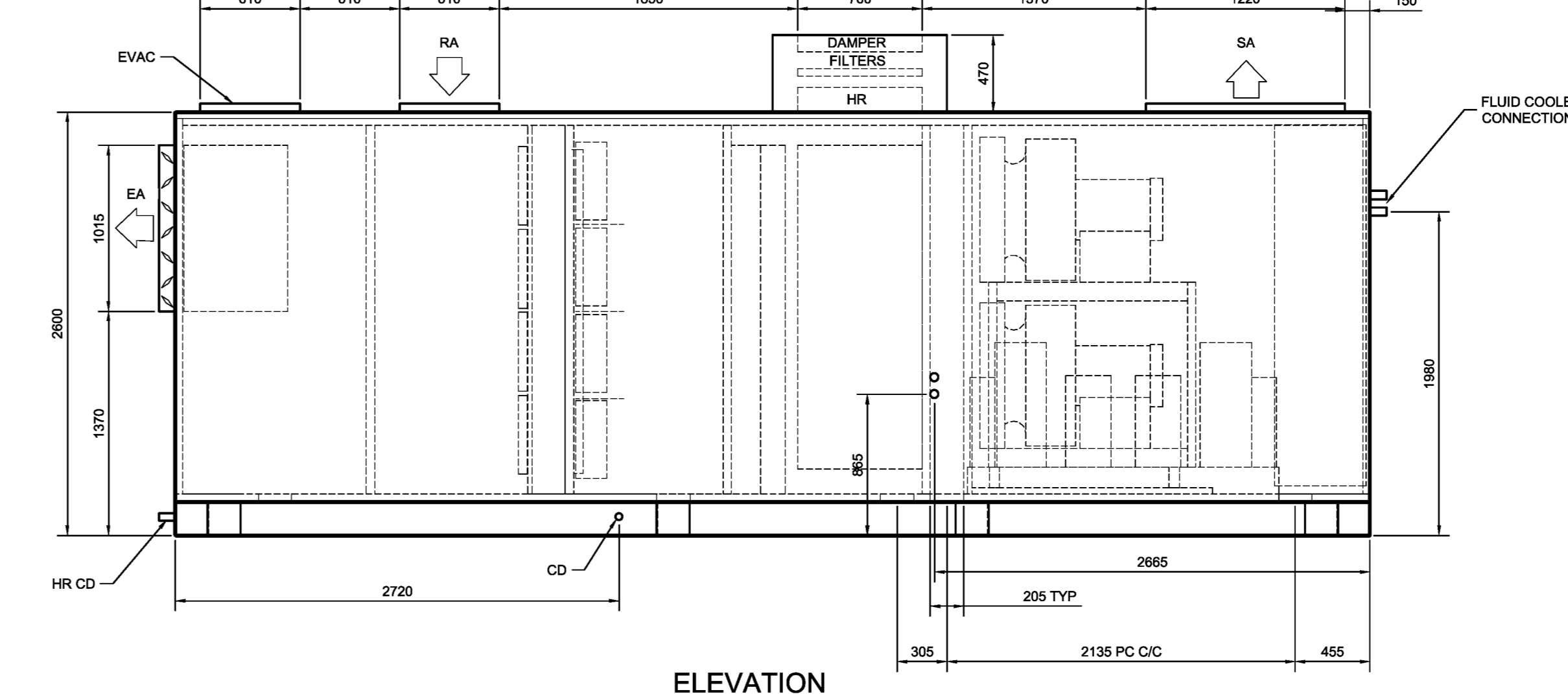
NOTE: 610mm ACCESS REQUIRED ALL AROUND UNIT.

1 DHUM-1 UNIT - PLAN & ELEVATION

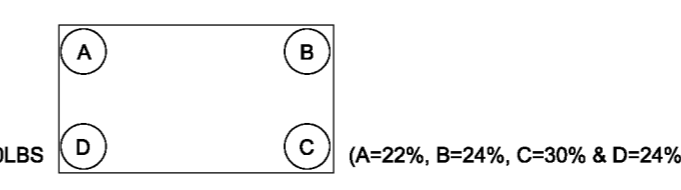
NOTE: DIMENSIONS SHOWN ARE MAXIMUM ALLOWED, AND DUCT CONNECTION CONFIGURATION MUST MATCH AS SHOWN.



PLAN



ELEVATION  
 (DOORS NOT SHOWN FOR CLARITY)

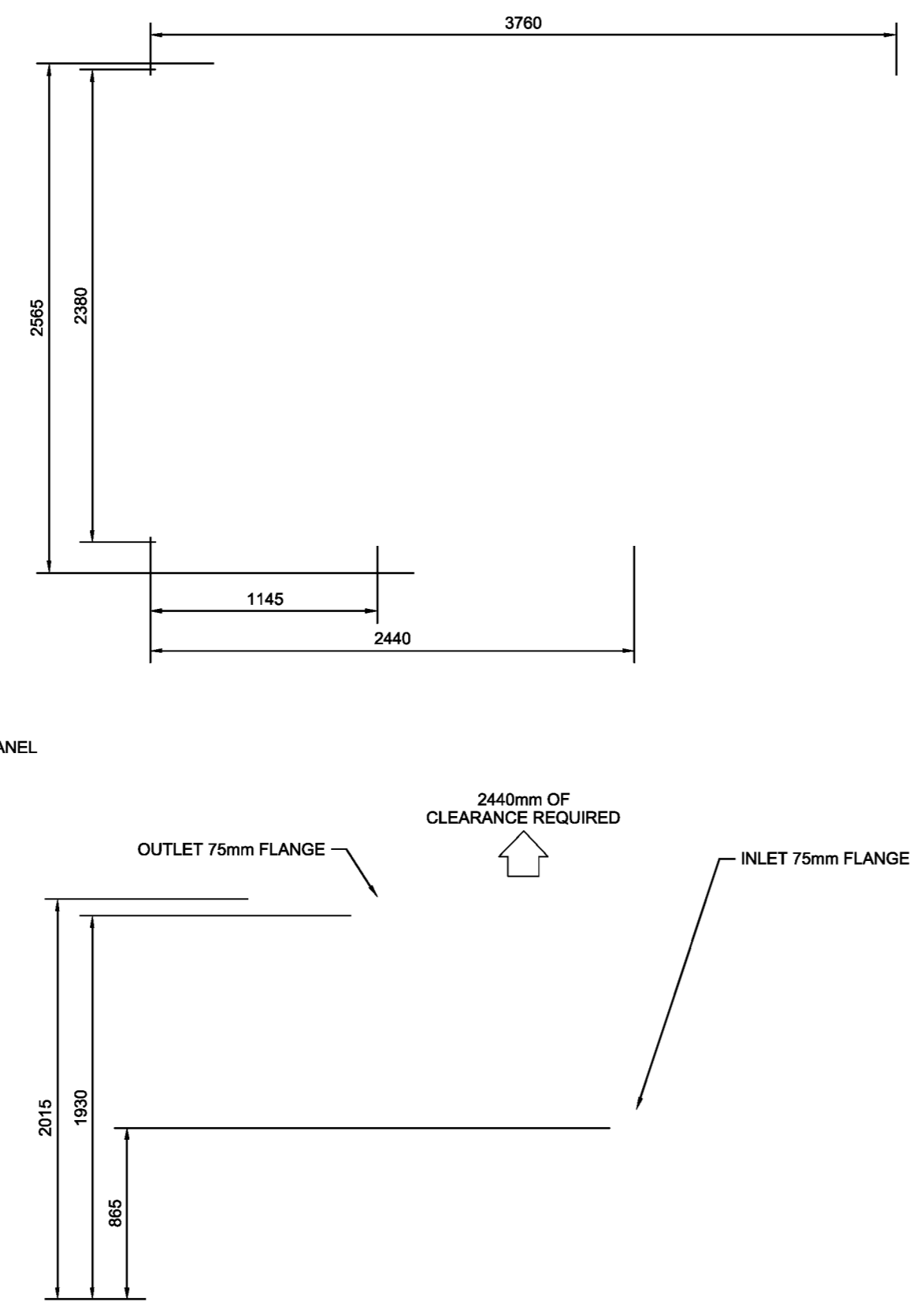


UNIT OPERATING WEIGHT: 13 100LBS  
 (A=22%, B=24%, C=30% & D=24%)

NOTE: MINIMUM 910mm CLEARANCE REQUIRED ALL AROUND UNIT.

2 DHUM-2 UNIT - PLAN & ELEVATION

NOTE: DIMENSIONS SHOWN ARE MAXIMUM ALLOWED, AND DUCT CONNECTION CONFIGURATION MUST MATCH AS SHOWN.



IMPORTANT NOTE: MINIMUM 36" OF CLEARANCE ALL THE WAY AROUND FOR PROPER AIR FLOW.

UNIT OPERATING WEIGHT: 3600 LBS

3 OUTDOOR DRY COOLERS CDDH-1 & 2 - PLAN, ELEVATION AND ISOMETRIC VIEW

No.	MANUFACTURER / MODEL	SUPPLY FAN		COOLING CAPACITY		GAS HEAT		POOL HEATING / PLATE Hx			POOL EXHAUST FAN			PROPYLENE GLYCOL RUN-AROUND HEAT RECOVERY COIL		ELEC. AUX. COIL		ELECTRICAL				
		L/S (CFM)	EXT. SP Pa (IN. WG)	RPM	KW (hp)	SENSIBLE KW (MBH)	MOIST. REMOV. kg/hr (lb/hr)	HOT GAS REHEAT KW (MBH)	MAX. CAP. KW (MBH)	WATER FLOW RATE L/S (gpm)	MAX PRESSURE DROP kPa (psi)	L/S (CFM)	EXT. SP Pa (in)	RPM	KW (hp)	FLUID GP	EFFICIENCY %	KW	V	PH	MCA	MOP
DHUM-1	DECTRON / LD 282	16037 (34000)	312 (1.25)	VFD	2 @ 18.6 (25)	141 (481.6)	165 (364.8)	320 (1094.4)	175 (585)	5.68 (90)	69 (10)	4150 (8600)	125 (0.5)	-	3.8 (4.8)	33%	50-55%	200	575	3	357	400
DHUM-2	DECTRON / LD 282	16037 (34000)	312 (1.25)	VFD	2 @ 18.6 (25)	141 (481.6)	165 (364.8)	320 (1094.4)	175 (585)	5.68 (90)	69 (10)	4150 (8600)	125 (0.5)	-	3.8 (4.8)	33%	50-55%	200	575	3	357	400
CDDH-1	DECTRON / NG-V-32	9.46 L/S (150 gpm) FLUID FLOW RATE AT MAX 32 kPa (4.6 psi)				DISSIPATION CAPACITY = 320 kW (1094.4 MBH) @ 35°C (95°F)		6 FAN MOTORS @ 2.9kW (3.9hp) Each														
CDDH-2	DECTRON / NG-V-32	9.46 L/S (150 gpm) FLUID FLOW RATE AT MAX 32 kPa (4.6 psi)				DISSIPATION CAPACITY = 320 kW (1094.4 MBH) @ 35°C (95°F)		6 FAN MOTORS @ 2.9kW (3.9hp) Each														

NOTE: INDOOR UNIT SHALL BE c/w "TOOL-LESS" CAM LOCK STYLE HANDLES ON ALL ACCESS DOORS. UNIT COMPLETE WITH PROPYLENE GLYCOL RUN-AROUND LOOP FROM EXHAUST TO O.A. FACTORY WIRED DISCONNECTS INDOOR AND OUTDOOR. BUILT-IN, PRE-WIRED GLYCOL PUMP FOR DRY COOLER, ELECTRICAL HEATING COIL W/ SCR, AND BUILT IN CONTROL PACKAGE. SINGLE POINT POWER BY ELEC FOR INDOOR AND OUTDOOR UNIT. BAGNET CONTROL CONNECTION BY CONTROLS FOR SCHEDULING AND MONITORING. UNIT ALSO C/W SUPERVISOR CONTROL SYSTEM TOUCH DISPLAY AND BUILT-IN MOTORIZED DAMPERS. APPROVED ALTERNATE: SERESCO

DEHUMIDIFICATION UNIT AND DRY COOLER SPECIFICATION

INDOOR AIR HANDLER - DETRONX LD SERIES OR APPROVED ALTERNATE.

PART 1 - GENERAL

1. SCOPE

SUPPLY ONLY AND SHIP TO MEMORIAL UNIVERSITY AQUARIUM SITE, OR TO VENTILATION CONTRACTORS PREFERRED SAINT JOHN'S N.L. STORAGE FACILITY. INCLUDE ALL SHIPPING COSTS, WARRANTY COSTS FOR 2 YEARS FROM DATE OF SHIPPING OR FOR 12 MONTHS AFTER UNIT IS INSTALLED AND POWERED (WHICHEVER IS LONGER). INCLUDE ON-SITE FACTORY-TRAINED-PERSONNEL START UP SERVICES FOR FULL SYSTEM OF AIR HANDLERS, DRY COOLERS, POOL HEATERS, AND ALL ASSOCIATED MANUFACTURER SUPPLIED CONTROLS AND COMPONENTS ASSOCIATED WITH DEHUMIDIFICATION SYSTEM. PROVIDE FULL WRITTEN REPORT LISTING ALL TEST AND START-UP RESULTS AND HIGHLIGHT ANY OPERATING DEFICIENCIES THAT WERE REPAIRED INCLUDING ON SITE MODIFICATIONS TO EQUIPMENT AND PART REPLACEMENTS COMPLETED TO MAKE SYSTEM FULLY FUNCTIONAL AS PER IMPLIED SEQUENCE AND INTENT IN THESE DOCUMENTS AND PRESUMED TYPICAL OPERATING SEQUENCE OF UNIT ONCE INSTALLED AND CONNECTED TO DUCTWORK.

FURNISH A FACTORY-ASSEMBLED, FULLY-ENCLOSED, SPLIT ENVIRONMENTAL CONTROL SYSTEM WITH ENERGY RECOVERY FEATURE(S) DESIGNED FOR NATATORIUM ENVIRONMENT CONTROL. FEATURES SHALL INCLUDE:

- 1.A. DEHUMIDIFICATION BY MEANS OF A DIRECT EXPANSION EVAPORATOR COIL.
1.B. SPACE HEATING BY MEANS OF A PACKAGED ELECTRIC RESISTANCE HEATING COIL.
1.C. COOLING MODE WITH HEAT REJECTION TO A REMOTE OUTDOOR AIR-COOLED FLUID COOLER (DRY-COOLER). NO FIELD REFRIGERATION WORK SHALL BE REQUIRED. SUBSTITUTING AN OUTDOOR CONDENSER AND INCREASING THE REFRIGERANT CHARGE WILL NOT BE ALLOWED.
1.D. PACKAGED MINIMUM EXHAUST FAN
1.E. INTEGRAL MINIMUM OUTDOOR AIR CONNECTION
1.F. HEAT RECOVERY BY MEANS OF A GLYCOL RUN-AROUND LOOP BETWEEN THE MINIMUM EXHAUST AND MINIMUM OUTDOOR AIR STREAMS (ALTERNATE FORM OF RECOVERY MAY BE CONSIDERED)

2. QUALITY AND SAFETY ASSURANCE

- 2.A. THE COMPLETE UNIT SHALL BE LISTED BY AN INDUSTRY RECOGNIZED, THIRD-PARTY, SAFETY CODE AGENCY UNDER THE TITLE OF "SPECIAL PURPOSE AIR CONDITIONERS" AND CARRY THE APPROPRIATE LABEL.
2.B. THE SYSTEM SHALL BE ETL LISTED
2.C. THE SYSTEM SHALL BE COMPLETELY ASSEMBLED, WIRED, PIPED, AND TEST-RUN AT THE FACTORY PRIOR TO SHIPPING. NO FIELD REFRIGERATION WORK SHALL BE REQUIRED. SUBSTITUTING AN OUTDOOR CONDENSER AND INCREASING THE REFRIGERANT CHARGE WILL NOT BE ALLOWED.
2.D. MANUFACTURER SHALL HAVE A MINIMUM OF TEN-YEARS PRIOR EXPERIENCE MAKING SIMILAR EQUIPMENT AS DESCRIBED IN THIS SPECIFICATION.
2.E. WHEREVER POSSIBLE, THE SYSTEM SHALL HAVE A MECHANICAL VESTIBULE WHERE THE ELECTRICAL PANEL, COMPRESSORS, POOL WATER HEAT EXCHANGERS, RECEIVER(S) AND MOST OF THE REFRIGERATION CONTROLS ARE OUT OF THE PROCESS AIR STREAM
2.F. THE COMPRESSOR(S) SHALL HAVE A 5-YEAR WARRANTY FROM THE FACTORY SHIP DATE
2.G. WHEN CONNECTED TO A NETWORK WITH INTERNET ACCESS, THE SYSTEM SHALL HAVE REMOTE SERVICE CAPABILITY WITH THE ABILITY FOR FIELD SERVICE TECHNICIANS TO RECEIVE SERVICE AND TROUBLE ALERTS BY E-MAIL AND MAKE PARAMETER ADJUSTMENTS VIA A BROWSER INTERFACE ON ANY INTERNET-CAPABLE DEVICE

3. INTENT

IT IS THE INTENT OF THIS SECTION OF THE SPECIFICATIONS TO PROVIDE A COMPLETE, OPERABLE, ADJUSTED NATATORIUM DEHUMIDIFICATION SYSTEM AS SHOWN AND SCHEDULED ON THE PLANS.

4. BASIS OF DESIGN

- UNIT SHALL BE DETRONX LD SERIES OR EQUIVALENT FROM DESERT AIRE.
4.A. TENDER SUBMISSION SHALL INCLUDE THE FOLLOWING:
4.A.1. LAYOUT DRAWINGS AND DETAILS INCLUDING DETAILS ON SUPPLY/RETURN AIR CONNECTIONS, PIPING CONNECTIONS, VENTILATION/EXHAUST CONNECTIONS, POWER/CONTROL WIRING CONNECTIONS
4.C. ENERGY RECOVERY FEATURES INCLUDING UNIT'S REHEAT CAPABILITIES, POOL WATER HEATING CAPABILITIES AND RECOVERY OF POOL WATER EVAPORATION ENERGY.
4.D. WHERE THE INTENT OF THE SPECIFICATION IS MET BUT WITH DIFFERENT CONSTRUCTION MATERIALS OR METHODS, THE DIFFERENCE SHALL BE COMPLETELY DEFINED BY PARAGRAPH IN THE FULL DISCLOSURE. THE FULL DISCLOSURE INCLUDE COMPLETE DOCUMENTED DATA

4.E. MATERIALS FROM THE FOLLOWING SHALL BE LISTED ON SUBMITTAL DRAWINGS ATTACHED TO BID:

- 4.E.1. SERVICE VESTIBULE WITH COMPRESSORS OUT OF THE AIR STREAM
4.E.2. REFRIGERANT PRESSURE TRANSDUCERS USED FOR ACTIVE CONTROL OF THE REFRIGERATION SYSTEM AND NO MANIFOLD GAUGES NEEDED TO SERVICE THE EQUIPMENT
4.E.3. FULLY DIPPED AIRSIDE COILS FOR CORROSION PROTECTION
4.E.4. FULLY MODULATING REHEAT COIL FOR STABLE SPACE TEMPERATURE CONTROL FROM THE DX SYSTEM. COIL SIZED FOR REJECTING 100% OF ALL COMPRESSORS HEAT.
4.E.5. ALL FANS DIRECT DRIVE WITH VFD OR ECM
4.E.6. EACH EVAPORATOR COIL PROVIDED WITH A BAKED POWDER PAINTED IAQ ALUMINUM DRAIN PAN
4.E.7. TWO SPEED FLUID COOLER OR OUTDOOR CONDENSER FANS
4.E.8. CABINET 2" DOUBLE WALLED WITH FULLY PAINTED INNER METAL LINER
4.E.9. FLUID COOLED UNIT WITH HEAT REJECTION OUTDOORS VIA A FLUID COOLER
4.E.10. HEAT RECOVERY FROM THE MINIMUM EXHAUST AIR STREAM USED TO DIRECTLY PREHEAT THE INCOMING MINIMUM OUTDOOR AIR STREAM
4.E.11. WEB-BASED INTERFACE CAPABLE OF LIVE INTERFACE WITH UNIT FROM SMART PHONE WITH LOGGING/TRENDING DATA FOR UP TO 20 VARIABLES IN ONE MINUTE INTERVALS FOR 24 HOUR PERIOD FOR FACTORY SERVICE INSTANT ACCESS
4.E.12. UNIT CONTROLLER HOLDS MEMORY OF BASIC REFRIGERANT SYSTEM INFO FOR 2 YEARS OF HOURLY DATA AND 5 DAYS OF ONE-MINUTE INTERVAL DATA
4.E.13. STANDARD FULLY DIPPED COATING ON ALL AIR SIDE COILS: CORROSION RESISTANCE AND HYDROPHILIC.
4.E.14. ELECTRIC HEATER PACKAGED INSIDE THE UNIT
4.E.15. BUILT IN MINIMUM AIR EXHAUST FAN FOR LOW LEVEL POOL EXHAUST.

PART 2 - PRODUCT

1. GENERAL

- THE NATATORIUM CONTROL SYSTEM SHALL INCLUDE:
1.A. MECHANICAL PROCESS DEHUMIDIFICATION
1.B. INDOOR CABINET CONFIGURATION
1.C. A PACKAGED ELECTRIC RESISTANCE HEATING COIL, SIZED AS PER SCHEDULE ON DRAWING
1.D. POOL HEATING VIA POOL WATER-TO-FLUID TITANIUM HEAT EXCHANGER. LESSER POOL WATER HEATER IS NOT ACCEPTABLE.
1.E. MINIMUM EXHAUST FAN(S)
1.F. HEAT RECOVERY BETWEEN THE MINIMUM EXHAUST AIR AND OUTDOOR AIR STREAMS AND VIA A GLYCOL RUN AROUND LOOP
1.G. A SERVICE VESTIBULE WHERE THE COMPRESSOR, REFRIGERATION SPECIALTIES, CONTROL VALVES AND ALL ELECTRONICS ARE OUTSIDE OF PROCESS AIR STREAM
1.H. CONVENIENCE OUTLET AND LIGHT INCLUDED FACTORY MOUNTED IN CONTROL CABINET, POWERED AND WIRED SEPARATELY.

2. SEQUENCE OF OPERATION

THE SYSTEM SHALL BE DESIGNED AND SIZED TO MAINTAIN THE SPECIFIED SPACE CONDITIONS
2.A. SYSTEM STARTUP
2.A.1. POWER IS TURNED ON OR THE SYSTEM IS RESTARTED
2.A.2. AFTER A SHORT INITIAL DELAY TO ALLOW THE SENSORS TO STABILIZE, THE BLOWER STARTS AND OPERATES CONTINUOUSLY
2.A.3. BASED ON SENSOR FEEDBACK, THE SYSTEM SHALL BEGIN, OR RESUME OPERATION BASED ON THE SEQUENCE BELOW

- 2.B.1. THE SYSTEM CONTINUOUSLY DELIVERS THE SPECIFIED SUPPLY AIR VOLUME TO THE NATATORIUM
2.B.2. THE MINIMUM EXHAUST AIR VOLUME IS SET TO MEET THE OPERATING SCHEDULE (ADJUSTABLE).
2.B.3. THE MINIMUM OUTDOOR AIR VOLUME IS SET TO MEET THE OPERATING SCHEDULE (ADJUSTABLE)

2.C. DEHUMIDIFICATION MODE

- 2.C.1. THE RETURN AIR RELATIVE HUMIDITY IS ABOVE THE HUMIDITY SETPOINT
2.C.2. RETURN AIR DEWPOINT IS ABOVE DEWPOINT SETPOINT.
2.C.3. THE COMPRESSOR ENTERS THE COMPRESSOR START SEQUENCE
2.C.4. IF THE SYSTEM CANNOT MAINTAIN THE RELATIVE HUMIDITY BELOW SETPOINT, THE SECOND COMPRESSOR CIRCUIT WILL START
2.C.5. COMPRESSOR WASTE HEAT IS REJECTED INTO A GLYCOL FLUID LOOP WHICH FEEDS THE REHEAT COILS AND THE AIR CONDITIONING AIR-COOLED HEAT EXCHANGER IN PARALLEL.
2.C.6. THE REHEAT COILS ARE FULLY MODULATING (0-100%). THE REHEAT OUTPUT WILL MODULATE TO MAINTAIN THE SPACE TEMPERATURE AT SET POINT YEAR-ROUND. REHEAT COILS THAT ARE ON OFF OR ONLY GIVE HEAT FROM ONE CIRCUIT ARE NOT ACCEPTABLE SINCE THEY DO NOT CLOSELY MATCH THE REQUIREMENT OF THE SPACE AND CAUSE SWINGS IN SPACE CONDITIONS

2.D. AIR CONDITIONING MODE

- 2.D.1. THE RETURN AIR TEMPERATURE IS ABOVE THE ROOM TEMPERATURE SETPOINT
2.D.2. THE COMPRESSOR STARTS, IF NOT ALREADY OPERATING IN DEHUMIDIFICATION MODE
2.D.3. EXCESS COMPRESSOR HOT GAS IS DIVERTED TO A FLUID-COOLED HEAT EXCHANGER. UP TO 100% OF COMPRESSOR HEAT IS REJECTED INTO THE GLYCOL FLUID LOOP WHICH IS PUMPED OUTDOORS TO AN OUTDOOR AIR-COOLED HEAT EXCHANGER FOR 100% HEAT REJECTION AT SUMMER DESIGN AMBIENT CONDITIONS
2.D.4. 100% OF COMPRESSOR HEAT IS REJECTED AT THE OUTDOOR AIR-COOLED HEAT EXCHANGER ON A SUMMER DESIGN DAY. ON OFF-PEAK DAYS, THE AIR REHEAT OUTPUT WILL MODULATE TO MAINTAIN THE SPACE TEMPERATURE AT THE SET POINT
2.D.5. IF THE SYSTEM CANNOT MAINTAIN THE RETURN AIR TEMPERATURE SETPOINT, THE SECOND COMPRESSOR WILL START

2.E. SPACE HEATING MODE

- 2.E.1. THE RETURN AIR TEMPERATURE IS BELOW THE ROOM TEMPERATURE SETPOINT
2.E.2. THE MICROPROCESSOR SPACE HEATING OUTPUT SIGNAL (0-10 VOLTS) IS SENT TO THE HEATING COIL CONTROLLER. THE SIGNAL OUTPUT WILL REGULATE BASED ON THE RETURN AIR TEMPERATURE

2.F. POOL WATER HEATING MODE

- 2.F.1. THE RETURN POOL WATER TEMPERATURE IS BELOW THE POOL WATER SETPOINT AND THE POOL WATER FLOW SWITCH OR MINIMUM TEMPERATURE DIFFERENTIAL IS SATISFIED
2.F.2. IF THE COMPRESSOR IS ALREADY OPERATING DUE TO A DEHUMIDIFICATION OR AIR CONDITIONING DEMAND, THE FLUID CONTROL VALVE WILL DIVERT FLUID TO THE TITANIUM POOL WATER HEAT EXCHANGER TO MODULATE THE HEATING OF THE POOL WATER. POOL WATER HEATING THAT DOES NOT USE A TITANIUM POOL WATER HEATER OR MODULATION TO MATCH THE DEMANDS OF THE POOL, ARE NOT ACCEPTABLE.
2.F.3. IF THERE IS NO PREEXISTING DEMAND FOR THE COMPRESSOR TO OPERATE, THE TITANIUM POOL WATER HEAT EXCHANGER SENDS A SIGNAL TO THE WATER HEATER (REMOTE BY OTHERS) TO OPERATE. THE COMPRESSOR WILL NOT OPERATE SOLELY FOR A POOL WATER HEATING DEMAND UNLESS SPECIFICALLY CONFIGURED TO DO SO AT THE CONTROLLER. AUX POOL HEAT CONTACT WILL BE CLOSED WITH INSUFFICIENT FLOW, IN ORDER TO PREVENT THE POOL FROM OVERHEATING. IT IS RECOMMENDED THAT A FIELD-INSTALLED AQUASTAT SOURCE CAPTURE EVACUATION SYSTEM, COMPLETE WITH A SEPARATE EXHAUST AIR INTAKE AND DEDICATED EXHAUST TUNNEL.

2.F.4. FACTORY-INSTALLED RELAY(S) AND FACTORY FURNISHED, FIELD-INSTALLED POOL WATER TEMPERATURE SENSOR(S) ARE PROVIDED TO ENABLE THE SMART POOL FEATURE. THIS FEATURE PROVIDES THE ABILITY TO ACTIVATE BOOSTER POOL WATER PUMP(S) FEEDING THE UNIT WHEN POOL WATER HEATING IS IN DEMAND.

2.G. EXHAUST AIR HEAT RECOVERY MODE

- 2.G.1. THE MINIMUM OUTDOOR AIR DAMPER AND MINIMUM EXHAUST FAN(S) ARE TIED TO THE SYSTEMS OCCUPANCY SCHEDULE AND WILL OPERATE AS PROGRAMMED
2.G.2. ONCE THE OUTDOOR AIR TEMPERATURE FALLS BELOW THE HEAT RECOVERY SETPOINT (65 °F BY DEFAULT, FIELD-ADJUSTABLE) THE GLYCOL PUMP SHALL CIRCULATE A GLYCOL MIXTURE BETWEEN THE EXHAUST AIR AND THE OUTDOOR AIR HEAT RECOVERY COILS, RECOVERING HEAT FROM THE SPACE CONDITION EXHAUST AIR AND USING IT TO PREHEAT THE INCOMING OUTSIDE AIR
2.H. FREEZE PROTECTION
2.H.1. THE SUPPLY AIR TEMPERATURE FALLS BELOW THE FREEZE/STAB SETPOINT
2.H.2. EXHAUST FAN(S) ARE STOPPED AND OUTDOOR AIR DAMPER(S) ARE FULLY CLOSED
2.H.3. WHEN THE FREEZE/STAB ALARM IS TRIPPED, IT MUST BE MANUALLY CLEARED BY THE OPERATOR
2.H.4. CABINET

A. CABINET CONSTRUCTION: ALL CABINET 16, 20 AND 24 GAUGE SHEET METAL SHALL BE GALVANIZED G90 STEEL OR GALVALUMET ALLOY WITH MILL-APPLIED ZINC PHOSPHATE PRIMER FOLLOWED BY AN EXTERIOR GRADE WHITE SILICONE MODIFIED POLYESTER TOP COAT. THE SHEET SHALL BE ENGINEERED TO FORM A CABINET WITH MAXIMUM STRENGTH AND RIGIDITY. ALL SEAMS SHALL BE CALKED WITH SILICONE TO PREVENT AIR AND WATER LEAKAGE OR INFILTRATION

- A.1. BASE RAILS: THE CABINET SHALL HAVE A BASE FRAME COMPRISED OF 16 LAYERS OF 10 GAUGE MLL GALVANIZED G90 STEEL. LIFTING LUGS SHALL BE PROVIDED ON THE BASE FRAME FOR RIGGING THE SYSTEM.
A.2. THE CABINET WALLS SHALL BE OF DOUBLE-WALL CONSTRUCTION USING 20 GAUGE PRE-PAINTED STEEL WITH A FULLY PAINTED INNER METAL LINER AND 2 INCHES OF FIBERGLASS INSULATION
A.3. THE CABINET FLOOR SHALL BE COMPRISED OF A 16-GAUGE GALVANIZED STEEL PANEL WITH A 20-GAUGE PRE-PAINTED STEEL INNER LINER, 2-INCH DOUBLE WALL ENGINEERED WITH STRUCTURAL BRACING FOR MAXIMUM RIGIDITY AND BE MECHANICALLY FASTENED TO THE BASE FRAME OF THE UNIT
A.4. THE CABINET ROOF SHALL BE 20-GAUGE PRE-PAINTED STEEL, 2-INCH DOUBLE WALL ENGINEERED WITH STRUCTURAL BRACING FOR MAXIMUM RIGIDITY AND BE MECHANICALLY FASTENED TO THE BASE WALLS OF THE UNIT
A.5. THE CABINETS SHALL BE MECHANICALLY ASSEMBLED WITH STAINLESS STEEL 502" SEALED BLIND NUTS. WHERE NUTS ARE REQUIRED BRIGLY ZINC PLATED BOLTS SHALL BE USED

A.6. ACCESS DOORS SHALL BE SUPPORTED ON MULTIPLE HINGES, HELD SHUT BY COMPRESSION LATCHES FOR QUICK ACCESS. DOORS SHALL BE PROVIDED FOR ENTRANCE TO ALL SECTIONS HOUSING COMPONENTS REQUIRING SERVICE. FULL HEIGHT ACCESS DOORS SHALL HAVE "HOLD BACK" LATCHES TO PREVENT DOOR CLOSURE DURING THE PERFORMANCE OF SERVICE PROCEDURES

- A.7. THE SYSTEM SHALL HAVE NON-CORRODING PROTECTIVE MESH SCREENS COVERING INTERNAL FAN BLADES, PROTECTIVE GRATES COVERING ALL FLOOR ACCESS PORTS
B. INSULATION THE UNIT SHALL BE INSULATED PER THE FOLLOWING STANDARDS:
B.1. ALL EXTERIOR CABINET SECTIONS SHALL BE INSULATED WITH TWO (2) INCH THICK FIBERGLASS INSULATION INSIDE THE DOUBLE WALLED CABINET
B.2. FIRE RESISTANT RATING TO CONFORM TO NFPA STANDARD 90A AND 90B
B.3. SOUND ATTENUATION COEFFICIENT SHALL NOT BE LESS THAN 1.02 AT A FREQUENCY OF 1,000 HZ AS PER ASTM STANDARD C423
B.4. THERMAL CONDUCTIVITY SHALL NOT EXCEED 0.26 BTU\*HR-SQ-FT AT 75 °F
C. CABINET CONFIGURATION SHALL INCLUDE:
C.1. A FILTER RACK WITH SEPARATE ACCESS DOORS SHALL BE PROVIDED FOR THE RETURN AIR AND MINIMUM OUTDOOR AIR STREAMS
C.2. MECHANICAL VESTIBULE: THE UNIT SHALL HAVE THE COMPRESSOR, RECEIVER, SOLENOID VALVES AND THE ELECTRICAL PANEL SEPARATELY LOCATED OUT OF THE PROCESSED AIR STREAM. ALL COMPONENTS SHALL BE SERVICEABLE WHILE THE UNIT IS IN OPERATION WITHOUT DISTURBING THE AIRFLOW
C.3. ELECTRICAL PANEL: THE UNIT SHALL HAVE A BUILT-IN ELECTRICAL CONTROL PANEL IN A SEPARATE COMPARTMENT IN ORDER NOT TO DISTURB THE AIRFLOW WITHIN THE DEHUMIDIFIER DURING ELECTRICAL SERVICING. ALL ELECTRICAL COMPONENTS SHALL BE MOUNTED ON A 16 GAUGE GALVANIZED SUB-PANEL
C.4. FILTERS WHEREVER POSSIBLE, AIR FILTERS SHALL BE STANDARD SIZED, REPLACEABLE, OFF-THE-SHELF FILTERS INCLUDING:
C.4.1. EXHAUST AIR: 2-INCH MERV 8, 30% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE
C.4.2. RETURN AIR: 2-INCH MERV 13, 90% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE ON A SLIDE-IN OR FACE-LOADING RACK
C.4.3. OUTSIDE AIR: 2-INCH MERV 13, 90% PLEATED FILTERS WITH RUST-FREE NON-METALLIC STRUCTURE
C.4.4. DIRTY AIR FILTER SWITCHES INCLUDED ON THE RETURN AIR FILTER FOR INDICATING AN ALARM WHEN PRESSURE DROP EXCEEDS A SET POINT.
C.5. COILS
C.5.1. EVAPORATOR/DEHUMIDIFIER COILS SHALL BE DESIGNED FOR MAXIMUM MOISTURE REMOVAL CAPACITY
C.5.1.1. COILS SHALL BE FULLY DIPPED AND COATED WITH A POLYESTERENAMEL COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM B117/D1654 AND ASTM D2126 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES
C.5.1.2. COIL SHALL HAVE GALVANIZED CASING AND END PLATES
C.5.1.3. ALUMINUM FIN AND COPPER TUBES MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER
C.5.2. AIR REHEAT COILS SHALL BE SIZED FOR VARIABLE HEAT TRANSFER INTO THE AIR WITH A CAPACITY OF 100% OF THE COMPRESSORS TOTAL REQUIRED HEAT OF REJECTION. AIR REHEAT COILS THAT ARE ON OFF WILL CAUSE UNSTABLE SPACE CONDITIONS AND ARE NOT ACCEPTABLE
C.5.2.1. COILS SHALL BE FULLY DIPPED AND COATED WITH A POLYESTERENAMEL COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM B117/D1654 AND ASTM D2126 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES
C.5.2.2. COIL SHALL HAVE GALVANIZED CASING AND END PLATES
C.5.2.3. ALUMINUM FIN AND COPPER TUBE JOINTS MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER
C.5.3. HEAT RECOVERY COILS
C.5.3.1. THE UNIT SHALL HAVE HEAT RECOVERY BETWEEN THE MINIMUM EXHAUST AND OUTDOOR AIR STREAMS PER THE FOLLOWING STANDARDS:
C.5.3.1.1. THE HEAT RECOVERY COILS SHALL BE SIZED FOR HEAT TRANSFER BETWEEN THE TWO AIR STREAMS
C.5.3.1.2. THE HEAT RECOVERY FLUID CIRCULATING BETWEEN COILS SHALL BE GLYCOL. THE MODULE SHALL BE A COMPLETE PACKAGE AND INDEPENDENT CIRCUIT THAT INCLUDES A CIRCULATING PUMP, FILL VALVES AND EXPANSION TANK
C.5.3.2. COILS SHALL BE FULLY DIPPED AND COATED WITH A POLYESTERENAMEL COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM B117/D1654 AND ASTM D2126 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES
C.5.3.3. ALUMINUM FIN AND COPPER TUBE JOINTS MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER
C.5.3.4. PLATE HEAT RECOVERY THAT WILL ADD FAN HORSEPOWER AND THEREFORE HAVE A NEGATIVE EFFECT ON ENERGY SAVING ARE NOT ACCEPTABLE. STRATEGIES THAT USE THE MAIN COMPRESSORS TO COOL EXHAUST AIR TO TRY AND ACT AS HEAT RECOVERY CANNOT BE USED IN PLACE OF FULL TIME HEAT RECOVERY BECAUSE THE COMPRESSORS WILL NOT BE RUNNING IN THE COLDEST MONTHS REQUIRING HEAT RECOVERY THE MOST.

C.6. DRAIN PANS

C.6.1. EACH EVAPORATOR COIL SHALL BE PROVIDED WITH A POSITIVE DRAINING, COMPOUND-SLOPED, BAKED POWDER PAINT COATED ALUMINUM DRAIN PAN WITH FULLY WELDED CORNERS TO ENSURE WATER RETENTION. IN NO WAY WILL STAINLESS STEEL OR GALVANIZED DRAIN PANS BE ACCEPTABLE.

C.7. BLOWERS AND BLOWER MOTORS

- C.7.1. SUPPLY BLOWERS:
C.7.1.1. THE MULTIPLE DIRECT DRIVEN SUPPLY AIR BLOWER WHEELS SHALL BE A PARALLEL MOUNTED ARRAY. BLOWERS SHALL BE A SINGLE WIDTH SINGLE INLET AIRFLOW, FLENUM TYPE, SECURED A MACHINED, GROUND AND POLISHED SOLID STEEL SHAFT. THE WHEEL SHALL BE 60% GALVANIZED STEEL WITH BAKED POWDER PAINT COATING. THE SHAFT SHALL BE COATED WITH A RUST INHIBITOR
C.7.1.2. THE COMPLETE BLOWER ASSEMBLY SHALL BE STATICALLY AND DYNAMICALLY BALANCED ON PRECISION ELECTRONIC BALANCERS
C.7.1.3. THE BLOWER ASSEMBLY SHALL BE MOUNTED ON A 1" DEFLECTION SPRING ISOLATED RACK
C.7.1.4. THE FAN INLETS SHALL BE EQUIPPED WITH ACCIDENTAL CONTACT PROTECTION SCREEN
C.7.1.5. MOTOR(S) SHALL BE PREMIUM EFFICIENCY PAINTED CAST IRON CONSTRUCTION TEFC, NEMA MG1-PART 31 INVERTER DUTY 151 CONSTANT TORQUE SEVERE DUTY WITH A SERVICE FACTOR 1.25. MOTORS SHALL BE 2 POLE 1800 SYNCHRONOUS SPEED WITH A HOA SWITCH WITH MOTOR SAFETIES AGAINST OVERLOADING AT 60 HZ OPERATION DIRECTLY ON MAINS. MOTORS SHALL HAVE DOUBLE LIP SEALS ON BOTH ENDS WITH RE-GREASABLE BEARINGS 25AT FRAME AND LARGER WITH POLYUREA GREASE
C.7.1.6. AT LEAST ONE MOTOR SHALL BE PROVIDED WITH A LOW MOTOR LOSS AND HIGH STARTING TORQUE VFD FOR AIR BALANCING PURPOSES. THE VFD SHALL HAVE A DRIVE EFFICIENCY OF 96 TO 98% WITH DISPLACEMENT POWER FACTOR OF 0.88, OUTPUT MAXIMUM FREQUENCY OF 400 HZ WITH TORQUE BOOST. THE VFD SHALL HAVE PROTECTIVE FEATURES INCLUDING: TORQUE LIMIT, HEAT SINK OVER-TEMPERATURE, CURRENT LIMITING DC-BUS FUSE, OVERCURRENT PROTECTION, OVERVOLTAGE PROTECTION, OVERUNDER TORQUE PROTECTION, OVERUNDER VOLTAGE PROTECTION, SHORT CIRCUIT CURRENT RATING OF 30KA RMS SYMMETRICAL, AND 100KA RMS SYMMETRICAL
C.7.2. EXHAUST BLOWERS:
C.7.2.1. THE PACKAGED EXHAUST BLOWER (EF1) SHALL BE SIZED TO MAINTAIN THE NEGATIVE PRESSURE REQUIREMENT IN THE SPACE DURING NORMAL OPERATION AND ITS OPERATION TIED TO THE SYSTEMS OCCUPANCY SCHEDULE

C.7.2.2. THE FAN ASSEMBLY SHALL BE BALANCED IN CLASS G 6.3 ACC DIN ISO 1940, DYNAMIC ON TWO LEVELS

- C.7.2.3. THE FAN ASSEMBLY SHALL BE SUITABLE FOR AMBIENT TEMPERATURES OF 40°C TO MAX. +70°C
C.7.2.4. THERMAL CONTACTS INSTALLED IN THE WINDINGS COMPLIANT WITH THCL 155
C.7.2.5. DRIVE MOTOR IN EXTERNAL ROTOR CONFIG. SEALED IN PROTECTION CLASS IP54 WITH MOISTURE PROTECTION IMPREGNATION OF THE WINDINGS. TOPICAL PROTECTION
C.7.2.6. HIGH CORROSION RESISTANCE DESIGN WITH HIGH QUALITY AND RELIABILITY
C.7.2.7. THE EXHAUST FAN SHALL BE CONTROLLED FROM AN END SWITCH ON THE POWER OPEN OF THE EXHAUST AIR DAMPER
C.7.2.8. SHALL BE PACKAGED WITH THE HEAT RECOVERY MODULE
C.7.2.9. THE PACKAGED EXHAUST FAN SHALL BE DEDICATED EXHAUST FOR A TRICHLORAMME SOURCE CAPTURE EVACUATION SYSTEM, COMPLETE WITH A SEPARATE EXHAUST AIR INTAKE AND DEDICATED EXHAUST TUNNEL.

C.8. DAMPERS

- C.8.1. INTERNAL DAMPERS SHALL BE MADE FROM EXTRUDED ANODIZED ALUMINUM WITH A PARALLEL BLADE CONFIGURATION AND NEOPRENE DOUBLE-SEAL TIPS TO MINIMIZE LEAKAGE. DAMPER BLADES SHALL BE MOUNTED ON STEEL RODS WHICH ROTATE ON NYLON BUSHINGS. ALL DAMPER HARDWARE SHALL BE CORROSION RESISTANT
C.8.1.1. THE SYSTEM SHALL BE PROVIDED WITH NORMALLY CLOSED OUTSIDE AIR AND EXHAUST AIR DAMPERS EQUIPPED WITH SPRING RETURN ACTUATORS. THE DAMPERS ADJUST BETWEEN 0% TO 100% OPEN POSITION.
C.8.1.2. THE OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL BE OF OPPOSED BLADE CONFIGURATION. DAMPERS SHALL HAVE 1750-INCH INSULATED BLADES MADE FROM EXTRUDED ANODIZED ALUMINUM WITH NEOPRENE DOUBLE-SEAL TIPS TO MINIMIZE LEAKAGE. DAMPER LEAKAGE SHALL BE LESS THAN 1% OF MAXIMUM FLOW AT 4-INCH WATER COLUMN DIFFERENTIAL. DAMPER BLADES SHALL BE MOUNTED ON STEEL RODS WHICH ROTATE ON NYLON BUSHINGS. ALL DAMPER HARDWARE SHALL BE CORROSION RESISTANT

C.9. POOL WATER HEATER

- C.9.1. THE POOL WATER HEATER SHALL BE TITANIUM GASKETED FLAT PLATE HEAT EXCHANGER. HEAT EXCHANGER THAT ARE NOT TITANIUM ARE NOT ACCEPTABLE SINCE THEY INCREASE THE OWNERS LIABILITY.
C.9.2. HEAT EXCHANGER WILL BE MODULATING. ON/OFF POOL WATER HEATERS ARE NOT ACCEPTABLE.
C.9.3. POOL HEATERS THAT WHEN BREACHED ALLOW WATER INTO THE REFRIGERATION SYSTEM ARE NOT ALLOWED.
C.9.4. TERMINATING CONNECTIONS ARE PVC NPT FITTINGS LOCATED AT THE CABINET WALL FOR EASY CONNECTION
C.9.5. THE MAXIMUM CIRCUIT PRESSURE RATING IS 100 PSI.
C.10. COMPRESSORS
C.10.1. HERMETIC, SCROLL ACTION COMPRESSOR, SUCTION GAS COOLED, SUITABLE FOR REFRIGERANT R-410A
C.10.2. THE COMPRESSOR(S) SHALL BE MOUNTED ON RUBBER-IN-SHEAR ISOLATORS TO LIMIT THE TRANSMISSION OF NOISE AND VIBRATION
C.10.3. THE COMPRESSOR(S) SHALL BE EQUIPPED WITH REMOTE CRANKCASE HEATER(S) FOR LIQUID MIGRATION PROTECTION
C.10.4. THE COMPRESSOR(S) SHALL BE LOCATED OUTSIDE THE CONDITIONED AIR STREAM IN THE SERVICE VESTIBULE
C.10.5. THE COMPRESSOR MANUFACTURER MUST HAVE A WHOLESALE OUTLET FOR REPLACEMENT PARTS IN THE NEAREST MAJOR CITY

C.11. REFRIGERATION CIRCUIT

- C.11.1. THE SYSTEM SHALL CONSIST OF TWO FACTORY SEALED REFRIGERATION CIRCUITS FOR DEHUMIDIFICATION AND SENSIBLE COOLING. NO SITE REFRIGERATION WORK SHALL BE REQUIRED
C.11.2. EACH REFRIGERATION CIRCUIT SHALL HAVE PRESSURE TRANSDUCERS MONITORING THE REFRIGERANT DISCHARGE (HIGH) AND SUCTION (LOW) PRESSURES. THE REFRIGERATION CIRCUIT SHALL BE ACCESSIBLE FOR DIAGNOSTICS, ADJUSTMENT AND SERVICING WITHOUT THE NEED FOR SERVICE MANIFOLD GAUGES
C.11.3. ALL REFRIGERATION CIRCUITS SHALL HAVE REFRIGERANT CONTROL VALVES, A LIQUID LINE FILTER-DRIER, A LIQUID AND MOISTURE INDICATOR, AN EXPANSION VALVE, HEAD PRESSURE CONTROL FEATURE AND PUMP DOWN FEATURE
C.11.4. ALL REFRIGERATION CIRCUITS SHALL HAVE AN EXTERNALLY ADJUSTABLE BALANCED PORT DESIGN MECHANICAL THERMOSTATIC EXPANSION VALVE
C.11.5. THE SYSTEM SHALL HAVE AN INTERNALLY ADJUSTABLE BALANCED PORT DESIGN MECHANICAL THERMOSTATIC EXPANSION VALVE. THE VALVE SHALL HAVE A REMOVABLE POWER HEAD
C.11.6. TAMPER PROOF, HERMETICALLY SEALED NON-ADJUSTABLE HIGH AND LOW PRESSURE SWITCHES AND REFRIGERATION SERVICE VALVES SHALL BE INSTALLED USING SCHRAEDER TYPE VALVES. REFRIGERATION SERVICE VALVES SHALL BE LOCATED OUTSIDE OF THE AIRSTREAM
C.11.7. THE RECEIVER SHALL HAVE TWO REFRIGERANT LEVEL (MAXIMUM AND MINIMUM) INDICATING SIGHT GLASSES
C.11.8. THE SUCTION LINE SHALL BE FULLY INSULATED WITH 0.500-INCH CLOSED CELL INSULATION
C.11.9. THE MAXIMUM OPERATING PRESSURE FOR THE GLYCOL LOOP IS 100 PSI. THE GLYCOL LOOP TEMPERATURE SHOULD NOT EXCEED 134 °F

C.12. CONTROL PANELS

- C.12.1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR EXTERNAL POWER WIRING AND DISCONNECT SWITCH FUSING. POWER BLOCK TERMINALS SHALL BE PROVIDED
C.12.2. THE SYSTEM SHALL INCLUDE A FACTORY-INSTALLED FUSED DISCONNECT
C.12.3. MAIN CONTROL PANEL SHALL BE MOUNTED INSIDE THE SERVICE VESTIBULE OUTSIDE OF THE PROCESS AIR STREAM
C.12.4. BLOWER MOTORS SHALL BE PROTECTED WITH THERMAL TRIP OVERLOADS
C.12.5. THE SYSTEM SHALL HAVE A VOLTAGE MONITOR WITH PHASE PROTECTION
C.12.6. AVAILABLE DRY CONTACTS SHALL INCLUDE:
C.12.6.1. ALARM
C.12.6.2. BLOWER INTERLOCK
C.12.6.3. STAGE 1 & 2 HEATING
C.12.6.4. OUTDOOR AIR DAMPER CONTROL
C.12.6.5. REMOTE EXHAUST FAN #1
C.12.6.6. REMOTE EXHAUST FAN #2
C.12.6.7. OUTDOOR-AIR COOLED EQUIPMENT
C.12.6.8. SYSTEM ON
C.12.6.9. AUXILIARY POOL HEATER 1
C.12.6.10. HEAT RECOVERY
C.12.7. TERMINALS SHALL BE PROVIDED TO SEND 24-VOLT POWER TO THE OUTDOOR AIR COOLED CONDENSER OR FLUID COOLER FAN CONTACTOR
C.12.8. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH UL OR CSA SAFETY ELECTRICAL CODE REGULATIONS AND SHALL BE IN ACCORDANCE WITH THE NFPA ALL COMPONENTS USED IN THE SYSTEM SHALL BE UL OR CSA LISTED
C.12.9. WIRING DIAGRAMS SHALL BE LOCATED NEAR THE ELECTRICAL PANEL(S) ON THE SYSTEM. THESE DIAGRAMS SHALL PROVIDE COLOUR-CODING AND WIRE NUMBERING FOR EASY TROUBLESHOOTING. ALL WIRES SHALL BE CONTAINED IN A WIRE DUCT.
C.12.10. THE COMPRESSOR(S) SHALL HAVE A TIME DELAY ON START TO PREVENT SHORT CYCLING
C.12.11. AN AIRFLOW SWITCH AND A DRY CONTACT FOR ALARM(S) SHALL BE PROVIDED AND FACTORY-MOUNTED.
C.12.12. CONVENIENCE OUTLET AND LIGHT INCLUDED FACTORY MOUNTED IN CONTROL CABINET, POWERED AND WIRED SEPARATELY.

C.13. AUXILIARY AIR HEATING

- C.13.1. THE PACKAGED ELECTRIC HEATING SYSTEM SHALL BE SIZED TO MEET THE SCHEDULED HEATING CAPACITY AND HAVE THE FOLLOWING CHARACTERISTICS:
C.13.1.1. MODULATING (0-10V) AIR HEAT CONTROL
C.13.1.2. THE HEATER FRAME SHALL BE MADE FROM GALVANIZED STEEL
C.13.1.3. THE RESISTANCE-HEATING COILS SHALL BE MACHINE CRIMPED ONTO GALVANIZED TERMINALS, SECURED BY AN ANTI-ROTATING HIGH TEMPERATURE RESISTANT PREMIUM GRADE CERAMIC SOCKET
C.13.1.4. HEATING ELEMENTS SHALL BE CRIMPED TO MONEL OR STAINLESS-STEEL TERMINAL LUGS TERMINAL LUGS AND PINS SHALL BE POSITIVELY PREVENTED FROM CORRODING BY MEANS OF NON-RONING BULKHEAD BUSHINGS
C.13.1.5. SCREENS SHALL BE PROVIDED TO PROTECT THE HEATING ELEMENTS
C.13.1.6. HEATING ELEMENTS SHALL BE OPEN-TYPE NICKEL-CHROMIUM RESISTANCE WIRE ELEMENTS SUPPORTED ON PREMIUM CERAMIC BUSHINGS
C.13.1.7. INTEGRAL AND PREWIRED COMPONENTS SHALL INCLUDE CONTACTORS, A FUSED CONTROL TRANSFORMER, POWER SUPPLY TERMINALS, CONTROL TERMINALS AND A THERMAL CUT-OUT SWITCH (DISC TYPE, AUTOMATIC RESET)
C.13.1.8. THE PACKAGED HEATER IS FULLY WIRED AT THE FACTORY AND THE SYSTEM SHALL HAVE A SINGLE POINT POWER CONNECTION

C.14. AIR CONDITIONING

- C.14.1. AIR-COOLED AIR CONDITIONING VIA A FLUID COOLER
C.14.1.1. THE SYSTEM SHALL BE EQUIPPED WITH AN AIR CONDITIONING MODE WHERE EXCESS COMPRESSOR HEAT IS REJECTED TO A REMOTE OUTDOOR AIR-COOLED HEAT EXCHANGER (AKA DRY COOLER) VIA A SINGLE GLYCOL FLUID LOOP. NO SITE REFRIGERATION WORK SHALL BE REQUIRED. THE SYSTEM SHALL INCLUDE A CIRCULATING PUMP AND EXPANSION TANK. THE PACKAGED FLUID COOLED CONDENSER AND REMOTE OUTDOOR AIR-COOLED HEAT EXCHANGER SHALL BOTH BE CAPABLE OF REJECTING 100% OF THE COMPRESSOR HEAT REJECTION WITH AN AIR ON TEMPERATURE AT SUMMER DESIGN CONDITIONS
C.14.1.2. THE SYSTEM SHALL BE PROVIDED WITH A DRY CONTACT RATED FOR 24VAC/5A TO OPERATE THE REMOTE OUTDOOR FLUID COOLER CONTACTOR
C.14.1.3. EACH REFRIGERATION CIRCUIT SHALL INCLUDE REFRIGERANT VALVES, A RECEIVER WITH PRESSURE RELIEF VALVE SET AT 650 PSIG, A PRESSURE CONTROL VALVE AND A PRESSURE DIFFERENTIAL VALVE, AND TWO MANUAL SHUTOFF VALVES TO ISOLATE THE OUTDOOR FLUID COOLER
C.14.1.4. COILS SHALL BE TESTED AT 425 PSIG AND MOUNTED VERTICALLY FOR COMPLETE SURFACE UTILIZATION. COILS SHALL BE COUNTER FLOW AND HAVE ADEQUATE CAPACITY TO DISSIPATE THE TOTAL HEAT REJECTION OF THE SYSTEM AT DESIGN CONDITIONS

C.15. FACTORY PERFORMANCE TESTING

- C.15.1. THE SYSTEM SHALL BE THOROUGHLY TESTED UNDER FACTORY TEST CONDITIONS.

OUTDOOR DRY COOLER - DETRONX MODEL NG-V OR APPROVED ALTERNATE.

PART 1 - GENERAL

1. SCOPE

SUPPLY ONLY AND SHIP TO MEMORIAL UNIVERSITY AQUARIUM SITE, OR TO VENTILATION CONTRACTORS PREFERRED SAINT JOHN'S N.L. STORAGE FACILITY. INCLUDE ALL SHIPPING COSTS, WARRANTY COSTS FOR 2 YEARS FROM DATE OF SHIPPING OR FOR 12 MONTHS AFTER UNIT IS INSTALLED AND POWERED (WHICHEVER IS LONGER). INCLUDE ON-SITE FACTORY-TRAINED-PERSONNEL START UP SERVICES FOR FULL SYSTEM OF AIR HANDLERS, DRY COOLERS, POOL HEATING PUMPS, GLYCOL PUMPS, AND ALL ASSOCIATED MANUFACTURER SUPPLIED CONTROLS AND COMPONENTS ASSOCIATED WITH DEHUMIDIFICATION SYSTEM. PROVIDE FULL WRITTEN REPORT LISTING ALL TEST AND START-UP RESULTS AND HIGHLIGHT ANY OPERATING DEFICIENCIES THAT WERE REPAIRED INCLUDING ON SITE MODIFICATIONS TO EQUIPMENT AND PART REPLACEMENTS COMPLETED TO MAKE SYSTEM FULLY FUNCTIONAL AS PER IMPLIED SEQUENCE AND INTENT IN THESE DOCUMENTS AND PRESUMED TYPICAL OPERATING SEQUENCE OF UNIT ONCE INSTALLED AND CONNECTED TO DUCTWORK.

2. QUALITY AND SAFETY ASSURANCE

- 2.1. THE FLUID COOLER SHALL BE DESIGNED FOR OUTDOOR APPLICATION.
2.2. CABINET CONSTRUCTION:
2.2.1. THE FLUID COOLER SHALL BE ETL LISTED.
2.3. THE FLUID COOLER SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED, PIPED, AND FANS TEST RUN PRIOR TO SHIPPING.

PART 2 - PRODUCT

1. CABINET

- 1.A. THE FLUID COOLER SHALL BE DESIGNED FOR OUTDOOR APPLICATION.
1.B. CABINET CONSTRUCTION:
1.B.1. BASE RAILS: THE BASE FRAME IS FORMED USING FORMED 10-GAUGE MILL GALVANIZED G90 STEEL
1.B.2. THE HOUSING SHALL BE 16 AND 20-GAUGE PRE-PAINTED STEEL ENGINEERED WITH STRUCTURAL BENDING FOR MAXIMUM RIGIDITY AND BE MECHANICALLY FASTENED TO THE BASE FRAME.
1.B.3. THE HOUSING SHALL BE MECHANICALLY ASSEMBLED WITH STAINLESS STEEL 502" SEALED POP RIVETS, BRIGHT ZINC PLATED BOLTS AND COATED SCREWS WHERE REQUIRED.
1.B.4. ACCESS DOORS SHALL BE PROVIDED TO GAIN ACCESS TO CLEANING THE COILS.
2. ELECTRICAL PANEL
2.A. THE ELECTRICAL PANEL AND OPTIONAL DISCONNECT SHALL BE OUTDOOR RATED.
2.B. SHALL HAVE POWER TERMINAL BLOCK FOR SINGLE POINT POWER SUPPLY. SHALL HAVE FAN MOTOR STARTERS WITH THERMAL SAFETY CONTROLS.
2.C. ALL WIRING SHALL BE INSTALLED IN ACCORDANCE WITH UL OR CSA SAFETY ELECTRICAL CODE REGULATIONS, AND SHALL BE IN ACCORDANCE WITH NFPA. ALL COMPONENTS USED SHALL BE UL OR CSA LISTED.

3. COILS

- 3.A. COILS SHALL BE SIZED FOR VARIABLE HEAT TRANSFER INTO THE AMBIENT AIR WITH THE PERFORMANCE AS SUBMITTED.
3.A.1. COIL FRAMES/HEADERS AND CONNECTIONS SHALL BE FULLY COATED WITH A LOW VOC AMERLOCK 400 COATING FOR MAXIMUM CORROSION PROTECTION. COATING SHALL COMPLY WITH ASTM D4086 ABRASION RESISTANCE, ASTM D2794 IMPACT RESISTANCE AND ASTM B117 FOR CORROSION RESISTANCE AGAINST COMMON ACIDS, SALT AND GASES.
3.A.2. COIL FINS SHALL BE ALUMINUM COATED WITH A HYDROPHOBIC NANO TYPE COATING AND TESTED AS PER ASTM B117-11 SALT SPRAY TESTS.
3.A.3. SHALL BE A MINIMUM OF FOUR ROWS DEEP AND HAVE COPPER TUBES EXPANDED INTO A MAXIMUM OF TWELVE ALUMINUM FINS PER INCH. COILS SHALL BE TESTED AT 425 PSIG. COILS SHALL BE COUNTER FLOW DESIGN AND HAVE ADEQUATE CAPACITY TO DISSIPATE THE TOTAL HEAT REJECTION OF THE SYSTEM AT DESIGN CONDITIONS.
3.A.4. COIL SHALL HAVE MARINE ALUMINUM CASING AND END PLATES.
3.A.5. ALUMINUM FIN AND COPPER TUBE JOINTS MECHANICALLY BONDED TO ASSURE HIGH HEAT TRANSFER.
3.A.6. COILS SHALL HAVE "V" PATTERN AND GUARDS TO PROTECT THE COILS FROM VANDALISM AND WEATHER RELATED DAMAGE.

4. FANS AND MOTORS

- 4.A. THE FAN SHALL BE A DIRECT DRIVEN AXIAL FAN MADE WITH A DUAL SPEED EXTERNAL ROTOR MOTOR WITH INNOVATIVE BIONIC BLADES IN DIE-CAST ALUMINUM MOLDS.

## APPENDIX B – SUBMISSION FORM

### 1. Bidder Information

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

### 2. Offer

The bidder has carefully examined the Open Call documents and has a clear and comprehensive knowledge of the Deliverables required under the Open Call. By submitting a bid, the bidder agrees and consents to the terms, conditions and provisions of the Open Call, including the Form of Agreement, and offers to provide the Deliverables in accordance therewith at the rates set out in the completed Pricing Form (Appendix C).

### 3. Rates

The bidder has submitted its rates in accordance with the instructions in the Open Call and in the Pricing Form (Appendix C). The bidder confirms that it has factored all of the provisions of Appendix A, including insurance and indemnity requirements, into its pricing assumptions and calculations.

### 4. Addenda

The bidder is deemed to have read and accepted all addenda issued by the Owner. The onus is on bidders to make any necessary amendments to their bids based on the addenda.

The bidder is required to confirm that it has received all addenda by listing the addenda numbers on the following line:

\_\_\_\_\_. Bidders who fail to complete this section will be deemed to have not received all posted addenda and shall be deemed **non-compliant**.

**5. No Prohibited Conduct**

The bidder declares that it has not engaged in any conduct prohibited by this Open Call.

**6. Disclosure of Information**

The bidder hereby agrees that any information provided in this bid, 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 bidder hereby consents to the disclosure, on a confidential basis, of this bid by the Owner to the advisers retained by the Owner to advise or assist with the Open Call process, including with respect to the evaluation of this bid.

**7. Bid Irrevocable**

The bidder agrees that its tender shall be irrevocable for a period of **[\*\*90\*\*]** days following the Submission Deadline.

**8. Execution of Agreement**

The bidder agrees that in the event its bid is selected by the Owner, in whole or in part, it will finalize and execute the Agreement in the form set out in Appendix A (or in a form mutually acceptable to the parties) to this Open Call in accordance with the terms of this Open Call . Failure to submit this signature section will render the proposal NON-COMPLIANT and the proposal will be disqualified.

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Signature of Bidder Representative

\_\_\_\_\_  
Name of Witness

\_\_\_\_\_  
Name of Bidder Representative

\_\_\_\_\_  
Title of Bidder Representative

\_\_\_\_\_  
Date

I have the authority to bind the bidder.

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

## APPENDIX C – PRICING FORM

### 1. 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 bidder must be all-inclusive and must include all labor and material costs, all travel and carriage costs, all insurance costs, all costs of delivery to the Owner, all costs of installation and set-up, including any pre-delivery inspection charges, and all other overhead, including any fees or other charges required by law.

DESCRIPTION	TOTAL COST (EXCL HST)
<b>Supply two (2) indoor air handlers with dehumidification and dry cooling units in accordance with the specifications and requirements included in Appendix A.</b>	<b>\$</b>
<b>SUBTOTAL</b>	<b>\$</b>
<b>HST</b>	<b>\$</b>
<b>GRAND TOTAL</b>	<b>\$</b>

### 2. THE DELIVERABLES:

AQ-004-19 AQUARENA SPORTS FACILITIES UPGRADES CP-1  
(DEHUMIDIFICATION PROCUREMENT)  
as per specifications listed in Appendix A

### 3. MANDATORY SUBMISSION REQUIREMENTS

1. **Specification Form (Appendix A)**  
As per instructions on form.
2. **Submission Form ( Appendix B)**  
Each bid must include a Submission Form (Appendix B) completed and signed by an authorized representative of the bidder.
3. **Pricing Form (Appendix C)**  
Each bid must include Pricing Form (Appendix C) as per instructions on form.



Financial and Administrative Services  
Memorial University of Newfoundland  
310 Elizabeth Ave, St. John's, NL  
A1B 1T9

Mechanical Components Ltd.  
119 Clyde Avenue  
Mt. Pearl, NL  
A1N 4R9

March 7, 2023

**RE: TFM-003-23(A) AQUARENA SPORTS FACILITY UPGRADE CP-1 (DEHIMIFICIATION PROCUREMENT)**

**PROJECT #: AQ-004-19**

Dear Mr. Wolfe,

We are pleased to advise you that you have been successful on the above mentioned Limited Call for the Lump Sum Award amount of **\$1,242,235.75 (HST included)**. All Terms and Conditions of the Open Call Document apply.

In accordance with the University Purchasing Policy, you must be in receipt of a Purchase Order, which will follow shortly, prior to the commencement of work, as well as the other provisions outlined in this letter below. All invoices must quote the Purchase Order No. and Project No. and must be sent to the attention of Facilities Management at the following address:

**Memorial University of Newfoundland  
Facilities Management  
Accounts Payable  
PO Box 4200  
St. John's, NL, A1C 5S7**

**OR via email: [fmadmin@mun.ca](mailto:fmadmin@mun.ca)**

Commencement of work on this project is conditional upon all required safety documentation being submitted and approved.

Memorial University of Newfoundland looks forward to working with you on this Limited Call.

Sincerely,



s. 40 (1)

Keith Field for Deanne Piercey  
Manager Strategic Procurement

Cc: Jayme Bastarache  
Project Manager, Major  
Capital Projects Facilities  
Engineering & Development



**Purchase Order**

Number: **P0198176**

**THIS NUMBER MUST BE QUOTED ON ALL DOCUMENTS AND INVOICES**

Date: **October 26, 2023**

Page 1 of 1

004-17-01-24

<p><b>Vendor: Mechanical Components Ltd.</b></p> <div style="background-color: black; width: 150px; height: 50px; margin: 10px 0;"></div> <p style="border: 1px solid black; display: inline-block; padding: 2px;">s. 40 (1)</p>	<p><b>Ships To:</b> Room: FM2031 Facilities Management Memorial University of NL</p> <p><b>Building:</b> Facilities Mana St. John's NL A1C 5S7 Canada</p> <p><b>Tender No:</b> AQ-004-19</p> <p><b>Attn:</b> Jayme Bastarache</p>
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<p><b>Invoicing Address:</b></p> <p>MEMORIAL UNIVERSITY OF NEWFOUNDLAND FACILITIES MANAGEMENT ACCOUNTS PAYABLE ST. JOHN'S, NL A1C 5S7 CANADA</p>	<p><b>Instructions to Suppliers:</b></p> <ul style="list-style-type: none"> <li>- All taxes must be shown separately</li> <li>- All shipping charges MUST be identified separately if applicable</li> <li>- If a supplier cannot meet the terms of this order, please refer to the Departmental contact at number provided below</li> <li>- We reserve the right to refuse any order not adhering to any of the terms specified on this purchase order.</li> <li>- HST registration number R107690273</li> <li>- Each shipment must include packing slip</li> </ul>
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Item	Commodity	Item Description	U/M	Desc	Qty	Unit Price	Net Amt
1	C0016392	Air Handler Indoor w/Dehumidification AQ-004-19 Agreement No: TFM-003-23(A)	EA	EACH	1	\$1,080,205.00	\$1,080,205.00

**SHIPMENTS FROM OUTSIDE CANADA:**

**PROPERLY CERTIFIED CUSTOMS INVOICES IN QUADRUPPLICATE MUST BE MAILED DIRECTLY TO FINANCIAL AND ADMINISTRATIVE SERVICES AT THE TIME SHIPMENT IS MADE.**

PO Subtotal:	\$1,080,205.00
Discount:	\$0.00
Freight:	\$0.00
Tax:	\$162,030.75
<b>PO Total:</b>	<b>\$1,242,235.75</b>

<b>Contact:</b> Keith Field - Strategic	<b>Email:</b> procurement@mun.ca	<b>Phone:</b> 709 864 4605	<b>Required Date:</b> October 26 2023
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Additional Information:	Replaces P0188317
FOAPAL:	900077 65040 79610 4311