

Town of Oxford
Tender 2018-02
Oxford Arena Louvers & BAS Project
Closing: August 15, 2018



Tender 2018-02
Oxford Arena Louvers & BAS Project



TOWN OF OXFORD
105 Lower Main Street
PO Box 338
OXFORD, NS B0M 1P0



July 2018

1.0 GENERAL INSTRUCTIONS

TENDER SUBMISSION

Submit completed Tender Form and required tender documents for this project by **2:00:00 PM local time, Wednesday, August 15, 2018**, in a sealed envelope clearly marked as follows:

TENDER-2018-02-Oxford Arena Louvers & BAS Project

**TOWN OF OXFORD
105 LOWER MAIN STREET
PO BOX 338
OXFORD, NS B0M 1P0**

ATTENTION: RACHEL JONES, CHIEF ADMINISTRATIVE OFFICER

All questions and queries on the technical information are to be submitted in writing to the Project Manager, Ernest Eddy, Energy Services, Black and McDonald Limited via e-mail at eddy@BlackandMcDonald.com. Verbal responses will not be provided.

Any tenders submitted by fax, email or telephone will not be accepted under any circumstances.

The Town of Oxford reserves the right to waive technicalities, reject any or all bids, or any portion thereof, to advertise for new proposals, to proceed to do the work otherwise, or to abandon the work, if in the best interest of the Town.

The Town of Oxford reserves the right to request clarification of information submitted and to request additional information, if required. All costs associated with the presentation of the proposal and any supplemental information shall be borne solely by the bidder and shall not be passed on to the Town under any circumstances.

The Town of Oxford reserves the right to cancel the contract immediately upon written notice, if, in the opinion of Chief Administrative Officer, the successful Proponent is not fulfilling the terms, conditions and specifications of the contract. All fees will be paid up to the date the work terminates, based on the work plan submitted and actual work completed.

TENDER OPENING

Bids will not be opened publicly at the time of closing. After a full review and evaluation of all submittals, the successful proponent will be contacted. Following that, the unsuccessful proponents will be notified. Review and assessment will require approximately 3 business days.

TIME

Time is of the essence in all matters arising under this order.



REVISION OF TENDER

Revisions shall be submitted only by signed letter delivered. Only the bidder's entries on the delivered tender offer may be revised. The revision must state only the amount by which a figure is to be increased or decreased, or specific directions as to the exclusion or inclusion of particular words. The revision shall not include the total bid price.

LOCAL PREFERENCE

The Town shall apply a 5% preference to the price offered by a local business as compared with non-local businesses, such that the price offered by the local business is adjusted lower by 5% for the purposes of evaluating which goods, services or construction offer best value.

In accordance with the Atlantic Procurement Agreement, the local preference described above does not apply to the following procurements:

- i) goods that have a value of \$25,000 or greater;
- ii) services that have a value of \$50,000 or greater;
- iii) construction that has a value of \$100,000 or greater

COMPLETION/DELIVERY/CANCELLATION

Time is of the essence and the specified completion/delivery dates should be carefully considered before bidders provide a promised date. Failure to meet promised completion/delivery dates may result in cancellation of any subsequent order.

ERRORS

Tender as received shall be considered final and no tender shall be altered, amended or withdrawn after the specified closing date.

FORM

Quotations will not be accepted unless properly signed and submitted on this form. Qualifying clauses or exceptions may result in rejection of the quotation.

LIABILITY

The Bidder acknowledges that they are an independent contractor and shall indemnify, protect and save harmless the Purchaser, its agents, employees, successors and assigns from any and all damages, liabilities and claims of whatsoever nature arising out of the furnishing by the Vendor, its agents or employees, of the materials covered by this order or incidental or ancillary thereto.

Any claims against a contractor working on behalf of the Town of Oxford must be documented and the claims process started within three (3) days of receipt of original complaint. The Town of Oxford will not pay complete any contractor with an outstanding insurance claim brought forward during the contracted work.

EVALUATION

In evaluating the Tender, the Town may consider criteria, including:



- the proposed price;
- the proposed completion date;
- the Tenderer's ability to complete the work within the scheduled time;
- the Tenderer's ability to effectively manage and perform the work;
- the Tenderer's ability to cooperate and work effectively with the Town, its consultants and representatives;
- the Tenderer's ability to present cost saving opportunities which may be appropriate and acceptable to the Consultant and to the Corporation;
- the financial strength and capability of the Tenderer.

Bid Submission Checklist:

Submit WITH the Tender:

- Signed & Sealed (or letter of signing authority) Form of Tender
- Signature sheet for Attachment "A"
- Addenda indicated where appropriate on Form of Tender
- Contractor Experience details

Submit before Articles of Agreement:

- Performance Guarantee
- WCB Clearance Letter with a current, valid date
- Proof of Safety Certification
- Certificate of Insurance, with Town of Oxford named as additional insured

Sealed envelope to indicate:

- Tender ID
- Company name and full address of bidder



General Project Overview

The Town of Oxford is issuing this request for proposals (RFP) and are seeking proposals from qualified service providers, to provide a turn-key project at the Town of Oxford Arena (Lions Recreational Center)

The general intent of this RFP and subsequent project is to provide a fully integrated building automation system, including new side wall exhaust fans, louvers and control dampers. This project is part of on-going efficiency improvement measures undertaken at the arena; and is intended to build upon the measures taken to date.

The Town of Oxford is looking for a firm to work with and who are committed to supporting on-going efforts; who understand rink operation, the operational and fiscal pressures faced by small town arenas, and who are willing to bring a value-added approach to the Town, in support of their rink.

Specifications included within this document are to be considered guidelines and the minimum acceptable and are not to be considered complete. All proponents submitting a proposal are to demonstrate within their submittal, a full understanding of all applicable specifications, codes, regulations and performance criteria required for the facility. All proponents submitting a proposal are fully responsible for data gathering and verification of all specifications; either supplied within, or in the field; and are not to assume that information provided is sufficiently accurate, upon which to base their completed submittal upon.

There are no original or as-build drawings or specifications available, thus site visit(s) and field data gathering, to augment these specifications are to be considered mandatory.

All submittals are to show a clear understanding of the scope of work required to fulfill the full intent of the project as well as the final performance criteria. As a turn-key project, the successful contractor is responsible to provide all aspects of the project, from the initial data gathering phase, through design, execution, testing and commissioning, to the full satisfaction of the authorized representatives of the Town of Oxford.

All costs incurred by the submitting proponents in order to compile and submit a proposal are their costs alone, and will not be reimbursed.

In general, the project includes the following aspects:

1. Supply & installation of a WEB based, non-proprietary Building Automation System
2. Supply & installation of new side-wall exhausts, louvers & integrated dampers
3. Comprehensive & fully integrated, facility wide commissioning, including functionality and performance testing.
4. Six (6) months M & V

General Intent & Conditions

- i. All aspects of the project are required to meet the latest (most current), applicable Regulatory and Code requirements; as well as the latest, appropriate performance standards set forth by the applicable organization: i.e. ASHRAE, AHRI, AMCA, AABC, etc.



- ii. The successful proponent is responsible for all permits and inspections by all applicable authorities. All permits must be in place prior to commencing on-site work.
- iii. As a turn-key project, all proponents are responsible to make themselves familiar with existing conditions, as well as all project requirements. No claims will be accepted for additional costs, which originate from a lack of site condition familiarity, inability to execute the project within the schedule submitted, or to meet the overall intent of the project.
- iv. Since project submittals represent a turn-key project, they must include full commissioning plans, M & V and follow-up warranty details, to the satisfaction of the authorized representative for the Town of Oxford
- v. All RFP submittals will be assessed using a weighted criteria matrix.
- vi. The Town of Oxford shall maintain the right to accept or reject for any reason, any submittal in their sole discretion. In the event none of the submittals are deemed satisfactory, the Town of Oxford reserves the right to call for additional proposals, not limiting themselves to the original submitting proponents.
- vii. All proposals are to be submitted in hard copy (2 copies) as well as electronically, to: Rachel Jones, Chief Administrative Officer for the Town of Oxford.
- viii. Proposals will be accepted until 2:00 pm on Wednesday, August 15, 2018.
- ix. All proposals must be signed by an authorized representative of the contractor.
- x. Faxed proposals will not be accepted.
- xi. At any time, while on-site, contractors must ensure they are not impeding in any way, the regular daily function of the facility, employees or patrons.
- xii. Current biographical profiles of all employees intended to be on site are to be included in submittals.
- xiii. All on-site staff must be bondable.
- xiv. The Town of Oxford is not responsible for any expenses incurred by submitting proponents in preparation of their RFP submittal.
- xv. All proposals must include a full costing of all aspects to perform the full proposed scope of work detailed in their submittal.
- xvi. There cannot be any implied terms, standards or conditions which could be perceived to be based upon typical industry standards or practice.
- xvii. All proposals must include a minimum of two (2) references, indicating successful performance of a project, of similar size and complexity.
- xviii. All work must be performed by a Contractor, including sub-contractors, approved to work for the Town of Oxford.
- xix. All submittals must include a detailed work schedule, including planned start and completion dates: NOTE: The facility is fully occupied during August with the Exhibition, which has priority over the scheduling of this project; nonetheless, completion and commissioning is expected to be complete by October 15, 2018.
 - a. The ice is scheduled to be installed and the refrigeration plant started by approximately October 1, 2018. This activity has priority and must not be impeded in any manner, by the execution of this project.
- xx. A Project Supervisor is required to be assigned full time, for the full duration of the project. In addition to overseeing all staff, sub-contractors, safety and overall project execution, they are responsible for all scheduling, communications, logistics and liaison with the facility, its' clients and their authorized representative(s).



- xxi. The Town of Oxford will assign management personnel of their choice to oversee all aspects of the project.
 - a. They will have the authority to stop all work, if conditions deem it necessary, in their sole discretion.
- xxii. All proposals must include a detailed safety plan, as well as details of the Contractors safety policies.
- xxiii. If there are substantial similarities between multiple submittals, additional details may be requested of any one or all of the proponents.
- xxiv. In the event asbestos is found within the work areas identified in the proposed scope of work, the Town of Oxford is responsible to bear all costs for its' removal and remediation, including air quality testing.
- xxv. All work spaces are to continually be kept clean, neat, tidy and free from debris at all times. Contractors are responsible for the removal and proper disposal of all associated project generated debris. Steps must be implemented to ensure any construction noise and or dust does not interfere with the daily activities of the facility.
- xxvi. Upon receipt of conditional acceptance of a submittal, the contractor shall submit all required Insurance, WCB, equivalent sub-contractor documents, as well as other documents deemed necessary by the Town of Oxford.
- xxvii. It is the responsibility of the contractor(s) wishing to submit a proposal to make themselves fully familiar with the facility, and all aspects impacting the execution of the project. Accurate, as-built blueprints of the facility are not available; thus the opportunities for site visits to perform data gathering is deemed critical for proposal preparation and subsequent project execution..
 - a. No plea of ignorance or failure to become familiar with all aspects of the facility and to obtain a thorough understanding of the project will be considered grounds to consider claims for additional monies; or to permit impacting the schedule by extending it for a period greater than 10% over and above the original intended time frame.
- xxviii. Each proposal must detail the proponents' ability to perform, with properly qualified personnel. As a minimum, proposals must include:
 - a. Resumes of each member of the installation team, including copies of all applicable certification.
 - o All field work is to be performed by personnel with Red Seal, Journeyman certification (HVAC, Natural gas, Electrical, Plumbing, Instrumentation) etc.
 - o Project Manager
 - o Project Supervisor
- xxix. A communication flow chart, detailing communication within the contractor and between the contractor and the Town of Oxford must be included.
- xxx. A detailed plan of all aspects of each phase of project execution, additionally identifying:
 - o Project milestones;
 - o Current operational requirements of the facility;
 - o Implementation steps to prevent schedule overruns;
 - o Steps taken to familiarize themselves with the existing conditions;
 - o Commissioning procedures.



Proposal Evaluation criteria:

The Town of Oxford is looking for fully detailed, comprehensive proposals from qualified bidders, to replace the side wall louvers and exhaust fans and to install a WEB based, non-proprietary control system. Additionally, they will welcome proposals which contain a Value Added component. This should be clearly identified as such within the proposal, priced separately, and provide clarity on the additional value these measure(s) will bring to the facility.

All submittals will be evaluated based upon the following criteria:

a) Authorized signatures b) Personnel Qualifications c) Sub-Contractors d) Schedule & detailed project execution plan, encompassing start to final commissioning e) Safety Plan and Policies	10%
f) Value Added	10%
g) Lump sum price (excluding value added component)	30%
H) Overall Project scope	50%

ENERGY EFFICIENCY PROJECT

BUILDING ENVELOPE ASPECT

Replacement of the four (4) existing, wall mount exhaust fans, dampers & louvers; and their integration into the BAS.

Intent:

To continue with the ongoing energy efficiency projects at the rink, by enhancing the building envelope. The goal is to eliminate the uncontrolled air movement via both infiltration and exfiltration, through the existing side wall exhaust fan and damper arrangements.

The existing units are to be replaced in their entirety, with dampers meeting Class 1A leakage ratings and the International Energy Conservation Code maximum leakage for building envelope dampers criteria of 3 cfm/ft² @ 1" w.g. (15.2 L/s/m² @ 0.25 kPa).

Site Visit:

A site visit is mandatory. It is the responsibility of each proponent to obtain all required field dimensions, mechanical and electrical data and measurements; to ensure all required information to understand the full scope of work and the environment in which to execute, has been obtained.

Scope of Work:

This aspect includes replacement of the four (4) existing, wall mount exhaust fans and damper-louver arrangements, c/w integration into the BAS, as well as full commissioning and water spray testing.



All dampers, louvers and fans are to fit the existing wall opening dimensions. Since the overall depth of the new damper-louvers may be greater than the existing, the louvers are to be installed as close as possible, to flush with the exterior wall; with the dampers and fan arrangement protruding inward. Any additional interior supports required, are to be identified in the submittal. The existing wooden frame is to be removed. If wooden framing is required to accommodate the new damper-louver arrangement, it is to be pressure treated lumber.

The existing, exterior plywood sheeting is to be replaced with galvanized sheet metal, spray painted to closely match the adjacent wall. All exterior joints are to be sealed water proof utilizing rubber gaskets or silicone.

Upon project completion, the installation is to undergo exterior water spray testing, to the satisfaction of the Town of Oxford representative(s).

All submittals are to clearly illustrate their understanding of the project, and, as a minimum, must include the following:

1. A detailed project safety plan
2. A detailed project execution procedure, including timelines
 - a. The procedures must illustrate the measures to be taken to ensure the daily operation of the rink is not negatively impacted
3. Shop drawings must be included with submittals, including:
 - a. Dampers
 - b. Louvers
 - c. Actuators
 - d. Motors
4. The dampers must meet the following specifications:
 - a. Ultra low leakage, high performance, premium dampers
 - b. Class 1A leakage rating
 - c. Meet the international Conservation Code maximum leakage for building envelope dampers criteria of 3 cfm/ft² @ 1" w.g. (15.2 L/s/m² @ 0.25 kPa).
 - d. Galvanized steel channel frame construction with reinforced corners
 - e. Extruded aluminum airfoil type blades
 - i. Opposed blade arrangement
 - f. All linkages to be concealed within the frame and out of the air stream
 - g. Bearings are not to require lubrication
 - h. Blade seals to be mechanically locked in place
 - i. Operating temperature range rating to be -40°C – 100°C
5. Fixed blade louvers are to be installed over the dampers, c/w:
 - a. Stationary frame: 4" (100mm) deep aluminum frame, 2.11mm nominal wall thickness
 - b. Blades: Aluminum, 2.11mm nominal thickness
 - i. Positioned at a 45° angle, 125mm center-center
 - c. Screen: 0.75 x 0.051 in. (19 x 1.3 mm) expanded flattened aluminum bird screen
 - d. Finish: Mill



6. Both the dampers and louvers are to be factory assembled and are to be matching sets. They are to be designed to be either field installed together, to form a single unit; or factory assembled as a single unit and field installed as one unit.
7. Motors:
 - a. The existing motors are to be replaced with premium efficiency, inverter rated motors, of equivalent horsepower and voltage as the existing.
8. Fans:
 - a. The existing propeller fans are to be replaced with fans of similar style, type, size and performance.
 - b. The new units are to be belt driven, fitted with new drive and driven sheaves, as well as belts.
 - c. Since the CFM performance of the existing fans are not known, CFM measurements of the existing units are required to be taken. New fans are to be sized for 30% greater CFM than the current highest performing fan. Submittals are to include actual field CFM readings and the fan curves of proposed new fans.
9. Actuators:
 - a. The dampers are to include 2-position, power open, spring return close actuators.
 - b. Actuators are to be direct coupled to the actuator drive shaft.
 - c. Actuators are to include a built in auxiliary switch.
 - i. The motors and actuators are to be wired to ensure the dampers are open prior to the fan motor being able to start.
 - d. 133 in-lb. (15Nm) torque required.
 - e. Belimo AF120-(S)US or equivalent are acceptable.
10. The fans are to be powered via their existing circuitry.
11. Each of the four (4) individual motors and dampers will be individually controlled via the BAS, with damper “open” confirmation prior to the fan motor receiving a “start” command
 - a. A manual pushbutton override, which will simultaneously start all four (4) dampers and motors in the event of urgent exhaust requirements, is to be located in the electrical room close to the fan switches, and is to be clearly marked as such. This override is to have a two (2) hour time limit.
12. Upon project completion, full commissioning is to be scheduled with and carried out to the satisfaction of the Town of Oxford representative(s):
 - a. Completed as-builds, wiring diagrams and equipment specifications are to be submitted in their entirety, in a 3-ring binder, as part of the project identified as “Oxford Arena- BAS & Exhaust Fans / Damper Project”.

Submittal Documentation Required

- Furnish fan performance ratings and fan curves with specified operating point clearly plotted.
- Furnish drawings indicating unit dimensions, required clearances, field connection locations, wiring diagrams, shipping drawings, and curb drawings.
- Furnish performance report showing unit level performance data including: fan(s), motor(s), coil(s) and other functional components.
- Furnish operation and maintenance data, including instructions for lubrication, filter replacement, motor and drive replacement, and condensate pan cleaning; spare parts lists, and wiring diagrams.



- Report electrical requirements for power supply wiring including wiring diagrams for interlock and control wiring, clearly indicating factory-installed and field-installed wiring.
- Report motor electrical characteristics.

Delivery, Storage And Handling

- Follow manufacturer's recommendations for handling, unloading and storage.
- Protect, pack and secure controls devices, motor control devices and other electronic equipment. Do not store electronic or electric equipment in wet or damp areas even when they are sealed and secured.
- Seal openings to protect against damage during shipping, handling and storage.

Extra Materials

- Provide one extra set of belts, in addition to the factory-installed set

Warranty

- Provide warranty for twelve (12) months from date of final commissioning. Warranty shall cover labor & material. Warranty work shall be performed by manufacturers' factory-trained, factory-employed or factory authorized technician(s).
- Include any associated factory-provided controls in the parts warranties.
- Parts associated with routine maintenance, such as belts & grease requiring bearings shall be excluded.

System Startup

- Comply with any applicable manufacturer's start-up requirements to ensure safe and correct operation and integrity of warranty.

Electrical Motors

- Provide fan motors built in accordance with the latest standards of the NEMA and IEEE.
- Provide all fan motors in compliance with ASHRAE 90.1.
- Provide fan motors with the following characteristics:
 1. Minimum service factor of 1.15
 2. Premium efficiency, or as required to meet ASHRAE 90.1
 3. Rated for continuous duty at full load in a 104°F (40°C) ambient
 - a. Rated for use in temperatures down to -20°C
 4. Suitable for use in variable frequency application, per NEMA MG-1 Part 30
 5. Premium Efficiency Inverter ready per NEMA STD MG1 PART 31.4.4.2.

Fan-Motor Disconnects

- Disconnects shall comply with applicable provisions of the National Electric Code.
- Provide fused motor disconnects in NEMA 1 enclosures.
- Disconnect shall be suitable for use as a lockout/tagout disconnect.

Installation

- Install equipment per industry standards, applicable codes, and manufacturer's instructions.



Field Quality Control

- Store all material and equipment as per manufacturer's written recommendations. Store indoors in a warm, clean, dry environment.
- Rig and lift units according manufacturer's instructions.

Return Fans:

CONSTRUCTION

- Assembly
 - Housing assembly, mounting brackets & frame to be heavy-gauge galvanized steel construction
- Pulleys
 - Heavy-duty cast iron adjustable pulleys
- Shaft
 - Precision ground and polished with a first critical speed of at least 125% of the fan's maximum operating speed
- Bearings
 - To be furnished with pre-lubricated cast iron pillow block bearings, designed for an average life (L-50) of 500,000 hours or more at maximum operating speeds
- Disconnect Switch
 - Mounted and prewired NEMA 1 disconnect switch
- Belt Guard
 - Formed galvanized steel guard to cover the drive assembly
- Extended Lube Lines
 - Exterior mounting fittings
- Vibration Isolators
 - Inherent vibration isolation to prevent exterior sheet metal wall vibration during fan(s) operation.

ENERGY EFFICIENCY PROJECT

BUILDING AUTOMATION SYSTEM

There is currently no automation system in the facility. A non-proprietary, WEB based BAS is to be installed.

All work in this BAS project shall be coordinated and managed by a single BMS contractor:

- The work of this aspect shall be scheduled, coordinated, and executed with the associated work of other trades.
- The work of this aspect shall be as required by the specifications throughout the document as well as the General Project Overview and project intent.



- If the BMS Contractor believes there are conflicts, missing information or they are unsure as how to provide and execute a BAS design, to meet the project requirements as well as final performance and functionality, the Contractor shall request clarification and instruction from the Town of Oxford's authorized representative.

Definitions

- Analog: A continuously variable system or value not having discrete levels. Typically exists within a defined range of limiting values.
- Binary: A two-state system where an "ON" condition is represented by one discrete signal level and an "OFF" condition is represented by a second discrete signal level.
- Building Management System (BMS): The total integrated system of fully operational and functional elements, including equipment, software, programming, and associated materials, to be provided by the BMS Contractor and to be interfaced to the associated work of other related trades.
- BMS Contractor: The single Contractor to provide the work of this Division. This Contractor shall be the primary installer, commissioner and ongoing service provider for the BMS work.
- Control Sequence: A BMS pre-programmed arrangement of software algorithms, logical computation, target values and limits as required to attain the defined operational control objectives.
- Direct Digital Control: The digital algorithms and pre-defined arrangements included in the BMS software to provide direct closed-loop control for the designated equipment and controlled variables. Inclusive of Proportional, Derivative and Integral control algorithms together with target values, limits, logical functions, arithmetic functions, constant values, timing considerations and the like.
- BMS Network: The total digital on-line real-time interconnected configuration of BMS digital processing units, workstations, panels, sub-panels, controllers, devices and associated elements individually known as network nodes. May exist as one or more fully interfaced and integrated sub-networks, LAN, WAN or the like.
- Node: A digitally programmable entity existing on the BMS network.
- BMS Integration: The complete functional and operational interconnection and interfacing of all BMS work elements and nodes in compliance with all applicable codes, standards and ordinances so as to provide a single coherent BMS as required by this project.
- Provide: The term "Provide" and its derivatives when used in this aspect shall mean to furnish, install in place, connect, calibrate, test, commission, warrant, document and supply the associated required services ready for operation.
- Furnish: The term "Furnish" and its derivatives when used in this Division shall mean supply and install at the BMS Contractor's cost. BMS Contractor shall connect all furnished items to the BMS, calibrate, test, commission, warrant and document.
- Wiring: The term "Wiring" and its derivatives when used in this aspect shall mean provide the BMS wiring and terminations.



- Protocol: The term “Protocol” and its derivatives when used shall mean a defined set of rules and standards governing the on-line exchange of data between BMS network nodes.
- Software: The term “Software” and its derivatives when used in this aspect shall mean all of programmed digital processor software, preprogrammed firmware and project specific digital process programming and database entries and definitions as generally understood in the BMS industry for real-time, on-line, integrated BMS configurations.

BMS Description

- The Building Management System (BMS) shall be a complete system designed for scalable implementation from small use to large, networked systems. This functionality shall extend into all aspects of the system. Contractor shall be responsible for coordination with the owner’s IT staff to ensure that the BMS will perform in the owner’s environment without disruption to any of the other activities taking place on that LAN.
- Any and all components of the BMS that are connected via field bus or IP network, including the BMS server, supervisory controllers, equipment controllers, user interface software, system and controller programming tools and software applications shall be designed, engineered, and tested to work together as a complete building management system.
- BMS system architecture shall support integration of third party devices using industry accepted protocols such as BACnet, LonWorks, and MODBUS.
- All points of operator user interface shall be on standard PCs, laptops, or mobile computing platforms such as tablets and smart phones that do not require the purchase of any special software from the BMS manufacturer. The primary point of interface on these devices will be a standard web browser.
- Where necessary BMS servers shall be used for the purpose of providing a location for extensive archiving of historical point and alarm and operator transactions.
- The BMS work shall consist of the provision of all labor, materials, tools, equipment, software, software licenses, software configurations and database entries, interfaces, wiring, tubing, installation, labeling, engineering, calibration, documentation, samples, submittals, testing, commissioning, training services, permits and licenses, transportation, shipping, handling, administration, supervision, management, insurance, temporary protection, cleaning, cutting and patching, warranties, services, and items, even though these may not be specifically mentioned in these documents which are required for the complete, fully functional and commissioned BMS.
- The BMS as provided shall incorporate, at minimum, the following integrated features, functions and services:
 - a. Operator information, alarm management and control functions.
 - b. Enterprise-level information and control access.
 - c. Information management including monitoring, transmission, archiving, retrieval, and reporting functions.
 - d. Diagnostic monitoring and reporting of BMS functions.



- e. Offsite monitoring and management access.
- f. Energy management
- g. Standard applications for HVAC systems.
- h. Indoor Air Quality monitoring and control

Quality Assurance

- General
 - a. The Building Management System Contractor shall be a controls contractor who meets one of the following criteria, and supports the Building Management System specified herein.
 - b. Purchases through an authorized BMS distributor of the manufacturer and has been properly trained as an “Authorized Systems” contractor or installer through a qualified program supported and endorsed by the BMS manufacturer. Proof of such shall be submitted prior to the award of any contract or notice to proceed.
 - c. BMS Contractors whether having a direct or indirect authorized relationship with the BMS manufacturer shall provide documentation that this relationship is current and in good standing with the BMS manufacturer prior to any contracts being awarded. The BMS Contractor shall also provide the name and contact information of the manufacturer’s individual responsible for managing the distribution of their BMS products.
 - d. In order to protect the rights of the owner for future service, repairs, &/or additional work, the owner does not intend to be “locked in” to one representative. In order to provide the owner with the choice of who they do business with for work and/or services on this system after the scope of work detailed in this project has been completed, any BMS manufacturer that provides “exclusive” geographic agreements with only one (1) BMS Contractor or representative in this area, shall not be acceptable.
 - e. The BMS Contractor shall have a facility within a 150 km radius of the job site supplying complete maintenance and support services on a 24 hour, 7-day-a-week basis. The BMS Contractor shall have at this facility factory-trained, directly employed and full-time technical staff, spare parts inventory, and all necessary test and diagnostic equipment.
 - f. As evidence and assurance of the BMS Contractor’s ability to support the owner’s system with service and parts, the BMS Contractor must have been in the BMS business for at least the last ten (10) years and have successfully completed at least two (2) projects of comparable value of this contract in the preceding three (3) years.
 - g. The Building Management System architecture shall consist of the products of a manufacturer regularly engaged in the production of Building Management Systems, and shall be the manufacturer’s latest standard of design at the time of proposal submittal.

References:

- b. All work shall conform to the latest applicable Codes and Standards, for the jurisdiction.



Submittals

- Shop Drawings, Product Data, and Samples
 - The BMS Contractor shall submit a list of all shop drawings with submittals dates within ten (10) days of contract award.
 - Allow five (5) working days for the review of each package by the Owner in the scheduling of the total BMS work.
 - Equipment and systems requiring approval of local authorities must comply with such regulations and be approved. Filing shall be at the expense of the BMS Contractor where filing is necessary. Provide a copy of all related correspondence and permits to the Owner.
 - Prepare an index of all submittals and shop drawings for the installation. Index shall include a shop drawing identification number, Contract Documents reference and item description.
 - The BMS Contractor shall correct any errors or omissions noted in the first review.
- At a minimum, submit the following:
 - BMS network architecture diagrams including all nodes and interconnections.
 - Systems schematics, sequences, and flow diagrams.
 - Device schedule listing each BMS server, supervisory controller, equipment controller and any other networked devices in the BMS, including: device name, device type, network identifier, and device identifier (address).
 - Points schedule listing each point in each of the networked devices listed in the device schedule, including: point name, point type, point description, and point identifier (address).
 - Samples of Graphic Display screen types and associated menus.
 - Detailed Bill of Material list for each system or application, identifying quantities, part numbers, descriptions, and optional features.
 - Details of all BMS interfaces and connections to the work of other trades.
 - Product data sheets or marked catalog pages including part number, photo and description for all products including software.

Record Documentation

- Operation and Maintenance Manuals
 - Three (3) copies of the Operation and Maintenance Manuals shall be provided to the Owner's Representative upon completion of the project. The entire Operation and Maintenance Manual shall be furnished on electronic media, and include the following for the BMS provided:
 - Table of contents.
 - As-built system record drawings. Drawings shall represent the as-built condition of the system and incorporate all information supplied with the approved submittal.
 - Manufacturer's product data sheets or catalog pages for all products including software.
 - System Operator's manuals.
 - Archive copy of all site-specific databases and sequences.
 - BMS network diagrams.



- Interfaces to all third-party products and work by other trades.
- The Operation and Maintenance Manual electronic copy shall be self-contained, and include all necessary software required to access the product data sheets. A logically organized table of contents shall provide dynamic links to view and print all product data sheets. Viewer software shall provide the ability to display, zoom, and search all documents.

Warranty

- Standard Material and Labor Warranty:
 - Provide a one (1) year labour and material warranty on the BMS.
 - If within twelve (12) months from the date of acceptance of product, upon written notice from the owner, it is found to be defective in operation, workmanship or materials, it shall be replaced, repaired or adjusted at the option of the BMS Contractor at no expense to the Owner.
 - Maintenance of computer Software Programs: The BMS Contractor shall maintain all software during the standard first year warranty period. In addition, all factory or sub-vendor upgrades to software during the first year warranty period shall be added to the systems, when they become available, at no additional cost.
 - The Owner shall grant to BMS Contractor reasonable access to the BMS during the warranty period. Remote access to the BMS (for the purpose of diagnostics and troubleshooting, via the Internet, during the warranty period) will be allowed.
- The Building Management System shall consist, as required, of the following:
 - Programmable equipment controllers, for directly operating and controlling mechanical equipment.
 - Network thermostats, for directly operating and controlling mechanical equipment.
 - Field bus network, for exchanging data between equipment controllers and between equipment controllers and supervisory controllers
 - Supervisory controller(s), for managing networks of equipment controllers and providing supervisory control services
 - Automation network, for exchanging data between supervisory controllers, distributed user interface(s), and BMS server.
 - Distributed user interface(s), for providing operational access to the BMS
 - BMS server (optional), for managing networks of supervisory controllers, equipment controllers and providing additional supervisory control services.
 - Application software, for defining the sequence of operation of the BMS.
 - Other components required for a complete and working BMS, including network processing, data storage and communications equipment.
 - The system shall be modular in nature, and shall permit expansion of both capacity and functionality through the addition of sensors, actuators, controllers and operator devices, while re-using existing controls equipment.
 - System architectural design shall eliminate dependence upon any single device for alarm reporting and control execution.
 - The failure of any single component or network connection shall not interrupt the execution of control strategies at other operational devices.



- The System shall maintain all settings and overrides through a system reboot.
- Programmable equipment controllers
 - Programmable equipment controllers shall include direct wired input interfaces for monitoring analog and binary signals from field devices.
 - Programmable equipment controllers shall include direct wired output interfaces for controlling field equipment.
 - Programmable equipment controllers shall be BACnet Testing Labs (BTL) certified and be marked with the BTL Label.
 - A BACnet Protocol Implementation Conformance Statement shall be provided for the programmable equipment controllers ten (10) days prior to bidding.
- Supervisory Controllers
 - Supervisory controller(s) shall provide network management services between itself and the equipment controllers which are connected to its communications trunks, between itself and other supervisory controllers, and between itself and any user interface clients that are part of the BMS.
 - Supervisory controller(s) shall be enabled to support and shall be licensed with the following open protocol drivers (client and server) by default:
 - BACnet
 - LonWorks
 - MODBUS
 - SNMP
 - Supervisory controller(s) shall perform control and operating strategies for the system based on information from any equipment controller connected to the BMS.
 - Supervisory controllers shall be capable of peer-to-peer communications with other supervisory controllers and with any user interface client connected to the BMS, whether the user interface client is directly connected, connected via cellular modem or connected via the Intranet or Internet.
 - The communication protocols utilized for peer-to-peer communications between supervisory controllers shall be Niagara 4 Fox, BACnet TCP/IP or SNMP. Use of a different communication protocol for peer-to-peer communications between supervisory controllers is not allowed.
 - The supervisory controller(s) shall employ a device count capacity license model that supports expansion capabilities.
 - The supervisory controller(s) shall provide alarm generation, storage, routing, management and analysis to data sourced from equipment controllers, network thermostats, and direct field inputs, including the following capabilities:
 - Alarming capability shall support being added to any data point in the supervisory controller's database.
 - User-defined criteria shall be used to define when the point meets an alarm condition (is in an alarmed state)
 - Alarm generation shall be selectable for annunciation type and acknowledgement requirements
 - Each alarm record shall include at a minimum, the following information:



- Name of source data point
- Time and date of alarm occurrence
- Acknowledge time, date, and user who issued acknowledgement
- Routing of alarms shall be user-defined, and may include one or more of the following destinations:
 - A dynamically-updated alarm console on the distributed user interface screen.
 - A bound, animated symbol on the distributed user interface screen.
 - Email
 - Pagers, using paging services that initiate a page-on receipt of email message.
 - SMS text message
 - Line printer
 - Another supervisory controller or a BMS Server for alarm centralization and/or archival
 - Alarms that have gone unacknowledged by the specified contact for a specified time shall re-routed to the next specified contact.
 - Alarms shall support customized text instructions to be assigned to them, so that any time an alarm is generated, the instructions are included and presented along with the alarm notification to guide the operator on how to recover from the alarm condition.
 - Authorized operators shall be allowed to add a note to one or more alarm records simultaneously to provide historical context for the event that triggered the alarm.
 - Authorized operators shall be allowed to acknowledge alarms using the alarm console on the user interface; if applicable.
 - Authorized operators shall be allowed to silence an audible alarm sound on the alarm console.
- The supervisory controller(s) shall support the following security functions to prevent unauthorized access:
 - The supervisory controller(s) shall use module code signing to verify the author of programming tool and confirm that the code has not been altered or corrupted.
 - The supervisory controller(s) shall use a Role-Based Access Control (RBAC) for managing user roles and permissions.
 - The supervisory controller(s) shall require strong user passwords.
 - All data in motion and sensitive data at rest in the supervisory controller(s) shall be encrypted.
 - The supervisory controller(s) shall support tagging to utilize Search, Hierarchy, and User Permission functionality.
- The supervisory controller(s) shall provide scheduling capabilities being added to any writable data point in the supervisory controller's database, sourced from any equipment controllers, network thermostats, and direct field inputs.
- The supervisory controller(s) shall support scheduling on a weekly and special event basis.
- Authorized operators shall be allowed to view and adjust the exact start/stop time and dates for the weekly schedule and special events from the user interface.



- The supervisory controller(s) shall support data logging capabilities being added to any data point in the supervisory controller's database, sourced from any equipment controllers, network thermostats, and direct field inputs, including the following capabilities:
 - Data logs shall be organized into ordered collections of time stamped records, herein called histories.
 - Each history record shall include at a minimum, the following information:
 - History name
 - Data point value
 - Time and date when data point was logged
- User-defined criteria shall be used to define when the data point is logged, including, but not limited to the following:
 - When the data point's value, state, or string changes by a user-defined amount.
 - At a regular, repeating, user-defined time intervals.
 - The supervisory controller shall support user-specified local storage capacity for the history records. The data logging behavior upon reaching the specified capacity shall be user-selectable from the following options:
 - Stop: terminate recording.
 - Roll: overwrite older records with newer ones.
 - Histories shall support being viewed by operators in a table or chart format on the user interface.
 - The supervisory controller shall support the automatic exporting of one or more histories, to the BMS server for long term archival.
- The supervisory controller's configuration software shall be embedded into the supervisory controller, enabling an authorized user to access the configuration software using a web browser.
 - The supervisory controller shall be provided with a one (1) year software maintenance license.
- Automation network
 - The automation network shall be based on an IT industry standard of Ethernet TCP/IP. Where used, LAN controller cards shall be standard "off the shelf" products available through normal PC vendor channels.
 - The BMS shall be able to network multiple user interface clients, supervisory controllers, and equipment controllers.
 - All BMS devices on the automation network shall be capable of operating at a communication speed of 100 Mbps, with full peer-to-peer network communication.
 - Supervisory controllers and BMS server shall reside on the automation network.
 - The automation network will be compatible with other enterprise-wide networks. Where required, the automation network shall be connected to the enterprise network and share resources with it by way of standard networking devices and practices
- Graphic Displays
 - Provide a color graphic system flow diagram display for each system with all points as indicated on the submitted point list
 - User shall access the various system schematics via a graphical penetration scheme and/or menu selection



- Installation
 - BMS Wiring
 - All conduit, wiring, accessories and wiring connections required for the installation of the Building Management System, as herein specified, shall be provided by the BMS Contractor. All wiring shall comply with the requirements of all local and national electric codes.
 - All BMS wiring materials and installation methods shall comply with BMS manufacturer recommendations.
 - The sizing, type and provision of cable, conduit, cable trays, and raceways shall be the design responsibility of the BMS Contractor. If complications arise, however, due to the incorrect selection of cable, cable trays, raceways and/or conduit by the BMS Contractor, the Contractor shall be responsible for all costs incurred in replacing the selected components.
 - Class 2 Wiring
 - All Class 2 (24VAC or less) wiring shall be installed in conduit unless otherwise specified.
 - Conduit is not required for Class 2 wiring in concealed accessible locations. Class 2 wiring not installed in conduit shall be supported every five (5) feet from the building structure utilizing metal hangers designed for this application. Wiring shall be installed parallel to the building structural lines. All wiring shall be installed in accordance with local code requirements.
 - Class 2 signal wiring and 24VAC power can be run in the same conduit. Power wiring 120VAC and greater cannot share the same conduit with Class 2 signal wiring.
 - Provide for complete grounding of all applicable signal and communications cables, panels and equipment so as to ensure system integrity of operation. Ground cabling and conduit at the panel terminations. Avoid grounding loops.
 - BMS Line Voltage Power Source
 - 120-volt AC circuits used for the Building Management System shall be taken from panel boards and circuit breakers
 - Circuits used for the BMS shall be dedicated to the BMS and shall not be used for any other purposes.
 - Power line filtering
 - Provide internal or external transient voltage and surge suppression for workstations and controllers. Protection shall have:
 - Dielectric strength of 1000 V minimum
 - Response time of 10 nano seconds or less
 - Transverse mode noise attenuation of 65db or less
 - BMS Raceway
 - All wiring shall be installed in conduit or raceway except as noted elsewhere. Minimum control wiring conduit size 1/2".
 - Where it is not possible to conceal raceways in finished locations, surface raceway (Wire mold) may be used as approved by the owner.



- All conduits and raceways shall be installed level, plumb, at right angles to the building lines and shall follow the contours of the surface to which they are attached.
- Flexible Metal Conduit shall be used for vibration isolation and shall be limited to three (3) feet in length when terminating to vibrating equipment. Flexible Metal Conduit may be used within partition walls. Flexible Metal Conduit shall be UL listed.
- Penetrations
 - Provide fire stopping for all penetrations used by dedicated BMS conduits and raceways.
 - All openings in fire proofed or fire stopped components shall be closed by using approved fire resistive sealant.
 - All wiring passing through penetrations, including walls shall be in conduit or enclosed raceway.
 - Penetrations of floor slabs shall be by core drilling. All penetrations shall be plumb, true, and square.
- BMS Identification Standards
 - Node Identification. All nodes shall be identified by a permanent label fastened to the enclosure. Labels shall be suitable for the node location.
- BMS Panel Installation
 - The BMS panels and cabinets shall be located at an elevation of not less than 1M from the bottom edge of the panel to the finished floor. Each cabinet shall be anchored per the manufacturer's recommendations.
 - The BMS Contractor shall be responsible for coordinating panel location(s) with arena operations staff.
- Input Devices
 - All Input devices shall be installed per the manufacturer recommendation.
- HVAC Input Devices – General
 - All Input devices shall be installed per the manufacturer recommendation.
 - Locate components of the BMS in accessible local control panels wherever possible.
 - The contractor shall install all in-line devices such as temperature wells, pressure taps, airflow stations, etc. as required.
- Outside Air Sensors
 - Sensors shall be mounted on the North wall to minimize solar radiant heat impact.
 - Sensors shall be installed with a rain proof, perforated cover.
- Building Differential Air Pressure Applications (-1" to +1" w.c.):
 - Transmitters exterior sensing tip shall be installed with a shielded static air probe to reduce pressure fluctuations caused by wind.
 - The interior tip shall be inconspicuous.
- Space Sensors:
 - To be stainless steel plate type
- HVAC Output Devices
 - All output devices shall be installed per the manufacturer's recommendation.



- Actuators: All control actuators shall be sized capable of closing against the maximum system shut-off pressure. The actuator shall modulate in a smooth fashion through the entire stroke.
- Training
 - The BMS Contractor shall provide the following training services:
 - Two days of on-site orientation by a system technician who is fully knowledgeable of the specific installation details of the project. This orientation shall, at a minimum, consist of a review of the project as-built drawings, the BMS software layout and naming conventions, walk-throughs of the facility to identify panel and device locations.
 - Use of the system software, with training in all aspects associated with facility operation and daily requirements.
 - Training will also include additional Town of Oxford staff, as BAS administrators
- Commissioning
 - Fully commission all aspects of the Building Management System work.
 - Prepare a check sheet that includes all points for all functions of the BMS.
 - Submit the check sheet to the owner for approval.
 - The owner will use the check sheet as the basis for acceptance with the BMS.
- Sequence of operation
 - The sequence of operations, as part of the complete data base, is to be compiled and submitted as part of the BMS shop drawing package, within 5 days of conditional award.
 - All sequences and performance is to be based upon the latest efficiency standards and operational parameters for this facility type.
 - The standards which the sequence of operations will adhere to are to be included in the submittals.
 - All sequences and performance criteria are to meet the latest performance standards for energy efficiency performance, indoor air quality & rink performance.
- The system must be configured for on-going system performance measurement and optimization, based upon the Energy Consumption Normalization values.

COMMISSIONING, including Functional Performance Testing

The commissioning is to be an intensive exercise encompassing all integrated BAS system components, within the facility. The purpose is to ensure that all work has been completed as specified, submitted, and meets all requirements. It is to be executed as to assist operating staff training and familiarization with new systems. It will also be used to record the associated test data in order to advance the building systems from a state of substantial completion to full dynamic operation.

Commissioning steps will consist of:

- Step One – Installation Verification.
- Step Two – System Start-Up.
- Step Three – Functional Performance Testing.
- Operational staff training is essential and will run concurrently with steps one through three.

- On-going, monthly Measurement & verification including operator training, as a component of the M&V, during the full “ice-in” season- i.e. Oct.1,2018-March 31,2019

Narrative Descriptions:

- A narrative description of the design, functionality and performance intents of the systems and their intended modes and sequences of operation, are to be included for the system to be commissioned.

Commissioning & Functional Performance Test procedures:

- The FPT procedures at the minimum shall consist of the following sections:
 - Narrative Description:
 - A narrative description of the design, functionality and performance intents of the systems and their intended modes of sequences of operation, are to be included for each system to be commissioned.
 - Testing Prerequisites:
 - This section shall contain verification that primary mechanical, electrical, and controls systems that support or interact with the system that the FPT is prepared against are completed, tested and operational.
 - Installation Verification:
 - This section is to contain verification that the system installation is completed and is ready for commissioning.
 - Commencement of Functional Performance Testing:
 - This section records the date and time of the start of system commissioning.
 - System Condition Prior to Starting Performance Testing:
 - This section records the current set points and parameters of the system at the start of commissioning.
- Functional Performance Test:
 - This section shall provide the following:
 - Clearly illustrated and defined sequential steps required to set parameters and conditions required to test components and functions throughout intended ranges of operation.
 - Full range of checks and tests carried out to determine if connections, components, subsystems, systems and interfaces between systems function in accordance with the contract documents, design intents and submittals.
 - All modes and sequences of control operations, interlocks and conditional control responses and specified responses to abnormal emergency conditions.
- End of Functional Performance Test:
 - This section records the date and time of the end of system commissioning.
- Field Notes:
 - This section records notes or remarks during system commissioning.



BAS CONTROL PANELS

- All control panels shall be factory constructed, incorporating the BMS manufacturer's standard designs and layouts. All control panels shall be constructed in a CSA approved panel shop and come with appropriate CSA approved labelling.
- Control panels shall be fully enclosed, with perforated sub-panel, hinged door, and slotted flush latch.
- Control panels shall include keyed lock.
- In general, the control panels shall consist of the DDC controller(s), display module (if a component of the BAS) and I/O devices—such as relays, transducers, and so forth—that are not required to be located external to the control panel due to function. Where included the display module shall be flush mounted in the panel face.
- All I/O connections on the DDC controller shall be provide via removable or fixed screw terminals.
- Low and line voltage wiring shall be segregated. All provided terminal strips and wiring shall be UL listed, 300-volt service and provide adequate clearance for field wiring.
- All wiring shall be neatly installed in plastic wire trays.
 - i. Wiring outside of the wire trays is to be neatly wire tied and wrapped.
- A 120 volt convenience outlet, fused on/off power switch, and required transformers shall be provided in each enclosure.

POWER SUPPLIES

- DC power supplies shall be sized for the connected device load. Total rated load shall not exceed 75% of the rated capacity of the power supply.
- Input: 120 VAC +10%, 60Hz.
- Output: 24 VDC.
- Line Regulation: +0.05% for 10% line change.
- Load Regulation: +0.05% for 50% load change.
- Ripple and Noise: 1 mV rms, 5 mV peak to peak.
- An appropriately sized fuse and fuse block shall be provided and located next to the power supply.

A power disconnect switch shall be provided next to the power supply.

BAS field points

This will provide full scheduling, automatic operation and control of equipment to match facility use, occupied hours and will utilize outdoor and internal temperatures to aid efficiency processes. The BAS will integrate all equipment listed and consumption targets, providing a means to significant kWh reduction annually. The areas listed below currently operate with no automatic features, resulting in a continual cycle of over-consumption.

The system must integrate the following:

- All electric heaters in fourteen (14) rooms, plus
 - The installation of new heaters in nine (9) of those rooms. The 14 rooms included are:



- Referee room (new heater)
- WR beside the female changing room (new heater)
- 5- Changing rooms (# 1-5 inclusive) (new heater in each of 5 changing rooms)
- Male WR, 1st fl. (new heater)
- Female WR, 1st fl. (new heater)
- Rink operator office, 2nd fl.
- Hospitality Room
- Storage rm. 2nd fl.
- Kitchen
- Public WR, 1st fl.
 - The existing electric baseboard heaters (in the rooms noted above) are to be replaced with new, Commercial grade, wall mounted, fan forced flow electric heaters, sized 50% smaller than the existing heater(s) rating.
 - All heaters (new and original) are to be controlled via BAS, utilizing tamper proof SS wall temperature sensors. The heaters will maintain space set-points via scheduling
- The flood water, in-direct fired water heater (tank water set-point will be maintained to meet rental needs)
 - The flood-water tank is currently maintained continually at set-point. Automation will shut it down during extended unoccupied times, and permit regular operation during rental hours, to meet flood water needs. Scheduling is to allow 60 minute recovery time.
- Both de-humidifiers
 - Following the installation of the exhaust fan louvers / dampers, these are to be controlled, via the BAS, to maximize the IAQ, providing a reduced refrigeration plant load.
- Both electric domestic hot water heaters
 - These are to be energized when required for occupancy. Otherwise, they are to be de-energized.
- Brine pump-compressor interlock
 - The brine pump currently runs continually from the date of plant start-up, until shut-down, six (6) months later. The brine pump is to be controlled via the BAS, to permit it to be shut down for portions of any extended, unoccupied times. Compressor status, interior and exterior temperatures and conditions, as well as input from the rink operator will determine the extent of the shut downs, and is to be monitored for maximum efficiency. The timeframes will vary, depending upon existing conditions and occupancy demands
 - At all times, optimal ice-quality during all occupied times is to have priority
- Four wall mount exhaust fans



- The exhaust fans are to operate to maximize IAQ, based upon indoor and outdoor conditions, rink use and status of the dehumidifiers.
- Timed, manual over-ride available to accommodate urgent exhaust requirements.
- Two space temperature sensors
 - To provide space temperature data. To be installed near the main entry and the players benches.
- Two space humidity sensors
 - To provide space humidity data. To be installed near the main entry and the players benches.
- An outdoor air temperature sensor
 - To aid creation of parameters for programming automatic, efficient operation of the facility.
- Building (indoor-outdoor) differential pressure transmitter.
- Change-of-state (CoS) & temperature logging to be available and set-up for:
 - Compressor #1
 - Compressor #2
 - Brine pump
 - Cooling tower fan
 - Cooling tower pump
 - Return brine temperature unoccupied reset control
 - This data is to aid Measurement & Verification (M&V) plus, data in which to aid fine-tuning of plant operation.
- Full access for data logging and scheduling will be available via client supplied PC / laptop.
 - Two (2) full days of initial training + on-going review of 4 hrs./month during the “ice-in” season.

Sequence of operation

The final details of the sequence of operation are to be determined by the BAS installation company, working in conjunction with the Town of Oxford representative(s) and arena operator(s).

The two overriding strategies are:

1. Optimal quality ice.
2. On-going energy efficiency.

The sequence of operations for the entire facility will be governed by the rental schedule to be provided by the Town of Oxford re Arena rentals.

Scheduling will be the pre-eminent strategy; i.e. all unnecessary loads will be shut-down during unoccupied times, and reactivated in time to accommodate occupied hours;

- All space temperatures
 - All rooms are to have auto set-point control with unoccupied set-back c/w optimal start to meet scheduling requirements.
- Flood water tank
 - To be controlled to provide shut-down during extended unoccupied periods, c/w re-energizing prior to scheduled ice rentals. Allow a 60 minute recovery.
- Two humidifiers
 - The humidifiers are to operate when internal conditions are such that their operation will reduce the load on the refrigeration plant, leading to overall energy reduction.
- Two domestic hot water tanks
 - Are to be de-energized during extended unoccupied periods, but re-energized to ensure hot water readily available at the time of scheduled occupancy.
- Four wall mount exhaust fans
 - The four wall exhaust fans and associated dampers are to operate when internal conditions warrant their operation. Their operation will be predominantly during the “ice-out” season, responding to temperature, humidity and /or dust during the exhibition. Temperature and humidity operation will be automatic via the BAS, with dust/fume extraction via manual override.
 - Any operation during the “ice-in” season must be via the BAS, and has to provide an overall efficiency improvement to the refrigeration plant.
- Brine pump
 - The brine pump currently runs continually from the date of plant start-up, until shut-down, six (6) months later. This continual operation is to be interrupted via the BAS, to permit it to be shut down for portions of any extended, arena unoccupied times. Compressor status, interior and exterior temperatures and conditions, as well as input from the rink operator will determine the extent of the shut downs, and is to be monitored for maximum efficiency. The timeframes will vary, depending upon existing conditions and occupancy demands.
 - At all times, optimal ice-quality during all occupied times is to have priority
- All remaining field points listed under BAS field points are to be utilized for data logging, in order to trend performance, and provide some of the input data upon which to base monthly M&V adjustments on.



- This data is also to be reviewed monthly during M&V with the rink operator, to aid identification of plant efficiency opportunities.

Measurement & Verification (M & V)

This should be sufficiently detailed to provide clarity to the effectiveness of all measures; and all reports should be open and accessible to the client, with regular reviews.

An outline of an M&V plan is as follows, and is to commence immediately following commissioning.

- A monthly review, consisting of:
 - An on-site inspection, to observe conditions and operations
 - To gather the complete refrigeration plant logs
 - A review of the BAS, all operating parameters and scheduling
 - A collection of the data logging information from the BAS for the refrigeration plant equipment
 - An overall review with the rink operator, including additional training
 - A Year To Date (YTD) analysis of the data collected (see Energy Consumption Normalization)
 - A fine-tuning of any required procedures or parameters to remain on track for the savings.
- The M & V period will be, at a minimum, 6 months, & must include an entire “ice-in” season.

Energy Consumption Normalization

In order to accurately compare and verify efficiency measures & project performance, energy consumption values will need to be normalized. This refers, generally, to a means of measuring consumption reduction against a constant value (or values) in order to ascertain the effectiveness of efficiency measures implemented. Considering the historical use patterns, normalization utilizing operational type and time represents the most effective method for this arena. This facility will require a minimum of six (6) months measurement and verification (M&V) of the project and efficiency measures implemented, in order to make comparisons against historical norms. The result of those comparisons will be considered an accurate measure of consumption reduction and efficiency improvements. As part of an on-going improvement process, those values will then be used as a baseline in which to further improve upon.

The three (3) year averages below, from October 2015- March 31, 2017, provides the historical data baseline, which all energy projects are compared.

The 2017-2018 season, will form the base line data upon which the 2018-2019 season performance will be compared. The 2018-2019 season will also be compared against the three (3) year historical average, to ensure, and provide measurement of on-going efficiency trending.

The Town of Oxford will provide the raw data from the 2017-2018 season as well as access to the refrigerant plant logs, in order for the service provider to calculate the 2017-2018 baseline data.



October 2015- March 31, 2017

3 year average

29.97	Low pressure (psi)	
149.86	High pressure (psi)	
38.66	Brine pp. pres. (psi)	
18.42	Brine out (supply) F	
19.78	Brine in (return) F	(Slab temp @ 22-22.5F)
57.75	Comp. 1 cooling water F	
	Comp. 2 cooling water F	
2.39	Rink Temp. C	
-0.52	OAT C	
163.33	Ice in days /annum (total 3919 hrs. avail.)	
425.25	Rental Hrs./annum (10.8% of total ice-in time)	

Arena consumption vs. rental profile- October 2014- March 31, 2017

3-year avg. annual ice season consumption kWh	282733.33
3-year avg. annual ice season rental hours	425.25
3-year avg. annual ice season consumption per rental hour kWh	664.86
3-year avg. annual ice season consumption per hr. (163.33 days x 24 hrs./day) kWh	72.13
3-year av. Annual total consumption kWh	348266.67
3-year avg. lighting consumption kWh	60060
Miscellaneous loads kWh	5473.34

In April 2019, the BAS contractor is to have a completed report for the 2018-19 “ice-in” season compiled. It is to include, as a minimum, the full season M&V report, including all energy comparison normalization values, for both the refrigeration plant as well as the arena consumption vs rental profile.

The report is to be submitted via email to the Town of Oxford CAO, and followed up with a meeting, to review in detail all aspects of the report, and the overall performance of the previous season.

NOTE: This project is subject to a 10% holdback, which will be released for payment following the April 2019 meeting, and the review of the M&V / energy comparison normalization report.



VALUE ADDED

- This aspect is intended to provide all proponents the opportunity to demonstrate a unique flexibility and approach to the Town of Oxford; providing an opportunity to clearly illustrate their ability to compile and deliver ideas, methodologies, components and integrated processes, all of which would enhance their overall scope, bringing a clearly defined “Value Added” component.
- The overall project scope of work or general intent, is not intended to restrict the Value Added component, but instead, should be seen as an opportunity to enhance submittals.



ATTACHMENT "A"

NOTE: These Terms and Conditions and the Supplements for the Town of Oxford shall apply to those documents that reference them specifically. In the event of any conflict or disagreement between these Terms and Conditions and the Invitation documents, the Invitation documents have precedence and will be assumed to be correct.

These Terms and Conditions are intended to cover a wide range of procurements, including goods and services. As such, not all clauses will be applicable in all situations. If Bidders have questions regarding any of these Terms and Conditions, they must call the contact person named on the Invitation form. To satisfy special requirements, supplementary Terms and Conditions may also apply to some acquisitions. If this is the case, the Invitation documents will reference any such documents, in addition to these Terms and Conditions.

Failure to completely comply with these Terms and Conditions could cause the Bidder's Bid to be disqualified.

1. Definitions

Bid- Bidder's written offer to provide the required goods or services at a given price or rate, or any similar document issued in reply to an Invitation. May also be referred to as a Proposal, Tender, Quotation, Submission, Response or similar name.

Bidder- Any person, business or Consortium that submits a bid.

Broader Public Sector- Any governmental or government-funded entity within a Province, including the MASH sector (Municipal governments, Academic institutions such as universities and community colleges, School boards and Hospitals). This includes all government departments, agencies, boards, offices and commissions and Crown Corporations.

Consortium- Two or more Bidders having no formal corporate links, who submit a joint bid.

"Contract" -The legal agreement, if any, entered into between the Town of Oxford and the successful bidder following approval of the Contract by the Town of Oxford, and the settlement, execution and delivery of the same by each party to the Contract.

Fax Bid- A Bid submitted by means of facsimile transmission over telephone lines.

Invitation- A formal request for prices or responses, in printed form, with sealed Bids, faxed Bids or similar responses opened at a given time. May also be referred to as a Tender, Request for Quotations, Request for Proposals, Request for Information, Pre-Qualification, Request for Expression of Interest or similar name. The Invitation incorporates any addenda that may be issued.



“Losses”- Means in respect of any matter all:

- (a) direct or indirect, as well as
- (b) consequential,

Claims, demands, proceedings, losses, damages, liabilities, deficiencies, costs and expenses (including without limitation all legal and other professional fees and disbursements, interest, penalties and amounts paid in settlement whether from a third person or otherwise).

Paper Bid- A Bid submitted in printed form, not through facsimile or other electronic medium.

Denotations: The words "may" "could" or "should" denote the permissive. The words "must", "shall" or "will" denote the imperative.

2. Date, Time and Place of Closing and Opening; Late Bids

Invitations will close at the time, date and location specified in the Invitation documents.

All Bids must be received in their entirety *at or before* the closing time specified; Bidders are responsible for ensuring that their Bid, however submitted, is received on time and at the location specified.

All times are local times (Atlantic Time).

Bids received late, or not received completely by the closing time will not be considered; the Reception Area time clock (located at Town Hall, 105 Main Street, Oxford, Nova Scotia) will be assumed to be correct in the event of dispute. Late bids will be rejected/returned.

All Bids must be sent to the Town of Oxford, Town Hall building (as identified in the Invitation documents), and will be opened there.

Bids will not be opened publicly at the time of closing. After a full review and evaluation of all submittals, the successful proponent will be contacted. Following that, the unsuccessful proponents will be notified. Review and assessment will require approximately 3 business days.

3. Methods of Submission

General

Bids must be legible and complete, must include the Invitation number and identify the Bidder's full legal name and address and supply all information requested; incomplete or illegible Bids are subject to rejection.

All bids received must be signed and dated by the authorized signatory for the bidder, with name and title clear and legible, on signature page of attachment A.



All questions or areas on the Invitation form must be answered, even if it is only to indicate that the referenced item is not available; blank items will be assumed to be unavailable and may result in rejection of Bidder's Bid.

Where the price summaries of the Bid do not fully explain the cost implications of an item, additional pricing detail should be attached, and shall form part of the Bid.

Prices should be broken down as requested; if the cost of an item has been included in some other item, enter "Included in Item [nn]".

Paper Bids

Bids must be enclosed in a sealed, opaque envelope or package. The Bidder's name, the Invitation number and the Invitation closing date should be clearly visible on the outside of the envelope or package. The Bid must be signed by an appropriate authorized official of the firm submitting the Bid.

Fax Bids

A Bid may be submitted by facsimile (fax) **unless** the Invitation documents state that fax Bids are not acceptable. Fax Bids may not be acceptable where the Bid must be accompanied by original documents, plans, deposits, or physical samples. Fax Bids are accepted for the convenience of the Bidder; the Town of Oxford cannot ensure the confidentiality or error-free receipt of fax Bids. A Bidder submitting a Fax Bid does so at its own risk. Submit Fax Bids to the **Town of Oxford office only**; *do not* send the Bid to any other fax number unless specifically directed to do so.

The Bid must be signed by an appropriate authorized official of the firm submitting the Bid.

4. Obtaining Documents

Bids are to be submitted on the official Invitation forms as issued through the Town of Oxford office; failure to use the correct forms could result in the Bid being rejected.

It is the Bidder's responsibility to obtain Invitation documents at their cost.

Bidders must not alter any portion of the Invitation or associated documents, with the exception of adding the information requested by the Invitation. Bids containing clauses additional to the Invitation that are "qualified" or "conditional" may be rejected.

The Invitation, or any supplementary document or portion thereof, is proprietary information and must not be used by the Bidder for any purpose other than the submission of Bids without the permission of the Town of Oxford.

Invitation documents are available directly from the Town of Oxford office at 105 Lower Main Street, Oxford, NS (Town Hall), or by email from cao@town.oxford.ns.ca



Notices of tenders are viewed on the Town of Oxford website at www.town.oxford.ns.ca and the Nova Scotia Public Tenders website at www.gov.ns.ca/tenders.

5. Vendor Registration

Bidder Registration: There is no requirement for Bidders to register with the Town of Oxford Supplier Registry to receive Invitation documents or submit Bids.

Corporate Registration: All Bidders must comply with the Nova Scotia Corporations Registration Act or the Partnerships and Business Names Registration Act. Bidders located outside Nova Scotia (which are not otherwise carrying on business in Nova Scotia) are expected to be registered in an equivalent manner in their respective jurisdictions. Verification of registration and good standing may be required before an award is made to a successful Bidder.

All Bidders must maintain their tax status in good standing. Verification of tax status with the Department of Finance and/or Canada Customs and Revenue Agency (GST/HST) may be required before an award is made to a successful Bidder.

6. Liability for Costs

Bidders are responsible for their own expenses in preparing, delivering or presenting a Bid and for subsequent negotiations with the Town of Oxford, if any. The Town of Oxford will not defray any costs incurred by a Bidder in responding to an Invitation.

The Town of Oxford will not be responsible for any costs, expenses, losses, damages or liability incurred by the Bidder as a result of, or arising out of, the submission of any Bid, or due to the Town of Oxford not accepting or rejecting any Bid.

7. Alternative Bids; Altering Bids Already Submitted

Alternative Bids are multiple replies to an Invitation, all or any of which are open for consideration. If Alternative Bids are being made, each alternative should be submitted as a complete, separate and independent Bid, and the Bid form or fax must be identified with words such as "Alternative A", "Alternative B", etc.

Multiple Bids submitted by the same Bidder and not clearly identified as Bid revisions will be assumed to be Alternative Bids.

Bids already submitted may be amended prior to closing a) by submitting an amendment identifying the plus or minus variance to the original Bid, or b) by sending in a complete new Bid, clearly indicating it replaces the previously submitted Bid. Any such revision must clearly identify the Invitation number and closing date of the Bid being submitted. A Bid revision replaces any other Bid revisions previously submitted by the Bidder; only the last of any Bid revisions received will be accepted.



Any Bid submitted in response to an Invitation may be withdrawn by written request to the Town of Oxford, but cannot be withdrawn, altered or changed in any way after the Invitation closing date and time.

All requests for withdrawal, amendment or submission of a replacement Bid must be submitted in writing on company letterhead or equivalent and be signed by an authorized official of the Bidder.

8. Supporting Documents

A brief supplementary statement may be included with the response to an item to give the evaluators a clear understanding of the products/personnel proposed and their ability to perform the specified tasks.

In addition to the responses requested in the Invitation, Bidders may include specifications on some or all proposed items for evaluation purposes.

Supporting documents should be suitably cross-referenced to the Invitation.

9. Unit Prices and Extensions; Taxes excluded; Currency; Shipping Costs

All prices should be extended and totaled. The extended price is derived by multiplying the unit price by the quantity of units required.

In the event of an error in calculation of the extended price, the unit price will be taken as correct and will govern in the Bid evaluation and contract administration.

Do not include any Provincial or Federal sales taxes in the price.

All prices should be quoted in Canadian dollars unless other currencies are specifically requested.

Shipping, cartage, loading, insurance and handling charges must be included in the total price. If these charges have not been stated specifically, it will be assumed that they have been included in the Bid price, i.e. FOB to the destination(s) listed in the Invitation. The Town of Oxford will not assume responsibility for any goods or services until they have been delivered to the destination(s) specified in the Invitation.

Unless stated otherwise in the Invitation, a firm, all-inclusive price is required, i.e. hourly rates or "Time and Materials" are not acceptable responses.



10. Duration of Bid/Award Prices

If the Bid is accepted, prices must remain firm for the duration of the contract unless otherwise specified.

Unless stated otherwise in the Invitation, Bids must remain open to acceptance and are irrevocable for a period of 90 days after the Invitation closing date.

11. Payment Terms and Discounts

If special payment terms or schedules are required, these must be specified in the Bid; otherwise, the Town of Oxford payment terms (net 30 days) will apply.

Early payment discount terms (minimum period 10 days) may be considered in the evaluation of a Bid.

Payment of term discount invoices will be calculated from the date the invoice or goods/services have been received, whichever is later.

Discount terms must appear on the Bid, and on the invoice.

12. Delivery

Where the Invitation includes a mandatory delivery schedule, the Town of Oxford will assume that the Bidder can meet the requested schedule and is satisfied that the goods or services required will be available for delivery on the requested date(s).

If Bidders wish to specify a delivery schedule different from that requested in the Invitation, they must provide specific delivery dates or a schedule in calendar days from the date a Purchase Order is issued. Bids that do not meet the delivery schedule as requested in the Invitation may be rejected.

Time is of the essence, and Bidder's delivery schedule is legally binding. The Town of Oxford reserves the right to assess penalties or cancel awards to Bidders who fail to meet their stated delivery or completion dates.

13. Quality/Complete Product

Unless otherwise stated in the Invitation, all material included in the Bid must be new, first quality goods; used, refurbished, second, obsolete, discontinued or demonstrator items must only be proposed if the Invitation specifically requests or otherwise states that such goods will be allowed.

By submitting a Bid, Bidder guarantees that, unless the Invitation specifies otherwise, all components required to make the required equipment or system operable or to deliver the required services have been included in the Bid or will be provided at no additional charge to the Town.



Where applicable, the end user must be provided with complete operation manuals, warranty registration forms, user licenses/ authentications and/or other associated documentation normally provided by the manufacturer, reseller, installer and/or consultant.

14. Substitutions and Equivalents, Discontinued Items

The specifications in the Invitation define the minimum acceptable goods and/or services required. Minor deviations from the specifications may or may not be permitted at the sole discretion of the Town.

The Invitation may specify items by brand name and/or model number to designate the design, type of construction, quality, functional capability and/or performance level of the product requested.

If an item has been discontinued during the Invitation process, or is otherwise unavailable, the Town of Oxford will cancel the Invitation, or will issue an Addendum to update the specification. Bidders should notify the Town immediately when they become aware of any discontinuation of specified items.

If Bidders feel that they can provide items with equivalent or better functionality at the same or lower cost, they may be able to offer a substitute item. Substitutions offered must be of equal or better quality and clearly identified and accompanied by brochures and technical information to permit evaluation of the item being offered. Substitution items must be identified by manufacturer's stock/part number and other descriptive information to establish equivalency. Substitutions offered without documentation sufficient to determine equivalency may be rejected as non-compliant.

The Town of Oxford reserves the right to inspect or test any product bid to determine equivalency and may require demonstrator or sample items in order to be able to evaluate the items proposed. The Town will be the sole judge of equivalency.

Specifications may, for technical or logistical reasons, require that the items specified be supplied without substitution.

15. Standards and Certification

Where applicable, all equipment must be certified by the appropriate regulatory agencies (e.g. Canadian Standards Association, Communications Canada, Transport Canada, Canadian Gas Association, Health Canada, etc.), and/or must be approved by the appropriate Provincial agency (e.g. Office of the Fire Marshal).



16. Addenda, Corrections or Extensions of the Invitation

The Town of Oxford reserves the right to modify the terms of the Invitation at any time prior to closing, at its sole discretion.

The Town of Oxford will make information available to the public regarding any changes made to the Invitation, or any change in the closing date or time by posting the addenda on the Provincial website at www.gov.ns.ca/tenders. Bidders are responsible for ensuring that they are aware of and have complied with any Addenda. All addenda will form part of the Contract Documents.

When these changes occur within five business days of the closing date, the closing date may be extended to allow for a suitable Bid preparation time.

17. Environmental Considerations

The Town of Oxford may seek to purchase recycled and/or environmentally sensitive products where practical and effective.

Where appropriate, the integration of environmental considerations into Invitations may be noted in the specifications; the specifications will identify these considerations to ensure that suppliers have a full understanding of the conditions to be met.

18. Warranty & Warranty of Title

The Bidder must describe the duration, type (e.g. on-site, depot, ship-in or carry-in) and terms of the manufacturer's warranty on all goods.

If the Bidder provides any additional/ supplementary warranty coverage, describe this as well.

If warranties can be upgraded or extended, identify the upgrade costs separately. Do not include warranty upgrade or extension costs in the Bid price unless the Invitation specifically states that the upgrade is a mandatory requirement.

If local service is a requirement of the Invitation, describe the means by which this will be accomplished, i.e. by "own forces" or through a contractual arrangement with a third party (which must be identified - see Section 20 "Subcontractors and Consortium Bids").

Title to all materials and equipment shall be furnished free and clear of all liens, charges or other encumbrances.

19. No Restriction on Fair Use

The Bidder warrants that there are no patents, trademarks or other rights restricting the use, repair or replacement of the goods or services furnished or any part thereof. The Bidder agrees to indemnify and save harmless the Town of Oxford from and against all claims filed or prosecuted in



any manner because of such use, repair or replacement of the goods or services being a violation of any patent, trademark, or other right.

20. Subcontractors and Consortium Bids

The use of a subcontractor is permitted and encouraged where this will result in skills and technology transfer to the Town of Oxford.

Names of all Subcontractors and/or Consortium members, and the services they will provide, must be listed on or attached to the Bid, if requested.

If a Consortium Bid is being submitted, one of the Bidders must be prepared to take overall responsibility for successful provision of the goods or services, and this must be defined in the Bid. Failure to do so may result in disqualification of the Bid.

"Own Forces" may only be named as Subcontractors when the Bidder is equipped to carry out and normally carries out the work noted.

If subcontractors (including "own forces") are named, work must be carried out by the named forces and substitution of others will not be allowed without prior approval of the Town.

21. Right to Reject; Financial Stability; Non-Compliance

Failure to comply with any of the mandatory terms or conditions contained or referenced in the Invitation documents may result in the rejection of the Bid.

All of the terms, conditions and/or specifications stated or referenced in the Invitation are assumed to be accepted by the Bidder and incorporated in the Bid.

Bidders may be required to demonstrate financial stability, authorization to provide the goods/services being acquired, and/or regulatory agency approval, licensing or registration as needed, or otherwise clarify Bidder's capability to satisfy the Invitation requirements. The Town of Oxford reserves the right to reject Bids from any Bidder that it feels is incapable of providing the necessary labour, materials, equipment, financing or management resources to perform the work or supply the goods in a satisfactory and timely manner.

The Town of Oxford reserves the right to waive minor non-compliance where such non-compliance is not of a material nature in its sole and absolute discretion, or to accept or reject in whole or in part any or all Bids, with or without giving notice. Such minor non-compliance will be deemed substantial compliance and capable of acceptance. The Town of Oxford will be the sole judge of whether a Bid is accepted or rejected.

The Town of Oxford reserves the right to split an award amongst Bidders as deemed in the best interests of the Town.



22. Cancellation; No Award

Issuing an Invitation implies no obligation on the Town of Oxford to accept any Bid, or a portion of any Bid submitted. **The lowest or any Bid will not necessarily be accepted.**

Invitations may be cancelled in whole or in part without penalty, when a) the price Bid exceeds the funds allocated for the purchase; b) there has been a substantial change in the requirements after the Invitation has been issued; c) information has been received by the Town of Oxford after the Invitation has been issued that the Town feels has substantially altered the procurement; or d) there was insufficient competition in order to provide the level of service, quality of goods or pricing required.

If no compliant Bids are received in response to an Invitation, the Town of Oxford reserves the right to enter into negotiations with one or more vendors in order to complete the procurement.

The Town of Oxford will be the sole judge of whether there is sufficient justification to cancel any Invitation.

No action or liability will lie or reside against the Town of Oxford in its exercise of its rights under this section.

23. Governing Laws and Trade Agreements

Unless the Invitation documents specifically state otherwise, the Invitation, all Bids, and any subsequent contracts will be construed and interpreted in accordance with the laws of the Province in which the Invitation was issued.

Invitations subject to the Atlantic Procurement Agreement, the Agreement on Internal Trade, or any other inter-provincial agreement, will be specifically identified as such in the public notice and/or the Invitation documents.

Copies of any applicable trade or procurement agreements and/or legislation can be obtained by contacting the Town of Oxford.

Bidders agree to comply with all applicable laws, regulations and standards, including all labour, occupational health & safety, and worker compensation requirements of the Province of Nova Scotia.

The Town of Oxford may consider and evaluate any Bids from other jurisdictions on the same basis that the purchasing authorities in those jurisdictions would treat a similar Bid from a supplier located in this Province. The Town of Oxford will be the sole judge of whether these conditions will be used and the extent to which they will be applied.

Vendors registered to do business in any Atlantic Province can bid on Invitations issued by any other Atlantic Province without having to satisfy any local registration or residency requirements.



Under Canadian law (and international agreements), your Bid must be arrived at separately and independently, without conspiracy, collusion or fraud; see

<http://www.competitionbureau.gc.ca/internet/index.cfm?itemid=1243&lg=e> for further information.

24. Confidentiality and Freedom of Information

All Bids submitted become the property of the Town of Oxford. By submitting a Bid, the Bidder hereby grants the Town a license to distribute, copy, print or translate the Bid for the purposes of the Invitation. Any attempt to limit the Town's right in this area may result in rejection of the Bid.

Bidder's Bid package may be subject to disclosure under the Province's "freedom of information" legislation. By submitting a Bid, the Bidder agrees to the appropriate disclosure of the information supplied, subject to the provisions of the governing law. The Town cannot guarantee the confidentiality of the complete content of any Bid after the procurement has been awarded to the successful Bidder.

During the delivery and installation of goods and/or services, the Bidder or Bidder's staff may have access to confidential information belonging to the Town. Should this occur, the Bidder must ensure that such information is not released to any third parties or unauthorized individuals; failure to comply may result in criminal or civil charges and/or the Bidder's disqualification from any further Invitations issued by the Town of Oxford.

The Town of Oxford is required to comply with the Personal Information International Disclosure Protection Act (S.N.S 2006, c.3). This Act creates obligations for the Town of Oxford and its service providers when personal information is collected, used or disclosed. Requirements include limiting storage, access and disclosure of personal information to Canada, except as necessary or otherwise required by law. For more information on this Act please click here. (http://www.gov.ns.ca/just/IAP/governing_law.asp)

25. Enquiries and Contacts

In case of any dispute over the completeness, accuracy and/or interpretation of any Invitation documents, the versions of such documents held by the Town of Oxford will be considered correct.

Information, offers, commitments or instructions obtained from any source other than the Town of Oxford will not be binding on the Town.

Enquiries regarding the Invitation must be made to the contact(s) named in the Invitation documents (or their designates); quote the Invitation number on any correspondence. All questions and queries on the technical information are to be submitted in writing to the Project Manager, Ernest Eddy, Energy Services, Black and McDonald Limited via e-mail at eddy@BlackandMcDonald.com. Verbal responses will not be provided.



If an envelope was included with the Invitation documents, this envelope must not be used to submit an enquiry; these envelopes are not opened before the closing time for receipt of Bids.

Enquiries and the responses given may be recorded and may be distributed to all other Bidders as Addenda. No response shall be binding on the Town unless made in writing.

All enquiries regarding the interpretation of these Terms and Conditions, general procurement policy or procedures must be made to the Town of Oxford.

26. Accuracy of the Invitation; Right to Clarify

While the Town of Oxford has tried to ensure accuracy in the Invitation, it is not guaranteed or warranted by the Town to be accurate, nor is it necessarily comprehensive or exhaustive.

The Town will assume that all Bidders have resolved any questions they might have about the Invitation and have informed themselves as to existing conditions and limitations, site restrictions, etc. before submitting their Bids.

Nothing in the Invitation is intended to relieve Bidders from forming their own opinions and conclusions with respect to the matters addressed in the Invitation or its associated documents.

The Town of Oxford reserves the right in its sole discretion to clarify any Bid after closing by seeking further information from that Bidder, without becoming obligated to clarify or seek further information from any or all other Bidders. However, Bidders are cautioned that any clarifications sought will not be an opportunity either to correct errors or change their Bids in any substantive manner.

The Town of Oxford follows the Atlantic Standard Terms & Conditions for Goods and Services. Any discrepancy between this document and the Atlantic Standard Terms and Conditions; the Atlantic Standard Terms and Conditions shall prevail. Failure to comply with these Terms and Conditions could cause the Bidder's Bid to be disqualified.

27. Language

Unless specifically requested otherwise, all Bids, supporting materials, operation manuals and documentation must be in English, or both English and French.

28. Eligibility and Conflict of Interest

A Bid may not be eligible for acceptance if current or past corporate or other interests of the Bidder may, in the Town of Oxford's opinion, give rise to a conflict of interest in connection with a project.

Bidders are cautioned that acceptance of their Bid may preclude them from bidding on subsequent phases where a conflict of interest may arise; Bidders should study the project implementation strategy to determine whether or not they plan to submit Bids on subsequent phases.



If the Bid covers the first phase of what may prove to be a multi-phased project, the successful Bidder on the initial phase may be permitted to bid on subsequent phases as long as, in the Town's opinion, no conflict of interest would be created in performance of the work by that Bidder.

Sub-contracting to any firm or individual whose current or past corporate or other interests may, in the Town's opinion, give rise to a conflict of interest in connection with this acquisition will not be permitted. This includes, but is not limited to, any firm or individual involved in the preparation of the Invitation documents.

29. PROTECTION OF TOWN OF OXFORD AGAINST LAWSUITS

.1 Release

Except only and to the extent that the Town of Oxford is in breach of Section 24 – *Confidentiality and Freedom of Information*, the Bidder now releases the Town of Oxford from all liability for any Losses in respect of:

- .1 any alleged (or judicially imposed) breach by the Town of Oxford of the TENDER (it being acknowledged and agreed that to the best of the parties' knowledge, the Town of Oxford has no obligation or duty under the TENDER which it could breach (other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially));
- .2 any unintentional tort of the Town of Oxford occurring in the course of conducting this Tender process;
- .3 the Bidder preparing and submitting its Tender;
- .4 the Town of Oxford accepting or rejecting its Tender or any other submission;
- .5 the manner in which the Town of Oxford:
 - (a) reviews, considers, evaluates or negotiates any Proposal,
 - (b) deals with or fails to deal with any Proposal or Proposals, or
 - (c) decides to enter into a Contract or not enter into any Contract; and
 - (d) the bidder(s), if any, with whom the Town of Oxford enters a Contract.

.2 Indemnity

Except only and to the extent that the Town of Oxford breaches Section 24 – *Confidentiality and Freedom of Information*, the Bidder now indemnifies and will protect and save the Town of Oxford harmless from and against all Losses, in respect to any claim or threatened claim by the Bidder or any of its Sub-contractors or agents alleging or pleading.

- .1 any alleged (or judicially imposed) breach by the Town of Oxford or its officials or employees of the TENDER (it being agreed to that, of the best of the parties' knowledge, the Town of Oxford has no obligation or duty under the TENDER



which it could breach other than wholly unanticipated obligations or duties merely alleged or actually imposed judicially),

- .2 any unintentional tort of the Town of Oxford or its officials or employees occurring in the course of conducting this Tender process, or
- .3 liability on any other basis related to this Tender or the Tender process.

.3 Limitation

In the event that, with respect to anything relating to the REQUEST FOR PROPOSALS or this Proposal process (except only and to the extent that the Town of Oxford breaches 29.3 – *Limitation*, Section 29.4 – *Dispute Resolution*, Section 24 – *Confidentiality and Freedom of Information*), the Town of Oxford or its officials, officers, agents or employees are found to have breached (including fundamentally breached) any duty or obligation of any kind to the Bidder or its Sub-contractors or agents whether at law or in equity or in contract or in tort, or are found liable to the Bidder or its Sub-contractors or agents on any basis or legal principle of any kind, the Town of Oxford liability is limited to a maximum of \$100, despite any other term or agreement to the contrary.

.4 Dispute Resolution

Any dispute relating in any manner to this Request for Proposals or the Proposal process (except only and to the extent that the Town of Oxford breaches Section 29.3 – *Limitation*, Section 29.4 – *Dispute Resolution*, Section 24 – *Confidentiality and Freedom of information*, and also excepting any disputes arising between the Town of Oxford and any bidder with whom the Town of Oxford has entered a Contract) will be resolved by arbitration in accordance with the CCDC 40.

30. Survival/Legal Effect of Proposal Contract

All of the terms of this Attachment A to this Proposal Form which by their nature require performance or fulfillment following the conclusion of the Proposal process will survive such issuance and will remain legally enforceable by and against the Bidder and the Town of Oxford.

AS EVIDENCE OF THE BIDDER'S INTENT TO BE LEGALLY BOUND BY THIS ATTACHEMENT A, THE BIDDER HAS EXECUTED AND DELIVERED THIS ATTACHMENT 'A', AS AN INTEGRAL PART OF ITS PROPOSAL FORM IN THE MANNER AND SPACE SET OUT BELOW:

Authorized Signatory for the Bidder

Date

Town of Oxford
Tender 2018-02
Oxford Arena Louvers & BAS Project
Closing: August 15, 2018



Print Name and Title