



SUBMISSION DEADLINE: 4:00 P.M. WINNIPEG TIME, FEBRUARY 16, 2004

If your company name and address are not correctly shown below, please enter or correct it before submitting your Proposal.

Company Name

Address

BUYER: Coleen Groening /d
TELEPHONE NO. (204) 986-2491

You are invited to submit a proposal for:

AMMONIA ICE PLANT REPLACEMENT AT ERIC COY ARENA – 535 OAKDALE DRIVE

in accordance with the Instructions to Offerers attached.

Ammonia Ice Plant Replacement at Eric Coy Arena	\$ _____	Base Bid
	_____	P.S.T.
	_____	G.S.T.
	=====	Total Price

THE PROPOSAL SUBMISSION MUST INCLUDE THIS PAGE (COMPLETED AND SIGNED)

Contact Person: (print) _____

Telephone Number: _____

Facsimile Number: _____

The Offerer hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out in this Proposal.

The Offerer agrees that the Request for Proposal in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Proposal.

The Offerer certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract.

No. 1 No. 2 No. 3 No. 4

This offer shall be open for acceptance, binding and irrevocable for a period of ninety (90) days following the Submission Deadline.

Signature: _____

RETURN TO:

**THE CITY OF WINNIPEG 14-2004
CORPORATE FINANCE DEPARTMENT
MATERIALS MANAGEMENT DIVISION
185 KING ST MAIN FLOOR
WINNIPEG MB R3B 1J1**

FORM H1: PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS THAT

_____ (hereinafter called the "Principal"), and

_____, (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____.)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee dated the _____ day of _____, 20____, for:

RFQ NO. 14-2004

AMMONIA ICE PLANT REPLACEMENT AT ERIC COY ARENA – 535 OAKDALE DRIVE

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**

(Date)

The City of Winnipeg
Corporate Services Department
Legal Services Division
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY – RFQ NO. 14-2004

AMMONIA ICE PLANT REPLACEMENT AT ERIC COY ARENA – 535 OAKDALE DRIVE

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

_____ Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

INSTRUCTIONS TO OFFERERS

1. PURPOSE

- 1.1 The purpose of this Request for Proposal is to invite Proposals from qualified Offerers for an Ammonia Ice Plant Replacement at Eric Coy Arena, 535 Oakdale Drive.

2. DEFINITIONS

2.1 When used in this Request for Proposal:

- (a) "**Business Day**" means any Calendar Day, other than a Saturday, Sunday, or a Statutory or Civic Holiday;
- (b) "**Buyer**" means the person authorized to represent the City in respect of the Request for Proposal;
- (c) "**Calendar Day**" means the period from one midnight to the following midnight;
- (d) "**Contract**" means the combined documents consisting of the Request for Proposal package and any documents and drawings referred to and incorporated therein together with any submissions required to be made by the Contractor after award, and all amendments to the foregoing;
- (e) "**Contract Administrator**" means the person authorized to represent the City in respect of the Contract and is identified at the time of award of the Contract;
- (f) "**Contractor**" means the person undertaking the performance of the Work under the terms of the Contract;
- (g) "**may**" indicates an allowable action or feature which will not be evaluated;
- (h) "**must**" or "**shall**" indicates a mandatory requirement which will be evaluated on a pass/fail basis;
- (i) "**Offerer**" means any person submitting a Proposal for the Work. If a Proposal is submitted jointly by two or more persons, the word "Offerer" shall mean each and all persons, and the undertakings, covenants and obligations of such joint Offerers in the Proposal and the Contract, when awarded, shall be both joint and several;
- (j) "**Proposal**" means the offer contained in the Proposal Submission;
- (k) "**should**" indicates a desirable action or feature which will be evaluated on a relative scale;
- (l) "**Site**" means the lands and other places on, under, in or through which the Work is to be performed;
- (m) "**User**" means a person, department or other administrative unit of the City authorized by the Contract Administrator to order Work under this Contract;
- (n) "**Work**" means the carrying out and the doing of all things, whether of a temporary or permanent nature, that are to be done by the Contractor pursuant to the Contract and, without limiting the generality of the foregoing, includes the furnishing of all equipment, facilities, material, labour and services necessary for or incidental to the fulfilment of the requirements of the Contract;
- (o) "**Working Day**" means any Calendar Day, other than a Saturday, Sunday or a Statutory or Civic Holiday, on which the Contract Administrator determines atmospheric and Site conditions are such that the Contractor is able to work at least seven (7) hours.

2.2 Further to 2.1(b), the Contract Administrator is:
Bruce Kazun C.E.T
Supervisor of Community Centre Maintenance
Building Services Division – Public Works Department
City of Winnipeg
100 Main Street
Winnipeg, MB R3C 1A4

(204) 986-7072 (Cell 794-4409)
Fax: 986-7311

3. SCOPE OF WORK

- 3.1 The Eric Coy Arena was constructed in 1971 and the majority of the ice plant components are original and have reached the end of their life cycle.
- 3.2 The project consists of:
- (a) Evaluation of the existing ice plant components and operation;
 - (b) Design a new complete ice plant utilizing new and existing components based on operating conditions provided for this facility;
 - (c) Demolition, construction, installation, and commissioning of all new and existing components for the complete ice plant replacement.
 - (d) Total completion of project shall be August 20, 2004.
- 3.3 Refer to Section 42 - Detailed Scope of Work for additional information.

4. BACKGROUND

- 4.1 The following is provided for the information of Offerers:
- (a) The City owns and operates 16 Indoor Ice Arenas. Eric Coy Arena is included in that portfolio. Eric Coy Arena was originally constructed in 1971 and the majority of the components in the ice plant are original. However, the 75 hp Mycom (4WB SN 97715) compressor was replaced in 1997 and evaporative condenser (BAC Model VCL134) was replaced in 1998. These components shall be either salvaged for use in other City of Winnipeg facilities or incorporated in the new Ammonia Ice Plant System.

5. INVESTIGATING THE WORK

- 5.1 The Offerer shall familiarize himself/herself with the location, extent and purpose of the Work and shall determine for himself/herself the actual conditions and requirements of the Work.
- 5.3 A Site meeting will be conducted on January 29, 2004 at 1:30 P.M.

6. ASSIGNMENT

- 6.1 The Contractor shall not assign the Contract or any payment thereunder without the prior written approval of the City.

7. SUBCONTRACTING

- 7.1 The Contractor shall not subcontract any portion of the Work to any person not identified as a Subcontractor in the Proposal without the prior written approval of the Contract Administrator.
- 7.2 If the Offerer proposes to subcontract any portion of the Work, he/she must submit a complete list of the proposed Subcontractors with the Proposal.
- 7.3 Where no Subcontractors are identified, it will be interpreted that the Offerer proposes to perform the Work with his/her own forces.
- 7.4 The fact that the Contractor is permitted to subcontract any portion of the Work as aforesaid shall not, however, relieve him of any responsibility for the proper commencement, execution and completion of the Work. The Contractor shall be fully responsible for each Subcontractor and his/her work and acts, and shall, either in person or through an accredited agent, receive all notices, communications, orders, instructions or legal service as if he/she were performing the Work with his/her own forces.

8. INSURANCE

- 8.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such

liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) automobile liability insurance for owned and non-owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance;

8.2 The Contractor shall provide the Contract Administrator with a certified true copy or a certificate of insurance of the policy at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

8.3 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least fifteen (15) Calendar Days prior written notice to the Contract Administrator.

8.4 Deductibles shall be borne by the Contractor.

9. WORKERS COMPENSATION

9.1 The Contractor shall be registered with the Workers Compensation Board of Manitoba, shall provide and maintain Workers Compensation coverage throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

10. CONFIDENTIALITY AND OWNERSHIP OF INFORMATION

10.1 Information provided to an Offerer by the City or acquired by an Offerer by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. To the extent permitted, the City shall treat all proposals as confidential.

10.2 The Offerer shall not make any statement of fact or opinion regarding any aspect of the Request for Proposals to the media or any member of the public without the prior written authorization of the Contract Administrator.

10.3 Information provided to the Contractor by the City or acquired by the Contractor during the course of the Work is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator.

10.4 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City. The Contractor shall not disclose or appropriate to its own use, or to the use of any third party, all or any part thereof without the prior written consent of the Contract Administrator.

10.5 The Contractor shall not make any statement of fact or opinion regarding any aspect of the Contract to the media or any member of the public without the prior written authorization of the Contract Administrator.

11. INDEMNITY

11.1 The Contractor shall save harmless and indemnify the City for twice the contract price plus two million dollars, unless specifically stated otherwise in the contract documents, against all costs, damages or expenses arising from actions, claims, demands and proceedings, by whomsoever brought, made or taken as a result of acts or omissions of the Contractor, his/her Subcontractors, employees or agents in the performance or purported performance of the Work, and more particularly from:

- (a) accidental injury to or death of any person whether retained by or in the employ of the Contractor or not, arising directly or indirectly by reason of the performance of the Work, or by reason of any trespass on or damage to property;
- (b) damage to any property owned in whole or in part by the City, or which the City by duty or custom is obliged, directly or indirectly, in any way or to any degree, to construct, repair or maintain;
- (c) damage to, or trespass or encroachment upon, property owned by persons other than the City;
- (d) failure to pay and obtain a discharge of a notice of claim for lien served upon the City in accordance with the requirements of The Builders' Liens Act;

- (e) failure to pay a workers compensation assessment, or federal or provincial taxes;
- (f) unauthorized use of any design, device, material or process covered by letters patent, copyright, trademark or trade name in connection with the Work;
- (g) inaccuracies in any information provided to the City by the Contractor.

11.2 The City has the right, acting reasonably and upon notice to the Contractor, to settle any such action, proceeding, claim or demand and charge the Contractor with the amount so paid or to be paid in effecting a settlement.

11.3 The Contractor shall pay to the City the value of all legal fees and disbursements required to settle any such claim or to defend the City against any such claim, action, proceeding, claim or demand notwithstanding that the settlement or defence of the said action, proceeding, claim or demand was undertaken on behalf of the City by a salaried employee of the City.

11.4 If the Contractor fails to make any payment required to be made to the City hereunder, the City shall be entitled to deduct the amount of such payment from any payment required to be made by the City to the Contractor under the Contract or take whatever other remedies against the Contractor that the City may have at law.

12. SECURITY CLEARANCE

12.1 Each person proposed to perform Work under the Contract within City facilities shall be required to obtain a security clearance by the police service having jurisdiction at his/her place of residence.

12.2 Prior to the commencement of any Work, and during the term of the Contract if additional or replacement persons are proposed to perform Work, the Contractor shall supply the Contract Administrator with a written security clearance, obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof for each person proposed to perform Work within City facilities.

12.3 No person for whom a security clearance is not provided, or who has any convictions or pending charges related to property offences or crimes against another person, will be permitted to perform any Work within City facilities.

12.4 Any security clearance obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.

12.5 The City may, at its sole discretion, require a records search at any time during the term of the Contract. Any person who fails to obtain security clearance as a result of a repeated records search shall not be permitted to continue to perform Work under the Contract.

13. EVENTS OF DEFAULT

13.1 An event of default will be deemed to have occurred if the Contractor:

- (a) abandons the Work; or
- (b) is adjudged bankrupt or files for bankruptcy, becomes insolvent, makes a general assignment for the benefit of his/her creditors, or has a receiver or liquidator appointed in respect of his/her assets; or
- (c) in the judgment of the Contract Administrator, is not performing or has not been performing the Work, or any part thereof, in a sound and workmanlike manner and in all respects in strict conformity with the Contract; or
- (d) in the judgment of the Contract Administrator, is not progressing continuously with the Work or any part thereof, and in such a manner as to ensure the completion of the Work or any part thereof, in accordance with the work schedule; or
- (e) fails to remedy any defective or deficient Work, or to remove any defective or deficient goods; or
- (f) fails to remedy defects or deficiencies during the warranty period in the manner and within the time periods specified by the Contract Administrator; or
- (g) fails to make prompt payment to his/her Subcontractors, his/her employees or on account of the purchase or rental of equipment or material; or
- (h) fails to promptly secure a discharge of a lien or trust claim served upon the City pursuant to The Builders' Liens Act; or
- (i) fails to comply with any laws, by-laws or statutory regulations; or

- (j) fails to provide competent supervision for the Work; or
- (k) fails to submit any schedules, documents or information required by the Contract; or
- (l) refuses or neglects to comply with an order given by the Contract Administrator; or
- (m) commits any other breach of the Contract.

13.2 Any provision of the Contract may be waived only by express waiver in writing by the Contract Administrator. No express waiver of any provision shall imply the waiver of any other provision.

13.3 If an event of default has occurred, the City may do any one or more of the following:

- (a) withhold or retain the whole or part of any payment;
- (b) take the whole of the Work, or any part or parts thereof out of the hands of the Contractor;
- (c) demand payment for any amount owed to the City.

13.4 The duties and obligations imposed upon the Contractor by the Contract and the rights and remedies available to the City hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed upon the Contractor or available to the City at law.

14. DISCREPANCIES

14.1 If the Offerer finds discrepancies or omissions in the Request for Proposal or any part thereof, or is unsure of the meaning or intent thereof, he/she shall notify the Contract Administrator.

14.2 The Contract Administrator will, if he/she deems it necessary, issue addenda to all Offerers.

14.3 The Offerer is advised to direct all enquiries or comments to the Contract Administrator at least five (5) Business Days prior to the Submission Deadline to allow time for the preparation and distribution of necessary addenda.

15. ADDENDA

15.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.

15.2 The Contract Administrator will issue each addendum to all Offerers by:

- (a) publication at the Materials Management Division's Bid Opportunities internet website at <http://www.winnipeg.ca/matmgt/bidopp.asp>.

15.3 The Offerer is responsible for ensuring that he/she has received all addenda and shall acknowledge receipt of each addendum on the Request for Proposal cover page. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

15.4 The Offerer is advised to check the Materials Management Division's Bid Opportunities internet website for addenda shortly before submitting his/her Proposal.

16. PROPOSALS

16.1 Proposals must be in writing and must include as a minimum:

- (a) the Request for Proposal cover page completed with:
 - (i) the name and address of the Offerer;
 - (ii) the name and telephone number of a contact person authorized to represent the Offerer for the purposes of the Proposal;
 - (iii) the signature of a person or persons who have the authority to sign for the Offerer;
- (b) a list of currently operating installations complete with the type of system installed, number of years/months in use, a contact person name, telephone number and fax number for equipment being used in similar application.

16.2 Offerers must include a full description of their methodology and experience of their project team with respect to the Work required with respect to the following:

- (i) Project team approach;
- (ii) Team organization – Provide a brief description of the team makeup and structure including responsibilities and qualifications of each team member;
- (iii) Communication strategy with client;
- (iv) Project quality assurance and control;
- (v) Design experience with respect to Ammonia Ice Plants;
- (vi) Designing mechanical, lighting, water and building automation and control systems related to this project;
- (vii) Providing project management services for projects of similar complexity and size;
- (viii) Demolition and Construction experience with respect to Ammonia Ice Plants;
- (ix) Commissioning and performance testing experience of Ammonia Ice Plants;
- (x) Training of employees and the development and implementation of occupant information programs;
- (xi) Identifying preventive maintenance approaches that will be recommended for the existing, modified and new equipment and systems;
- (xii) Determining approaches for training of the facility and the City staff in the proper operation and maintenance of all improvements.

16.3 Schedule of Work

- (i) As part of the submission, Offerers must complete and submit a schedule of the proposed Work including timelines, milestones and approvals for the Contract. Schedule shall reflect a total completion of Work by August 20, 2004.

16.4 Fee Proposal

- (i) As part of the submission, Offerers must complete the cover sheet detailing the total fees for undertaking the Work. GST and PST shall be identified and itemized.
- (ii) The requested fee shall include all the Offerers' and sub-contractors' fees and all costs including the cost of all reports, drawings, diagrams or other supporting documentation considered necessary by the Offerer in order to fully complete the requirements of this proposal.
- (iii) The amounts shall be inclusive of all costs, including disbursements necessary to complete this assignment. The fee quoted for disbursements shall be a maximum amount.

17. SUBMISSION OF PROPOSALS

17.1 The Proposal must be submitted enclosed and sealed in an envelope clearly marked with the RFP Number and the Offerer's name and address. The Offerer is requested to submit one (1) original and three (3) copies of the Proposal.

17.2 The Proposal must be submitted to the Materials Management Division at the address specified no later than the Submission Deadline.

17.3 Proposals received after the Submission Deadline will not be considered.

17.4 Proposals will not be opened or acknowledged publicly. The City will acknowledge receipt of each Proposal by written notice to the address of the Offerer as indicated in the Proposal.

18. WITHDRAWAL OF PROPOSALS

- 18.1 The Offerer may withdraw his/her Proposal without penalty at any time prior to the Submission Deadline.
- 18.2 The Proposal shall be open for acceptance, binding and irrevocable for the period of time specified on the cover page. An Offerer who withdraws his/her Proposal after the Submission Deadline but before his/her Proposal has been released or has lapsed shall be liable for such damages as are imposed upon the Offerer by law and subject to such sanctions as the City considers appropriate in the circumstances.

19. INTERVIEWS

- 19.1 The Contract Administrator may, at his/her sole discretion, interview Offerers during the evaluation process.

20. NEGOTIATIONS

- 20.1 The City reserves the right to negotiate details of the Contract with Offerers.
- 20.2 Negotiations, if any, are intended to address administrative and technical details of the Contract. The Offerer is advised to present his/her best offer, not a starting position for negotiations, in his/her Proposal Submission; the City will not necessarily pursue negotiations with any Offerer.
- 20.3 If, in the course of negotiations pursuant to 20.2 or otherwise, the Offerer amends or modifies a Proposal after the Submission Deadline, the City may consider any amended Proposal as an alternative to the Proposal as originally submitted without releasing the Offerer from the Proposal as originally submitted.

21. EVALUATION OF PROPOSALS

- 21.1 Award of this Contract will be based on the following evaluation criteria:

(a) conformance with mandatory requirements	pass/fail;
(b) schedule of Work	pass/fail;
(c) qualifications of the Offerer	30%;
(d) methodology and experience of the Offerer	30%;
(e) fee proposal	40%;

Conformance With Mandatory Requirements

- 21.2 Further to 21.1(a), the City may reject a Proposal as being non-responsive if the Proposal is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The City may reject all or any part of any Proposal or waive technical requirements if the interests of the City so require.

Schedule of Work

- 21.3 Further to 21.1(b); the City may reject a Proposal submitted by an Offerer whose Schedule of Work does not reflect a total completion of Work by August 20, 2004 in accordance with clause 16.3.

Qualifications of the Offerer

- 21.4 Further to 21.1(c), the City may reject any Proposal submitted by an Offerer who does not demonstrate, in his/her Proposal, in other information required to be submitted, during interviews or in the course of reference checks, that he/she is responsible and qualified. A responsible and qualified Offerer is one that meets the qualifications specified and is not suspended, debarred or in default under any contract with the City.
- 21.5 The Offerer shall:
- (a) submit, within two (2) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Offerer and of any proposed subcontractor including:
 - (i) proof that he/she is incorporated or otherwise authorized to do business in Manitoba;
 - (ii) proof that he/she is financially capable of carrying out the terms of the Contract;

- (iii) proof that he/she has successfully carried out works similar in scope and value, or is fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (iv) such other pertinent data as may be required by the Buyer;
- (b) provide, on the request of the Contract Administrator, full access to any of the Offerer's equipment and facilities to confirm, to the contract Administrator's satisfaction, that the Offerer's equipment and facilities are adequate to perform the Work.

21.6 Evaluation Criteria

- (a) The proposal, which satisfies the mandatory criteria and which obtains the highest number of points under the point rated criteria is thereby determined to be the most advantageous to the City shall be selected. The successful Offerer will be asked to enter into a Contract to perform Ammonia Ice Plant Replacement at Eric Coy Arena.
- (b) The Offerer may submit multiple proposals for evaluation. This may include alternatives for savings for long term maintenance and life cycle costing of equipment.

22. AWARD OF CONTRACT

- 22.1 The City shall not be obligated to award a Contract to an Offerer, even though one or all of the Offerers are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- 22.2 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Offerer who's Proposal is determined to be the most advantageous to the City.
- 22.3 The City will give notice of the award of Contract by way of a Letter of Intent or will give notice that no award will be made.
- 22.4 The Request for Proposal, including but not limited to the Specifications, Drawings and addenda, and the Contractor's Proposal shall be deemed to be incorporated in and to form a part of the Contract notwithstanding that they are not necessarily attached to or accompany said notice.
- 22.5 The name of the successful Offerer and the Contract amount will be made available, upon request, to Offerers only after award of Contract.

23. WORKPLACE SAFETY AND HEALTH

- 23.1 All Work shall be performed in compliance with the Manitoba Workplace Safety and Health Act.
- 23.2 All Work must be performed in compliance to the Manitoba Health and Safety Fall Protection Guidelines.
- 23.3 The Contractor shall know and understand current Ammonia (NH₃) waste management, handling procedures, personal protection equipment, clean up and disposal techniques.
- 23.4 The Contractor must be fully aware of all Work involving hazardous material. All Work shall be performed in compliance to the Manitoba Department of Labour Workplace Health and Safety Guidelines and all other applicable codes. The Contractor is responsible for the immediate notification of the Contract Administrator of his/her encountering of suspected hazardous material during their course of Work.
- 23.5 The Contractor shall comply with all laws, by-laws, ordinances, regulations, codes and orders of authorities having jurisdiction which are to come into force during the performance of the Work and which relate to the Work. Where there are two or more laws, by-laws, ordinances, regulations or codes applicable to the Work, the most restrictive shall apply.
- 23.6 The Contractor shall know and understand current Polychlorinated Biphenyl (PCB's) waste management, handling procedures, personal protection equipment, clean up and disposal techniques.
- 23.7 The Contractor shall, at least one (1) Calendar Day before the commencement of Work, provide the Contract Administrator with one (1) copy of Material Safety Data Sheets (MSDS) for each product to be supplied under the Contract.

23.8 Contractor shall dispose of refrigerant and brine in accordance with the requirements of CAN/CSA B52-1999 and the Manitoba Ozone Depleting Substances Act.

24. WORKPLACE SAFETY

24.1 Bidders shall have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba). Bidders shall be required to provide proof of such program within two (2) Business Days of a request by the Contract Administrator.

25. PRIME CONTRACTOR - THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

25.1 The Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

26. CHANGES IN WORK

26.1 The City shall have the right to order a Change in Work at any time after award of the Contract.

26.2 If, at any time after award of the Contract, the Contractor is of the opinion that a Change in Work is necessary to accomplish the result intended by the Contract or if the Contractor considers it desirable that a Change in Work be approved, he/she shall promptly provide notice thereof to the Contract Administrator, including:

- (a) the reason for the proposed Change in Work;
- (b) a detailed description of the proposed Change in Work;
- (c) The Contractor's proposed method(s) to determine the adjustment, if any, in Contract Price.

26.3 The Contract Administrator shall determine whether a Change in Work is necessary or desirable and whether a corresponding adjustment to the Contract price is required.

27. CONTRACTOR'S RIGHT TO APPEAL

27.1 If the Contractor disagrees with a determination or order of the Contract Administrator he/she may, within seven (7) Calendar Days after receiving notice of the Contract Administrator's determination or order, notify the Chief Administrative Officer of the City of his/her contention with respect thereto and request a determination thereon from the Chief Administrative Officer.

27.2 If the Contractor disagrees with the Chief Administrative Officer's determination he/she may request that the dispute be referred to arbitration in accordance with Clause 28, Arbitration, by providing notice to the Chief Administrative Officer within seven (7) Calendar Days after receiving notice of the Chief Administrative Officer's determination.

27.3 If the Contractor neglects or fails to observe fully and faithfully the above conditions, he/she shall be deemed to have accepted the Contract Administrator's determination and to have waived any said claim, at law or otherwise.

28. ARBITRATION

Requests for Arbitration

28.1 If, at any time before the termination of the warranty period, any dispute, difference or question shall arise between the City and the Contractor regarding the Work, then every such dispute, difference or question may, with the consent of both the City Solicitor, on behalf of the City, and the Contractor, be referred to arbitration. Notwithstanding that the parties may have consented to arbitration, no arbitration shall proceed before the date of Substantial Performance.

28.2 The party desiring arbitration (the "Requesting Party") shall request the consent of the other party (the "Other Party") to refer a particular dispute, difference or question to arbitration.

28.3 The Other Party shall reply to the request within seven (7) Calendar Days of receiving same.

Referral to a Single Arbitrator

- 28.4 If the Other Party has consented to arbitration, the Requesting Party shall nominate an arbitrator (the "Requesting Party's Nominee") within seven (7) Calendar Days of receiving the reply. The Other Party shall have seven (7) Calendar Days after receiving notice of the nomination to accept or reject the Requesting Party's Nominee.
- 28.5 If the Other Party accepts the Requesting Party's Nominee, the dispute, difference or question shall be promptly referred to him or her.

Referral to a Panel of Arbitrators

- 28.6 If the Other Party rejects the Requesting Party's Nominee, it shall, within seven (7) Calendar Days of rejection, appoint its own arbitrator.
- 28.7 The Requesting Party shall, within seven (7) Calendar Days of receiving the Other Party's rejection, appoint its own arbitrator.
- 28.8 The arbitrators appointed under 28.6 and 28.7 shall, within seven (7) Calendar Days of the date on which the last of them was appointed, appoint a third arbitrator (the "Panel Chair") who will act as chair of the arbitration panel.

General

- 28.9 The Arbitration Act (Manitoba) or any successor legislation thereto shall apply to the arbitration in all respects except as expressly otherwise provided in these General Conditions.
- 28.10 The single arbitrator or the Panel Chair, as the case may be, shall determine the procedure to be followed in the arbitration, which shall be consistent with The Arbitration Act (Manitoba) or any successor legislation thereto.
- 28.11 Where the matter proceeds with a single arbitrator, each party shall be responsible for its own legal expenses, expenses to produce expert evidence or other expenses voluntarily incurred, and for an equal share of the fees and expenses of the single arbitrator and of any other expenses related to the arbitration.
- 28.12 Where the matter proceeds with an arbitration panel, each party shall be responsible for its own legal expenses, expenses to produce expert evidence or other expenses voluntarily incurred, for the fees and expenses of the arbitrator appointed by it, and for an equal share of the fees and expenses of the Panel Chair and of any other expenses related to the arbitration. The City of Winnipeg General Conditions for Construction Contracts.

29. AUTHORITY OF CONTRACT ADMINISTRATOR

- 29.1 The Contract Administrator shall be the City's representative throughout the duration of the Contract and shall have authority to act on behalf of the City to the extent expressly provided for in the Contract.
- 29.2 The Contract Administrator shall interpret or clarify the Contract or any part thereof, which appears indefinite, not clear or contradictory to the Contractor.
- 29.3 The Contract Administrator may at any time correct errors or omissions in the Contract or issue additional Drawings or Specifications further detailing, explaining or modifying the Work. Such Drawings or Specifications shall either supplement or supersede those forming part of the Contract at the time the Contract was executed.
- 29.4 The Contract Administrator may examine or inspect the Work or any part thereof and determine whether the Work meets the requirements of the Contract. The Contract Administrator may reject the Work or any part thereof, which does not meet the requirements of the Contract.
- 29.5 The Contract Administrator may give instructions or orders to the Contractor to the extent necessary to ensure that the Work is performed in an orderly manner and meets the requirements of the Contract.
- 29.6 The Contract Administrator may give instructions or orders to the Contractor's supervisor on the Site and such instructions or orders shall be deemed to have been given to the Contractor.
- 29.7 The Contract Administrator may order the Contractor to remove from the Work any person employed or retained by the Contractor or a Subcontractor in the performance of the Work who the Contract Administrator determines is incompetent, negligent or guilty of misconduct.

- 29.8 The Contract Administrator may order the Contractor to alter or improve his methods, to increase or improve his Facility, to furnish additional or more suitable Material, or to employ additional or more qualified labour if, at any time, the Contract Administrator determines that:
- (a) The Work is not being, or will likely not be, constructed satisfactorily; or
 - (b) Progress is not being, or will likely not be, maintained in accordance with the Work schedule.
- 29.9 The Contract Administrator may order the Contractor to stop Work or to take such remedial Measures as the Contract Administrator considers necessary, if, at any time, the Contract Administrator determines that:
- (a) A danger to life or to property exists; or
 - (b) Such stoppage or remedial Measures may be necessary to ensure the performance of the Work in accordance with the requirements of the Contract.
- 29.10 Neither the giving of any orders by the Contract Administrator nor the carrying out of such orders by the Contractor shall entitle the Contractor to any extra payment, nor relieve the Contractor of his responsibilities.
- 29.11 If the Contractor disputes a determination or order of the Contract Administrator on any of the foregoing matters, the Contractor shall act in accordance with the Contract Administrator's determination or order. The Contractor may concurrently appeal the determination or order of the Contract Administrator to the Chief Administrative Officer of the City.

30. SUBSTANTIAL PERFORMANCE

- 30.1 The Contractor shall achieve Substantial Performance by August 6, 2004.
- 30.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purpose of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- 30.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a Certificate of Substantial Performance is the date on which Total Performance has been achieved.

31. TOTAL PERFORMANCE

- 31.1 The Contractor shall achieve Total Performance by August 20, 2004.
- 31.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist on the inspection of the Work with the Contract Administrator for the purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- 31.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issues of a Certificate of Total Performance is the date on which Total Performance has been achieved.

32. LIQUIDATED DAMAGES

- 32.1 If the Contractor fails to achieve Total Performance in accordance with the Contract by the day fixed herein for Total Performance, the Contractor shall pay the City One Thousand Five Hundred Dollars (\$1,500.00) per calendar day following the day fixed herein for Total Performance during which such a failure continues.
- 32.2 The amount specified for liquidated damages in Clause 32.1 is based on a genuine pre estimate of the City's losses in the event the Contractor does not achieve Total Performance by the date fixed herein for the same.

32.3 If the actual losses suffered by the City are less than the amount specified in Clause 32.2 for liquidated damages, the Contractor shall only be obligated to pay the City such lesser amount.

32.4 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

33. SCHEDULED MAINTENANCE

33.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the specifications.

(a) Two complete start-ups and shutdowns of the system (two season operation) with scheduling to be determined by the Contract Administrator.

33.2 Determination of Substantial and Total Performance shall be exclusive of scheduled maintenance identified herein. All schedule maintenance shall be completed prior to the expiration for the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such a period of time as it takes the Contractor to complete the scheduled maintenance.

34. WARRANTY

34.1 The Contractor warrants that the Work will be free of any and all defects or deficiencies for a period of Two (2) years from the date of Total Performance.

34.2 Upon notification by the Contract Administrator, the Contractor shall, at his/her sole cost and expense, remedy any defect or deficiency identified by the Contract Administrator during the warranty period and any damage that may arise or result from the defect or deficiency or as a result of the correction of same.

34.3 Notwithstanding 34.1 and 34.2 above, if any statute in force in the Province of Manitoba or in the jurisdiction where materials were manufactured requires, or if the manufacturer provides, a longer warranty period or a warranty that is more extensive in its nature, then the provisions of such statute or manufacturer's warranty shall apply

34.4 Warranty Work shall include all emergency call outs.

35. POWER SMART INITIATIVE

35.1 The City of Winnipeg has entered into a multi-year agreement with Manitoba Hydro to reduce consumption of utilities. As a result of this agreement, Manitoba Hydro has the right to review the design, specifications and drawings prior to construction. Manitoba Hydro may make a financial contribution to the project or may provide an alternative design with a financial contribution. Any additional design costs as a result of the Power Smart Initiative shall be borne by the Contractor.

35.2 The Ammonia Ice Plant design shall incorporate and reflect the City of Winnipeg's initiative to reduce consumption of natural gas, hydro electricity and water wherever practical, feasible and economical.

36. IRREVOCABLE OFFER

36.1 The proposal(s) submitted shall be open for acceptance, binding and irrevocable for a period of ninety (90) days following the submission deadline.

36.2 The acceptance by the City of any proposal shall not release the proposal of the next two lowest evaluated responsive offers and these offers shall be bound by their proposal on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any proposal shall be deemed to have lapsed unless accepted within the time period specified.

37. PERMITS, LICENCES, CERTIFICATES, LAWS AND RULES

37.1 The Contractor shall give all necessary notices, obtain all necessary permits and pay all fees in order that the Work may be carried out. The Contractor shall submit all plans required by any inspection authority and obtain approval of same before proceeding with the Work and pay any cost attached to the inspection of such plans.

37.2 The Contractor shall comply with all laws, ordinances, rules and regulations that would relate to the Work. Where there are two or more laws, by-laws, ordinances, regulations or codes applicable to the Work, the most restrictive shall apply.

38. PERFORMANCE SECURITY

38.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Manitoba, in the form attached (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

38.2 The contractor shall provide the Contract Administrator with the required Performance Security at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

38.3 The City will not pay any interest on certified cheques furnished as a Performance Security.

39. SCHEDULE OF WORK

39.1 The Contractor shall achieve Total Performance by August 20, 2004.

39.2 Work can commence at this facility starting March 29, 2004.

39.3 Contractor may Work on Site from plant shutdown continuously to completion of project.

40. DESIGN CRITERIA

40.1 The Ice Plant at Eric Coy Arena shall be designed to operate with normal programming from August 1 to April 30 inclusive. The plant shall have sufficient capacity to make ice within 72 hours of start-up to meet the August 1 programming requirements.

40.2 The normal ice surface temperature for this facility is 16°F - 18°F (Brine Temperature). Flooding intervals for this facility are hourly during regular programming schedule. The normal hours of operation are as follows:

Week Days 3:00 P.M. – 1:00 A.M.

Saturday 7:00 A.M. – 1:00 A.M.

Sunday 7:00 A.M. – 1:00 A.M.

The normal ice thickness ranges from 1" to 1 ½".

Ice maintenance is performed weekly with an ice edger and ice resurfer.

The shed lighting comprises of 55 – 400W metal halide light fixtures

40.3 After a normal ice resurfacing flooding, ice surface shall be ready for use within 15 minutes. The ice surface shall be completely frozen with no wet patches.

40.4 The system shall be designed to operate on a single compressor between November 15 to February 20 rotating with the other compressor(s) to maintain even balance of usage.

40.5 The design of the Ice Plant shall be based on industry standards for this type of construction and utilizing "Best Practice" for maintenance and operation purposes.

40.6 A Site survey for noise pollution shall be conducted and appropriate modifications and equipment shall be implemented to the design.

41. EXISTING FACILITY AND EQUIPMENT

41.1 The facility was constructed in 1971 and has an approximate area of 26,480 square feet. The rink is a 85' x 200' standard surface on a concrete slab.

41.2 The existing 75 HP Mycom Compressor, motor and related components shall be dismantled and delivered to Terry Sawchuk Arena, 901 Kimberly Avenue. The Contractor shall incur all related shipping and handling expenses to specified location.

41.3 The existing evaporative condenser is a Baltimore Air Coil Model VCL-134 and was purchased and installed in 1998. The existing condenser shall be utilized and retrofitted into the new ice plant. The existing condenser shall be modified as required for system operation to achieve free air cooling with no additional water at 42° - 45°F outdoor air temperature.

41.4 The existing Brine Header shall be replaced. The existing Brine lines to remain and retrofitted to new header upon completion. The Brine System to be fully pressure tested, system to be flushed if contaminated, refilled, balanced for normal operating conditions. Verify concentration of brine and adjust mixture to recommended industry value.

41.5 The existing electrical distribution is a 1200 AMP 120/208v 3 Phase with a pad mounted transformer adjacent to the machine room. Evaluate the existing electrical distribution and sub-panels and provide upgrades or replacement to the electrical system to incorporate new and existing equipment to meet current codes.

41.6 The existing Johnson Control "METASYS"/Cimco guarded status panel was installed in 2002/2003. Contractor shall refurbish and incorporate this system into the new plant management operation system. Additional items to include multiple compressors and all new equipment.

41.7 Contractor shall conduct an inspection of all equipment that is not included in demolition to ensure that it will operate as intended with new systems and equipment.

41.8 The existing 20 H.P. Brine Pump Motor shall be removed but remain on-site.

41.9 The existing electric heaters and guarded status exhaust fan shall remain and be incorporated in new design.

41.10 The existing dehumidifier located in the ice shed spectator area was installed in 1995. The unit is a Cimco Model Mark Five 7 ½ H.P. 208 volt, 3 Phase. Contractor shall evaluate and refurbish as required.

41.11 Modify, reconstruct, and refurbish entire machine room to meet all current Codes, Acts, By-Laws and Regulations.

42. DETAILED SCOPE OF WORK

42.1 The Ammonia Ice Plant replacement at Eric Coy Arena shall include the following as a minimum:

- (a) A thorough and professional examination and review of the facility's existing systems.
- (b) Develop, design and prepare detailed working drawings, specifications, control schematics and related documents for the complete Ice Plant operation.
- (c) The Contractor shall review the construction Work to ensure it meets the original intent, and will not depreciate the value of the buildings, and will not affect the safety of occupants or exceed the agreed impact on the City's operations at any time during or after construction.
- (d) The Contractor shall ensure that all changes in design and operation meet the latest codes, standards and best practices (including, but not limited to, the current provincial building code, WCB regulations, provincial plumbing code, boiler and refrigeration regulations, electrical codes, IES Lighting Handbook (8th Edition), City By-Laws, ASHRAE and SMACNA Standards, and Manitoba Department of Labour Regulations.
- (e) The Contractor shall provide all necessary demolition, removal of all equipment and materials and dispose in a certified disposal area. Personnel shall be qualified and experienced to perform the demolition and construction. Any related damage to existing structure or alterations to the facility to assist demolition shall

be restored to original condition at the Contractor's expense. Items to remain are noted in existing facility and equipment section.

- (f) The new Ice Plant shall incorporate multiple compressors complete with a Glycol cooling system for compressor head cooling. As a minimum, the design shall be based on reciprocating compressors and as an alternate, screw compressors may be included in the proposal.
- (g) All component selection shall be based on achieving optimum operation of the Ice Plant and maintaining energy efficiency.
- (h) Design shall be based on ammonia (NH₃ R-717) type refrigeration. All Work shall be done in accordance with the requirements of CAN/CSA B52-1999 and the Manitoba Ozone Depleting Substances Act.
- (i) Provide all detailed design calculations for all equipment selection.
- (j) Design to include modifications to existing plant room for the installation of new equipment including mechanical ventilation, heating and electrical alterations. Design shall optimize existing space without structural modification.
- (k) All drawings shall be sealed and signed by a Professional Engineer registered and licensed and in good standing in the Province of Manitoba. The Contractor must hold, or be eligible to hold a Certificate of Authorization from the Association of Professional Engineers and Geoscientists of Manitoba.
- (l) Three (3) complete sets of construction drawings and specifications for review by the City of Winnipeg, shall include as a minimum demolition and disposal of existing ice plant components, as well as structural, mechanical and electrical details, control wiring for the installation and/or construction of new ice plant components, including identification of asbestos or any other hazardous materials.
- (m) Provide three (3) complete sets of "as built" drawings showing all mechanical, electrical, wiring schematics and structural components of the new refrigeration room and header. All drawings shall be produced on Mylar and the entire document shall be on a CD.
- (n) All ammonia refrigeration and brine piping shall be Schedule 80 and welded in accordance with Department of Labour regulations and ANSI B31. All piping shall be labelled with service, pipe size and flow direction. Labelling shall be Capital Lettering using fire resistant interior latex paint, waterproof, heat resistant plastic marker tags. Upon completion of the Work all piping shall be cleaned and flushed of debris.
- (o) The Contractor shall submit for approval, at least five (5) sets of detailed shop drawings for all Work for which drawings are required. Approval of Shop Drawings will be general. It shall not relieve the Contractor of responsibility for accuracy of shop drawings, nor for proper fitting, construction of Work or Work required by contract and not indicated on Shop Prints. Shop Prints approval shall not be construed as approving departure from Contract's requirements.
- (p) Contractor shall clean, patch and apply one (1) coat of primer and two (2) coats of paint to entire machine room. Colour shall be determined on Site.

43. ICE PLANT CONTROLS

- 43.1 The compressor start-up/shut-down sequencing shall be based on the supply and return temperatures of the Brine Systems.
- 43.2 The system operation shall have a 2°F differential at 16°F for start stop sequencing operation with a variable set point adjustment.
- 43.3 Incorporate existing Johnson Control "METASYS"/Cimco guarded status panel. Ensure that adequate monitoring points are provided and that they are compatible with existing Johnson Control METASYS system.
 - (i) As a minimum, the following points shall be monitored: Ice Plant indication, Compressor status, Brine pumps status, condenser status, exhaust fan status, NH₃ alarm status, (from gas monitoring system), CO Alarm status (from gas monitoring system), Propane Alarm status (from gas monitoring system, Brine temperature entering and leaving, ice surface temperature, average rink temperature (minimum four locations).
 - (ii) Control Sequences: The following control sequences exhaust fan shall be interlocked with compressor controller so that the fan will be energized upon compressor being operational.

- (iii) Ammonia Spill Ventilation: Exhaust fan shall be energized upon NH₃ gas monitoring system status indicating alarm mode. Fan shall remain energized until sensor indicates non-alarm condition.
- (iv) Upgrade control panel to include hour meters for compressors and positive indicator lights for a system operation and status of equipment.

44. ENERGY CONSERVATION DESIGN FEATURES

- 44.1 Replacement of existing "Thermostor" heat recovery tank. New equipment shall be sufficiently sized for current operation.
- 44.2 All pumps shall be selected to be dual or variable speed.
- 44.3 All piping, valves, tanks, chiller, pumps shall be insulated. Insulation thickness and type shall be consistent with standard industry practice for this type of application.

45. PRODUCTS

- 45.1 Approved manufacturers of equipment
 - 1. Compressors: Mycom, Vilter
 - 2. Brine Chiller: Chil-Con Ammonia Brine Chiller
 - 3. Pumps: ITT Bell and Gossett, Grundfos
 - 4. Valves: Grinnell, Toto
 - 5. Electrical Components: Federal Pioneer, Schneider

46. COMMISSIONING/TRAINING

- 46.1 The Contractor shall implement the testing and commissioning procedures in accordance with all new and retrofitted systems to ensure that each component meets requirements, and building staff is trained in its use. Commissioning shall be in accordance with the Code of Practice for Commissioning Mechanical Systems in buildings.
- 46.2 Upon completion of commissioning, provide three (3) complete sets of performance testing protocols and reports to the Contract Administrator.
- 46.3 Provide all necessary training to City of Winnipeg personnel for entire Ice Plant operation. Training shall be conducted by approved manufacturer's representatives for each product installed.

47. PREVENTATIVE MAINTENANCE

- 47.1 At the completion of the project, the Contractor shall provide three (3) sets of preventive maintenance schedules including tasks and frequencies for all new, refurbished and existing components and systems.
- 47.2 The Contractor shall demonstrate to the City of Winnipeg personnel all techniques required to perform maintenance tasks.
- 47.3 Provide sufficient on-site lubricants such as, oils, refrigerant, glycol and brine for maintenance purposes for duration of the Contract.