



THE CITY OF WINNIPEG

TENDER

TENDER NO. 812-2023

SUPPLY AND DELIVERY OF NEWPCC SPIRAL HEAT EXCHANGERS

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND DELIVERY OF NEWPCC SPIRAL HEAT EXCHANGERS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, December 20, 2023.

B2.2 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, the Contract Administrator will be available to conduct a Site walkthrough of the North End Water Pollution Control Centre (NEWPCC) located at 2230 Main Street to provide Bidders access to the Site at the following times:

- (a) Tuesday, December 5, 2023 at 9:00am.
- (b) Thursday, December 7, 2023 at 9:00am.

B3.2 Bidders are required to register for the Site Investigation by contacting the Contract Administrator with the preferred site visit date they plan to attend. Instructions will be provided for site map, parking and meeting location.

B3.3 The Bidder is advised that they are responsible for providing their own Personal Protective Equipment (PPE) while at the Site including but not limited to CSA approved footwear, hard hat. Bidders attending the site visits without proper PPE equipment will not be allowed to participate in the site visits walkthrough.

B3.4 The Bidder is advised that the dimensions and connection points of the spiral heat exchangers are critical and must match the existing conditions.

B3.5 The Bidder shall not be entitled to rely on any information or interpretation received at the Site Investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B3.6 The Bidder is responsible for inspecting the Site, the nature of the Work to be done and all conditions that might affect their Bid or their performance of the Work, and shall assume all risk for conditions existing or arising in the course of the Work which have been or could have been determined through such inspection.

B3.7 Although attendance at the Site Investigations is not mandatory, the City recommends that Bidders attend at least one (1) Site Investigation.

B3.8 The Bidder is responsible for determining:

- (a) the requirements and resources for delivery of the Heat Exchangers to the NEWPCC digester building or as otherwise assigned. The bidder is responsible for offloading the exchangers.
- (b) the nature of the surface and subsurface conditions at the Site.
- (c) Location equipment will be installed including space requirements, existing pipe connection points and access for maintenance.
- (d) all matters concerning access to the Site, power, location of existing equipment, galleries (concrete and grating floor) or materials necessary for the completion of the delivery and Work; and
- (e) all other matters which could in any way affect this Bid or the performance of the Work.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Tender, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Tender will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 All correspondence or contact by Bidders with the City in respect of this Tender must be directly and only with the Contract Administrator. Failure to restrict correspondence and contact to the Contract Administrator may result in the rejection of the Bidders Bid Submission.
- B4.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.
- B4.7 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B5. CONFIDENTIALITY

- B5.1 Information provided to a Bidder by the City or acquired by a Bidder 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. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Bidder before receipt hereof; or
 - (b) becomes publicly known other than through the Bidder; or
 - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B6. ADDENDA

- B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.
- B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B6.3 Addenda will be available on the MERX website at www.merx.com.
- B6.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.

B7. SUBSTITUTES

B7.1 The Work is based on the Plant, Materials and methods specified in the Tender.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Total Performance.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.

B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.

B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons they wish to inform.

B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base their Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B18.

B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B8. BID SUBMISSION

B8.1 The Bid shall consist of the following components:

- (a) Form A: Bid/Proposal;
- (b) Form B: Prices.
- (c) Form N: Detailed Specifications; and
 - (i) Heat Exchanger dimensional drawings

B8.2 All components of the Bid shall be fully completed or provided in the order indicated, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B8.3 The Bid shall be submitted electronically through MERX at www.merx.com.

B8.3.1 Bids will **only** be accepted electronically through MERX.

B8.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B18.1(a) and may be deemed non-compliant.

B9. BID

B9.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.

B9.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, their name shall be inserted;
- (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
- (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
- (d) if the Bidder is carrying on business under a name other than their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than their own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.

B9.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B10. PRICES

B10.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Notwithstanding C12.2.1 and C12.2.3, prices on Form B: Prices shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B10.1.2 Prices on Form B: Prices shall include:

- (a) duty;
- (b) freight and cartage;
- (c) off-loading at site;
- (d) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
- (e) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.

B10.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B10.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B10.6 Bidders are advised that the calculation indicated in B18.5 will prevail over the Total Bid Price entered in MERX.

B11. DETAILED SPECIFICATION

B11.1 Form N shall be submitted and filled out confirming conformity and list deviations with a description of proposed alternates as applicable.

B12. DISCLOSURE

B12.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B12.2 The Persons are:

- (a) Alfa Laval. Obtained information regarding existing Exchangers

B13. CONFLICT OF INTEREST AND GOOD FAITH

- B13.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.
- B13.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:
- (a) other commitments;
 - (b) relationships;
 - (c) financial interests; or
 - (d) involvement in ongoing litigation;
- that could or would be seen to:
- exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
 - compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of their participation in the Tender process or the Work; or
 - (f) has knowledge of confidential information (other than confidential information ~~disclosed~~ by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.
- B13.3 In connection with their Bid, each entity identified in B13.2 shall:
- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
 - (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
 - (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.
- B13.4 Without limiting B13.3, the City may, in their sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in their sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in their sole discretion, to avoid or mitigate the impact of such Conflict of Interest.
- B13.5 Without limiting B13.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in their sole discretion:
- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of their employees proposed for the Work;
 - (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in their sole discretion, determines cannot be avoided or mitigated;
 - (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B13.4 to avoid or mitigate a Conflict of Interest; and

- (d) disqualify a Bidder if the Bidder, or one of their employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B13.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in their sole discretion.

B14. QUALIFICATION

B14.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B14.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>

B14.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract;
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
- (d) have completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B14.5 and D5) and;
- (e) Have submitted an approved exchanger dimensional drawing showing acceptable conformity to existing piping;
- (f) Submit evidence of model information and specifications; and
- (g) Submit equipment manuals that show acceptable operation and maintenance for the application.

B14.4 Further to B14.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or

- (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

- B14.5 Further to B14.3(d), the Bidder acknowledges they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at <http://www.accessibilitymb.ca/training.html> for anyone that may have any interaction with the public on behalf of the City of Winnipeg.

- B14.6 The Bidder shall submit, within five (5) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

- B14.7 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

- B15. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B15.1 Bids will not be opened publicly.

- B15.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (unevaluated and pending review and verification of conformance with requirements) will be available on the MERX website at www.merx.com.

- B15.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.

- B15.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

- B15.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

- B16. IRREVOCABLE BID**

- B16.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.

- B16.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the contract security have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

- B17. WITHDRAWAL OF BIDS**

- B17.1 A Bidder may withdraw their Bid without penalty at any time prior to the Submission Deadline.

B18. EVALUATION OF BIDS

B18.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Tender or acceptable deviation therefrom:
(pass/fail)
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B14
(pass/fail)
- (c) complete all sections on Form N (Detailed Specifications) and have acceptable deviations:
(pass/fail)
- (d) economic analysis of any approved alternative pursuant to B7
- (e) Total Bid Price;

B18.2 Further to B18.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B18.3 Further to B18.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in their Bid or in other information required to be submitted, that they are qualified.

B18.4 Further to B18.1(c), the Award Authority may reject all or any part of any Bid for failure to complete Form N and/or any Form N items deemed as a Fail without an acceptable deviation.

B18.5 Further to B18.1(e), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.

B18.5.1 Further to B18.1(e), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B18.5.2 Bidders are advised that the calculation indicated in B18.5 will prevail over the Total Bid Price entered in MERX.

B18.6 This Contract will be awarded as a whole.

B19. AWARD OF CONTRACT

B19.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.

B19.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be qualified, and the Bids are determined to be responsive.

B19.2.1 Without limiting the generality of B19.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with their own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

- B19.3 Where an award of Contract is made by the City, the award shall be made to qualified Bidder submitting the lowest evaluated responsive Bid in accordance with B18.
- B19.4 Further to Paragraph 6 of Form A: Bid/Proposal and C4, the City may issue a purchase order to the successful Bidder in lieu of the execution of a Contract.
- B19.4.1 The Contract Documents, as defined in C1.1(p), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.
- B19.5 Following the award of contract, a Bidder will be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for the Combined Provision of Goods and Services (2020-01-31)* are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Combined Provision of Goods and Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Tender to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for the Combined Provision of Goods and Services*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for the Combined Provision of Goods and Services*, these Supplemental Conditions are applicable to the Work of the Contract.

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of supply and delivery of six (6) spiral heat exchangers as per PART E -

D2.2 The major components of the Work are as follows:

- (a) Supply and delivery of six (6) spiral heat exchangers Section E3
- (b) Testing of heat exchangers as per Section E3.17;
- (c) Supply and deliver spare parts as per Section E4;
- (d) Supply and deliver special tools as per Section E5
- (e) Warranty Section E6;
- (f) Commissioning Section E7; and
- (g) Operating and Maintenance Manuals Section E8;

D2.3 The Work shall be done on an "as required" basis during the term of the Contract.

D2.3.1 The type and quantity of Work to be performed under this Contract shall be as authorized from time to time by the Contract Administrator and/or Users.

D2.3.2 Subject to C7.2, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of their actual operational requirements.

D3. DEFINITIONS

D3.1 When used in this Tender:

- (a) **"Aspect Environmental"** means an environmental aspect is an activity, product or service that can interact with the environment while environmental specifications can be implemented to prevent or mitigate these impacts;
- (b) **"DCS"** means Digital Control System;
- (c) **"EMS"** means Environmental Management System;
- (d) **"FAT"** means Factor Acceptance Testing;
- (e) **"Installation Contractor"** means the contractor that will install the Heat Exchangers supplied in this tender;
- (f) **"Instream"** means Waterway/Waterbody;
- (g) **"Supply Chain Disruption"** means an inability by the Contractor to obtain goods or services from third parties necessary to perform the Work of the Contract within the schedule specified therein, despite the Contractor making all reasonable commercial efforts to procure same. Contractors are advised that increased costs do not, in and of themselves, amount to a Supply Chain Disruption;
- (h) **"WWSD"** means Wastewater Services Division; and
- (i) **"Watercourse"** means a natural or artificial channel through which water flows;

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Brent Soloway, C.E.T..

Project Coordinator

Wastewater Engineering Services

Telephone No. (431) 278-0876

Email: bsoloway@winnipeg.ca

D4.2 At the pre-commencement meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D5. ACCESSIBLE CUSTOMER SERVICE REQUIREMENTS

D5.1 The Accessibility for Manitobans Act (AMA) imposes obligations on The City of Winnipeg to provide accessible customer service to all persons in accordance with the Customer Service Standard Regulation ("CSSR") to ensure inclusive access and participation for all people who live, work or visit Winnipeg regardless of their abilities.

D5.1.1 The Contractor agrees to comply with the accessible customer service obligations under the CSSR and further agrees that when providing the Goods or Services or otherwise acting on the City of Winnipeg's behalf, shall comply with all obligations under the AMA applicable to public sector bodies.

D5.1.2 The accessible customer service obligations include, but are not limited to:

- (a) providing barrier-free access to goods and services;
- (b) providing reasonable accommodations;
- (c) reasonably accommodating assistive devices, support persons, and support animals;
- (d) providing accessibility features e.g. ramps, wide aisles, accessible washrooms, power doors and elevators;
- (e) inform the public when accessibility features are not available;
- (f) providing a mechanism or process for receiving and responding to public feedback on the accessibility of all goods and services; and
- (g) providing adequate training of staff and documentation of same.

D6. UNFAIR LABOUR PRACTICES

D6.1 Further to C3.2, the Contractor declares that in bidding for the Work and in entering into this Contract, the Contractor and any proposed Subcontractor(s) conduct their respective business in accordance with established international codes embodied in United Nations Universal Declaration of Human Rights (UDHR) <https://www.un.org/en/about-us/universal-declaration-of-human-rights> International Labour Organization (ILO) [https://www.ilo.org/global/lang--en/index.htm](https://www.ilo.org/global/lang-en/index.htm) conventions as ratified by Canada.

D6.2 The City of Winnipeg is committed and requires its Contractors and their Subcontractors, to be committed to upholding and promoting international human and labour rights, including fundamental principles and rights at work covered by ILO eight (8) fundamental conventions and the United Nations Universal Declaration of Human Rights which includes child and forced labour.

D6.3 Upon request from the Contract Administrator, the Contractor shall provide disclosure of the sources (by company and country) of the raw materials used in the Work and a description of the manufacturing environment or processes (labour unions, minimum wages, safety, etc.).

- D6.4 Failure to provide the evidence required under D6.3, may be determined to be an event of default in accordance with C16.
- D6.5 In the event that the City, in its sole discretion, determines the Contractor to have violated the requirements of this section, it will be considered a fundamental breach of the Contract and the Contractor shall pay to the City a sum specified by the Contract Administrator in writing (“Unfair Labour Practice Penalty”). Such a violation shall also be considered an Event of Default, and shall entitle the City to pursue all other remedies it is entitled to in connection with same pursuant to the Contract.
- D6.5.1 The Unfair Labour Practice Penalty shall be such a sum as determined appropriate by the City, having due regard to the gravity of the Contractor’s violation of the above requirements, any cost of obtaining replacement goods/ services or rectification of the breach, and the impact upon the City’s reputation in the eyes of the public as a result of same.
- D6.5.2 The Contractor shall pay the Unfair Labour Practice Penalty to the City within thirty (30) Calendar Days of receiving a demand for same in accordance with D6.5. The City may also hold back the amount of the Unfair Labour Practice Penalty from payment for any amount it owes the Contractor.
- D6.5.3 The obligations and rights conveyed by this clause survive the expiry or termination of this Contract, and may be exercised by the City following the performance of the Work, should the City determine, that a violation by the Contractor of the above clauses has occurred following same. In no instance shall the Unfair Labour Practice Penalty exceed the total of twice the Contract value.

SUBMISSIONS

D7. AUTHORITY TO CARRY ON BUSINESS

- D7.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D8. SAFE WORK PLAN

- D8.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D8.2 The Safe Work Plan should be prepared and submitted in the format shown in the City’s template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgmt/Safety/default.stm>
- D8.3 Notwithstanding B14.4 at any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

D9. INSURANCE

- D9.1 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) inclusive, with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability, non-owned

automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work and throughout the warranty period;

- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Service. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence;
- (c) certificate of insurance to indicate that the Contractor is responsible for unloading/offloading the equipment

D9.2 Deductibles shall be borne by the Contractor.

D9.3 All policies shall be taken out with insurers licensed to write business in the Province of Manitoba.

D9.4 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, as applicable.

D9.5 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D10. CONTRACT SECURITY

D10.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain contract 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 to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; and
- (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 Winnipeg, in the form attached to these Supplemental Conditions (Form H3: 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.

D10.2 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:

- (a) the version submitted by the Contractor must have valid digital signatures and seals;
- (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B1.1.1(b).B1.1.1(b)B1.1.1(b)

D10.2.1 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or

digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in its discretion, exercised reasonably, allows.

- D10.2.2 Digital bonds passing the verification process will be treated as original and authentic.
- D10.2.3 Where the contract security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as contract security.
- D10.3 The Contractor shall provide the City Solicitor with the required contract security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

D11. SUBCONTRACTOR LIST

- D11.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.

SCHEDULE OF WORK

D12. COMMENCEMENT

- D12.1 The Contractor shall not commence any Work until they are in receipt of a notice of award from the City authorizing the commencement of the Work.
- D12.2 The Contractor shall not commence any Work until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - i. evidence of authority to carry on business specified in D7;
 - ii. evidence of the workers compensation coverage specified in C6.18;
 - iii. evidence of the insurance specified in D9;
 - iv. the contract security specified in D10; and
 - v. the Subcontractor list specified in D23.1;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D12.3 The City intends to award this Contract by January 10, 2024.

D13. DELIVERY

- D13.1 Goods shall be delivered within two hundred and twenty-four (224) Calendar Day(s) of the placing of an order and approved Shop Drawings, f.o.b. destination, freight prepaid to:

North End Water Pollution Control Centre (NEWPCC)
2230 Main St, Winnipeg, Manitoba, R2V 4T8
- D13.2 The Contractor shall confirm each delivery with the Contract Administrator or their designate, at least five (5) Business Days before delivery.
- D13.3 Goods shall be delivered between 8:30 a.m. and 2:00 p.m. on Business Days.
- D13.4 The Contractor shall off-load goods as directed at the delivery location.
- (a) The Contractor will be responsible for offloading the good from the transportation trailer.

D14. CRITICAL STAGES

D14.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:

- (a) Shop Drawings submitted 4 weeks after award.
- (b) Final approved Shop Drawing approved by March 1, 2024;
- (c) Shipment received at Site by September 6, 2024.

D15. TOTAL PERFORMANCE

D15.1 Total Performance is planned to be achieved by October 20, 2024.

D15.2 Total Performance shall be the date of one (1) week of operational service after all six (6) Digester Spiral Exchangers have been successfully installed and commissioned.

- (a) Digester Spiral Exchangers are to be installed by a separate Contractor as part of a City of Winnipeg installation Tender:

D15.3 The date on which the Work has been certified by the Contract Administrator as being Total Performance achieved to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D16. LIQUIDATED DAMAGES

D16.1 If the Contractor fails to achieve the Work of the Contract in accordance with the Contract by the day stated in D13, the Contractor shall pay the City two hundred and fifty dollars (\$250) per Working Day for each and every Working Day following the day fixed herein until the delivery is complete.

D16.2 The amount specified for liquidated damages in D16.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve the Work of the Contract.

D16.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D17. SUPPLY CHAIN DISRUPTION SCHEDULE DELAYS

D17.1 The City acknowledges that the schedule for this Contract may be impacted by the Supply Chain Disruption. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the delivery requirements and schedule identified in the Contract, in close consultation with the Contract Administrator.

D17.2 If the Contractor is delayed in the performance of the Work by reason of the Supply Chain Disruption, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

D17.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether a Supply Chain Disruption will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to ordering of Material or Goods, production and/or manufacturing schedules or availability of staff as appropriate.

D17.4 For any delay related Supply Chain Disruption and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D17.3. Failure to provide this notice will result in no additional time delays being considered by the City.

D17.5 The Work schedule, including the durations identified in D13 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator.

D17.6 Any time or cost implications as a result of Supply Chain Disruption and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

CONTROL OF WORK

D18. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) - QUALIFICATIONS

D18.1 Further to B14.3, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require updated proof of compliance, as set out in B14.3.

D19. SAFETY

D19.1 The Contractor shall be solely responsible for safety at the Site and for compliance with all laws, rules, regulations and practices required by the applicable safety legislation.

D19.2 The Contractor shall be solely responsible for securing the Site, and any existing facility thereon, and for the proper care and protection of the Work already performed.

D19.3 The Contractor shall do whatever is necessary to ensure that:

- (a) no person, property, right, easement or privilege is injured, damaged or infringed by reason of the Contractor's activities in performing the Work;
- (b) the health and safety of all persons employed in the performance of the Work or otherwise is not endangered by the method or means of their performance;
- (c) adequate medical services are available to all persons employed on the Work and at all times during the performance of the Work;
- (d) adequate sanitation measures are taken and facilities provided with respect to the Work;

D20. DEFICIENCIES

D20.1 Further to C11.7, the Contract Administrator may order the Contractor to alter or improve their methods, to increase or improve their Plant, 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, performed satisfactorily; or
- (b) progress is not being, or will likely not be, maintained in accordance with the work schedule.

D21. RECORDS

D21.1 The Contractor shall keep detailed records of the goods supplied under the Contract.

D21.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:

- (a) user name(s) and addresses;
- (b) order date(s);
- (c) delivery date(s); and
- (d) description and quantity of goods supplied.

MEASUREMENT AND PAYMENT

D22. INVOICES

D22.1 Further to C12, the Contractor shall submit an invoice for each portion of work performed to:

The City of Winnipeg
Corporate Finance - Accounts Payable
4th Floor, Administration Building, 510 Main Street
Winnipeg MB R3B 1B9

Facsimile No.: 204 949-0864
Send Invoices to CityWpgAP-INVOICES@winnipeg.ca
Send Invoice Inquiries to CityWpgAP-INQUIRIES@winnipeg.ca

D22.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase order number;
- (b) the City's project number and title: 'S-1287 – NEWPCC Spiral Heat Exchanger Replacement;
- (c) The Contract Administrator name;
- (d) date of delivery;
- (e) delivery address;
- (f) type and quantity of work performed;
- (g) the amount payable with GST and MRST shown as separate amounts; and
- (h) the Contractor's GST registration number.

D22.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D23. PAYMENT

D23.1 Further to C12, the City shall make payments to the Contractor by direct deposit to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct deposit arrangements with the City. Direct deposit application forms are at https://winnipeg.ca/finance/files/Direct_Deposit_Form.pdf.

D24. PAYMENT SCHEDULE

D24.1 Further to C12, payment shall be in accordance with the following payment schedule:

- (a) Ten (10) percent upon the approval of Shop Drawings.
- (b) Seventy-five (75) percent upon successful delivery of Shipment to the location identified in D13
- (c) Ten (10) percent upon successful installation (by others) and completion of commissioning activities of all six exchangers;
- (d) Five (5) percent upon delivery and acceptance of Operation and Maintenance (O&M) manuals along with training, training sessions provided.

WARRANTY

D25. WARRANTY

D25.1 Warranty is as stated in E6

DISPUTE RESOLUTION

D26. DISPUTE RESOLUTION

D26.1 If the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator, the Contractor shall act in accordance with the Contract Administrator's opinion,

determination, or decision unless and until same is modified by the process followed by the parties pursuant to D26.

D26.2 The entire text of C21.4 is deleted, and amended to read: "Intentionally Deleted"

D26.3 The entire text of C21.5 is deleted, and amended to read:

(a) If Legal Services has determined that the Disputed Matter may proceed in the Appeal Process, the Contractor must, within ten (10) Business Days of the date of the Legal Services Response Letter, submit their written Appeal Form, in the manner and format set out on the City's Materials Management Website, to the Chief Administrative Officer, and to the Contract Administrator. The Contractor may not raise any other disputes other than the Disputed Matter in their Appeal Form.

D26.4 Further to C21, prior to the Contract Administrator's issuance of a Final Determination, the following informal dispute resolution process shall be followed where the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator ("Dispute"):

- (a) In the event of a Dispute, attempts shall be made by the Contract Administrator and the Contractor's equivalent representative to resolve Disputes within the normal course of project dealings between the Contract Administrator and the Contractor's equivalent representative.
- (b) Disputes which in the reasonable opinion of the Contract Administrator or the Contractor's equivalent representative cannot be resolved within the normal course of project dealings as described above shall be referred to a without prejudice escalating negotiation process consisting of, at a minimum, the position levels as shown below and the equivalent Contractor representative levels:
- (i) The Contract Administrator;
 - (ii) Supervisory level between the Contract Administrator and applicable Department Head;
 - (iii) Department Head.

D26.4.1 Names and positions of Contractor representatives equivalent to the above City position levels shall be determined by the Contractor and communicated to the City at the pre-commencement or kick off meeting.

D26.4.2 As these negotiations are not an adjudicative hearing, neither party may have legal counsel present during the negotiations.

D26.4.3 Both the City and the Contractor agree to make all reasonable efforts to conduct the above escalating negotiation process within twenty (20) Business Days, unless both parties agree, in writing, to extend that period of time.

D26.4.4 If the Dispute is not resolved to the City and Contractor's mutual satisfaction after discussions have occurred at the final escalated level as described above, or the time period set out in D26.4.3, as extended if applicable, has elapsed, the Contract Administrator will issue a Final Determination as defined in C1.1(v), at which point the parties will be governed by the Dispute Resolution process set out in C21.

THIRD PARTY AGREEMENTS

D27. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

D27.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.

D27.2 Further to D27.1, in the event that the obligations in D27 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in

C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.

D27.3 For the purposes of D27:

- (a) **“Government of Canada”** includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) **“Government of Manitoba”** includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D27.4 Modified Insurance Requirements

D27.4.1 Where applicable, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and their Ministers, officers, employees, and agents shall be added as additional insureds.

D27.4.2 If applicable the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.

D27.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.

D27.4.4 Insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.

D27.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

D27.5 Indemnification by Contractor

D27.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for the Combined Provision of Goods and Services, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.

D27.5.2 The Contractor agrees that in no event will Canada or Manitoba, their respective officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:

- (a) any injury to any person, including, but not limited to, death, economic loss or infringement of rights;
- (b) any damage to or loss or destruction of property of any person; or
- (c) any obligation of any person, including, but not limited to, any obligation arising from a loan, capital lease or other long-term obligation;

in relation to this Contract or the Work.

D27.6 Records Retention and Audits

D27.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.

D27.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for the Combined Provision of Goods and Services, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D27.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.

D27.7 Other Obligations

D27.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.

D27.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.

D27.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.

D27.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

D27.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.

D27.7.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

FORM H1: PERFORMANCE BOND
(See D10)

KNOW EVERYONE 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 for

TENDER NO. 812-2023

SUPPLY AND DELIVERY OF NEWPCC SPIRAL HEAT EXCHANGERS

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 as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT
(CONTRACT SECURITY)
(See D10)**

(Date)

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

TENDER NO. 812-2023

SUPPLY AND DELIVERY OF NEWPCC SPIRAL HEAT EXCHANGERS

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.

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.

Except where they may conflict with the terms and conditions contained in this Letter of Credit, the International Standby Practices 1998 shall apply to this Letter of Credit. This Letter of Credit shall also be governed by and construed in accordance with the laws of the Province of Manitoba and of Canada as applicable therein, except to the extent that such laws are inconsistent with the International Standby Practices 1998. This Letter of Credit is subject to the exclusive jurisdiction of the courts in the Province of Manitoba and all courts competent to hear appeals therefrom.

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0101-MDTL-D001-001-R00	Dimensional Arrangement – Spiral Heat Exchanger

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B7.

E2. SERVICES

E2.1 The Contractor shall supply six (6) spiral heat exchangers in accordance with the requirements hereinafter specified.

E3. SPIRAL HEAT EXCHANGERS

E3.1 Applicable Codes and Standards

(a) As supplemented by this specification, the following codes, standards and regulations shall apply:

- (i) ASME Boiler and Pressure Vessel Code, section VIII, Division 1, latest revision, its addenda, and all other documents referenced therein. (Referred herein after as the Code.) Heat exchangers shall be designed and stamped in accordance with this Code and;
- (ii) ASTM A516/A516M pressure vessel plates, carbon steel, for moderate and lower temperature service.

(b) In addition, the following codes, standards and regulations in force on the date of the Purchase Order shall apply to the extent specified herein:

- (i) National Building Code of Canada and;
- (ii) Requirements of the Province of Manitoba in which the heat exchanger will be installed.

E3.2 Design Conditions

(a) The equipment shall be designed and constructed to meet the following minimum performance parameters:

- (i) Thermal Capacity: 806 kW
- (ii) Sludge Flow: 180 m³/hr
- (iii) Hot Water Flow: 125 m³/hr
- (iv) Sludge Temperature In: 33°C
- (v) Sludge Temperature Out: 38°C
- (vi) Water Temperature In: 68°C
- (vii) Water Temperature Out: 63°C
- (viii) Pressure Drop – Sludge Side: 4.9 m
- (ix) Pressure Drop – Water Side: 3.4 m
- (x) Max Operating Pressure: 210 kPa

E3.3 Equipment Size and Arrangement

- (a) The heat exchanger shall be generally as shown on the drawings. Deviations from the connection points and nozzle shown will not be considered and;
- (b) Exchangers must fit in existing location and be compatible with existing infrastructure.

E3.4 Thermal Design

- (a) The Heat Exchanger shall be guaranteed to deliver the performance called for under E3.2.

E3.5 Design Pressure

- (a) Notwithstanding the design pressure stated in the heat exchanger specification sheet, the minimum design pressure for either side of the exchanger channel shall be not less than 205 kPa;
- (b) The exchanger shall be stamped for the true Maximum Allowable Working Pressure (MAWP) if it is greater than the design pressure and;
- (c) The design of exchanger internal pressure parts for a differential pressure less than the shell and/or channel design pressure shall not be allowed unless specifically shown on the heat exchanger specification sheet. When such a differential pressure design is permitted, a special nameplate or warning tag shall be attached to the exchanger so as to make this condition known.

E3.6 Corrosion Allowance

- (a) Corrosion allowances shall be as shown in the specifications and;
- (b) No corrosion allowance shall be added to non ferrous materials, stainless steel, or other high alloy parts unless indicated on the heat exchanger specification sheet.

E3.7 Shell

- (a) Shell heads shall be one side fixed, one side removable (hinged and bolted, minimum of twenty $\frac{3}{4}$ " inch zinc-plated hook bolts and clamps). The removable head shall provide access to the outer (cold side) channel to allow sludge cleaning.

E3.8 Channels

- (a) Spiral construction shall be as given below:
 - (i) External spiral type with two concentric spiral channels for counter current circulation of sludge and hot water. Tube-in-tube, plate and boiler/heat exchanger types are unacceptable;
 - (ii) Sludge channel provided with large inlet compartment offering tangential entry and a 4-inch cleanout for sludge pocket;
 - (iii) Sludge channels shall be a minimum of 1 inch high and free of any sharp bends, support pins or any other obstructions;
 - (iv) Carbon steel 6mm (1/4") thick, 22mm (7/8") inner channel (hot side) width and 25mm (1") outer channel (cold side) width;
 - (v) The inner (hot side) channel shall be welded to the fixed head and;
 - (vi) Spacer studs shall be provided on the inner channel (hot side). The outer (cold side) channel shall be open to the removable head side.

E3.9 Gaskets

- (a) Full-face non-asbestos fiber sheet minimum 6mm (1/4") thick;
- (b) Furnish the gaskets for the removable shell head;
- (c) Provide one extra set of all gaskets and;
- (d) Provide six cover hook bolts.

E3.10 Valves and Connections;

- (a) ANSI B16.5, Class 150 flange, for all connections 3 inch and larger;

- (b) Half coupling drain connections with valves shall be provided on the hot side of the exchanger. Sufficient connections shall be provided to insure complete draining of all spiral compartments;
- (c) Flanged valves through 50mm (2") size inclusive shall be raised face 150# ANSI;
- (d) Valves over 50mm (2") size may be built up using forged steel raised face 150# ANSI type flanges, with rolled plate (min. 12mm) or pipe necks (minimum SCH. 80). Paragraph UG 37 of the Code shall be used to ascertain the necessity for reinforcement.;
- (e) Valves shall be long enough to permit the removal of a standard length stud bolt from the back side of the flange to clear the exchanger body and insulation. If not specified elsewhere, the minimum distance from external surface of shell to nozzle flange face shall be as follows:
- (f) A 50mm (2") half coupling backwash valve shall be provided on the cold side inlet valve and the cold side discharge valve;
 - (i) With extension to full port ball valve, accessible from side face of the spiral heat exchanger. Final direction to be determined upon approved Shop Drawings
- (g) A 100mm (4") diameter cleanout shall be provided on the cold side inlet pocket and;
- (h) All nozzles shall be ground flush and smooth with the inside of the exchanger. The periphery of any nozzles opening shall be ground to 6mm (1/4") minimum radius.

E3.11 Shell Supports

- (a) Each exchanger shall be provided with at least two steel supports with saddles for distributing the dead load and;
- (b) The bolt holes in the saddle on one end of each exchanger shall be slotted if required for expansion under the operating temperature.

E3.12 Lifting Lugs

- (a) Suitable lifting lugs, rings, or eyebolts shall be provided on the shell in order to facilitate handling.

E3.13 Identification Plate;

- (a) 16-gauge stainless steel with 1/4-inch die stamped equipment tag number securely mounted in a readily visible location.

E3.14 Materials

- (a) Where carbon steel construction is provided, the following materials will be preferred:
 - (i) Plate: SA516 70 (shell, head, channel, reinforcing pad, etc.);
 - (ii) Forgings: SA105N;
 - (iii) Pipes: SA106B or SA53B Seamless;
 - (iv) Bolting: A193 Gr B7 for bolts and SA 194 Gr 2H for nuts and;
 - (v) Structural: SA36 - or approved equivalent.
- (b) When stainless steel material is provided, L grade materials shall be used and;
- (c) Factory Finishing
 - (i) Sandblast in accordance to SSPC-SP-6. External carbon surfaces, except machined surfaces, or flanges painted with International Interlace 789 (single component modified alkyd primer/finish). 4.0 mil minimum finish coat.

E3.15 Fabrication

- (a) Forming and Assembly;
 - (i) The preparation of plate edges for welding shall be done by shearing, machining, grinding, or thermal cutting. Carbon steel plate thickness greater than 25mm (1") and all ferrous alloy steel plates shall be preheated prior to thermal cutting, and the

- bevelled edges magnetic particle examined for linear discontinuities. Defects shall not exceed limits outlined in ASME SA 20, Table A1.14;
- (ii) Plate edge laminations, revealed by visual or magnetic particle examination and which are not acceptable shall be completely removed and area(s) repaired;
 - (iii) The maximum thickness of non-bevelled plate shall not exceed 8mm (5/16");
 - (iv) Shearing shall not be used for thickness of 6mm (1/4") and over;
 - (v) Nozzles and their reinforcement pads shall not be located within 50mm (2") of any weld unless welds meet the radiographic requirements in paragraph UW 51 of Division 1 and;
 - (vi) All internal and external non-pressure welded attachments shall be fully seal welded. All seal welded pads shall be vented through a 6mm (1/4") NPT tell tale hole.
- (b) Welding
- (i) All pressure retaining welds shall be full penetration welds;
 - (ii) Where access does not permit back welding, the root pass shall be made by the GTAW process;
 - (iii) On the shell, welding procedures qualified to SA 516 70 are also acceptable for SA 106 B. The same brands of welding consumables as those used for qualification shall be used for production and;
 - (iv) Welders and welding procedures shall be qualified in accordance with the ASME Code, Section IX.
- (c) Post Weld Heat Treatment
- (i) When specified or when required by the ASME Code, post weld heat treatment of the heat exchangers shall be performed in accordance with the requirements of the Code and;
 - (ii) Properly identified heat treatment charts are required for all heat treatment operations. The temperature charts shall identify each of the thermocouples used to record the exchanger temperature.

E3.16 Inspection

- (a) The responsibility for inspection rests with the Contractor in accordance with paragraph UG 90 of the Code; however, the Contract Administrator reserves the right for its authorized representative to inspect exchangers at any time during their fabrication to assure that such equipment, materials and workmanship are in accordance with this Specification, and the Code;
- (b) All non-destructive examinations shall be performed only by personnel certified in accordance with CGSB Standards (Canadian General Standards Board);
- (c) All pressure vessels shall be registered by the Contractor with the Government Jurisdiction in which the heat exchanger will be installed. All required certificates shall be obtained by the Contractor and forwarded to the Contract Administrator for record;
- (d) The Contractor shall notify the Contract Administrator, or its authorized representative, when fabrication is started and when the exchanger is completed and ready for final inspection and tests. Intermediate inspections shall be arranged as necessary, between the Contractor and the Contract Administrator or his authorized representative;
- (e) For non-magnetic materials, a liquid penetrant examination, shall be used in place of any required magnetic particle examination;
- (f) Welds utilizing stainless steel or high nickel electrodes shall be liquid penetrant examined upon their completion;
- (g) Radiographic examination of weld joints shall be performed when required by the Code;
- (h) All nozzle to shell and channel attachment welds shall be magnetic particle examined (MT);
- (i) All radiographs taken during fabrication shall be available for examination by the Contract Administrator or his agent and;

- (j) All non-destructive examinations shall be conducted and results evaluated in accordance with ASME Section V.

E3.17 Testing

- (a) Hydrostatic testing shall be in accordance with ASME Section VIII, Division 1, and as follows;
- (b) Factory Acceptance Test (FAT) report shall be provided for each spiral heat exchanger;
 - (i) Report shall state design specifications, acceptable tolerances and as found values.
- (c) All welded attachments provided with tell tale holes shall be pneumatically and soap tested at 20 psig prior to heat treatment and/or hydrostatic test. Tell tale holes shall not be plugged during the final hydrostatic test of the vessel;
- (d) Heat exchangers shall be subjected to a hydrostatic test pressure which, at every point in the exchanger, is not less than that required by the Code. There shall be no water leakage from nozzle blinds during hydrostatic test;
 - (i) Test shall be performed after completion of all external and internal welding;
 - (ii) Prior to final inspection and hydrostatic test, the inside and outside of the vessel shall be cleaned and shall be free from all slag, scale, dirt, grit, weld spatter and pieces of metal, paint, oil, etc;
 - (iii) The use of shellac, compounds, lead, etc., on gaskets is not permitted;
 - (iv) Service gaskets and bolting that are to be supplied with the exchanger may be used when pressure testing the equipment. A spare set of gaskets for all but ANSI flanges shall be supplied with the exchanger. All gaskets shall be new;
- (e) All hydrostatic tests shall be held for at least one hour and shall be made in the presence of an authorized inspector and with his approval;
- (f) Following the hydrotest, the exchanger shall be completely drained so that no liquid remains;
- (g) The release of an exchanger by an authorized inspector shall not relieve the Contractor of his responsibility and does not alter the conditions of the guarantee and;
- (h) No welding (pressure or non-pressure) on a pressure envelope is permitted after final hydrotesting.

E3.18 Repairs

- (a) Any major repairs resulting from the material defects or manufacturing errors must be reviewed with the Contract Administrator prior to taking any corrective action and;
- (b) Welding repairs carried out after heat treatment shall be re heat treated, or after testing shall be re-tested, or after radiography shall be re radiographed, or after examination by magnetic particle or liquid penetrant method, shall be re examined in accordance with the requirements of this specification. The Contract Administrator shall be notified of any such repairs.

E3.19 Preparation For Shipment

- (a) All flange faces and other machined surfaces shall be coated with a rust preventative and protected with covers;
- (b) All tell tale and vent holes shall be packed with grease to prevent water infiltration. Plugs are not permitted;
- (c) Bolts and nuts shall be coated with a suitable thread lubricant to prevent galling;
- (d) All bolting and other parts shall be suitably packaged and identified to avoid loss or damage during shipment and;
- (e) Exchanger shall not be released for shipment without the approval of the Contract Administrator's authorized representative.

E4. SPARE PARTS

- E4.1 Provide six (6) of each spare part to furnish each heat exchanger:
- (a) One cover-gasket and;
 - (b) Six cover hook-bolts.

E5. SPECIAL TOOLS

- E5.1 Provide two (2) sets of the following tools to perform the Work:
- (a) Digital torque wrench, extension, and sockets for proper tensioning of service hatch and front door. Each tool set is to be complete with a labelled case/bag suitable for an industrial environment and rugged use.

E6. WARRANTY

- E6.1 Warranty is as stated in C13, except where longer warranty periods are specified in the respective Specification sections and as per below.
- E6.2 For the Spiral Heat Exchangers;
- (a) the warranty period shall be two (2) years and;
 - (b) The warranty period shall begin whichever comes first; 6 months after delivery or the date of total performance/
- E6.3 Prior to the Warranty expiring, the Contractor may be required at the City's discretion to attend an on-site warranty walkthrough approximately one (1) month prior to the end of the warranty period. The Contract Administrator will provide a minimum of ten (10) Business Days notice. It is planned for the warranty inspection site visit to occur over one (1) full business day;
- (a) The Contractor shall provide the services of a qualified technical representative to be present at the warranty walkthrough.

E7. COMMISSIONING

- E7.1 On-site start-up inspections and on-site commissioning activities are planned to occur over one (1) full Business Day (8 hours) for each heat exchanger. The Contract Administrator will provide a minimum of five (5) Business Days notice of on-site initial start-up inspection and on-site field commissioning activities. Only one (1) Heat Exchanger will be installed and commissioned at a time, therefore a total of six (6) separate on-site start-up inspections and commission activities will be required by the Installation Contractor.
- (a) The Contractor will be required to provide documentation, installation assistance and troubleshooting support as required by the Installation Contractor;
 - (b) In order to ensure reliable operation of a new installed Heat Exchangers, the Contractor will be required to provide a minimum two (2) site visits by an authorized field service representative;
 - i. The first site visit is to witness, participate in commissioning and validate the first heat exchanger installation;
 - ii. The second site visit is required to validate all six (6) newly installed heat exchangers installations and confirm they are operating correctly within Fifteen (15) working days of the last heat exchanger total performance;
 - iii. The Contractor will be required to provide informal training to City personnel during the site visit. This informal training shall include service, troubleshooting and maintenance activities;

- (c) The Contractor authorized representative will note any warranty or installation deficiencies. They will be required to provide inspection checklists and for each on-site heat exchanger. The Contractor representative will be responsible to fill out checklists and commission forms during site visit(s) and;
- (d) All expenses to validate and witness the installation are to be incurred by the Contractor.

E8. OPERATING AND MAINTENANCE (O&M) MANUALS

- E8.1 Provide the Contract Administrator with manufacturer's technical literature for each component supplied detailing correct installation procedure and recommended operating and maintenance schedule, grades of lubricants required and assembly/disassembly instructions.
- E8.2 The Contractor shall provide one (1) electronic copy and two (2) hardcopy draft versions of the installation & storage, operation and maintenance instructions prior to each shipment of goods from the factory.
- E8.3 After the Contractor has reached Total Performance, provide the Contract Administrator with one (1) electronic copy for each review submission for the complete Operating and Maintenance Manuals.
- E8.4 Provide the Contract Administrator with five (5) hard copies and five (5) electronic copies of the Contract Administrator reviewed an approved Operating and Maintenance Manuals. Bind hard copies in a three (3) "D-Ring", hard-covered, plastic jacketed binder with full cover and spine inserts. Organize contents into applicable sections of work, parallel to Specifications breakdown and provide tab dividers for separating sections along with cover sheets for each section. Provide each binder with USB for a complete electronic copy of Operating and Maintenance Manuals.
- E8.5 Each Tab requires a section index page to list the separate items in each tab along with the page number and number of pages. All pages shall be numbered.
- E8.6 Digital copies are to be word searchable and all tabs, indexes and references cross-reference linked (hyperlink).
- E8.7 In addition to the information called in the Specifications, the following shall be included as part of the Operating and Maintenance Manuals:
 - (a) Title Sheet, labelled "Operation and Maintenance Instructions", containing Project Number & Name (S-1287 – NEWPCC Digester Spiral Heat Exchangers), Date;
 - (b) Bid opportunity number and description of supplied goods;
 - (c) Table of Contents indicating all sections contained in the Operation and Maintenance manual;
 - (d) Tab A – Contractor Information;
 - (i) Contractor name and address;
 - (ii) Contractor contact representative with phone number and email and;
 - (iii) All Sub-Contractors names, addresses and contact information.
 - (e) Tab B – Warranty;
 - (i) Letter of Warranty, signed and dated to include warranty start date (from the date as stated in E9), warranty end date, Contractor warranty information and;
 - (ii) Description of work/parts that are covered under warranty and warranty durations.
 - (f) Tab C – equipment Models, serial and performance specifications;
 - (i) Quick reference exchanger model, serial number and performance specifications including pictures of supplied equipment and;
 - (ii) Auxiliary equipment model, serial and specifications including pictures.
 - (g) Tab D – Products and Shop Drawings;

- (i) Complete Specifications information;
 - (ii) Copy of all approved and as-constructed Shop Drawings. As-constructed Shop Drawings shall be sealed by a Professional Engineer licenced to practice engineering in the Province of Manitoba;
 - (iii) Bill of martial with parts numbers and;
 - (iv) Exchanger PID's drawings (To be provided by consultant).
- (h) Tab E – Spare Parts & Tools;
- (i) Provide instructions for handling and storage of spare parts;
 - (ii) Provide a listing of any special tools required to operate and/or maintain the products and;
 - (iii) Provide a listing of all spare parts included with pictures of each part, part numbers, quantities and practical life spans.
- (i) Tab F – Certified Factory Test Results;
- (i) General information page containing:
 - (a) Information (model, serial, specifications);
 - (b) Dates Exchangers were tested;
 - (c) Tests performed and;
 - (d) Testing representatives;
 - (ii) Calibration of equipment used for testing procedures and test procedure arrangements;
 - (iii) Copy of all approved tests and documented information test forms completed at the factory, each test shall be signed by the Contractor representative and dated;
 - (iv) Factory inspection and verification reports/forms;
 - (v) Any additional performance reports and;
 - (vi) Copy of current edition of factory certification for CSA and/or cUL compliance for Canadian Approval.
- (j) Tab G – Sequence of Operation;
- (i) Sequence of Operation outlining how systems installed were designed to work;
 - (ii) Provide description of entire mechanical system, operation and control and;
 - (iii) Provide operating instructions, including start-up and shutdown procedures.
- (k) Tab H – Installation and Removal Instructions;
- (i) Provide instructions for handling and storage of equipment and;
 - (ii) Provide instructions for installation and removal of equipment.
- (l) Tab I – Maintenance Activities;
- (i) Provide part books that illustrate and list all assemblies, sub-assemblies, and components for easy reference;
 - (ii) Cleaning and service instructions complete with step by step instructions and pictures;
 - (iii) Provide instructions on preventative and corrective maintenance, with service procedures and recommended schedule;
 - (iv) Recommended frequency for each maintenance task, cleaning inspections and scheduled overhauls and/or reconditioning and;
 - (v) Listing of any special tools required to service and/or maintain the equipment.
- (m) Tab J – Inspection & Commissioning Reports;
- (i) Include two (2) field observation reports submitted for each site visit inspection and commissioning activities;
 - (ii) Confirmation letter identifying that all two (2) commissioning site visit activities were witnessed and verified to meet the requirements of the Specifications and the requirements of the project;
- (n) Tab K – Commissioning report (To be provided by consultant) ;

- (o) Tab M –Training Operations and Maintenance documents;
- (p) Tab N – Spare and;
- (q) Tab O – Spare.

E9. TRAINING

- E9.1 The Contractor shall provide virtual training to City staff by a factory-trained representative on the operation and maintenance of the heat exchangers complete with power point presentation.
- E9.2 Training sessions shall be provided as a presentation slideshow done over Microsoft Teams. Submit one (1) electronic copy of each presentation slide show in pdf format to the Contract Administrator .
- E9.3 Training shall be provided in one (1) session for Operation staff and Maintenance staff. after completion of each training session to be distributed to attendees.
- E9.4 Training presentations shall be submitted to the city in addition to creating Pdf documents. PDF documents shall be setup with two (2) slides on one (1) page.
- E9.5 Training is to be coordinated and completed with the City tanning coordinator to ensure formatting and compliance with online training objectives;
 - (a) Consultant shall ensure clear learning objectives and assessment built-in;
 - (b) Training requirements are identified and submitted for review and;
 - (c) Training materials to be submitted to the City for review and comment prior to the on-site training.
- E9.6 Training shall be completed after Total Performance has been achieved. The Contract shall not be considered complete until the training has been provided.

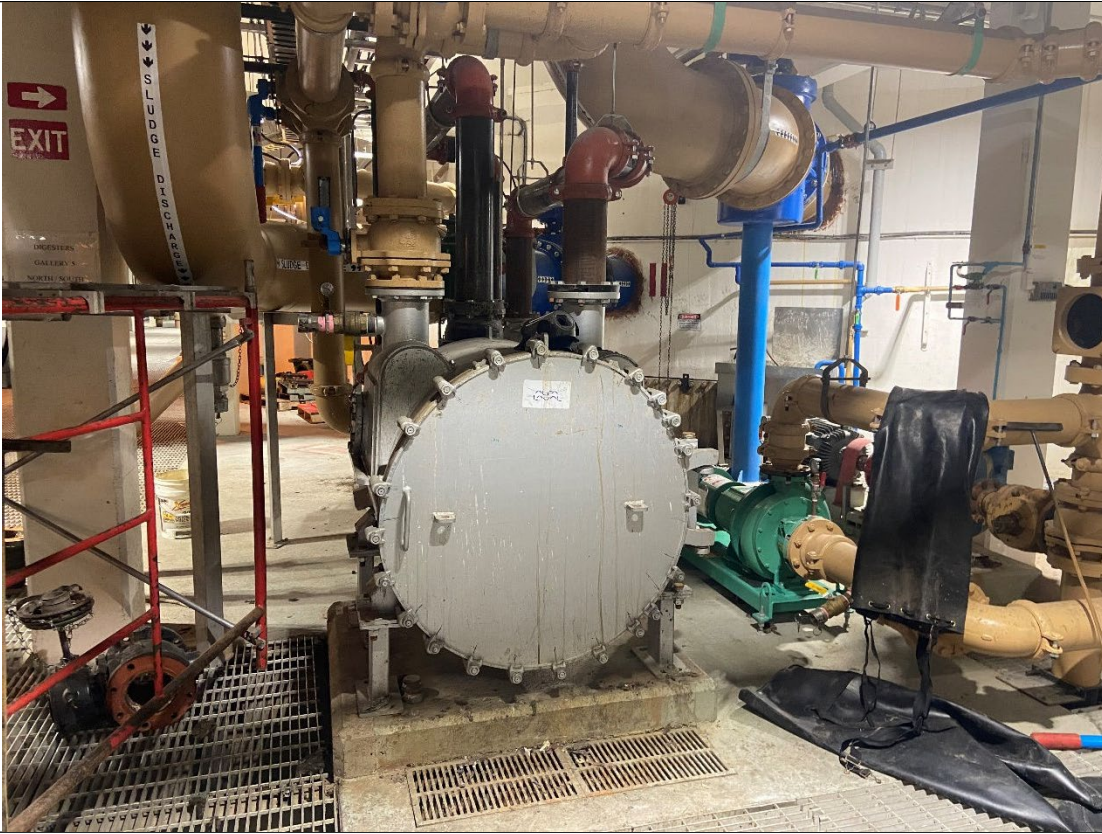
APPENDIX A – SITE INFORMATION



Digester Spiral Exchanger 09



Digester Spiral Exchanger 10



Digester Spiral Exchanger 11



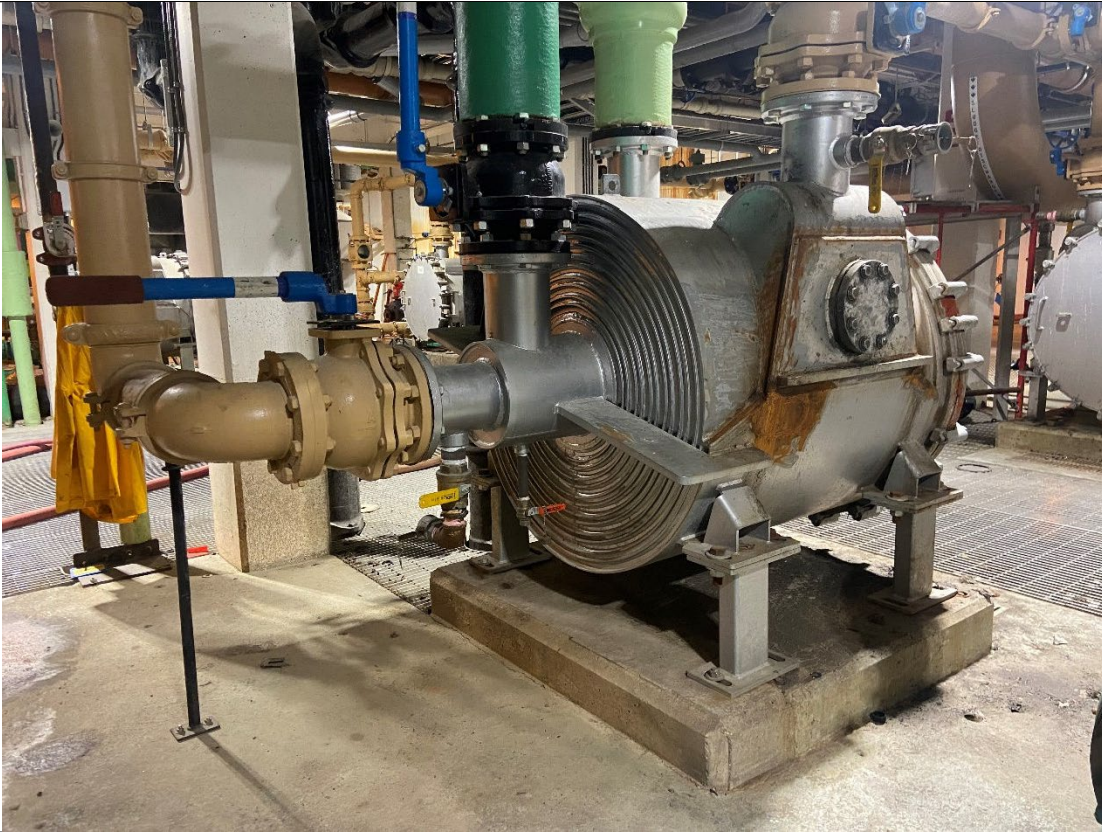
Digester Spiral Exchanger 12



Digester Spiral Exchanger 13



Digester Spiral Exchanger 14



Digester Spiral Exchanger Rear Connections



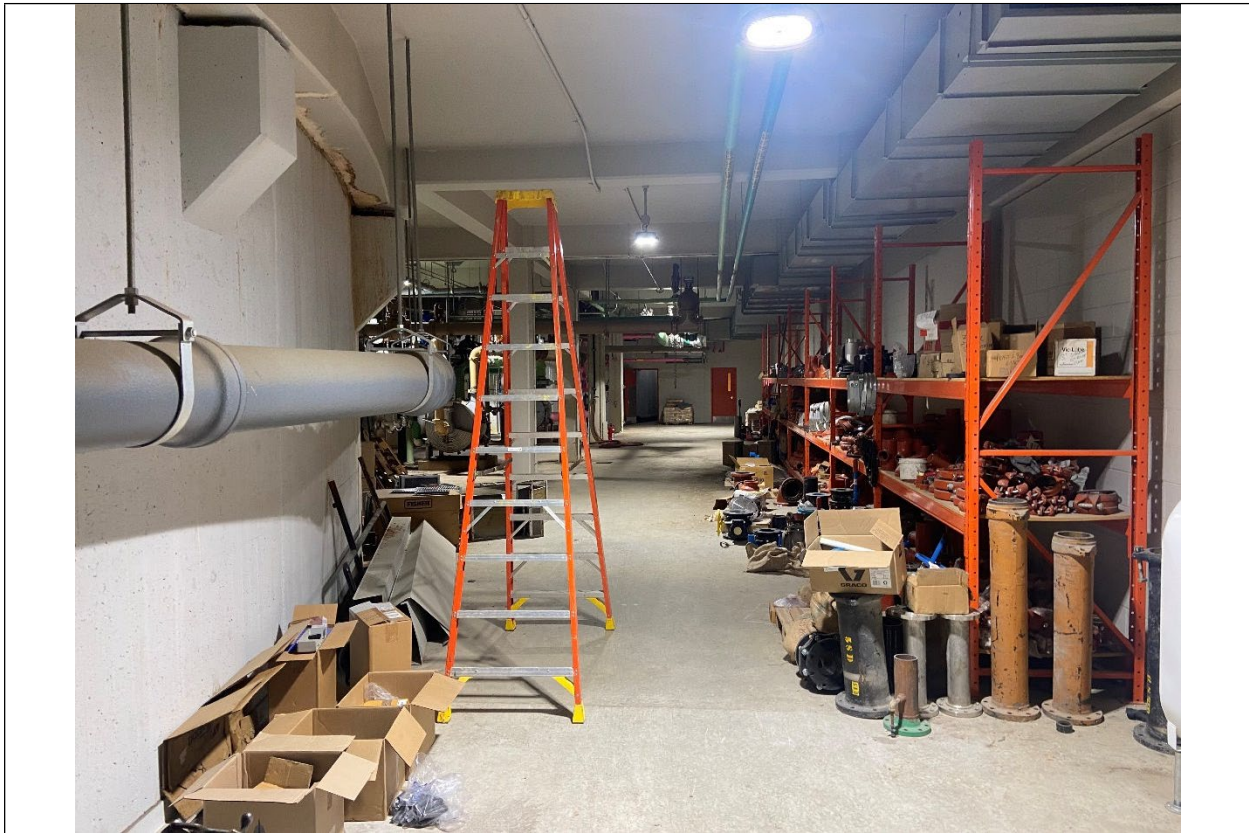
Digester Spiral Exchanger Top Connections



Exchanger Unload Location Outside



Exchanger Unload Location Inside



Digester Spiral Exchanger Storage Gallery 1 (2 Exchangers)



Digester Spiral Exchanger Storage Gallery 2 (4 Exchangers)