

TENDER CALL

PW 12-25

**Frankford Wastewater
Treatment Plant
Headworks Upgrades**



A Natural Attraction

CITY OF QUINTE WEST

TENDER CONTACT:

**Janet Powers, AMCT
Purchasing Supervisor
7 Creswell Dr.
Trenton, ON K8V 6X5
T. (613) 392-2841 x 4450
F. (613) 392-0714
Email: purchasing@quintewest.ca**

ALL QUESTIONS:

purchasing@quintewest.ca

DATE OF ISSUE:

Sept. 6, 2012

MANDATORY SITE MEETING:

Sept. 17, 2012 at 1:00 p.m.

SUBMISSION DEADLINE DATE:

Sept. 25, 2012 at 1:00:00 p.m. local time

CLOSING LOCATION:

**Finance Department
City of Quinte West
7 Creswell Drive
2nd Floor Reception
Trenton, ON
K8V 6X5**

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PART I –PROJECT SPECIFIC INFORMATION/REQUIREMENTS

1. INTRODUCTION

- 1.1 The City of Quinte West is situated on the shores of the beautiful Bay of Quinte serving as the gateway to the world famous Trent Severn Waterway, and is just 90 minutes east of Toronto on Highway 401. Quinte West was formed through the amalgamation of the former municipalities of Trenton, Sidney, Murray and Frankford.
- 1.2 The anticipated outcome of this Tender Call is the selection of a qualified contractor to complete the works as detailed.

2. SCOPE OF PROJECT

The project includes for upgrades to the raw sewage screening and related works at the City of Quinte West Frankford Wastewater Treatment Plant located at 174 North Trent Street, Frankford Ward of the City of Quinte West.

Work includes, but is not limited to:

- Provide a factory built raw sewage inclined screen complete with channel insert, manual bypass screen, bypass weir, screenings bagging system, and controls,
- Construction of a building enclosure on the existing headworks structure,
- Related building and process mechanical and electrical,
- Demolition,
- Temporary raw sewage bypass piping,
- Electrical power supply, and
- Related start-up, documentation, and commissioning.

3. TENTATIVE SCHEDULE

- 3.1 Release of Tender Documents: Sept. 6, 2012
- 3.2 *Mandatory Site Meeting – September 17, 2012 at 1:00 p.m.
- 3.3 Closing Date: September 25, 2012 at 1:00:00 p.m. local time
- 3.4 **Date for Project Substantial Completion: On or before February 28, 2012

*A MANDATORY SITE MEETING has been scheduled for Monday, Sept. 17, 2012 at 1:00 p.m. Interested parties will meet at the Frankford Wastewater Treatment Plant, 174 North Trent Street, Frankford. Registration/attendance will be taken between 12:50 and 1:10. Only those represented at the

** The City of Quinte West has applied to the Ontario Ministry of the Environment for Environmental Compliance Approval (formerly Certificate of Approval). Modification of process related components of the project may not proceed until the MOE review is complete. MOE review may take up to 20 weeks, in which case the project completion date for related scope will

be extended by the number of days from the date of contract award to the date of receiving the ECA.

4. INSURANCE AND INDEMNIFICATION REQUIREMENTS

- 4.1 The successful bidder shall at its own expense obtain and maintain until the termination of the contract, and provide the City with evidence of the following within ten days of notification of intent to accept.
- 4.2 **Comprehensive general liability** insurance on an occurrence basis for an amount not less than Five Million (\$5,000,000) dollars for any negligent acts or omissions by the bidder relating to its obligations under this Agreement. Such insurance shall include, but is not limited to Bodily Injury and Property Damage including loss of use; personal injury; contractual liability; premises, property & operations; non-owned automobile liability, broad form property damage, owners and contractors' protective, products and completed operations, employees as additional Insured, occurrence property damage, contingent employers liability, cross liability and severability of interest clauses;
- 4.3 The successful applicant shall agree to all times indemnify and save harmless the City and its respective councilors, officers, employees, agents, contractors and other users from and against all claims, demands, losses, costs, damages, actions, suits or other proceedings by whomsoever made, sustained, brought or prosecuted in any manner based upon, occasioned by or attributable to anything done or omitted to be done by the Successful Applicant, the Successful Applicant's permitted connection with the submission or the Contract.
- 4.4 **Additional Insured** Such insurance shall add the Corporation of the City of Quinte West, and J.L. Richards & Associates Limited, as an additional insured but only with respect to the operations of the bidder. This insurance shall be non-contributing with and apply as primary and not as excess of any insurance available to the City.
- 4.5 **Automobile liability** insurance with respect to owned or leased vehicles (in excess of 30 days) used directly or indirectly in the performance of the Services covering liability for bodily injury, death and damage to property with a limit of not less than \$5,000,000. inclusive for each and every loss.
- 4.6 **Cancellation, Lapse, Material Change** The policies shown above will not be cancelled, permitted to lapse or materially changed unless the insurer notifies the City in writing at least thirty (30) days prior to the effective date of cancellation, expiry or change. The City reserves the right to request such higher limits of insurance or other types of policies appropriate to the work as the City may reasonably require.
- 4.7 **Claims Handling**

For the purpose of this paragraph "claim" or "claims" shall mean those claims for damages or loss resulting from the performance of work under the contract and made against the

City and/or the Contractor by persons not involved in the performance of the work, e.g.: property owners, pedestrians, motorists.

The Contractor shall, upon receiving notice of a claim, respond promptly in a respectful manner to the claimant and notify the City Representative of the particulars of the claim. Within thirty (30) days after receiving notice of a claim the Contractor will conduct an investigation and resolve the claim and, if unsuccessful, the City may then appoint an independent adjuster to investigate the claim.

The City will make its best efforts to settle any claims not settled within thirty (30) days by the Contractor based on the independent adjuster's report. All costs of the settlement and the adjuster are to be paid by the Contractor and may be taken by the City from monies due the Contractor.

Prior to the release of holdback monies, the Contractor and the City Representative will confirm to the City that there are no unresolved claims remaining and, if they are unable to do so, then the City will be entitled to retain monies it deems sufficient to pay for claims and associated costs, including legal costs on a solicitor-client basis, from the holdback amount.

In the event that the City and/or the Contractor are served with a Statement of Claim, the Contractor and/or the Contractor's insurer shall assume the defense of any such action, including the City's defense, and ensure that the City Representative is kept apprised of the status of the legal proceedings in any such action.

5. WORKPLACE SAFETY AND INSURANCE BOARD

- 5.1 A Letter of Good Standing from the Workplace Safety and Insurance Board must be provided by the successful proponent prior to commencement of work. The successful proponent will also be required to produce a Certificate of Clearance from the Workplace Safety and Insurance Board from time to time during the contract and/or prior to final payment. The successful proponent further agrees to maintain that good standing throughout the contract period.
- 5.2 The successful bidder shall not commence work until such time as the required evidence of insurance has been filed with and approved by the City of Quinte West. The successful bidder shall further ensure that evidence of the continuance of said insurance is filed at each policy renewal date for the duration of the contract.
- 5.3 If the successful Contractor is an Independent Operator they must provide documentation to that effect as issued by the Workplace Safety and Insurance Board.
- 5.4 With the implementation of WSIB's electronic registration and accessibility to that information, if you have named the Corporation of the City of Quinte West in your profile,

we will access that information online to determine compliance and a paper copy will not be necessary.

6. BID DEPOSIT

6.1 A bid bond or certified cheque in an amount not less than ten (10) percent of the total tender amount, made payable to The Corporation of the City of Quinte West must accompany all bids. All bid deposits will be returned to the respective bidders within fifteen (15) working days after the Tenders have been opened except that of the two low bidders which shall be retained by the Owner until the accepted Contractor has fully executed the Contract and provided the City will all required documentation and securities as prescribed.

7. SURETY'S CONSENT & SUBSEQUENT BONDING

7.1 A surety's consent to bond (Agreement to Bond) with a validity period of no less than 60 days must accompany all bids

7.2 Within ten (10) days from the date of notification of the acceptance of the submitted tender by the Corporation, the Contractor shall submit a completed Performance Bond in the format of CCDC 221 and a Labour and Material Payment Bond in the format of CCDC 222, each in the amount of 100% of the contract total price, both issued by a surety company licensed to do business in the province of Ontario. Failure to do so will result in the forfeiture of the bid bond referenced in item 6.1 above.

8. WARRANTY PERIOD AND SURETY

8.1 **A one year warranty period will be in effect upon substantial completion of the works. Two and a half percent (2.5 %) of the total of each payment certificate will be deducted and retained by the Owner as warranty surety for the duration of the warranty period. (Note: This is in addition to the mandatory 10% as stipulated under the Construction Lien Act.)**

9. PRICING AND TAXES

9.1 Prices quoted are to be in Canadian Funds and are to remain firm for the duration of the contract. Any applicable taxes are to be shown as a separate line item.

9.2 Prices submitted are to remain firm for acceptance for a period of 60 (sixty) days from date of tender closing.

9.3 HST – extra

10. ACCESSIBILITY

10.1 The City is committed to the accessibility principles of preventing and removing barriers in accessing goods and services for people with disabilities and is bound by the Standards under the Accessibility for Ontarians with Disabilities Act, 2005 as may be amended from time to time.

- 10.2 Regulations enacted under the Act apply to every designated public sector organization and other third parties that provide goods and services to the members of the public.
- 10.3 The contractor, and all sub-contactors hired by the consultant/contractor in the completion of its work, will meet or exceed compliance with all applicable regulations under the Accessibility for Ontarians with Disabilities Act, 2005 as may be amended from time to time.
- 10.4 It is the contractor's responsibility to ensure they are fully aware of, and meet all requirements under the Act.
- 10.5 The Corporation of the City of Quinte West shall not be responsible for any liabilities, costs, expenses, loss or damage incurred, sustained or suffered by any respondent prior or subsequent to or by reason of the acceptance or the non-acceptance by the City of Quinte West of any tender or by reason of any delay in the acceptance of a tender save as provided in the Contract.

PART II
GENERAL INSTRUCTION TO BIDDERS

1. DEFINITIONS

Change Order: A written amendment to the Contract prepared by the Consultant/Owner and signed by the Owner and the Contractor stating their agreement upon a change in the Work, the method of adjustment or the amount of the adjustment in the Contract Price if any and the extend of the adjustment in the Contract Time if any.

City/Municipality: City of Quinte West

Construction: Includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project.

Constructor: A person who undertakes a project for an Owner and includes an Owner who undertakes all or part of the project by himself or by more than one employer.

Consultant: A person or entity engaged by the Owner and identified as such in the Agreement. The Consultant is the Architect, the Engineer or entity licensed to practise in the province of the Place of the Work. The term Consultant means the Consultant or the Consultant's authorized representative.

Contract: The undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the Contract Documents and represents the entire agreement between the parties.

Contractor: The person or entity identified as such in the Agreement. The term Contractor means the Contractor or the Contractor's authorized representative as designated to the Owner in writing.

Employer: A person who employs one or more workers or contracts for the services of one or more workers and includes a Contractor or Subcontractor who undertakes with an Owner, Constructor, Contractor, or Subcontractor to perform work or supply services. Must, Mandatory or Required – Identifies a requirement that shall be met in order for a tender to receive consideration. Failure to comply will result in rejection of the tender submission.

Owner: The person or entity identified as such in the Agreement. The term Owner means the Owner or the Owner's authorized agent or representative as designated to the Contractor in writing, but does not include the Consultant.

Place of Work: The designated site or location of the Work identified in the Contract Documents.

Project: The total construction contemplated of which the Work may be the whole or a part.

Provide: To supply and install.

Should or Desirable: Identifies a requirement having a significant degree of importance to the objectives of the RFT.

Must, Mandatory or Required: Identifies a requirement that shall be met in order for a tender to receive consideration. Failure to comply will result in rejection of the tender submission.

Specifications: That portion of the Contract Documents, wherever located and whenever issued, consisting of the written requirements and standards for Products, systems, workmanship, quality, and the services necessary for the performance of the Work.

Subcontractor: A person or entity having a direct contract with the Contractor to perform a part or parts of the Work at the Place of the Work.

Supplier: A person or entity having a direct contract with the Contractor to supply Products.

Volunteer: A person who performs a job or provides a service and who receives no pay for that job or service.

WWTP: Wastewater Treatment Plant

2. SUBMITTING A TENDER

All responses must be submitted as described below.

2.1 All tenders must be submitted in a sealed envelope to the attention of:

Janet Powers, Purchasing Supervisor
City of Quinte West Municipal Office
7 Creswell Drive, 2nd Floor Reception
Trenton, ON
K8V 6X5

USE RETURN "LABEL" (page) PROVIDED IN THIS TENDER PACKAGE

(Tape or glue it to the front of your submission)

2.2 To ensure standardization of bidder response, City of Quinte West response forms will be supplied in the bid package, and must be used. Failure to submit the information on the forms when provided may result in rejection of the bid. When forms are not provided,

- responses should be submitted on respondent's own letterhead or quotation form and must be signed by an authorized officer of the respondent.
- 2.3 The tender return "label" (page) as provided in this tender package **should** be affixed (taped or glued) to the outside of your submission. Failure to do so could result in loss, misdirection, or opening of the contents of the tender submission prior to the official tender opening, all of which would result in rejection of your bid submission.
- 2.4 Faxed or other electronically transmitted bids **will not** be accepted.
- 2.5 All bid opportunities are posted to the City's website www.quintewest.ca under Business>Bids and Tenders. Hard copies are also available from the municipal office, address as shown above.
- 2.6 When a bid is received, the envelope shall be date and time stamped in accordance with the clock located at the 2nd floor reception area. The person receiving the document on behalf of the City will initial in the appropriate area and ensure that the submission is directed to the Purchasing Supervisor immediately.
- 2.7 Late bids will not be considered. *Local time is according to the clock located in the 2nd floor reception area of the Municipal Center, which will be deemed to be taken as conclusive. (HR.:MIN.:SEC.)
- 2.8 The Purchasing Supervisor or their designate, shall keep all bids received in a safe and secure location until bid opening. Bids will not be unsealed until the official tender opening date and time.
- 2.9 The number of bids received and the names of respondents are confidential and shall not be divulged prior to the tender opening. However, the number of tender packages released is public information EXCEPT where the tender is for the sale of surplus property (lands or equipment). It is understood that by completing and submitting a bid for this tender the respondents name and tender amounts will be disclosed at the tender opening and further published in subsequent reports.
- 2.10 The City assumes no responsibility or liability for any cost incurred by the respondent in the preparation or submission of tender, site inspections, demonstrations, or any other services that may be requested as part of the evaluation process.
- 2.11 The bidder declares that this quotation is made without any connection, knowledge, comparison of figures or arrangement with any other person or persons making a quotation for the same goods and services, and is in all respects fair and without collusion or fraud.
- 2.12 The original paper bid document issued by the Purchasing Division of the City of Quinte West shall be understood to be the master document in case of all disputes or questions regarding the exact wording of the bid document. In the event of any disputes regarding

wording differences in the signed contract and the originally issued bid document on file in Purchasing, the originally issued bid document will prevail.

3. QUESTIONS AND ANSWERS PRIOR TO THE CLOSING DATE

3.1 It is the respondent's responsibility to clarify interpretation of any item on the specifications and/or other tender documents. **All questions relating to the tender must be in writing** and delivered, faxed or emailed as directed below. No verbal interpretation will be effective to modify any component of the tender or any contract.

3.2 Please note that no questions or contact are to be directed to anyone other than the below noted contact or their designate. Any attempt on the part of any proponent or any of its employees, agents, contractors or representatives to contact any other proponent or any employee, agent or representative thereof other than, with respect to this bid solicitation or the preparation or presentation of their respective submission, will be grounds for disqualification.

3.3 Questions must be received no later than **forty-eight hours prior to the closing date and time** in order to provide sufficient time to prepare an addendum (if necessary). Questions received after that time may not be acknowledged or answered. Contact the following **in writing**:

Janet Powers, Purchasing Supervisor
7 Creswell Drive, 2nd Floor Reception
Trenton, ON
K8V 6X5
Facsimile – 613-392-0714,
Email - purchasing@quintewest.ca

3.4 Any inquiry or clarification which results in a modification to the tender will be issued as an addendum by the Purchasing Supervisor or their designate, and distributed to all parties as recorded on the Record of Documents Distributed. Proponents must register either on the City's website or with the Purchasing Supervisor to be included on this list.

3.5 The submission of a tender shall be deemed proof that the bidder has satisfied himself as to all the provisions of the tender, all conditions which may be encountered, what goods and services he will be required to supply, or any other matter which may enter into the carrying out of supply of goods and services referred to in the tender, and no claims will be entertained by the City based on the assertion by the bidder that he was uninformed as to any of the requirements of the tender.

3.6 Should a bidder discover any errors or omissions in the tender, they shall notify the Owner so that clarification can be made to all bidders.

4. ADDENDA

- 4.1 When it becomes necessary to revise, delete, substitute or add to the bid documents after release, the Purchasing Supervisor or designate will issue an addendum.
- 4.2 A copy of each addendum shall be forwarded to all persons registered on the distribution list. Those who downloaded the document from the City website will receive automatic notification of the change in status of the project via email.
- 4.3 The City's website is www.quintewest.ca and it will be the bidder's responsibility to check the website for updates. Purchasing information is found under the Business Section > Bids and Tenders button.
- 4.4 Addendum sent by fax are accompanied by a "Verification of Receipt" document to be returned promptly by fax to the Purchasing Supervisor. This is for your protection.
- 4.5 All bidders must acknowledge addenda in the body of the bid document in the space provided. Failure to do so may result in rejection.

5. WITHDRAWAL PROCEDURE

- 5.1 The bidder who has submitted a response may request that the bid be withdrawn. Adjustments or corrections to a bid already submitted will not be allowed. The withdrawal will be allowed if the request is made by mail, fax or in person, directly to the Purchasing Supervisor or his/her designate, before closing time, and only if verification of source is possible. Telephone requests will not be considered.
- 5.2 When a withdrawal request is made in person, the requester shall sign a withdrawal form confirming the request. When requests are made by mail or fax, they shall be confirmed by telephone prior to acceptance.
- 5.3 Bids confirmed as withdrawn prior to closing time shall be returned unopened.
- 5.4 The withdrawal of a bid does not disqualify a bidder from submitting another bid on the same contract provided it is submitted prior to closing date and time.
- 5.5 Withdrawal requests received after the tender closing will not be allowed.

This portion of the document is as stated “General” and is generically stated in all City competitive bid documents.

It is the bidder’s responsibility to be aware of “job specific” mandatory criteria requirements due at time of bid submission that may be in addition to “General” conditions.

<p>PART III GENERAL INFORMATION / TERMS & CONDITIONS</p>
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1. ONLY ONE BID RECEIVED

- 1.1 In the event that only one bid is received in response to a competitive bid, the Purchasing Supervisor or his/her designate along with the Dept. Head or his/her designate will determine whether or not to proceed with the opening. If in their opinion, using criteria based on the number of bids which might reasonably be expected on a given type of project, additional bids could be secured, the bid may be returned unopened and the bidder advised that the City may be recalling the tender at a later date.
- 1.2 In the event that the decision is made to open the document, and after evaluation it is found that the bid is unacceptable, they may follow the procedures to cancel the call.

2. TENDER OPENING

- 2.1 The opening shall be conducted in a public forum, and shall take place as soon as practical after the closing time, generally within 10 minutes. The names of respondent's and the total tender amounts will be read aloud.
- 2.2 During the reading out of tenders, the Purchasing Supervisor or his/her designate, shall check for more than one submission under the same name. If two tender envelopes for the same contract are received in the same bidder's name and are both properly submitted, the envelope containing the lower tender amount shall be considered the intended bid and shall be processed within the normal manner.
- 2.3 Determination of compliance to mandatory requirements and any subsequent rejections will be completed during the preliminary checking phase.

3. PRELIMINARY CHECKING

- 3.1 Initially all responses will be checked by the Purchasing Supervisor or his/her designate to ensure that the **standard mandatory criteria** have been met. Non-compliance with any of the following **WILL** result in rejection of the bid.
- a) bid form must be signed as necessary;
 - b) the correct bid form, if provided, must be used;
 - c) the return envelope/label is used;
 - d) the bid envelope has been time and date stamped prior to the contract closing time;
 - e) the tender deposit, if required, is included with submission;
 - f) surety consent is included if called for;
 - g) tenders must be legible, written in ink or typewritten. Submissions written in pencil will be rejected. **The authorized officer signing the tender must initial erasures, corrections or strikeouts.**
 - h) the bid is free of restrictions or alterations

- 3.2.1 If there is an error or incomplete material on any other portion of the bid, then the decision as to whether or not to accept or reject the submission shall be at the discretion of the Dept. Head or his/her designate and the Purchasing Supervisor. That decision will be based upon the following considerations:
- a) Is the intention of the bidder clear?
 - b) Has the bidder made a conscientious attempt to comply with the bid requirements?
 - c) Is it fair to all bidders to accept the tender or has the bidder gained an unfair advantage?
- 3.3 If the amount bid for a unit price item does not agree with the extension of the estimated quantity and the bid unit price, or if the extension has not been made, the unit price shall govern and the total price shall be corrected accordingly.
- 3.4 If both unit price and total price are left blank, then both shall be considered as zero.
- 3.5 Following completion of preliminary checking procedures, bidding infractions shall be noted on the Record of Tenders Opened. This notation must clearly state the reason the bid is noted as incomplete or rejected.
- 3.6 Photocopies of all acceptable submissions will be forwarded to the Dept. Head or his/her designate for further consideration by the Evaluation Committee.

4. NO ACCEPTABLE BID OR EQUAL BIDS RECEIVED

- 4.1 Where bids are received in response to a bid solicitation but exceed budget, are not responsive to the requirement, or do not represent fair market value, a revised solicitation may be issued in an effort to obtain an acceptable bid unless Subsection (14.2 of the purchasing policy) applies
- 4.2 The Dept. Head or his/her designate and the Purchasing Supervisor jointly may waive the need for a revised bid solicitation and enter into negotiations with the lowest responsive bidder, or the highest responsive bidder for a revenue-driven bid selection emanating from a bid solicitation, under the following circumstances:
- The total cost of the lowest responsive bid is in excess of the funds appropriated by City Council for the project or the highest responsive bid revenue is less than approved in departmental estimates where reserved bid amounts exist; and
 - The Dept. Head or his/her designate and the Purchasing Supervisor agree that the changes required to achieve an acceptable bid will not change the general nature of the requirement described in the bid solicitation

- 4.3 In the case of building construction contracts, where the total cost of the lowest responsive bid is in excess of the appropriation made by City Council, negotiations shall be made in accordance with the guidelines established by the Canadian Construction Documents Committee.
- 4.4 The City of Quinte West has the right to cease negotiations and reject any offer.
- 4.5 If two equal bids are received, the following items will be taken into consideration:
- i. Prompt payment discount
 - ii. When delivery is an important factor, the bidder offering the best delivery date will be given preference
 - iii. A bidder in a position to offer better after sales service, with a good record in this regard shall be given preference,
 - iv. A bidder with an overall satisfactory performance record shall be given preference over a bidder known to have an unsatisfactory performance record or no previous experience with the City
 - v. All other things being equal, preference will be given to the vendor whose place of business is local, in order of City, Province & Country
- If (i) through (v) do not break the tie, equal bidders shall be entered into a draw. The names of the tied bidders shall be placed in a container and the tender to be awarded shall be drawn by a member of council. The time and location of the draw shall be set by the Purchasing Supervisor or his/her designate, and the bidders shall be notified in order that they may be present.

5. EXCLUSION OF BIDDERS IN LITIGATION

- 5.1 The City may, in its absolute discretion, reject a Tender or Proposal submitted by the bidder if the bidder, or any officer or director of the bidder is or has been engaged, either directly or indirectly through another corporation, in a legal action against the City, its elected or appointed officers and employees in relation to:
- i. Any other contract or services; or
 - ii. Any matter arising from the City's exercising of its powers, duties, or functions.
- 5.2 In determining whether or not to reject a quotation, tender or proposal under this clause, the City will consider whether the litigation is likely to affect the bidder's ability to work with the City, its consultants and representatives, and whether the City's' experience with the bidder indicates that the City is likely to incur increased staff and legal costs in the administration of the contract if it is awarded to the bidder.

6. EXCLUSION OF BIDDERS DUE TO PAST POOR PERFORMANCE

- 6.1 The Dept. Head or his/her designate shall document evidence and advise the Purchasing Supervisor or his/her designate in writing where the performance of a supplier has been unsatisfactory in terms of failure to meet contract specifications, terms and conditions or is guilty of Health and Safety violations.
- 6.2 The Director may, at his/her discretion, prohibit an unsatisfactory supplier from bidding on future contracts with the City for a period of up to three (3) years.

7. STANDARD EVALUATION CRITERIA

- 7.1 Generally speaking, the lowest “qualified” bidder will be awarded providing the project moves forward’. The following criteria, which are not in any particular order, as well as any other criteria outlined in tender specifications will be used to determine the successful bidder.
- Cost. The availability of City funds to complete the task
 - The Dept. Head/Designate being satisfied with the submission.
 - The required expertise, including professional qualifications and experience.
 - A demonstration of a thorough knowledge and understanding of the scope of work.
 - A demonstration of specific related experience relative to the nature of the tender call.
 - Past performance with other municipalities preferably in the Ontario marketplace, in providing similar product/service.
 - All other things being equal, the percentage of local content, including supplies, materials and sub-contractors from the City.
 - Ability and experience to perform in accordance with the Terms of the Tender Call. (The City reserves the right to reject any offer based on products that have not demonstrated proven satisfactory performance through field trials or actual use by the Customer or a comparable business. Whether a product meets this requirement shall be the sole decision of the City)
 - Compatibility with other goods and services of the City.
 - If requested, the bidder agrees that he will furnish a copy of his latest financial statement within four (4) calendar days after being requested to do so by the City.
 - Any other factors which may be set out in the Tender Call.

8. CONTRACT AWARD/CONTRACT EXECUTION AND PERFORMANCE

- 8.1 If a Request for Proposal or a Tender Call can be awarded within the confines of the Council pre-approved budget amount and the scope of the project, approval at Dept. Head level is sufficient to proceed with official award. If a Tender Call is to be awarded to other than the lowest qualified bidder, the decision must be approved at Committee level prior to award. If at the discretion of the Committee and Dept. Head or his/her designate, it is deemed appropriate to defer final decision for any award to full council, they may do so.
- 8.2 Once a recommendation has been made for award, the Purchasing Supervisor or their designate shall without delay send a "Notification of Intent to Accept" to the highest ranked bidder advising that his/her bid has been recommended for award.
- 8.3 The successful bidder has ten (10) working days from official notification to produce evidence of appropriate insurance, performance surety's if applicable, executed contract or agreement etc. to the Purchasing Supervisor. Under no circumstance will the successful bidder commence work until the appropriate documentation has been submitted and acknowledged by the City. Non-compliance will result in a stop work order. Failure to submit compliant required documentation may lead to forfeiture of the bid deposit and the next highest bidder may be offered the job.
- 8.4 If a formal contract other than the agreement in the bid document is required, it shall be prepared in triplicate by the Purchasing Supervisor/Designate and forwarded to the contractor for execution. The City will forward the related documentation to the contractor at least seven days prior to the end of the period of validity of the contractors bid. The contractor's bid is to be valid for a period of 120 days.
- 8.5 Once the contracts, bonds, et cetera, of the awarded bidder have been signed and found acceptable, bid deposit cheques will be returned to all parties.
- 8.6 If the contract has been awarded and the successful bidder fails to provide a contract bond, cash or other acceptable collateral within the specified time, the Department Head or his/her designate and the Purchasing Supervisor or his/her designate may grant additional time to fulfill the necessary requirements or may recommend one of the following:
- That the contract shall be awarded to the next best responsible bidder
 - That the contract shall be cancelled
- 8.7 In either of the above cases, the deposit cheque of the successful bidder shall be forfeited. If the contract is to be awarded to the next best responsible bidder, his/her deposit cheque shall be retained until he/she has actually completed the contract to the satisfaction of the Department Head or his/her designate.
- 8.8 If the next best responsible bidder fails, or declines to execute the contract if awarded to him/her, his/her deposit shall also be forfeited.

9. SUB-CONTRACTING

9.1 The selected respondent, who has signed a contract with the City, shall be considered to be the prime contractor and shall keep the operation totally under their control and shall not assign, transfer or sub-contract any portion without the written approval of the City. The consent of the City for such assignment or sub-contracting shall not relieve the prime contractor from completion of the project in accordance with the terms of the contract. Where a respondent submits a joint tender or proposes a partnership arrangement, the respondent must assume the lead or prime contractor position. As such, the respondent will have the overall responsibility for completing the project as proposed.

10. CONTRACT AMENDMENTS AND REVISIONS

10.1 No amendment or revision to a contract shall be made unless the amendment is in the best interest of the City.

10.2 No amendment that changes the price of a contract shall be agreed to without a corresponding change order describing the change in requirement or scope of work.

10.3 Amendments to a contract are subject to the identification and availability of sufficient funds in appropriate accounts within City council approved budget including authorized revisions.

10.4 Department Heads may authorize amendments to contracts provided that the total amended value of the contract is within the approved budget amount.

10.5 Where expenditures for the proposed amendment combined with the price of the original contract exceeds City Council approved budget for the project, a report prepared by the Dept. Head or his/her designate shall be submitted to the Director of Finance and City Council recommending the amendment and proposing the source of financing.

11. EXERCISE OF CONTRACT RENEWAL OPTIONS

11.1 Where a contract contains an option for renewal, the Dept. Head or his/her designate may exercise such option provided that all of the following apply:

- The supplier's performance in supplying the goods, services or construction is considered to have met the requirements of the contract
- The Dept. Head has determined that the exercise of the option is in the best interest of the City.
- Funds are available in appropriate accounts within City Council approved budget including authorized revisions to meet the proposed expenditure.
- A valid business case has can be made.
- When a specific timeframe for a renewal option is not written in the original bid document, the renewal period shall not exceed the original contract duration.

12. ACCESS TO INFORMATION

- 12.1 The disclosure of information received relevant to the issue of a bid solicitation or the award of contracts emanating from bid solicitations shall be made by the appropriate offices in accordance with the provisions of the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, as amended.
- 12.2 All records and information pertaining to RFP's, tenders and other sealed bids, which reveal a trade secret or scientific, technical, commercial, financial or other labour relations information supplied in confidence implicitly or explicitly, shall remain confidential if the disclosure could reasonably be expected to:
- Prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organizations;
 - Result in similar information no longer being supplied to the City where it is in the public interest that similar information continue to be so supplied;
 - Result in undue loss or gain to any person, group, committee or financial institution or agency; or
 - Result in information whose disclosure could reasonably be expected to be injurious to the financial interests of the City.
- 12.3 Tender openings are conducted in a public forum. The names of respondents submitting bids and total bid amounts will be announced.

13. DISPUTE RESOLUTION

- 13.1 Wherein the spirit of this policy is to promote a sense of fairness and transparency, in the event of possible dissatisfaction, the following process will be followed in order:
- i. The vendor would be required to submit in writing to the Purchasing Supervisor, a notice clearly stating contract details and nature of perceived problem.
 - ii. The Purchasing Supervisor would respond to same in writing, and attempt to provide the information requested.
 - iii. Should the vendor still not be satisfied, a meeting between the vendor, Purchasing Supervisor and appropriate Dept. Head or his/her designate will be scheduled to further discuss the issues and debrief the vendor with regards to his/her bid submission evaluation. (Information regarding the scoring of other proponents is confidential and will not be discussed)
 - iv. If articles (i –iii) does not lead to a resolution, the decision may be referred to Council if deemed appropriate.

14. REFERENCES

- 14.1 The City reserves the right to check references and use the information gathered in the award decision making process. A firm's references which prove unsatisfactory or for whom there is a consistent trend of contract issues through other public agencies or consultants may be rejected.
- 14.2 The City reserves the right to check further than the references submitted by the Tenderer at its discretion.

PART IV
CITY OF QUINTE WEST
HEALTH AND SAFETY POLICY

HEALTH AND SAFETY REQUIREMENTS FOR CONTRACTORS

The following information is provided by the City's Health, Safety and Employee Services Officer as a broad overview, and all suppliers of goods or services to the City of Quinte West will be expected to work with the Health and Safety Co-ordinator to provide necessary information specific to each job awarded.

POLICY STATEMENT

The City of Quinte West is aware of its responsibility as an employer to provide a safe and healthy workplace for all workers, including contract workers. The intent of this policy and procedure is to provide guidelines to be followed when an outside service provider is hired to perform work on City of Quinte West premises. This applies both to contractors required on an "as needed" basis, as well as those hired for major construction projects.

GUIDELINES

- When an outside contractor is required for the provision of services and a tender/quote is not required as outlined in the City of Quinte West Purchasing Policy, the Department Head will be responsible for ensuring that the "City of Quinte West Health and Safety Requirements for Contractors" as outlined in this policy, are met. If the required information is not already on file for that particular contractor, it should be obtained prior to the work being done.
- Where a tender is required for the provision of services by an outside contractor, as outlined in the City of Quinte West Purchasing Policy, the staff member responsible for the contract will ensure that the Health and Safety Program Requirements for Contractors, as outlined in this policy, are included in the tender document.
- When the job is a "construction project" as defined by the Occupational Health and Safety Act, the responsible staff member will determine who is to act as the "constructor" for the project. A Notice of Project must be completed by the constructor and submitted to the Ministry of Labour if the total cost of materials and labour for the project is expected to exceed \$50,000 and/or as prescribed by Section 6 of the Regulations for Construction Projects.
- Volunteers performing work at a City work-site must be under the direction of either a City of Quinte West staff member or a contractor for the City of Quinte West. They must be qualified to do the work and are expected to comply with the Occupational Health and Safety Act and its regulations as well as relevant City health and safety policies.
- Whether or not the job is a construction job, the staff member hiring the contractor is responsible for providing appropriate information to the contractor regarding any designated substances, WHMIS controlled substances, or hazards specific to the work-site.

Note: The substances which are designated in Ontario as requiring special precautions to control worker exposure are: asbestos, acrylonitrile, arsenic, benzene, coke oven emissions, ethyleneoxide, isocyanates, lead, mercury, silica, vinyl chloride, and x-rays.

PRE-JOB MEETING

When the job is a “construction project” or there are significant health and safety risks involved, a pre-job meeting will be held. Depending on the scope of the job, the meeting may involve, but is not limited to: contractor representatives/supervisors, volunteers, the department head and/or supervisor, the Health and Safety Coordinator, and the department safety committee representative.

Topics for the meeting will include, but are not limited to, the following:

- An overview of the scope of the work
- A review of all known and potential hazards in that work area
- A review of the WHMIS controlled and/or designated substances present at the work-site and those to be brought by the contractor to the work-site. The contractor must provide copies of the appropriate Material Safety Data Sheets at this time. Confirmation of when the work will be done, including the necessity to do any work after normal working hours
- Confirmation that contractor workers have required licences, certificates and/or training
- Review of work-site emergency procedures, including notifying the contractor of all alarms and what to do when the alarms are activated
- Confirmation that the contractor will comply with:
 - 1) All applicable requirements of the Occupational Health & Safety Act and Regulations
 - 2) Any applicable City of Quinte West safety policies
 - 3) Requests by City staff regarding compliance with Health and Safety requirements during the completion of the work

MISCELLANEOUS INFORMATION

- City staff will report any contravention by the contractor of the Occupational Health and Safety Act and its Regulations of which they are aware, to the department head. The department head will report same to the management staff of the Contractor Company and request the unsafe work practice stop immediately. If the unsafe work practice poses an immediate and serious risk to either City or contractor employees, the staff member may direct the contractor to stop work until further notice.

- A valid Certificate of Clearance from the Workplace Safety and Insurance Board must be provided as stated in “Insurance” portion of this document. It is the contractor’s responsibility to ensure that the Certificate of Clearance is valid and remains current throughout the project;
- It is the responsibility of the contractor to provide any personal protective equipment for their own workers and to ensure that it is worn when required by the Occupational Health and Safety Act and its regulations. The Contractor must also supply their own tools and equipment, all of which must be properly maintained and in good repair;
- The City has the right to issue a warning and/or order to stop work if there are any violations of the contract by the contractor(s), including any violations by the contractor(s) of the Occupational Health and Safety Act, City health and safety programs, policies and rules. Written warnings can be given to contractors using the Contractor Health and Safety Warning/Stop Work Order Form;
- Before being awarded the contract, the successful bidder may be required to provide appropriate information with regards to its health and safety practices. The staff member in charge of the contract may be asked to confirm in writing that this information has been provided and that it is acceptable. This should be accomplished using the City’s Confirmation of Favourable Health and Safety Practice Form;
- For all construction projects, a Notice of Project form must be completed and submitted to the Ministry of Labour by the constructor if the total cost of labour and materials for the project is expected to exceed \$50,000 and/or as prescribed by Section 6 of the Regulations for Construction Projects;
- For all construction projects, the constructor will post the name of their company, address and telephone number, and the address and phone number of the nearest Ministry of Labour office, as required by section thirteen (13) of the Regulations for Construction Projects.
- The Contractor must provide a list of any designated substances and/or WHMIS controlled materials that will be brought onto the work-site, as well as material safety data sheets for same;
- The Contractor must notify the City staff member in charge of the contract of any sub-contractors they hire. The Contractor assumes responsibility for ensuring that their sub-contractors comply with applicable Health and Safety regulations;
- The Contractor is responsible for the Health and Safety of all of its employees, sub-contractors, volunteer workers, visitors or business associates while on City of Quinte West property. The Contractor agrees to provide appropriate training and instruction to its employees working on the job, as required by the Occupational Health and Safety Act and its regulations, and ensure the same has been provided to its sub-contractors on the job.

The following are some of the safety rules, which must be adhered to, including but not limited to the following:

1. C.S.A. approved hard hats and safety footwear, as outlined in the Occupational Health and Safety Act (OHSA) and Construction Regulations, must be worn at all times on construction sites, and on other jobs as required by the appropriate regulation. Other personal protective equipment including hearing protection and eye protection must be worn as required by the appropriate regulation.
2. Traffic safety vests are to be worn as required by the OHSA and construction regulations.
3. Smoking in enclosed workplaces is prohibited except in designated areas as posted.
4. Before cutting or welding work is started, the area must be inspected and flammable material removed from the area. When using a burning torch or welder, proper safeguards, including having a fire extinguisher readily available at the site. Fireproof screens must be used where necessary to prevent personnel from sparks and/or arc flash damage to the eyes. Butane lighters are not permitted near welding sites.
5. Drugs or alcohol are not allowed on City work-sites. Anyone observed to be under the influence of drugs or alcohol will be asked to leave the work-site.
6. Cylinders of compressed gas must be handled and transported in accordance with OHSA and regulations.
7. All ladders and scaffolds shall be erected, maintained and dismantled, and used in compliance with the OHSA and its regulations. An engineer's Certificate of Design must be provided to the City staff member responsible for the contract for all scaffolding to be erected, if the height of such scaffolding exceeds fifteen metres.
8. Confined space work must be carried out in accordance with the OHSA and its regulations.
9. When work is being carried out on machinery/equipment, the machine must be shut off and locked out/tagged or otherwise prevented from accidental starting, in accordance with the OHSA and its regulations. The Contractor is responsible for providing appropriate locks/tags for use by its employees.
10. It is the responsibility of the Contractor to maintain good housekeeping and material storage standards in the work area at all times. No dumping of debris, waste etc., is permitted on City property other than in designated containers. The contractor must inform the staff member responsible for the contract prior to disposal of any liquid waste from the site. At the conclusion of the job, the area must be left clean and tidy and all unused materials removed from the site.

PART V
PROJECT SPECIFICATIONS

SPECIFICATION FOR
**CITY OF QUINTE WEST
FRANKFORD WWTP
HEADWORKS UPGRADES**

August 2012

Prepared for:

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JLR No. 24740-03

01017	General Requirements
01021	Testing Operation and Commissioning
01040	General Construction Sequence and Maintenance Treatment During Construction
01340	Submittals
01400	Quality Control
01500	Construction Facilities and Temporary Controls
01545	Safety Requirements
01561	Environmental Protection
01600	Materials and Equipment
01730	Operation and Maintenance Manual
02000	Site Work General Requirements
02311	Site Grading
02315	Excavation, Trenching and Backfilling
11330	Mechanical Screen

END OF SECTION

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| 1
<u>Description
of Section</u> | .1 | This section provides a brief description of some of the general requirements for completing the work. |
| 2
<u>Working Hours</u> | .1 | Observe all local by-laws with respect to working hours. |
| | .2 | Normal working hours for construction are deemed to be 7:00 a.m. to 5:00 p.m., Monday to Friday excluding recognized holidays. |
| | .3 | Notify the Owner in writing a minimum of four (4) days in advance of to work outside of normal working hours. |
| 3
<u>Notice</u> | .1 | Notify Ministry of Labour and other regulatory bodies of intent to commence work. |
| 4
<u>Pre-Construction
Survey</u> | .1 | A pre-construction survey shall be prepared for all utilities, structures, facilities and equipment on the plant site likely to be used or potentially impacted due to the proposed construction activities. |
| | .2 | The pre-construction survey is to consist of a detailed record in written form, accompanied by photographs and/or video. |
| 5
<u>Progress
Photographs</u> | .1 | Contractor to regularly take digital photographs of construction and progress as it proceeds but no less than bi-weekly. |
| | .2 | Maintain a hard copy and digital record of construction for the City. |
| | .3 | Record all concealed and buried areas prior to concealment. |
| | .4 | Submit digital and hard copy of photos at conclusion of construction. Hard copy to be labeled as to time and specific location. Maximum four photos per 8 ½" x 11" page. |
| 6
<u>Construction
Meetings</u> | .1 | Construction meetings will be held on site at regular two week intervals during construction or more often if progress of work demands. |
| | .2 | Individuals in attendance to have authority to make decisions on behalf of the Contractor. |
| | .3 | Additional dedicated meetings will be scheduled for commissioning. |

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| 7
<u>Setting Out
of Work</u> | .1

.2 | <p>Identify to Engineer any discrepancies between site conditions and contract documents prior to proceeding with constructed works.</p> <p>Assume full responsibility for and execute complete layout of Work to locations, lines and elevations indicated.</p> |
| 8
<u>Utilities
and Services</u> | .1

.2 | <p>Confirm location of utilities prior to completing construction in the general area indicated on the drawings. Retain the services of a specialist contractor and/or hand excavate to locate underground services.</p> <p>Be responsible to implement temporary measures to maintain normal plant operations if a utility or service is damaged by construction. Coordinate and be responsible for costs to repair damaged service.</p> |
| 9
<u>Existing
Services</u> | .1

.2 | <p>Submit schedule to and obtain approval from Owner for any shutdown or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties. Scheduling of shutdowns may be limited by influent flows to the WWTP and WWTP operations.</p> <p>Record exact horizontal and vertical locations of maintained, re-routed and abandoned service lines.</p> |
| 10
<u>Alterations,
Additions or Repairs to
Existing Building</u> | .1

.2 | <p>The WWTP Site must be secure at all times to prevent unauthorized entry.</p> <p>Provide temporary dust screens, barriers, warning signs in locations where renovation and alteration work is adjacent to occupied and/or process areas.</p> |
| 11
<u>Construction Equipment</u> | .1

.2 | <p>Provide and maintain all equipment necessary to perform the work.</p> <p>Comply with all safety regulations.</p> |
| 12
<u>Loading</u> | .1 | <p>Take precautions to prevent overloading of any part of structure during progress of work, and make good, at no expense to Owner, damage resulting from such overloading. No load bearing members shall be cut, drilled or sleeved without written approval of Engineer.</p> |

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| 13
<u>Drainage</u> | .1 | Provide temporary drainage and pumping as necessary to keep excavations and site free from water. Be responsible for related regulatory requirements including disposal. |
| 14
Dewatering
Existing Structures
and Pipelines | .1 | Be responsible, as deemed necessary, to isolate and dewater existing engineered structures, channels, pipelines and tanks as required to facilitate construction. |
| | .2 | Existing valves, gates and isolation devices may be used to isolate tanks, channels or pipelines. The Owner provides no guarantee that existing equipment will provide a leak tight shut-off or a safe shut-off. Allow for plates, blank flanges etc. to properly blank off lines and channels. |
| 15
<u>Cutting and Patching</u> | .1 | Co-ordinate work of all trades so that there is a minimum of cutting, fitting and patching. |
| | .2 | Be aware that electrical conduits may be embedded in concrete structures. |
| | .3 | Drilling and cutting of load bearing structural members may only be done with written permission of Engineer for each instance. Contractor responsible for locating structural steel embedded in concrete prior to drilling or cutting. |
| | .4 | Cut holes accurately, to dimensions given by trade requiring holes, with smooth, true, clean edges. |
| | .5 | Cut existing surfaces as required to accommodate new work, including drilling and cutting for conduits, pipes ducts, etc., for mechanical, electrical and other trades. Patch and make good surfaces cut, damaged or disturbed. |
| | .6 | Make patches inconspicuous in final assembly. |
| 16
<u>Noise Control</u> | .1 | All local noise by-laws must be recognized and adhered to. |
| 17
<u>Dust and Particulate Control</u> | .1 | Dust control measures shall be undertaken to prevent dust nuisances resulting from any phase of the construction operation. |
| 18
Sleeves, Hangers and
<u>Inserts</u> | .1 | Co-ordinate setting and packing of sleeves and supply and installation of hangers and inserts. |

- .2 Provide sleeve and 40 mm minimum annular space on all sides, around pipes, ducts or conduits passing through walls, floors or structural members. Install joint backing and caulk joint with approved compound. Maintain weathertight and fire rating where applicable.
- 19
Removed/
Salvaged Material
- .1 Except if expressly stated otherwise, materials which must be removed to perform the work or are indicated for removal become the Contractor's property and shall be taken from the site and disposed of at no cost to the Owner.
- .2 Surplus excavated material to be removed from site unless indicated otherwise.
- 20
Location of
Equipment and Fixtures
- .1 Unless indicated otherwise location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Coordinate work of all trades to confirm all interferences are addressed. Make adjustments to location to suit.
- .3 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .4 Inform Engineer of impending installation and obtain Owner's approval for actual location a minimum of two weeks before work is to be performed.
- .5 Submit field drawings to indicate dimensioned position of various services and equipment.
- .6 Provide detailed interference and coordination drawings when required by specific specification sections.
- 21
Labour and Products
- .1 All manufactured articles, materials and equipment to be applied, installed, connected, erected, used, cleaned and conditioned as directed in writing by manufacturer of such products.
- .2 All materials and labour to be supplied by Contractor in order to perform the work.

- | | | |
|------------------------------------|----|--|
| 22
<u>Equipment Protection</u> | .1 | Deliver and store materials in accordance with manufacturer's written instructions and protect from damage. |
| | .2 | Equipment installed and/or stored in construction areas is to be protected from dust, moisture and mechanical damage. As a minimum, provide heavy duty tarps securely fastened. |
| | | |
| 23
<u>Equipment Maintenance</u> | .1 | Equipment started prior to substantial performance is to be maintained by the Contractor in accordance with the manufacturer's written instructions. |
| | .2 | Following trial operation period, replace all lubricants in equipment supplied in the Contract. |
| | | |
| 24
<u>Concealment</u> | .1 | Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise. |
| | | |
| 25
<u>Record Drawings</u> | .1 | Maintain project "as-built" record drawings and record accurately significant deviation from Contract documents caused by site conditions and changes as work progresses. |
| | .2 | Record all changes neatly and legibly to standard of original prints. |
| | .3 | At each billing period, the Engineer will review "as-built" record drawings with the contractor. A sum of \$5,000 will be withheld from each monthly billing for each month that drawings are not updated. |

END OF SECTION

PART 1 - GENERAL

1.1

Definitions

- .1 "Startup" means the initial operation of a piece of equipment after installation by the Contractor. A startup report indicating the adequacy of the installation, set points for any adjustable components and programmable parameters is to be provided to the Owner. Failure to provide proper notification to the Owner will result in the Contractor having to redo startup at his cost.
- .2 "Manufacturers Representative" means factory trained technical representatives or manufacturer's certified representative. The manufacturers representative must be equipped with the necessary tools and equipment to do startup as per manufacturer's recommendations and as per additional requirements indicated in the contract. The manufacturer's representative must be capable of disassembling related equipment to make repairs and/or adjustment.
- .3 "Commissioning" means inspect installation, calibrate as per contract, and program as per contract. The manufacturer's representative shall be present for the commissioning of equipment. During commissioning, equipment is operated and set-up to operate as an integral component within the related system, in order that operation responds to variances and changes that may occur in the system operation.
- .4 "Trial Operation" means a continuous five (5) day full scale in service test of all new equipment including related systems as a whole.

1.2

General

- .1 Provide all labour and material to plan, organize and implement the commissioning process for systems and equipment.
- .2 Verify operation and functional performance of equipment and systems through observation:
 - .1 Observe actual physical responses of systems and components and compare to specified requirements. Reliance on control signals or other indirect indicators is not acceptable.
 - .2 Observe input and output signals for each control component to confirm they are correct for each physical condition.
 - .3 Adjust and recommission systems as necessary to achieve specified performance.
 - .4 Test systems at normal, minimum and maximum rated capacities.
- .3 Document testing and functional verification activities.

- .4 Review application of operation and maintenance manuals. Record (as-built) documents, spare parts listing, special tools listing, and any other items necessary for operator training and the operation and maintenance of components, equipment and systems.
 - .5 Coordinate and direct training of personnel for operation and maintenance of equipment and systems. Provide training records for all new equipment and systems.
- 1.3 Submittals
- .1 Submit the following prior to starting the commissioning process:
 - .1 Qualifications of Commissioning Supervisor.
 - .2 Commissioning Plan.
 - .3 Training Plan.
 - .4 Equipment Start-up Reports.
 - .5 Manufacturer Start-up Procedures/Test Reports.
 - .6 Functional Verification Procedures/Reports.
 - .7 Certification of mechanical and electrical systems support, anchorage and seismic restraint systems.
- 1.4 Temporary Use of New Equipment
- .1 Upon written approval of Owner, Contractor may use equipment solely at the Owner's discretion.
 - .2 In any case, temporary use shall not affect warranty which shall commence on the date of Substantial Completion.
- 1.5 Organization
- .1 Contractor to retain the services of a recognized commissioning supervisor/agent to plan, coordinate and supervise the related commissioning activities of all subtrades.
 - .2 Well before commencing start-up, testing and/or verification of systems, prepare a detailed schedule listing the various activities and interrelationships. Identify sequence of activities and responsibilities of various parties. Schedule to be subject to approval of Owner.
 - .3 Commissioning team to meet prior to and during commissioning
- 1.6 Leakage and Other Tests
- .1 Upon completion of structural and mechanical work, carry out following tests in accordance with accepted industry standards or as indicated.
 - .1 Test all retaining vessels, concrete tanks and chambers for leakage.
 - .2 Test all piping and equipment.
 - .3 Provide all necessary labour, testing equipment, gauges, temporary caps, plugs, valves, etc., to complete the tests as specified.

- 1.7
Material Testing
- .1 Costs of initial independent third party specialist testing to verify that materials, compaction, etc. comply with requirements will be borne by Contractor against the Testing Allowance identified paid unless indicated otherwise. Provide all assistance and all materials for testing purposes and deliver to testing laboratory designated by Owner.
 - .2 When test reports indicate non-compliance of materials supplied or insufficient compaction, carry out at no cost to Owner additional tests required to prove that alternate materials or subsequent working methods meet the specified requirements.
- 1.8
Pipe Testing
- .1 Record test pressures, scope, duration, conditions, etc. on a standard form to be included in the final commissioning manual.
- 1.9
Equipment Testing and Commissioning
- .1 Perform initial testing to prove equipment and control system operation. Once proven, submit start-up and test results for approval prior to demonstrating system to Engineer.
 - .2 Unless impractical, initially test all new equipment and works using treated effluent water or isolated municipal water.
 - .3 Following initial testing, demonstrate systems to Owner and Engineer and verify / demonstrate all components in their presence.
- 1.10
Verification
- .1 Demonstrate to the Owner the successful operation of system including normal and upset condition operating scenarios.
 - .2 Upset conditions to include as a minimum:
 - .1 Power failure
 - .2 Component failure
 - .3 Process variable(s) above and below normal operating range.
 - .3 Demonstrate successful operation of all alarms using functional tests. Jumpering of contacts, for example, will not be acceptable.
 - .4 Simulate analog inputs or outputs where a functional simulation is not practical. Generally, functional tests are considered practical for level, pressure, and temperature.
- 1.11
Trial Operation
- .1 Before acceptance of new works by Owner, provide necessary assistance during continuous 5 day trial operations. During this period have competent personnel available to respond within 2 hours (24 hours/day) including General, Mechanical and Electrical Superintendents, and Equipment Suppliers and Programmers to assist in ensuring that all equipment, controls and systems are functioning properly. If operation is not to the satisfaction of the Engineer, the period of the trial operation will be extended at the Contractor's expense. The trial operation will be considered complete upon receiving written approval from the Engineer.

- .2 Trial operation period to begin only following written approval of Owner following successful completion of all start-up, commissioning and training.
 - .3 Satisfactory trial operation is a prerequisite to issuing Certificate of Substantial Performance.
- 1.12 Substantial Performance
- .1 In addition to the general requirements of CCDC 2, 2008 prerequisites to issuing of Certificate of Substantial Performance include:
 - .1 Satisfactory trial operation.
 - .2 Receipt and acceptance of certificates and written reports from all manufacturers and suppliers.
 - .3 Receipt and acceptance of all manuals, shop drawings and record drawings.
 - .4 Successful completion of training.

PART 2 - PRODUCTS

- 2.1 Water Supply for Testing
- .1 Water used for testing will be supplied by the Owner. Contractor to provide pumps and hoses as required.
 - .2 Contractor to provide certified reduced pressure backflow prevention prior to connecting to municipal water supply.

PART 3 - EXECUTION

- 3.1 General
- .1 Within 30 days of commissioning prepare and submit detailed commissioning plan outlining the following:
 - .1 Responsibility of each trade affected by system commissioning.
 - .2 Documentation requirements for testing and functional verification.
 - .3 Documentation requirements for tests and inspections by detail specifications and local authorities.
 - .4 Commissioning program reflecting seasonal, part load and full load operation.
 - .5 Format for training program for operation and maintenance personnel.
 - .6 Commissioning schedule.

- .2 Update commissioning plan as required.

- 3.2 Commissioning Schedule
 - .1 Commissioning schedule to include timing for the following:
 - .1 Submittals.
 - .2 Cleaning - testing.
 - .3 Equipment delivery and installation.
 - .4 Equipment start-up tests.
 - .5 Manufacturer's start-up tests.
 - .6 Functional performance tests, commissioning.
 - .7 Trial Operation.
 - .8 Maintenance Manual preparation.
 - .9 Instruction and training of operating staff.

- 3.3 Start-up Reports
 - .1 Prior to trial operation ensure that all equipment has been tested by a factory representative of the supplier, and that a report has been provided including a letter or certificate stating that his qualified representative has found the installation to be to his satisfaction.

- 3.4 Training
 - .1 Operator training to provide a complete overview of all following:
 - .1 Documentation included in the Operations and Maintenance Manuals.
 - .2 How to use the Operation and Maintenance Manuals.
 - .3 Systems operational procedures for all modes of operation.
 - .4 Acceptable tolerances for system adjustments in all operating modes.
 - .5 Procedures for dealing with abnormal conditions and emergency situations for which there is a specified system response.

END OF SECTION

1
Intent of Section

- .1 This Section provides the basis for construction sequencing and scheduling and identifies scheduling constraints. The section is intended to identify the various operational constraints and is not intended to be a detailed construction plan; exact details to be determined by the Contractor, and scheduled to be coordinated with WFP operations and water demands.
- .2 Alternative sequencing may be considered subject to approval of the Owner and the Engineer.

2
General Outline of Procedures

- .1 The following general construction sequence is intended to ensure that existing level of treatment, disinfection, and capacity is maintained during the entire construction and commissioning period.
- .2 The WWTP is the only wastewater treatment system for the Hamlet of Frankford and must be available at all times. The Trent Street Sewage Pumping Station which supplies the WWTP may be shut down for only relatively limited periods.
- .3 Generally, where possible In each area, construct all new works except those that interfere with existing process.
- .4 Modifications to the plant can proceed with controlled interference to the operation of the existing plant. Flows will continue through existing facilities while proposed new works are under construction. Bringing new works into operation will affect certain operational procedures and these must be discussed and approved with plant staff before proceeding.
- .5 A back-up plan must be in place for any shutdown of a plant system, unless risk of non-availability has been properly assessed and has been accepted in writing by the Ministry of the Environment (MOE) and by the (Owner). Verify backup equipment operation prior to proceeding with related shutdowns.
- .6 Maintain automatic monitoring and alarm systems during off-hours, or provide competent off-hours supervision. Following each interruption and/or shutdown, complete a functional verification of remote alarm systems.
- .7 The required number of tanks and unit processes in service is dependent upon flow rate through the plant

3
Responsibilities

- .1 Provided procedures as specified, or agreed to in writing, are and have been followed, the Owner will be responsible for maintaining treated waste water quality.
- .2 Contractor will be held responsible for spills of wastewater not in compliance with Provincial and/or Federal regulations due to unauthorized deviations from change-over procedures. Similarly, the Contractor will be responsible for treated wastewater not meeting Provincial water quality requirements.

- .3 Contractor will maintain all new equipment in working order until Substantial Performance.
 - .4 Contractor shall be responsible for cleaning all tanks and/or pipelines necessary to complete Construction.
- 4
Coordinating Construction with Operation of Existing Facilities
- .1 Recognize that the existing facility operates 24 hours per day, seven days per week but is staffed only 8 hours per day five days per week except holidays. In the event of conflict between construction operations and routine plant operations, plant operations shall have priority.
 - .2 Give 72 hours written notice where the construction schedule requires that a portion of the existing works be taken out of service to facilitate construction. Provide a minimum of two weeks notice of impending shutdowns and tie-ins.
- 5
Scheduling
- .1 The schedule is to be updated weekly and in addition to an overall sequence include a detailed schedule of activities for the following week.
 - .2 During critical activities, meet each day prior to commencing work to review the day's activities.
 - .3 For each shutdown, provide a detailed written plan to be reviewed with Owner identifying:
 - .1 Length of shutdown.
 - .2 Manpower assignment.
 - .3 Material and equipment resources required.
 - .4 Contingency plans for equipment or material failure during shutdown..
 - .5 Contingency plans for foreseeable conditions such as power failure, component failure, higher or lower than expected process variables.
 - .6 List of all related items to be completed prior to proceeding with the shutdown or process disruption.
 - .4 Prior to commencing work, review plan and ensure that all required resources are available.
- 6
Identified Scheduling Constraints
- .1 The following treatment process scheduling constraints must be followed unless written authorization is provided to deviate. The contractor is ultimately responsible to sequence the work to maintain plant operations.
 - .2 In order to complete modifications to the screenings channel and installation of the mechanical screening package, raw sewage flow must be diverted through temporary piping to the grit channels. During this time the Contractor must isolate the screenings channel from the wastewater flow by temporary measures.

- .3 Construction of the building enclosure may proceed at any time.
- .4 The existing sludge loading station on the north side of the headworks structure must remain in service. The City uses this station only periodically and will coordinate scheduling.
- 7
Off-Hour Supervision
- .1 Have senior staff on call and able to respond within 120 minutes during critical shutdowns or initial operation of equipment where there is a risk to plant operations. The Contractor's Supervisory Staff, and Supervisory staff for each major discipline involved in a shutdown must be on site during the shutdown.
- 8
Temporary By-pass Arrangements
- .1 In order to carry out some aspects of the Work, the Contractor must/may by-pass certain plant processes.
- .2 Generally influent flow into the plant can only be interrupted for short periods.
- .3 A temporary by-pass is required to complete installation of the mechanical screen and other channel modifications.
- .6 Temporary by-pass arrangements at the must provide up to 9,000 m³/d instantaneous capacity to meet peak flow requirements.
- .7 The Contractor is to prepare a By-pass Arrangement and Contingency Plan and submit the plan for review by the Owner.
- .8 By-pass arrangements to operate for 48 hours continuously without fault prior to proceeding to demolish the by-passed process.

END OF SECTION

1
General

- .1 Submit to Engineer, for review, shop drawings, product data and samples specified prior to related work proceeding.
- .2 No payment will be recommended until shop drawings for the related equipment or works are approved.
- .3 Prior to submission, ensure completeness in accordance with requirements of this section. Incomplete submissions will be returned without review.
- .4 Keep one copy of reviewed submission on-site.

2
Responsibilities

- .1 Review of shop drawings by Engineer does not relieve Contractor of full responsibility for errors, necessity to check drawings, furnish materials and equipment, and perform work as required by Contract Documents.
- .2 Review by Engineer is for the sole purpose of ascertaining general conformance with design concept. Review does not mean that Engineer approves design detail inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same. Such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

3
Tracking

- .1 Track submission dates, review dates and status. Indicate scheduled delivery, order dates and status. Update regularly and submit every two (2) weeks. Submittal Sheet to be similar to Section 01340 Appendix 'A'.

4
Alternatives

- .1 Unless indicated otherwise, alternative equipment suppliers may be proposed by the Contractor(s) prior to ten days before the close of tenders. Proposals must be submitted with a completed form included as Section 01340, Appendix 'B' and include detailed engineering information, references, etc. Alternatives will be accepted in writing via Addendum to the tender documents.
- .2 During the construction period, alternatives to specified equipment will only be considered if they provide a clear technical, cost or schedule advantage to the Owner. Acceptance will be at the discretion of the Owner.
- .3 A minimum total credit of \$1,500.00 is required to warrant additional review and evaluation, where the product is not familiar to the Engineer. Additional credit may be warranted depending on the extent of the review necessary, technical and performance differences etc.

- .4 Where a manufacturer or alternate is named in the documents, it is not intended as an indicator that the manufacturer's standard equipment is equal to the requirements of the specification. Listing of a name in the specification is an indication that the manufacturer may be capable of providing a product equal to the requirements of the specification.
- .5 Where alternate equipment proposed by the Contractor or named in the specification, or materials are approved, Contractor shall be responsible for all related modifications for all disciplines necessary to complete the works. All modifications to be approved by the Owner.
- .6 Contractor to provide a product which meets specifications with respect to performance, quality of material, spatial requirements, workmanship and other specified details. Include all accessories and options to meet system requirements.
- .7 Alternatives will not be considered for the mechanical screen following the award of the contract.
- .8 Allow a minimum of 14 days for Engineer to review a request for an alternate product.

5
Shop Drawings

- .1 Drawings to be originals prepared by Contractor or Supplier, which illustrate appropriate portion of work; showing fabrication, layout, setting or erection details
- .2 Identify details by reference to sheet and detail numbers or equipment tag shown on Contract Drawings.
- .3 All units on shop drawings to be metric.
- .4 Engineer will return stamped and marked-up reproducible (or original).
- .5 Submit a minimum of four (4) copies of shop drawings at least 14 days before approval is required and before ordering equipment. . One (1) copy only will be returned to the Contractor.
- .6 Electronic submittals are the preferred format for the Shop Drawings review process. A file transfer protocol (FTP) website will be created for the Contractor to submit digital versions of their Shop Drawings. The Contractor is to provide E-mail transmittals to the Engineer for all Shop Drawings uploaded to the FTP site. Digital versions of Shop Drawing reviews will also be uploaded to the FTP site, and corresponding E-mail transmittals will be issued.

6
Product Data

- .1 Certain specification Sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and other standard descriptive data will be accepted in lieu of shop drawings.

7
Coordination
of Submissions

- .1 Delete information which is not applicable to project.
- .2 Identify specific model number for equipment.
- .3 Supplement standard information to provide additional information applicable to project.
- .4 Show dimensions and clearances required.
- .5 Show performance characteristics and capacities including performance curves for the full range of operation.
- .6 Supply samples as required.
- .7 Show wiring diagrams and controls.
- .8 Include installation requirements and instructions.
- .9 List storage requirements.
- .3 Submitted product data to identify clearly exceptions or differences from the specification.
- .1 Review shop drawings, product data and samples prior to submission.
- .2 Verify:
 - .1 Field measurements.
 - .2 Field construction criteria.
 - .3 Catalogue numbers and similar data.
- .3 Have all related trades review drawings for coordination purposes.
- .4 Contractor's responsibility for deviations in submission from requirements of Contract documents is not relieved by Engineer's review of submission, unless Engineer gives written acceptance of deviations specifically identified in the transmittal form submitted by the Contractor.
- .5 Resubmit drawings as required. Identify clearly all resubmission changes from original submission.

END OF SECTION

1.1
Submission
Form

.1 Request for Alternative Equipment manufacturer/supplier.

.2 Specification Section Reference

.1 Equipment _____

.3 Manufacturer/Supplier

.1 Name _____

.2 Address _____

.3 City/Province _____

.4 Product Representative

.1 Telephone _____

.5 Equipment:

.1 Model _____ Size _____ Type _____

.2 Accessories _____

.3 Options _____

.4 References

List three recent Canadian projects where similar size, model and configuration of equipment has been used.

Project Date	Location	Equip.Start-up Date	Contact
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

.5 Additional Information to be included with submission:

.1 Statement clearly illustrating advantage over listed manufacturer(s).

.2 Deviations from specification.

.3 Equipment specifications.

.4 Dimensional drawing.

.5 Drawing illustrating modifications to proposed installation.

.6 Proposed credit.

Signed _____

Contractor's Name _____

Date _____

Title _____

END OF SECTION

SHOP DRAWING TRANSMITTAL

PROJECT: Frankford WWTP – Headworks Upgrades
JLR PROJECT NO: 24740-03

DATE:
SHOP DRAWING NO:
REVISION:

GENERAL CONTRACTOR:

SUBCONTRACTOR:

Address:

Address:

SPECIFICATION SECTION NO.:

EQUIPMENT I.D.:

DESCRIPTION:

INSTALLATION LOCATION:

MANUFACTURER:

MODEL:

LIST DEVIATIONS FROM SPECIFICATION OR CHECK NO DEVIATIONS: NO DEVIATIONS

.....
.....
.....
.....

Site installation requirements reviewed by Contractor: YES NO

Related subcontractors advised: Mechanical
Electrical
Controls & Instrumentation
Other:

PART 1 - GENERAL

- 1.1
Section Includes
- .1 Inspection and testing, administrative and enforcement requirements.
 - .2 Tests and mix designs.
- 1.2
Minimum Standards
- .1 Materials shall be new and work conform to, or exceed the minimum applicable standards of the Canadian General Standards Board, the Canadian Standards Association, the Ontario Building Code or standards listed in individual sections. Latest edition at tender closing date and the most stringent conditions apply.
 - .2 In the event of a dispute regarding construction standards where standards are not specifically listed in the documents, industry standards as published by a recognized authority, association or agency shall be used.
- 1.3
Contractor Quality Assurance Program
- .1 The Contractor is solely responsible for the control, charge and supervision of construction means, methods, techniques, sequences and procedures, and for safety precautions and programs required in connection with the work.
 - .2 The Contractor is solely responsible for the discovery and correction of deficiencies, errors and omissions in the execution and performance of the work and for the preparation of submissions (shop drawings, reports, etc.) relating to the work.
 - .3 The Contractor is solely responsible for providing the appropriate quality assurance program to ensure that the work is carried out and performs in accordance with the Contract Documents, industry standards and relevant codes and legislation. The Contractor Quality Assurance Program is to ensure the following:
 - .1 The use of qualified tradesmen, experts and professionals with the level of skill and experience required for the proper execution and performance of the work.
 - .2 The level of direction, supervision and inspection required for the proper execution and performance of the work.
 - .3 The level of co-ordination between trades, field conditions, material requirements and product requirements required for the proper execution and performance of the work.
 - .4 The level of management required for the quality assurance program to operate effectively so that deficiencies, errors and omissions in the work are identified by the Contractor on a continuous basis and that corrective action is carried out promptly.

- .5 The level of management and communication required for the status of the work to be properly monitored and reported to the Owner and the Engineer.
 - .4 Field review (observations) of the work by the Engineer and Owner are not to be considered part of the Contractor Quality Assurance Program.
 - .5 The review of Contractor prepared submissions (shop drawings, reports, etc.) by the Engineer and Owner are not to be considered part of the Contractor Quality Assurance Program.
 - .6 Independent testing is a precaution against oversight or error and does not relieve the Contractor of his contractual responsibilities for completing all work in accordance with the Contract Documents.
- 1.4 Drawings and Measurements
- .1 Drawings do not indicate exact architectural, structural, mechanical, or electrical features. Examine drawings prior to laying out, fabricating and installing work to ensure no interference exists. Report conflict with work to Engineer before proceeding.
 - .2 Drawings show general design and arrangement of civil works, and mechanical and electrical systems installation, and are diagrammatic in some details. Coordinate all drawings and with all trades for complete operational system.
 - .3 Do not scale drawings to order material. Take field measurements before ordering materials and make material conform to site conditions.
 - .4 Provide field drawings with position of various services when required by Engineer.
- 1.5 Consultant Review/Testing
- .1 Notify Engineer two (2) weeks in advance of date when work will be ready for testing.
 - .2 Give minimum 24 hours notice requesting site review or test if Work is designated for special tests, site review or approvals.
 - .3 Do not conceal and/or cover work without written approval of Onwer/Engineer.
 - .4 If, upon examination such work is found not in accordance with the Contract Documents, correct work and pay the cost of examination and correction.
- 1.6 Independent Inspection Agencies
- .1 Independent Inspection/Testing Agencies will be appointed by the Engineer and engaged by the Contractor for the purpose of inspecting and/or testing portions of Work. Cost of such services will be taken from the cash allowance in Form of Tender.

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- | | | |
|--------------------------------------|----|---|
| | .2 | Provide equipment required for executing inspection and testing by the appointed agencies. |
| | .3 | If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection (at Contractor's cost) and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Engineer at no cost to the Owner. Pay costs for retesting and reinspection. |
| 1.7
<u>Access to Work</u> | .1 | Allow inspection/testing agencies access to the Work, off site manufacturing and fabrication plants. |
| | .2 | Deliver samples of materials to testing company at Contractor's cost when required or requested. |
| 1.8
<u>Procedures</u> | .1 | Notify the appropriate agency in advance of the requirement for tests, in order that attendance arrangements can be made. |
| | .2 | Provide labour and facilities to obtain and handle samples and materials on site. |
| 1.9
<u>Rejected Work</u> | .1 | Remove defective Work, whether the result of poor workmanship, use of defective products or damage and whether incorporated in the Work or not, which has been rejected by the Engineer as failing to conform to the Contract Documents. Replace or re-execute in accordance with the Contracts Documents. |
| | .2 | Make good other Contractor's work damaged by such removals or replacements promptly. |
| 1.10
<u>Reports</u> | .1 | Independent testing company will promptly issue reports simultaneously and directly to Contractor and Engineer. |
| 1.11
<u>Tests and Mix Designs</u> | .1 | Furnish test results and mix designs as may be requested. |
| | .2 | The cost of tests and mix designs beyond those called for in the Contract Documents or beyond those required by the law of the Place of Work shall be appraised by the Engineer and may be authorized as recoverable. |
|
<u>PART 2 - PRODUCTS</u> | | |
| 2.1
<u>Not Applicable</u> | .1 | Not Applicable. |

PART 1 - GENERAL

- | | | |
|--|-----------------------------------|---|
| <p>1.1
<u>Construction Offices</u></p> | <p>.1</p> | <p>Contractor's site office must have adequate working space for staff and suitable furniture for examination and filing of drawings. Provide heat, electric lighting (70 fc), adequate natural light, ventilation and telephone.</p> |
| <p>1.2
<u>Temporary Sanitary Facilities</u></p> | <p>.1

.2</p> | <p>Provide temporary lavatory accommodation and sanitary conveniences, in accordance with Provincial and Municipal regulations, for use of construction workers.</p> <p>Owner's staff facilities are not to be used.</p> |
| <p>1.3
<u>Security</u></p> | <p>.1</p> | <p>Maintain the equivalent of the existing level of security at all times the plant is unattended.</p> |
| <p>1.4
<u>Separation of Work Areas from Occupied Areas</u></p> | <p>.1

.2</p> | <p>Separate parts of the facility, in close proximity to the work areas required to remain in use, from parts of the plant under construction.</p> <p>Provide access doors equipped with latches to ensure that access is maintained for plant operation, exiting, safety and fire fighting.</p> |
| <p>1.5
<u>Access to Site</u></p> | <p>.1

.2

.3</p> | <p>Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.</p> <p>Contractor is to ensure that all construction related parking is within the designated areas. On-site parking will be limited.</p> <p>Be responsible to plow snow from Contractor's parking and staging areas.</p> |
| <p>1.6
<u>Fire Routes</u></p> | <p>.1

.2</p> | <p>Maintain access to property including overhead clearances for use by emergency response vehicles.</p> <p>Contractor to ensure that access to site hydrants and fire access entrances are maintained and free of obstruction at all times.</p> |
| <p>1.7
<u>Protection for Off-Site and Public Property</u></p> | <p>.1

.2</p> | <p>Protect surrounding private and public property from damage during performance of Work.</p> <p>Be responsible for damage incurred.</p> |

- | | | |
|--|----|---|
| 1.8
<u>Fire Protection</u> | .1 | During the entire construction period provide fire extinguishers in each construction shed and temporary office, as well as in other locations reasonably required, and all other fire protection necessary to protect the project and to comply fully with the requirements of insurance underwriters for the project and local, provincial and federal authorities. |
| 1.9
<u>Removal of Temporary Installations</u> | .1 | Keep temporary facilities operational until work is accepted by Owner. |
| 1.10
<u>Protection of Building Finishes</u> | .1 | Provide protection for finished and partially finished building finishes and equipment during performance of Work. |
| | .2 | Provide necessary screens, covers, and hoardings to ensure that materials do not enter process tankage, channels, or piping. |
| | .3 | Ensure all work areas are properly isolated from process areas. |
| | .4 | Be responsible for damage incurred due to lack of or improper protection. |
| 1.11
<u>Construction Sign</u> | .1 | Provide signage at entrance to site clearly identifying contact person, location, and procedures for all construction related deliveries to site. |

END OF SECTION

PART 1 - GENERAL

- | | | |
|-----------------------------------|----|---|
| 1.1
<u>Safety Meetings</u> | .1 | Conduct regular safety meetings as required. Advise Owner's representative 48 hours in advance of scheduled meeting. |
| 1.2
<u>Treatment Chemicals</u> | .1 | Be aware that hazardous chemicals and materials are used in, and are inherent to, the treatment process. |
| | .2 | Prior to commencing work on site, Contractor to meet with Owner to familiarize himself with substances on site, and location and requirements of WHMIS Data Sheets. |
| | .3 | Owner will provide tour of site and describe existing plant and operations. Contractor is responsible to assess potential risks and determine all necessary precautions, establish his own safety plan and train his workers. |

PART 2 - PRODUCTS

- | | | |
|------------------------------|----|-----------------|
| 2.1
<u>Not Applicable</u> | .1 | Not Applicable. |
|------------------------------|----|-----------------|

PART 3 - EXECUTION

- | | | |
|------------------------------|----|-----------------|
| 3.1
<u>Not Applicable</u> | .1 | Not Applicable. |
|------------------------------|----|-----------------|

END OF SECTION

PART 1 - GENERAL

1.1
Not Applicable .1 Not Applicable.

PART 2 - PRODUCTS

2.1
Not Applicable .1 Not Applicable.

PART 3 - EXECUTION

3.1
Noise Control .1 Noise By-laws:
.1 All local noise by-laws must be recognized and adhered to.

3.2
Dust and Particulate Control .1 Dust control measures shall be undertaken to prevent dust nuisances resulting from any phase of the construction operation.

END OF SECTION

PART 1 – GENERAL

1.1-
Guarantees and
Certificates

- .1 In addition to other guarantee requirements, Contractor together with supplier shall guarantee that installed equipment shall comply in every respect with C.S.A. and local, provincial and federal safety, mechanical and electrical requirements.
- .2 Provide certificate or letter from electrical inspection authority which has jurisdiction to project area stating that said commission's representative has inspected electrical installations in project and is satisfied that they are in accordance with said commission's requirements.
- .3 All equipment to be guaranteed for one year commencing from date of Substantial Performance, or from start-up, whichever comes later.
- .4 Warranty to protect Owner against any failure of equipment due to faulty design, workmanship, or material; breakage, damage or extraordinary deterioration; or other defects. Warranty to include all parts and labour. Guarantee performance of equipment to specified operating conditions and other conditions implied by drawings and data reviewed by Engineer.
- .5 Repairs performed during the warranty period to be further warranted for a period of twelve months from date when repairs were completed to the acceptance of the Owner.

END OF SECTION

1
General

- .1 Assemble, coordinate, bind and index required data into Operation and Maintenance Manual.
- .2 Submit one complete operation and maintenance manual to Engineer six (6) weeks prior to application for Interim Certificate of Completion of project.
- .3 Upon receipt of comments from Engineer, update all copies of manual, and submit 4 final copies.
- .4 Organize data into same numerical order as contract specifications.
- .5 Material: label each section with tabs protected with celluloid covers fastened to hard paper dividing sheets.
- .6 Type lists and notes.
- .7 Drawings, diagrams and manufacturer's literature must be originals and clearly legible. Facsimile copies will not be acceptable.

2
Electronic Documents

- .1 Provide two (2) copies of Operation and Maintenance Manuals in CD format.
- .2 CD's are to be organized in same format as the binders with one CD corresponding to each binder and a separate file for each tabbed section.

3
Contents

- .1 Cover sheet containing:
 - .1 Date submitted.
 - .2 Project title, location and project number.
 - .3 Names and addresses of Contractor, and all Sub-contractors.
- .2 Table of Contents of all binders. Table of contents to include section number and a list of all equipment listed in each section.
- .3 List of maintenance materials and special tools provided in the Contract.
- .4 List of all materials and equipment suppliers/manufacturers including contact names, addresses and phone numbers.
- .5 Warranties, guarantees.
- .6 Copies of approvals, and certificates.

- .7 Individual section contents - The following information shall be provided for each system and major piece of equipment. Where manufacturer's literature covers several models or options, the applicable information shall be highlighted or redundant information crossed out.
- .1 Index of information in that particular section in order of appearance. Include a list of equipment included in each section.
 - .2 Description of each system, it's components, operating sequences and any seasonal operating changes. Provide any technical data associated with the system.
 - .3 One complete set of reviewed shop drawings and product data specified in Section 01330. Include Engineer's shop drawing review sheet and indicate all connections and changes made during review process, fabrication and installation.
 - .4 Operating instructions.
 - .5 Maintenance instructions, complete with all specifications, tolerances, torques, fits, etc. necessary to conduct a complete overhaul as well as suggested check lists and troubleshooting information. Include any specific information on maintenance required in order to comply with and maintain the warranty.
 - .6 Preventative maintenance program complete with suggested check lists for daily, weekly monthly, etc., inspection and maintenance.
 - .7 Single sheet summary of daily, weekly, monthly and annual maintenance.
 - .8 Recommended spare parts list.
 - .9 Replacement part suppliers and service representatives, names, addresses and telephone numbers.
 - .10 Test results; witness testing, commissioning test results, set-up documentation.
 - .11 Schematics, shop drawings, single line diagrams and wiring diagrams.
 - .12 Certification, guarantee, warranty, instrumentation calibration certificates from the manufacturers.
 - .13 Hydrostatic and/or air test performance.
 - .14 Supply equipment shim, expansion, alignment calculations certificates and vibration testing results.
 - .15 Balancing data for air and water systems.
 - .16 Inspection approval certificates for all systems such as plumbing, HVAC and electrical.
 - .17 Safety precautions and procedures.
 - .18 CT ratios, fuse sizes and relay settings.
 - .19 PLC ladder logic complete with design notations to in hard copy and on compact disk.
 - .20 Model numbers, colour codes and manufacturers for all architectural features such as metal roofing, flashing, concrete block, brick, quarry tile, etc.
 - .21 Lubricant list, complete with the designated application and where they may be purchased. All lubricants will be of a company if possible, whose products are already being used by the Operator.

- .22 Pump and other performance curves showing head vs. flow, hp, efficiency and npsh. For variable speed pumps, provide the above information for a family of curves, i.e. for the various RPM's the pump will be operating.
- .23 Complete nameplate information for each piece of equipment recorded separately on individual pages.

4
Quality

- .1 Manual contents to be either manufacturers originals or high quality photocopies.

5
Building Products

- .1 Building Products: Maintenance instruction for finished surface and materials including instruction for cleaning agents and methods, precautions against detrimental agents and methods and recommended schedule for cleaning and maintenance.
- .2 Copy of hardware and paint schedules including product data, catalogue numbers, colour texture designations.

END OF SECTION

PART 1 – GENERAL

- 1.1
Minor Location Changes
- .1 Engineer at his discretion may direct or approve minor changes requested by Contractor in route or location of new utilities or structures during construction. However, any such change in location shall not be considered as a basis for a claim for extra compensation regardless of reason for changing location.
- 1.2
Obstructions
- .1 Obtain direction from Owner of utility before exposing moving or supporting utilities.
- .2 Exercise proper caution in excavation and repair and make good at own expense any and all damage done to existing services, provided their location has been shown or staked out substantially correctly.
- .3 No payment shall be made for additional work or delays resulting from the presence of structures including pipes, conduits, poles and overhead wires that are known to exist but do not require permanent realignment or relocation, although they may require temporary relocation, support or protection.
- .4 At direction of Engineer, remove, realign or change location or position of any gas or water pipe, sewer, drain, pole, conduit, wire or other structure. If such removal, realignment or change is not covered by Plans or Specifications, this work shall be without cost to Contractor.
- .5 No extra compensation shall be made for crossing under or over existing mains or services known to exist that do not require realignment.
- 1.3
Dust and Dirt Control
- .1 When so ordered by Owner, clean pavements of earth tracked by construction traffic and hose down.
- 1.4
Safety Requirements
- .1 Adhere to municipal and provincial requirements relating to safety of excavations.

END OF SECTION

PART 1 - GENERAL

- 1.1
References
- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM D 698-91(1998), Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (600 kN-m/m³).

PART 2 - PRODUCTS

- 2.1
Materials
- .1 Granular 'A' and Granular 'B' Type II in accordance with OPSS form 1010.
 - .2 Topsoil - friable loam containing substantial quantity of organic matter that will produce plant growth with pH of 6.0 to 7.5. Topsoil shall not contain crabgrass, couchgrass or weeds.

PART 3 - EXECUTION

- 3.1
Grading
- .1 Shape areas to be graded to produce smooth and even surfaces without depressions.
 - .2 Match existing grades.
 - .3 Rough grade to following depths below finish grades:
 - .1 150 mm for grassed areas.
 - .2 690 mm for asphalt paving.
 - .4 Compact filled and disturbed areas to Standard Proctor density as follows:
 - .1 85% under landscaped areas or as shown on Drawings.
 - .2 95% under paved and walk areas or as shown on Drawings.
- 3.2
Testing
- .1 Inspection and testing of soil compaction will be carried out by testing company designated by Owner. Costs to be taken from Testing and Inspection Allowance.

END OF SECTION

PART 1 - GENERAL

- 1.1 Existing Underground Services .1 Contractor shall make necessary explorations to discover exact location of shown existing pipe, conduits, etc. at his own expense. Contractor must exercise proper caution in this exploratory excavation and must repair and make good at his own expense any and all damage done to existing underground services.
- 1.2 Quality Control, Inspection and Testing .1 Testing of materials will be carried out by geotechnical representatives designated by Engineer.

PART 2 - PRODUCTS

- 2.1 Materials .1 Granular Backfill:
- 1 Granular 'B' (Type I and Type II), Granular 'A', conforming to OPSS 1010 and Granular 'C'.
- .2 General Backfill:
- .1 Approved material selected from excavation, unfrozen and free from cinders, ashes, sods, refuse or other deleterious materials. It will generally be possible to reuse the excavated sand as trench backfill. Where trench will be covered with hard surfaced areas, the type of native material placed in the frost zone (between subgrade level and 1.8 metres depth) is to match the soil exposed on the trench walls for frost heave compatibility.
- .3 Pipe Cover and Bedding Material:
- .1 Cover material to consist of OPSS Granular 'A' or Granular 'B' Type I with a maximum particle size of 25 mm.
- .2 OPSS Granular 'A' to be used for pipe bedding.
- .3 The use of clear crushed stone as bedding layer is not permitted anywhere.

PART 3 - EXECUTION

- 3.1 Site Preparation .1 Saw cut pavement or sidewalk neatly along straight lines outside limits of excavation in order that surface may break evenly and cleanly.

- 3.2
Dewatering
- .1 Protect open excavations and structures against flooding and damage due to surface run-off.
- 3.3
Fill Types and Compaction
- .1 Use fill of types as indicated or specified below. Compaction densities are percentages of Standard Proctor density.
- .1 Exterior side of perimeter walls: use Granular 'B' Type II fill to subgrade level. Compact to 95%.
- 3.4
Backfilling
- .1 Do not proceed with trench backfilling operations until Engineer has inspected and approved installations. Bottom of excavations and trenches must be completely free of water before backfilling and bedding is commenced.
- .2 Use approved common or granular backfill material as indicated or directed.
- .3 Place all materials carefully to avoid damage to, or displacement of walls, services, etc
- .4 Place granular materials in 150 mm lifts, and compact each lift with mechanical compaction equipment. Do not use such motorized equipment to compact fill in immediate vicinity of walls, services, service appurtenances and similar works
- .5 Hand-operated compaction equipment should be used to compact the backfill soils within a 1 m wide zone adjacent to the walls.
- .6 Pipe Bedding and Backfilling:
- .1 Sewer and forcemains to be bedded in at least 150 mm compacted OPSS Granular 'A'.
- .2 The bedding material should in all cases extend to springline of the pipe and should be compacted to at least 95% of the material's standard Proctor maximum dry density.
- .3 Cover material, from the springline of the pipe to at least 300 mm above the top of pipe, to consist of OPSS Granular 'A' or Granular 'B' Type I with a maximum particle size of 25 mm. The cover material should be compacted to at least 95% of the material's standard Proctor maximum dry density.
- .4 Trench backfill to be placed in maximum 300 mm lifts and should be compacted to 95% of the material's standard Proctor maximum dry density using suitable compaction equipment.

END OF SECTION

PART 1 - GENERAL

- 1.1
Scope
- .1 This section is for the supply of one factory-built screening package for installation by the contractor in an existing concrete raw wastewater channel.
 - .2 The package is to include:
 - .1 Mechanical screen.
 - .2 Bypass weir.
 - .3 Manual screen.
 - .4 Channel insert assembly.
 - .5 Related electrical and controls.
 - .6 Bagging and screenings handling system.
 - .7 Engineering.
 - .8 Start-up and Commissioning.
 - .9 Documentation.
 - .10 Warranty.
- 1.2
Quality Assurance
- .1 All equipment and components to be manufactured and/or assembled by the manufacturer of the key equipment component, factory assembled and tested prior to limit disassembly as required.
 - .2 Contractor to verify all field dimensions.
 - .3 Manufacturer to have minimum of five years of proven experience and references for similar equipment of a similar size operating for a minimum of five years.
 - .4 Start-up and commissioning is to be by factory trained technicians specialized in related trades (ex. Mechanical, electrical, instrumentation and control).
- 1.3
Related Codes & Standards
- .1 Support system(s), and auger(s) materials of construction shall, as applicable, meet the requirements of the following industry standards:
 - .1 American Society for Testing and Materials (ASTM) A36: Standard Specification for Carbon Steel Plate
 - .2 American Iron and Steel Institute (AISI) 304 Stainless Steel
 - .3 American Iron and Steel Institute (AISI) 316 Stainless Steel
 - .2 Motor controllers shall, as applicable, meet the requirements of the following Regulatory Agencies.
 - .1 National Electrical Manufacturer's Association (NEMA) Standards
 - .2 Local Electrical Authority.
 - .3 CSA.

- | | | |
|---|----|---|
| 1.4
<u>Shop Drawings
and Data</u> | .1 | Submit Shop Drawings and manufacturer's data in accordance with Section 01340 for all equipment included in this Section. |
| | .2 | Submit start-up reports and maintenance data in accordance with Division 01 requirements. |
| 1.5
<u>Alternative Equipment
Suppliers</u> | .1 | Refer to bind document. Contractor may submit a total contract price for an alternative equipment supplier for acceptance solely at the discretion of the Owner. |
| 1.6
<u>Receiving
and Storage</u> | .1 | Refer to Section 01017. |
| | .2 | All equipment to be stored indoors in dry heated area and in accordance with manufacturer's written instructions. Protect from dust and damage due to construction. Tarp all equipment once placed in position. |
| | .3 | All openings, pipe connections, etc. to be capped during storage. |
| 1.8
<u>Identification</u> | .1 | Provide corrosion resistant nameplate, securely affixed in a conspicuous place. Nameplate information shall include equipment model number, serial number, supplier's name, and location. |
| | .2 | Drive and motor to have similar nameplates. |
| | .3 | Include copy of nameplate in manuals. |

PART 2 - PRODUCTS

- | | | |
|---|----|--|
| 2.1
<u>Manufacturers</u> | .1 | Complete package to be supplied by JWC Environmental (Contact: ACG Technology: 905-856-1414 ext 27). |
| | .2 | Mechanical Screen: Model No. ALE 1800 -480. |
| 2.2
<u>Performance/Installation
Requirements</u> | .1 | Screen to be hydraulically suitable for an instantaneous flow of up to 9,000 m3/d including normal screen loading in a municipal wastewater plant. |
| | .2 | Screen will be supplied by an upstream sewage pumping station. No grinder is installed upstream. |
| | .3 | Refer to drawings for dimensions. |
| | .4 | Bypass weir to be designed for peak flow. Minimum length 2000 mm. |

- .5 Manual screen as detailed on drawings. Designed for peak flow.
- .6 Top of channel: 114.65 m.
Top of bypass weir: 114.34 m
Liquid level downstream of screen: 114.04
- .7 All components in the screening room to be rated for class of environment indicated on the drawings.

2.3 Support

- .1 Support frame with adjustable mounting brackets shall be provided.
- .2 316 stainless steel channel insert to be provided as indicated to support bypass weir, manual screen and related gates. Drive end support shall provide a method for pivoting the auger from the channel to perform simple maintenance.
- .3 The support frame and additional supports shall be of welded square tube, angle, and plate made of 304 stainless steel.

2.3 Augers

- .1 General
 - .1 The auger(s) shall be comprised of perforated screen segment, transport segment, discharge segment, and drive segment with a internal rotating spiral.
 - .2 Each auger shall be installed at an inclination of 45 degrees from horizontal.
 - .3 The auger screen segment trough with a rotating spiral shall provide particle capture and transport to the discharge segment outlet.
 - .4 A wiper/brush shall be affixed to the outer edge of the spiral in the screen segment trough to provide trough cleaning and particle transport.
 - .5 Particles shall be washed by discharge spray wash system. Dewatering shall occur as the rotating spiral conveys the washed screenings.
 - .6 A spray wash assembly shall be provided to rinse the organic material from the processed solids back into the waste stream. The spray wash system shall consist of a set of nozzles providing an impact spray to hold solids against the screen trough for transportability. A spray wash solenoid valve shall be automatically energized by the system controller allowing wash water to spray into the screen segment whenever the auger spiral is in operation. The spray wash solenoid shall be automatically de-energized, stopping the flow of wash water whenever the auger spiral is stopped.

- .7 Starting of auger run cycles shall be initiated by signals from an ultrasonic level sensor.
- .2 Components
 - .1 Auger Spiral
 - .1 The 480 mm spiral shall be made of high wear-resistant, alloy carbon steel.
 - .2 The spiral shall have a grooved spiral designed into the outside diameter of the spiral for the mounting of the brush. The groove shall securely position the brush so that constant contact is maintained with the screen segment for the purpose of cleaning the perforations and the free passage of soft organics and liquids.
 - .3 The spiral shall have a welded drive plate for connection to the drive shaft.
 - .4 The spiral tip speed shall not be more than 0.27 m/s.
 - .5 The spiral transport speed shall not be more than 0.03 m/s.
 - .2 Screen Segment
 - .1 The screen segment trough shall be a replaceable, perforated 304 stainless steel assembly. The perforated area of the segment shall be constructed of 14 ga. Sheet.
 - .2 The screen trough perforations shall be 6.4 mm on a 7.9 mm stagger for separation of the liquids from the solids
 - .3 Transport Segment
 - .1 The transport segment shall be a 304 stainless steel assembly with inspection port(s). The segments shall be constructed of 10 ga. sheet.
 - .2 The transport segment shall have stainless steel wear bars to support the rotating spiral.
 - .4 Discharge Segment
 - .1 The discharge segment shall be a 304 stainless steel assembly with an inspection port and a full-width bottom discharge flange.
 - .2 The discharge segment shall have a 304 stainless steel endplate for mounting the drive segment.
 - .5 Drive Segment
 - .1 The drive segment shall be comprised of a drive shaft with welded drive plate, shaft seal, drive adapter spool, speed reducer and electric motor.
 - .2 The shaft seal shall consist of a packing housing; PTFE impregnated packing cords, and adjustable packing ring.

- .3 The drive adapter spool shall be cast A536-84 ductile iron coated to inhibit corrosion.
- .4 The speed reducer shall have a reduction ratio of 160:1.
- .5 The electric motor shall be of (1.5 kW), TEFC, 1,725 rpm, 230/460 volt, 3-phase, 60-Hz.
- .6 Spray Wash Assembly
 - .1 The spray wash assembly shall consist of a one (1) 1 inch spray wash manifold, solenoid operated valve, manually operated ball-valve, and basket strainer.
 - .2 The spray wash manifold shall be of 304 stainless steel pipes and fittings. The spray nozzles shall consist of 40° "V" spray nozzles rated for 1.5 GPM @ 40 PSI and high 50° spray nozzles rated for 1.0 GPM @ 40 PSI.
 - .3 The solenoid valve shall be of bronze construction, fitted with an explosion proof enclosure, housing a 120-volt, ac coil.
 - .4 The manually operated ball valve shall be of 316 stainless steel and shall provide adjustment for the spray wash water flow.
 - .5 The basket strainer shall be of SST material, with an 80 mesh 304 stainless steel screen and a plugged blow-off outlet.
 - .6 A one (1) inch NPT double back-flow preventer (not supplied by equipment manufacturer) is recommended when using potable water for spray wash.

2.5 Discharge Bagging System

- .1 General
 - .1 Discharge bagging system shall provide a clean, odor-free means of collecting and containing the material discharged from screenings screw conveyor.
 - .2 Attached to the auger/conveyor discharge. An accordion-folded plastic-sleeve "bag" shall be fitted on the end of the Bagger. The end of the plastic sleeve shall be pulled off and tied in a knot. Material being discharged from the conveyor will be collected in the "bag". When the user/operator decides the "bag" is full, the plastic sleeve shall be cut and the exposed ends tied in knots.
 - .3 An adapter flange, Bagger chute, and "bag" holder shall be utilized to mount the Bagger to the discharge. The adapter flange shall be fitted to the auger/conveyor transportation section discharge chute, the Bagger chute shall be attached to the adapter flange, and the bag holder shall hold the "bag" sleeve material.
 - .4 Adapter flange shall be AISI Grade 304 stainless steel.

- .5 The Bagger chute and bag holder shall be industry standard injection-molded, wear-resistant plastic.
- 2.6
Level Sensors
- .1 General
 - .1 The Auger Monster system shall be provided with upstream and downstream ultrasonic level sensors.
 - .2 The level sensors will initiate auger run cycles based on channel head differential and the parameters set in the operator interface.
 - .3 The PLC logic shall determine differential levels using signals from two (2) separately-mounted ultrasonic level sensors.
 - .1 One (1) level sensor shall be installed upstream of the system and measure the system's upstream water level.
 - .2 One (1) level sensor shall be installed downstream of the system and measure the channel's downstream water level.
 - .3 The head in front (upstream) of the system shall be compared to the head behind (downstream) of the system to determine the water level differential.
- 2.6
Electrical and Controls
- .1 Provide complete electrical and control system consisting of local control panel, level instruments, remote control/starter panel (refer to electrical drawings).
 - .2 Individual isolated components to be field wired by contractor.
 - .3 All panels and components to be factory tested using temporary wiring as required.
 - .4 General
 - .1 The controller shall provide independent control of the auger and spray wash assembly.
 - .2 System shall be PLC controlled using Allen-Bradley Compact Logix complete with Ethernet connection for remote monitoring of status and alarms. Coordinate with Owner's System Integrator for interface.
 - .3 The controller shall be rated for 1.5 kW, 575 volts, 3-phase, 60-Hz.
 - .5 Operation
 - .1 The controller shall be equipped with an AUGER ON/OFF/RESET-LEVEL three (3) position selector switch.

- .1 In the OFF/RESET mode the auger shall not run.
 - .2 In the ON mode the auger shall continuously initiate Auger Run Cycles.
 - .3 In the LEVEL position, auger run cycles shall be initiated by the ultrasonic level sensor or the Auger Start Timer.
 - .4 The auger shall only be reset by switching the AUGER ON/OFF/RESET-LEVEL switch to the OFF/RESET position.
- .2 The controller shall be equipped with a digital operator interface.
- .1 The operator interface shall display auger run times, elapsed times, reversals, jams, motor overloads and over-temperature occurrences.
 - .2 The operator interface shall display Fail, Service Reminder, and Operational Messages.
 - .3 Operator interface function keys shall select the following displays: Date and Time, Auger Run Cycle, Auger Start Timer Interval, and System Monitor.
 - .4 The Auger Cycle Run times and Auger Start Timer shall be programmable. Settings shall be entered at the operator interface using panel keys to initiate a desired run sequence.
- .3 The controller shall be equipped with a programmable Level Sensor Backup Timer.
- .1 The Level Sensor Backup Timer shall initiate an auger run cycle if the ultrasonic sensor fails to start an auger cycle within a preset interval of 0 to 999 minutes.
 - .2 The Level Sensor Backup Timer shall run the system continually when the timer is set to 0.
- .6 Components
- .1 Enclosure
 - .1 Enclosures shall be NEMA 4X, 304 stainless steel construction and shall be suitable for wall mounting. Doors shall have corrosion-resistant hinges and latches.
 - .2 Enclosure shall house the control devices, relays, terminal blocks and reversing motor starters.
 - .2 Control Devices
 - .1 Operator interface and pilot devices shall be mounted on the enclosure front panel door.
 - .2 The controller shall have indicator lights for AUGER RUN, and common FAIL.

- .3 The POWER ON, AUGER MOTOR OVERLOAD, AUGER MOTOR OVERTEMP, LEVEL SENSOR 1 FAILED, LEVEL SENSOR 2 FAILED and HIGH LEVEL ALARM shall be displayed by the operator interface.
 - .4 Control devices shall be mounted in the front panel of the enclosure. Indicator lights shall be LED type pilot lights. Lights and the selector switches shall be heavy duty NEMA 4X type.
 - .5 Control transformer shall be protected by two (2) primary fuses and one (1) secondary fuse. The 120-volt secondary shall have one (1) leg grounded.
 - .6 Relay contacts shall be included for auger run, and common FAIL signal outputs. The contacts shall be rated 10 ampere, 240 VAC, resistive load.
- .3 Motor Starter
- .1 The motor tarter shall be a full-voltage reversing type with 120-volt operating coils.
 - .2 Forward and reverse contactors on the starter shall have both mechanical and electrical interlocks.
 - .3 Overload relays (OL) shall be adjustable so that the range selected includes the full load amperes (FLA) rating and service factor.
- .4 Local Control Panel
- .1 Provide local operator panel to be field mounted in Class 1, Division 02 environment.
 - .2 Local panel to include:
 - .1 Hand/Off/Auto.
 - .2 Start/Stop buttons.
 - .3 Spring return/job start switch.
 - .4 Fan wand/reverse.
 - .5 Power on light.
 - .6 Alarm light.
 - .7 Running light.
- .7 Safety Features
- .1 When an auger jam condition occurs in the auger ON or LEVEL position the controller shall stop the auger, reverse the auger rotation to clear the obstruction. If the jam is cleared, the controller shall return the auger to normal operation. One (1) additional auger reversal (2 times total) may occur within 30 seconds before the controller de-energizes the auger motor and activates the auger fail indicator and common fail relay.
 - .2 If a power failure occurs while the auger is running, operation will resume running when power is restored.
 - .3 If a power failure occurs while the auger is in a fail condition the fail indicator shall be reactivated when power is restored.

- .4 The controller shall provide overload protection for the motor through an overload relay mounted directly on the auger starter.
- .5 The controller shall be equipped with a main power disconnect switch. Motor branch circuits shall be short circuit protected.
- .6 Controller reset shall be from the local panel controls only.

PART 3 - EXECUTION

3.1
Installation

- .1 Install in accordance with manufacturer's instructions.
- .2 Assemble all connecting piping for proper operation of screen in order that that no strain is transferred to equipment.
- .3 Accurately level and bed in non-shrink grout as required.

3.2
Delivery

- .1 Contractor to receive and unload equipment. Arrange delivery in order that equipment may be placed in it's location upon receipt.
- .2 Alternatively store in heated, enclosed storage.

3.3
Certificates

- .1 On completion of installation, obtain equipment supplier's services to have a factory trained technician inspect and assist in start-up in accordance with Division 1. Submit to Engineer the manufacturer's certification of correctness of installation.
- .2 Complete start-up report in accordance with Sections 01021.
- .3 Install in accordance with supplier's instructions. Rectify or repair damage resulting from shipping or handling to the satisfaction of Owner and equipment supplier. Provide all small piping, fittings and valves required for proper operation, including draining of glands and packings.
- .4 Demonstrate all aspects of operation to Owner.

3.4
Anchor Bolts

- .1 Anchor bolts shall be 316 stainless steel.

3.5
Alignment

- .1 Employ Millwrights to set equipment precisely level and within manufacturer's tolerance before connecting to pipes, valves, couplings, shafts, etc. Record all site measurements. Have all alignments approved in writing by equipment supplier's representative.

END OF SECTION

PART VI
RESPONSE FORMS

NOTE: OPTION TO PROVIDE AN ALTERNATE MECHANICAL SCREENING PACKAGE

All bidders must complete the “Itemized Bid Form 1” where the amount is to be based on the specified screen package supplied by JWC Environmental and upon which the drawings are based.

In addition, bidders may propose a single alternate supplier to provide an equivalent equipment package and performance, where the successful bidder will be responsible for all engineering and modification of the tender documents to suit the proposed alternate if acceptable to the City, to the same standard. If applicable, bidders are to include complete technical information for the proposed alternate in their bid package prior to the indicated closing date and time, to permit the City to evaluate the proposal.

The bidder is to complete the “Itemized Bid Form 2” only if providing an alternate solution to the Mechanical Screening Package. Please indicate N/A on this form if this is not applicable.

The City at its sole discretion may substitute the Alternate Total Contract for the Total Contract amount (Bid -1) indicated above and is under no obligation to review any part of, or all of the alternate equipment proposal. Consideration of the alternate equipment package (Bid -2) will be based on financial and technical advantage as assessed by the City.

RESPONDENT IDENTIFICATION

RESPONDENT:

Company Name

Address

Telephone Number

Fax Number

Email Address

Name of Person Signing

Position of Person Signing

Signature

Person signing must be authorized to sign on behalf of the Company/Individual represented, and to bind the Company/Individual to statements made in response to this contract.

ACKNOWLEDGMENT OF ADDENDUM

I/WE declare that I/WE have carefully examined all addendum and hereby acknowledge the same to be part and parcel of any contract to be let for all work therein described

Addendum No. 1 _____

Addendum No. 2 _____

Addendum No. 3 _____

Addendum No. 4 _____

Addendum No. 5 _____

(to be completed by Contractor only if addendum are issued)

Failure to acknowledge all Addenda issued **may** result in the bid being rejected.

SIGNATURE: _____ POSITION _____

DECLARATION OF ACCESSIBILITY COMPLIANCE

COMPANY NAME:	
PRINT NAME:	
TITLE:	DATED:

I/ we acknowledge that as a Contractor/Consultant of the City of Quinte West we are bound to comply with all accessibility Standards under the Accessibility for Ontarians with Disabilities Act, 2005 as amended from time to time.

I/we declare that I/we have read, understand and will meet or exceed all enacted accessibility Standards as amended from time to time.

I/we further declare that I/we will undertake to ensure all sub-contractors hired by us in completion of our work will also comply with the above Standards.

Authorized Signature

Dated

Printed Name

ITEMIZED BID FORM 1 (Mandatory)

Note: All parts of the Form of Tender must be bid to be valid and must reflect the actual value of the work and subcontracts. Failure to do so will result in the bid being deemed as incomplete and rejected.

The total of all the items will total the Total Contract Amount.

Item #	Line Item Pricing excludes tax	
1.	Mobilization / Demobilization	
2.	Commissioning & Documentation	
3.	Maintenance Manuals & Record Drawings	\$,5,000
4.	Temporary Bypass	
5.	Demolition	
6.	Concrete & Masonry	
7.	Building Enclosure	
8.	Mechanical Screening Package Supply Only	
9.	Mechanical (Process, Plumbing, HVAC)	
10.	Electrical	
11.	Miscellaneous (not to exceed 1% of total bid)	
12.	Contingency Allowance (requires change order to be issued)	\$30,000
13.	Testing Allowance (subject to approval by Owner)	\$5,000
14.	Sub Total (Lines 1-13 inclusive)	\$
15.	HST	\$
16.	TOTAL CONTRACT AMOUNT (line 14+15)	\$

Company Name

Authorized Signature

Please print name of Authorized Person Signing

Date

Person signing must be authorized to sign on behalf of the Company/Individual represented, and to bind the Company/Individual to statements made in response to this contract.

ITEMIZED BID FORM 2 (Optional)
REPRESENTS PRICING WITH ALTERNATE MECHANICAL SCREENING PACKAGE

Note: All parts of the Form of Tender must be bid to be valid and must reflect the actual value of the work and subcontracts. Failure to do so will result in the bid being deemed as incomplete and rejected. The total of all the items will total the Total Contract Amount.

Item #	Line Item Pricing excludes tax	
1.	Mobilization / Demobilization	
2.	Commissioning & Documentation	
3.	Maintenance Manuals & Record Drawings	\$,5,000
4.	Temporary Bypass	
5.	Demolition	
6.	Concrete & Masonry	
7.	Building Enclosure	
8.	Mechanical Screening Package Supply Only	
9.	Mechanical (Process, Plumbing, HVAC)	
10.	Electrical	
11.	Miscellaneous (not to exceed 1% of total bid)	
12.	Contingency Allowance (requires change order to be issued)	\$30,000
13.	Testing Allowance (subject to approval by Owner)	\$5,000
14.	Sub Total (Lines 1-13 inclusive)	\$
15.	HST	\$
16.	ALTERNATE MECHANICAL SCREENING PACKAGE BID TOTAL CONTRACT AMOUNT (line 14+15)	\$

 Company Name

 Authorized Signature

 Please print name of Authorized Person Signing

 Date

Person signing must be authorized to sign on behalf of the Company/Individual represented, and to bind the Company/Individual to statements made in response to this contract.

REFERENCES – MUST BE COMPLETED AND RETURNED WITH SUBMISSION

References: State names, addresses and telephone numbers of clients for whom your company has recently performed similar services. Additional pages may be added if necessary.

Reference No. 1	
Company Name:	
Project Name and Year Completed	
Contact Person:	
Position of Contact Person:	
Telephone/Fax:	
Email:	
Reference No. 2	
Company Name:	
Project Name and Year Completed	
Contact Person:	
Position of Contact Person:	
Telephone/Fax:	
Email:	
Reference No. 3	
Company Name:	
Project Name and Year Completed	
Contact Person:	
Position of Contact Person:	
Telephone/Fax:	
Email:	

References may be used as part of the evaluation process

PART VII DRAWINGS & OTHER EQUIPMENT SPECIFICATIONS

These drawings are posted as individual files on the bids and tenders webpage under Tender no. PW 12-25 to facilitate easier access, keep the files smaller for downloading and preference printing.

Dwg S001 – SCREENING ENCLOSURE GENERAL NOTES AND DETAILS
Dwg S002 = SCREENING ENCLOSURE PLANS AND SECTIONS
Dwg S002 = SCREENING ENCLOSURE ELEVATIONS
Dwg S002 = SCREENING ENCLOSURE PLANS AND SECTIONS

Dwg GO1 = GENERAL ARRANGEMENT
Dwg G02 = DEMOLITON
Dwg M01 = MECHANICAL UPGRADES
Dwg P01 = PROCESS UPGRADES

Dwg E1 = ELECTRICAL SPECIFICATION SHEET 1
Dwg E2 = ELECTRICAL SPECIFICATION SHEET 2
Dwg E3 – LEGEND, DRAWING LIST, LAYOUTS AND SINGLE LINE DIAGRAM
Dwg E4 = ELECTRICAL DETAILS AND PANEL SCHEDULES

Refer to Specification Index for list of Specification Sections.

RETURN "LABEL" (to be glued or taped to outside of return envelope)

CONFIDENTIAL BID DOCUMENTS ENCLOSED

DO NOT OPEN

CONTRACT IDENTIFICATION : PW 12-25

Frankford Wastewater Treatment Plant, Headworks Upgrade

Deliver To:
 Attn: Janet Powers, Purchasing Supervisor
 City of Quinte West, 2nd Floor Reception
 7 Creswell Drive,
 Trenton, ON
 K8V 6X5

Submitted By (Insert company Name)		
OFFICE USE ONLY		
Received By: (Name of City Staffer)		
Date/Time:		
Date & Time as per electronic punch time clock at 2nd floor reception		
IF LATE – NAME AND SIGNATURE OF PERSON DELIVERING	(Print Name)	(Signature)