

# Town of Quispamsis

## Request for Proposals

**Type of Document:**

FINAL

**Project Name:**

Supply of Pressure Sewer System Pump Units for Forrester's Cove Subdivision

**Project Number:**

FRE-00023185-A0

**Prepared By:**

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**Reviewed By:**

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**Date Submitted:**

January 13, 2012



**TOWN OF QUISPAMISIS  
REQUEST FOR PROPOSALS**

**SUPPLY OF PRESSURE SEWER  
SYSTEM PUMP UNITS FOR  
FORRESTER'S COVE SUBDIVISION**

Sealed Proposals marked as to its contents addressed to Mr. Michael F. Brennan, CGA, Town Administrator, Quispamsis, New Brunswick, bearing the title of the work, "**Supply of Pressure Sewer System Pump Units for Forrester's Cove Subdivision**" shall be received until 3:00 P.M., local time, Wednesday, February 8, 2012.

The Town of Quispamsis is soliciting proposals from qualified Proponents for the supply of 30 pressure sewer pumping station units to service the existing Forrester's Cove Subdivision located in the Town of Quispamsis. The specific products and/or services to be supplied under this Contract include all labor, materials, equipment, spare parts, controls and associated electrical and mechanical components to supply 30 fully functional pressure sewer simplex grinder pumping station units.

The purpose of this Request for Proposals is to request, receive and review proposals from Proponents interested in supplying the equipment for this Project. Proposals will be reviewed and evaluated based on equipment performance, support, maintenance and operation costs, purchase costs, technical expertise, and relevant factors detailed in the Request for Proposals document.

The Terms of Reference and other relevant documents can be obtained during regular business hours from the office of the Director of Engineering and Works, Town of Quispamsis, 12 Landing Court, Quispamsis, New Brunswick, E2E 4Z4, Phone (506) 849-5749 or from the Consultant, **exp** Services Inc., 602 Rothesay Avenue, Saint John, New Brunswick, E2H 2H1, Phone (506) 646-8020.

Proposals will be opened publicly in the Town Hall immediately following Bid Closing.

Mr. Michael F. Brennan, CGA  
Administrator  
Town of Quispamsis

## Legal Notification

This Document was prepared by **exp** Services Inc. for the account of **The Town of Quispamsis**.

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exp Quality System Checks	
Project No.: FRE-00023185-A0	Date: January 13, 2012
Issue Status: Released for Construction	Revision No.: 0
Prepared By: Angus MacKenzie	<i>Angus MacKenzie</i>
Reviewed By: Stephen Bliss	<i>Stephen Bliss</i>



## **Chapter 1 – Introduction**

## 1.0 Project Description

### 1.1 Definitions and Acronyms

Consultant	Consultant refers to the Engineering consultant engaged by the Owner to perform engineering services. In this case <b>exp</b> Services Inc
<b>exp</b>	<b>exp</b> Services Inc
Owner	Refers to the person or entity who initiates the project. In this case the Town of Quispamsis
Town	Town of Quispamsis
Proponent	Any company that submits a proposal in response to this RFP
Successful Proponent	The proponent who is awarded the equipment supply contract
Pump Unit	Simplex grinder pump station consisting of a single grinder type submersible pump, wet well and complete with all controls, control/alarm panel and appurtenances required for a fully operable pumping system
RFP	Request for Proposal
CSA	Canadian Standards Association
ULC	Underwriters' Laboratories of Canada
NEMA	National Electric Manufacturers Association

## 1.2 Project Description

- .1 The scope of this project generally includes the supply of 30 pressure sewer pumping station units and the associated design of the pressure sewer system for the existing Forrester's Cove Subdivision located in the Town of Quispamsis. The purpose of this RFP document is to provide the specific performance requirements of the system without otherwise eliminating or identifying specific technologies. The specific products and/or services to be supplied under this contract include all labour, materials, equipment, spare parts, controls and all associated mechanical and electrical components to supply 30 fully-functional pressure sewer pumping station units and a complete design for the associated pressure sewer system.
- .2 The purpose of the RFP process is to request, receive and review proposals from proponents interested in supplying the equipment and system design for this project. Proposals will be reviewed and evaluated based on cost, equipment performance, support, maintenance costs, technical expertise, experience, proposal quality, professionalism and relevant factors including those detailed in Chapter 5.

## 1.3 Submission of Bids

Proponents shall deliver four (4) copies of the Technical Proposal and supporting information and one (1) copy of the Financial Proposal no later than **at 3:00pm, AST, Wednesday February 8th, 2012.**

Proposals shall be submitted in sealed opaque envelopes clearly indicating the Proponent's name and address and marked:

**"Technical Proposal -Supply of Pressure Sewer System Pump Units for Forrester's Cove Subdivision"**

The Financial Proposal is to be submitted in the Proponents's package in a separate sealed envelope, clearly marked as:

**"Financial Proposal -Supply of Pressure Sewer System Pump Units for Forrester's Cove Subdivision"** with the Proponent's name and address

Proposals shall be Hand Delivered or Courier to:

Mr. Michael F. Brennan, CGA, Town Administrator,  
Town of Quispamsis  
P.O. Box 21085  
12 Landing Court  
Quispamsis, New Brunswick  
E2E 4Z4

Late proposals and Proposals received via facsimile machine or e-mail will not be accepted. All prices quoted in the proposal are to be in Canadian funds.

Suppliers are solely responsible for any costs or expenses related to the preparation and submission of proposals.

After the closing time and date, all proposals received by the Town become the property of the Town.

The Supplier's proposal must remain valid for a period of 120 days after the date of closing noted in above.

The laws of the Province of New Brunswick shall govern this proposal and any subsequent contract resulting from this proposal.

Immediately following the closing time, proposal packages will be publicly opened in the committee room at the Quispamsis Town Hall. Only the name and addresses of proponents will be made public at that time. No other information about the proposals will be disclosed at that time. Proposals will then be forwarded to the Working Committee for review and recommendations.

## **1.4 Inquiries**

All inquiries regarding this RFP shall be submitted in writing, at least five business days prior to the specified submission date, only to the attention of:

Gary Losier, P.Eng.  
Town of Quispamsis  
P.O. Box 21085  
12 Landing Court  
Quispamsis, New Brunswick  
E2E 4Z4  
e-mail: [glosier@quispamsis.ca](mailto:glosier@quispamsis.ca)  
fax: 506.849.5799

Responses to inquiries will be in writing in the form of an addendum and distributed by email or facsimile to all proponents registered as having received the bid documents as of the date the response is prepared. The source of the questions will not be identified in the response. Verbal information shall not be binding upon the Town. Inquiries after the above deadline will not receive a response.

## **1.5 Registered Proponents**

It is mandatory that interested proponents register as having received or downloaded the RFP document to receive all issued addenda. Proponents are urged to register as having an interest in the RFP by sending an email to the Inquiries Contact specified above. The email should provide the following information: Company Name, Contact Person, Address, Phone and Fax Number and Email Address

## **1.6 Privilege**

The Town of Quispamsis does not, by virtue of this proposal call, commit to an award of this proposal, nor does the Town limit itself to accepting the lowest of any proposal submitted, or any proposal submitted, but reserves the right to award this proposal in any manner deemed to be in the Town's best interest. The Town further reserves the right in its sole discretion to cancel the competition, in whole or in part, without any award, for any reason, at any time. Thereafter, the Town may in its sole discretion, re-tender, sole source or do nothing further.

## **Chapter 2 – Project Administration**

## 2.0 Project Administration

### 2.1 Working Committee

A Working (Committee) will oversee the technical aspects of the selection process and the implementation of the selected pumping station units and pressure sewer design. The Committee will include representative(s) from:

Town of Quispamsis  
**exp** Services Inc.

Proposals will be distributed to the members of the Committee who will review each bid and make recommendations. The Committee will score in accordance with the matrix provided. The Town may, at its sole discretion, shortlist the highest evaluated Proponents. The short-listed Proponents may be required to participate in a Presentation process with the evaluation committee. In the event that one Proponent scores significantly higher than the other firms, the right is reserved by the committee to waive the Short Listing Process and proceed directly to negotiations with the highest rated proponent.

### 2.2 Project Procedure

Overall, the project will proceed as follows:

- .1 The Committee will receive and carry out an assessment of all proposals received. All proposal submissions must contain sufficient catalogue cuts, equipment specifications, equipment dimensions, general equipment arrangement drawings and design information to permit the detailed assessment of each proposal. The Committee may request additional information as necessary.
- .2 The Consultant, on the Working Committee's approval, will notify the selected equipment supplier.
- .3 A General Contract will be tendered for the installation of the pump units and supply and installation of the pressure sewer mains and laterals.
- .4 The Owner will issue a Purchase Order to the Successful Proponent. The Proponent is responsible for the supply, delivery and warranty of the equipment and design in accordance with the requirements of this Proposal, the subsequent correspondence, attached specifications and the terms and conditions of the General Contract.

- .5 Upon receipt of shop drawings, the Consultant will review, stamp, and return shop drawings to the equipment supplier. Shop drawing submittals are to be in accordance with the technical specification.
- .6 The Equipment Supplier will revise shop drawings as required based on the Consultant's recommendations.
- .7 The Successful Proponent will facilitate delivery of equipment to the project site by the agreed upon delivery date and coordinate with the General Contractor. All on-site equipment storage and handling as well as offloading will be the responsibility of the General Contractor.
- .8 The successful proponent will provide any on-site installation and commissioning support and inspection as agreed upon in the General Contract. These services will include start-up, commissioning, and operator training services as required upon completion of the construction phase of the project.
- .9 The successful proponent will be required to provide written confirmation at various stages of the process, these stages may include:
  - .a Notice of Start of Manufacturing
  - .b Notice of Shipment of Equipment
  - .c Certification of Equipment Delivery
  - .d Certification of Readiness to Install
  - .e Certification of Satisfactory Installation
  - .f Certification of Satisfactory Performance
  - .g Certification of Satisfactory Training
- .10 The successful proponent will provide documentation to support any warranty or guarantee associated with the equipment. Any warranty or guarantee period will commence at plant start-up and last for a minimum of 1 year.

## **Chapter 3 – Specific Project Requirements**

## 3.0 Specific Project Requirements

### 3.1 Design Criteria

The following paragraphs will lay out the design criteria in terms of specific project design and equipment requirements. Any technology that meets these requirements will be considered for evaluation under this RFP process. In addition to the requirements listed herein, the system must meet all relevant CSA, ULC and local regulations whether specifically stated or not. All proponents are required to be familiar with the local regulations prior to submission of proposals.

All proponents are required to submit a conceptual design with their technical proposal submission. Only the successful proponent will be required to submit a detailed design plan and calculations upon award of the work. The conceptual design must include the following information:

- The specified simplex grinder pump station model
- Forcemain locations, types and sizes
- Number and location of all appurtenances including cleanouts and air release valves.

At the request of the Proponent, the Consultant (**exp** Services Inc) will provide to the Proponent a plan of the project area showing contours, right-of-ways, homes and other relevant topographic features required to complete and present the conceptual design. The plan will be provided in PDF and in AutoCAD (.Dwg) format. Registered Proponent's are to request Electronic Plan Information by email to the following address, [angus.mackenzie@exp.com](mailto:angus.mackenzie@exp.com).

#### .1 Design Flows

The design flow rates for this project are based upon values and procedures as published in the "Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment and Disposal, 2006". Average daily sewage flows for design purposes are to be 340 litres /day/person and each residence is to have a design population of 2.5.

Primary design parameters to be considered are the number of pumps under simultaneous operation, flow velocities in pressure sewer piping, and limiting the operating head at a pump.

Consider the following guidelines in defining these parameters:

.2 Number of Pumps Under Simultaneous Operation.

- .a Semi-positive displacement pump systems - using E/One pumps, the maximum number of simultaneously operating pumps has been statistically defined and referenced in the Environment One Pressure Sewer Design Handbook. Use this information for the design of such systems.
- .b Centrifugal pump systems - The maximum number of pumps that may be expected to operate simultaneously has not been consistently developed for centrifugal pump systems. Such systems shall be sized so that the pumps under simultaneous operation shall be able to discharge the peak flow generated by the dwelling units located upstream of any point in the pressure sewer system under consideration.

.3 Flow Velocities

- .a Size a system for the maximum number of pumps that may be expected to operate under the full development stage, thereby generating the highest flow velocities and pumping head. Also consider in the design system hydraulics during the initial stage when a fewer number of pumps are expected to operate and lower velocities may be expected.
- .b The minimum flow velocity should be approximately one (1) m/s under simultaneous pump operating conditions, except for piping servicing one to two dwelling units where a 0.6 mps minimum velocity shall be used. A one (1) m/s minimum velocity criteria is required for pressure sewer profiles which have multiple high points and low points.
- .c The maximum velocity shall be approximately 3.0 m/s under simultaneous pump operating conditions.

.4 Operating Head at a Pump

- .a Design positive displacement pumps such that maximum pumping head for system design to be ninety (90%) percent of the Successful Proponent's pump performance curve.
- .b Design a centrifugal pump not to operate at above ninety (90%) percent of its shut-off head and at or below its cut-off point. The shut-off head is the head at zero pump discharge; the cut-off point is a point on the pump curve where discharge head decreases abruptly with a small incremental flow.
- .c Size a pressure sewer system and develop alternative designs such that the above criteria can be met during the full development stage and the initial stage as well.

.5 Piping System Design

Computerized design must provide adequate accuracy in hydraulic calculations. With the selected maximum number of grinder pumps in simultaneous operation, design the piping system and submit all calculations, using the following design methods:

- .a The semi-positive displacement pump systems using E/One pumps, the design methodology is described in detail in the E/One Design Handbook for Pressure Sewer Systems.
- .b For centrifugal pump systems, a number of branches should be used to represent the piping layout similar to the design of semi-positive displacement pump systems. The peak flow generated by all dwelling units in a branch shall be estimated. Locations of the pumps shall be designated and computer designs shall be used for analyzing system hydraulics during simultaneous pump operation.
- .c Pumps located at the most remote part of a system, farthest from the point of discharge to gravity system, and pumps located at the lowest elevations in a system must be considered in pump selection for simultaneous operation.
- .d Size of pressure sewers, maximum 150mm nominal pipe diameter and minimum 38mm nominal pipe diameter.
- .e Allowable pipe material, SDR-21 PVC pipe and/or SDR-11 HDPE pipe. PVC pipe is generally installed in open-cut trench and HDPE pipe can be installed in open-cut trench or by horizontal directional drilling.
- .f Use Hazen-Williams (HW) friction coefficient of one hundred forty (140) for calculating head losses through piping. Consider head losses through fittings and bends and other minor losses when calculating the total dynamic head.
- .g In computing the static head, base the pump elevation on the proposed elevation at which the grinder pump will be installed.
- .h Centrifugal grinder pumps should not be designed to operate at or below the pump's cut off point. This situation can occur at centrifugal pumps located relatively close to the transition manhole and at pump elevations close to that of the transition manhole, when fewer than the maximum number of pumps is operating simultaneously. These operating scenarios should be analyzed during system design, so as to ensure that the pumps will perform satisfactorily under various operating conditions.
- .i Use sound engineering and hydraulic principles in design and analysis. Consider various scenarios of pipe sizes, system layout, and pump operation to arrive at an optimum design. Use of computer analysis enables checking for minimum and maximum flow velocities and pump discharge head under various operating scenarios.

- Uphill pumping is preferred in a pressure sewer system where the point of discharge to gravity system is at a higher elevation than the rest of the system, so as to maintain positive pressure throughout the system.
- Eliminate vertical piping alignment that may be conducive to siphoning at high points or gravity drain/air binding in downhill pumping conditions.
- Ideally, high points and low points are to be avoided and a continuously rising pressure sewer profile toward the point of gravity discharge is to be designed. Place pressure sewer air vacuum and air release valves at all high points in a system, if the high point cannot be eliminated.
- PVC and HDPE pipe having the same nominal diameter have different inner diameters. Hydraulic calculations used for sizing the pipe diameters of the system should reflect this. If the option of using PVC and/or HDPE piping is allowed, the nominal pipe diameters called for on the drawings may be different depending on the material. For example, calculations might indicate 38mm PVC is hydraulically satisfactory in a particular situation. Calculations may indicate, however, that 38mm HDPE, due to its smaller ID, is not hydraulically compatible for the same situation. The use of HDPE as an alternative may therefore require 50mm HDPE. If the Contractor has the option of using either PVC or HDPE under these circumstances, a note must be placed on the drawings indicating that where the drawings show PVC, larger nominal diameter HDPE installed by horizontal directional drilling may be used as an alternative.

.j Verify calculations used in sizing the grinder pump system with grades shown on the drawings. Assume pump wet well inlets will be located a minimum 3.05 m below existing grade at the front of the homes to be serviced.

## .6 Appurtenances and Structures

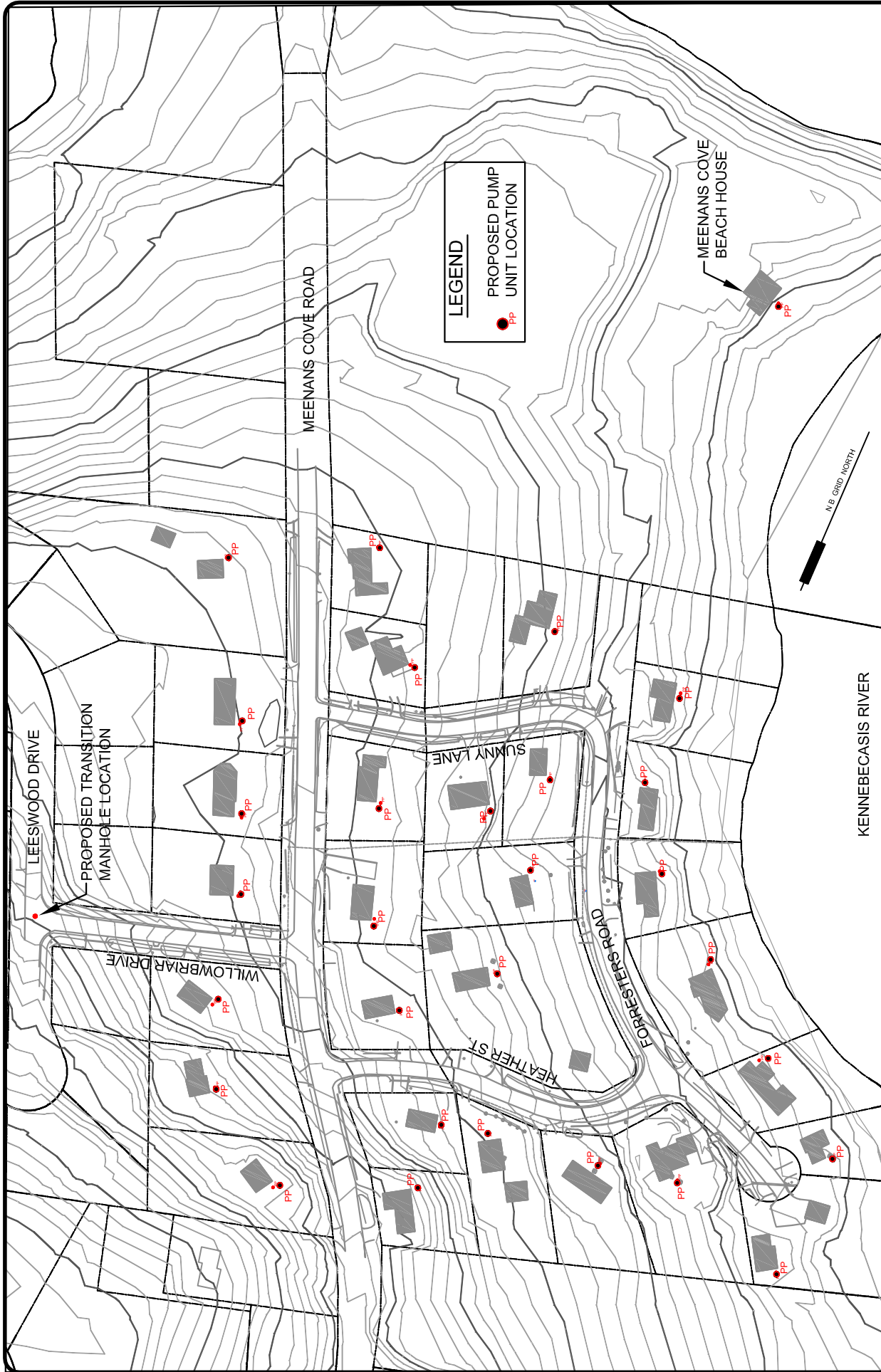
- .a Flushing connections required every 120 meters in the system, at dead ends and along downhill sloping piping.
- .b Air release valves required at all high points and where required by the manufacturer's designer.
- .c Transition manhole - The forcemain is to discharge to a proposed manhole located on the existing gravity sewer in the Leeswood Drive right-of-way at the corner of Leeswood drive and Willowbriar Drive. The forcemain outlet invert elevation into the transition manhole is to be 32.5m.

.7 Wastewater Characteristics

The wastewater characteristics for this plant are considered to be typical for municipal domestic wastewater.

.8 Site Location and Space Constraints

The site of the proposed pressure sewer collection system is the Forrester's Cove Subdivision located in the Town of Quispamsis. The project area is shown in Figure A. Proponents must demonstrate that the proposed system will be able to fit within the constraints of the site and meet any requirements in accordance with local regulations and the *Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment, and Disposal (2006)*. The proponent must be able to demonstrate that all equipment items required to form a complete system, whether included in the proponent's scope of supply or not, could meet these constraints.



**RELEASED FOR CONSTRUCTION**

1:2500

This drawing is not to be scaled

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 BUILDINGS · EARTH & ENVIRONMENT · ENERGY · INDUSTRIAL · INFRASTRUCTURE · SUSTAINABILITY

Project Title

**SUPPLY OF PRESSURE SEWER  
 SYSTEM UNITS FOR  
 FORRESTER'S COVE  
 SUBDIVISION**

Dwg. Title:

**PROJECT SITE PLAN**

Drawn By:

OSE

Project No.

FRE-00023185-A0

Dwg. Standards  
 Ckdt. By:

ACM

Dwg. No.

**FIGURE A**

Designed By:

ACM

Dwg. Design  
 Ckdt. By:

Rev. No.

0

exp Services Inc. © 2011

## **3.2 Warranties**

### **.1 Equipment Warranty**

All equipment supplied shall be accompanied by a minimum warranty of 1 year from official start-up against Successful Proponent's defects. This is the minimum requirement but it should be noted that the duration and scope of the warranty will factor into the evaluation of proposals as indicated in Section 5.5..1 Evaluation Criteria.

## **Chapter 4 – Project Information and Deliverables**

## **4.0 Project Information and Deliverables**

### **4.1 Shop Drawings and Product Information Material**

The successful proponent will be required to submit detailed shop drawings for all equipment and process units in accordance with the technical specification.

### **4.2 Operation and Maintenance Manuals**

Four (4) sets and a CD copy of the Operation and Maintenance Manuals are to be provided by the successful proponent in accordance with the technical specification.

### **4.3 Inspection at Factory**

Factory inspections of all equipment shall be conducted and properly documented. As well, all equipment inspections shall be conducted in accordance with the technical specification.

### **4.4 Project Schedule**

A formal schedule will not be prepared until such time as the Owner and Successful Proponent have entered into a formal contract. The Consultant will prepare a project schedule at that time, which will be communicated to all parties involved. At this time, some estimated milestone dates are as follows:

Technology Supply Contract Award – February 21st, 2012

General Construction Contract Award – April, 2012

Construction Commencement – April, 2012

### **4.5 Delivery, Storage, and Handling**

Delivery, storage and handling shall be conducted in accordance with the technical specification. All equipment shall be shipped FOB Quispamsis, New Brunswick, Canada.

It will be the responsibility of the successful proponent to be aware of the construction schedule for this project and to coordinate delivery with the Contractor. The successful proponent shall provide detailed information outlining the recommended offloading procedures and acceptable storage conditions for all supplied equipment items.

The General Contractor is responsible for the off-loading and storage of all equipment at the site in accordance with the recommendations noted above. Transfer of ownership of equipment to the contractor will take effect upon the successful off-loading at the site.

## **4.6 Commissioning and Site Services**

It will be the responsibility of the General Contractor to ensure that that all equipment is installed properly in accordance with local codes and Successful Proponent's guidelines. This will include power/controls connections.

## **Chapter 5 – Proposal Submission and Evaluation**

## 5.0 Proposal Submission and Evaluation

### 5.1 Required Proposal Content

The following is a list of general information that must be included in the proposal at a minimum. The technical specification may include more specific submission requirements.

- .1 Technical description of the proposed equipment with sufficient detail/catalogue cuts, literature and Successful Proponent's specifications, to permit comparison with specifications.
- .2 Itemization of what is included in the estimate and a detailed list of all exclusions. Summary of rated capacity and performance capabilities for system components, including power requirements and efficiencies. Identify and provide information on optional equipment and associated costs in the technical submission.
- .3 Supply a breakdown of operation & maintenance costs for the entire system. Costs estimates should include routine maintenance, electrical usage (based on a rate of 3.676 ¢/kWh), and any other unit-specific maintenance or routine part replacement. Outline the routine inspection requirements and intervals for all equipment and the amount of time required by the operator to perform the inspection.
- .4 Provide a concept design plan as defined in Section 3.1.
- .5 Describe the preventative maintenance program and the parts that must be replaced in this program.
- .6 Provide service requirements for the system (level of operator skill, time, materials, & other operation and maintenance costs).
- .7 List similar projects in Atlantic Canada, Canada or the northern US (references) that have been in operation for at least 5 years, including information that may be relevant to the evaluation process (the cost, year of installation) and contact information for the operator. Provide the complete company name, nearest location to the project area, and name and telephone number of primary contact person(s).
- .8 Provide a description of all services provide as part of the supply of the equipment. Services may include but not be limited to pre-commissioning inspection, commissioning and start-up, operator training, and any additional technology specific services. The description of services shall include the number of site visits and the duration of each visit in terms of total on-site time and man-hours.

## 5.2 Price Information

All equipment cost and operation and maintenance costs shall be entered on the price breakdown forms attached in Appendix A.

Quoted prices must remain valid for a period of 120 days after the proposal submission date.

No adjustments will be made for any changes in the rate of import duty or foreign exchange unless the rate at the time of equipment order varies from the rate at the time of proposal close by more than 10%. In this instance the formula for a price decrease/increase will be:

$\% \text{ adjustment} = \text{Closing Date Rate} - \text{Purchase Rate} - 10\%$

## 5.3 Proposal Submission

Proponents shall deliver four (4) copies of the Technical Proposal and supporting information and one (1) copy of the Financial Proposal no later than **at 3:00pm, AST, Wednesday February 8th, 2012.**

Proposals shall be submitted in sealed opaque envelopes clearly indicating the Proponent's name and address and marked:

**"Technical Proposal -Supply of Pressure Sewer System Pump Units for Forrester's Cove Subdivision"**

The Financial Proposal is to be submitted in the Proponent's package in a separate sealed envelope, clearly marked as:

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Proposals shall be Hand Delivered or Courier to:

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The Proponent's proposal must remain valid for a period of 120 days after the date of closing noted in above.

The laws of the Province of New Brunswick shall govern this proposal and any subsequent contract resulting from this proposal.

Immediately following the closing time, proposal packages will be publicly opened in the committee room at the Quispamsis Town Hall. Only the name and addresses of proponents will be made public at that time. No other information about the proposals will be disclosed at that time. Proposals will then be forwarded to the Working Committee for review and recommendations.

## **5.4 Amendment of Withdrawal of Proposal**

Proposals may be amended or withdrawn up to the closing date for proposal submissions as noted above. Amendments must be submitted to the address as provided in Section 5.3 Proposal Submission.

## **5.5 Proposal Evaluation Process**

### **.1 Evaluation Criteria**

An equipment supplier will be selected through an evaluation process. The successful proponent will be selected on the basis of the highest overall weighted score as determined by the evaluation criteria presented in Table 1. The Owner reserves the right to assign scores for each proposal as it sees fit to ensure that the priorities of the Owner are met by the selected technology. In general, the proponent with the best/most complete proposal with respect to each evaluation criterion will receive full marks. Other proposals that are deemed to fall short of the best submission in each category will be assigned a score based on the relative shortcomings of each respective proposal. If the information for a category is absent or incomplete, the Owner reserves the right to attempt to acquire this information at its own discretion (i.e., the Owner may or may not choose to request additional information from individual proponents as part of the evaluation). The subjective technical evaluation will be conducted using, but not limited to, the following general criteria:

.a Technical Evaluation

- Compliance with Specifications: Proposals that comply fully with the Technical Specifications will receive a full score.
- Quality of References: In addition to comments received from the reference source, references will be evaluated based on: 1) similarity of the installation with the referenced projects and 2) similarity of the system size (number of pumps) and design flows. The Owner reserves the right to contact as many references as it sees fit for each proposal.
- Experience of Equipment Supplier: Expected reliability of proposed system design based on the supplier's: 1) history with existing comparable installations, 2) experience with municipal wastewater pressure sewer system installations in cold weather climates, 3) operation and maintenance support.
- Quality Assurance/ Quality Control (QA/QC)/Warranty: Based on the Equipment Supplier's QA/QC program as provided with the submission along with the duration and limitations of the equipment warranty.
- Equipment Quality & Maintenance: Based on: 1) Quality of major components including; pumps, valves, controllers, etc. 2) Ease of access to repair or replace individual valves, pumps, piping, 3) Performance record on similar applications 4) Probability of failure and 5) Availability of replacement parts.
- Local Representation: Suppliers with representation in the Province of New Brunswick will receive a full score. Suppliers not represented in the Province of New Brunswick will be scored based on the perceived difficulty/disadvantage of 1) contacting the nearest supplier, 2) receiving on-site technical support, and 3) ordering/receiving replacement parts.
- System Performance (Proposed Design and Optimization): Performance will be evaluated based on the ability of the system to meet the specific design criteria outlined in this RFP document including any performance requirements contained within the technical specifications.

.b Cost Evaluation:

- Capital Costs: The capital cost evaluation will be based on the total cost to the Owner for implementation of each technology including equipment, services, and additional required components not included in the proponent's scope of supply.
- Annualized O&M Costs: Costs will be based on a 20 year life cycle at an interest/discount rate of 6%.

.2 Pre-selection Meetings

The Owner reserves the right to conduct pre-selection meetings with Equipment Suppliers, which may include a run-through of the proposal submission.

.3 Informal or Unbalanced Proposal

The Owner reserves the right to reject proposals that the Working Committee considers informal, incomplete or unbalanced.

.4 Right to Accept or Reject

The Owner is not bound to accept the lowest cost or any proposal. The Owner reserves the right to reject any proposal regardless of cost or evaluation score if any proposal is not deemed to be in the overall best interest of the Town.

.5 Notification of Results

The successful proponent will be notified under separate letter. Detailed shop drawings will be requested immediately and an agreement between the owner and contractor will be formulated for the works as detailed and specified herein.

Unsuccessful proponents will be notified under separate letter after an agreement has been reached with the successful proponent.

**Table 1**  
**Sample Scoring Sheet - Pressure Sewer System Evaluation Matrix**

	Item	Max Points	Score	Max Points per sub category
<b>System</b>	Pump Type (Progressive Cavity, Centrifugal)	0.50		
	Installation Pre-packaged	2.00		
	Grinder Assembly	2.00		
	Shut off Head (m)/(psi)	1.00		
	TDH (m)	2.00		
	Flow (l/s)	0.50		
	Level Controls (type)	3.00		
	Control Panel Indoor/Outdoor/NEMA Certified	3.00		
	Telemetry Available (type and options)	1.00		15.00
<b>Inlet/Outlet</b>	Inlet Dia. and type	2.00		
	Discharge Dia. and type	3.00		
	Check Valve (Y/N)	1.00		
	Isolation Valve (Y/N)	1.00		
	Anti Siphon Valve (Y/N)	1.00		8.00
<b>Motor</b>	Motor Construction	4.00		
	RPM	0.50		
	Horsepower	0.50		
	Voltage	1.00		
	Amperage	1.00		7.00
<b>Standard Wet Well</b>	Wet Well Construction	3.00		
	Maximum Standard Depth	2.00		
	Cast in Place Concrete Required	2.00		
	Pump Removal System	1.50		
	Weight of Removeable Pump Core Unit (kg/lbs)	1.50		
	Working Volume (liters)	2.00		
	Emergency Volume (liters)	3.00		
	Residual Volume (liters)	2.00		17.00
<b>Warranty, Maintenance and Certifications</b>	Warranty	3.00		
	Installation Support	2.00		
	Comissioning Support	2.00		
	Operation Support	5.00		
	Maintenance Shop Location	5.00		
	Recommended Maintenance Requirements and Intervals	5.00		
	CSA/ULC Certified (Y/N)	2.00		
	NSF 46 Certified (Y/N)	2.00		
ISO Registration	2.00		28.00	
<b>Pressure System Design and Construction</b>	Design Provided By Manufacturer	2.00		
	Design Model	5.00		
	Air Release Valves Provided By Manufacturer/Supplier	1.00		
	Cleanout Provided By Manufacturer/Supplier	1.00		9.00
<b>References and Reliability</b>	Estimated Number of Pump Units Installed in Atlantic Canada	3.00		
	Estimated Number of Pressure Systems Installed in Canada or Northern US	3.00		
	References - Atlantic Canadian Installations (Organization/Contact Person and Phone No.)	5.00		
	References - Canadian and Northern US Installations(Organization/Contact Person and Phone No.)	5.00		
				16.00
<b>Total Score</b>		100		

## **Appendix A - Technical Specifications**

# Technical Specifications

## 1.0 GENERAL

### 1.1 SCOPE OF WORK

The work covered by this Section shall consist of furnishing all materials, labour, equipment, and services for the supply of the pressure sewer pump units and appurtenances. Attention is directed to the fact that the specification is based on a recognized model and manufacturer that meets the intended standards of the Town for this project; however these specifications are intended to serve as a baseline guide. Deviations from the specification are permitted, however the Proponent must clearly identify and define in the technical submission all deviations from the specification.

Pressure sewer pump unit supply shall include;

- .1 Complete factory-built and tested Wet well Grinder Pump Station(s), each consisting of grinder pump(s) mounted in a suitably constructed wet well
- .2 Level controls
- .3 NEMA 6P electrical quick disconnect
- .4 Pump removal system
- .5 Discharge assembly/shut-off valve
- .6 Anti-siphon valve/check valve, each located in the wet well,
- .7 Electrical alarm panel
- .8 All necessary internal wiring and controls
- .9 Direct bury control and power supply cable from the unit to the control panel

For ease of serviceability, all pump, motor/grinder units shall be of like type and horsepower throughout the system.

## **1.2 SUBMITTALS**

The Successful Proponent shall provide a minimum of five (5) sets of shop drawings detailing the equipment to be furnished, including dimensional data and materials of construction. The Town shall endeavour to promptly review this data and shall return two (2) copies as accepted or pending requested modifications.

## **1.3 MANUFACTURER**

Pump stations units, complete with all appurtenances, form an integral system, and as such, shall be supplied by one (1) pump station unit Manufacturer.

- .1 All Successful Proponent/Manufacturers proposing equipment for this project shall have at least ten (10) years of experience in the design and manufacture of grinder pumps for specific use in low pressure sewage systems and of identical size(s) and performance to the specified units.
- .2 The Successful Proponent shall:
  - .a Provide detailed installation and user instructions for its Product
  - .b Submit evidence of an established service program, including complete parts and service manuals
  - .c Maintain a continuing inventory of grinder pump replacement parts
  - .d Provide a reference and contact list of five (5) of its largest contiguous grinder pump installations of the type specified herein that have been in operation for at least ten (10) years.

## **1.4 WARRANTY**

The Successful Proponent shall provide a part(s) and labour warranty on the complete station and accessories, including, but not limited to, panel and redundant check valve for a minimum period of twelve (12) months after notice of Town acceptance. Any manufacturing defects found during the warranty period will be reported to the Successful Proponent by the Town and shall be corrected by the Successful Proponent at no cost to the Town.

## **2.0 PRODUCTS**

### **2.1 PUMP**

- .1 The pump shall be designed for the application and shall be either progressing-cavity type or centrifugal type.
- .2 Components and material shall be suitable for domestic wastewater service. Its physical properties shall include high tear and abrasion resistance, grease resistance, water and detergent resistance, temperature stability, excellent aging properties, and outstanding wear resistance.

### **2.2 GRINDER**

- .1 The grinder shall be placed immediately below the pumping elements and shall be direct-driven by a single, one-piece motor shaft.
- .2 The grinder assembly shall be dynamically balanced and operate without objectionable noise or vibration over the entire range of recommended operating pressures.
- .4 The grinder shall be constructed so as to eliminate clogging and jamming under all normal operating conditions, including starting.
- .5 Sufficient vortex action shall be created to scour the wet well free of deposits or sludge banks that would impair the operation of the pump.
- .6 The grinder shall be capable of reducing all components in normal domestic sewage, including a reasonable amount of "foreign objects," such as paper, wood, plastic, glass, rubber, panty hose and the like, to finely divided particles that will pass freely through the passages of the pump and the 38mm diameter discharge.
  - .a The grinder shall be positioned in such a way that solids are fed in an upward flow direction.
  - .b The maximum flow rate through the cutting mechanism must not exceed 1.2 meters per second to reduce jamming of the mechanism.

### **2.3 ELECTRIC MOTOR**

- .1 The motor shall be 240 volt (V), 60 hertz (Hz), single-phase, with a low starting current not to exceed 30 amperes (A).
- .2 Conditions for the pump motor shall be provided by the use of an automatic-reset, integral thermal overload protector incorporated into the motor. This motor

protector combination shall have been specifically investigated and listed by Underwriters Laboratories, Canada Inc., (ULC) for the application.

#### **2.4 MECHANICAL SEAL**

The pump core shall be provided with a mechanical shaft seal to prevent leakage between the motor and pump.

#### **2.5 WET WELL**

- .1 The wet well shall consist of a of laminated fibreglass, HDPE, FRP or composite construction suitable for the application.
- .2 The inner surface shall have a smooth finish and be free of cracks and defects.
- .3 The exterior wet well surface shall be relatively smooth with no exposed fiber or sharp projections present.
- .4 The wet well wall and bottom shall be of sufficient thickness and construction to withstand the imposed loading due to saturated soil at the specified burial depth for each available wet well height.
- .5 All station components must function normally when exposed to the external soil and hydrostatic pressures developed at the specified burial depth.
- .6 The wet well bottom shall be factory reinforced as required to support concrete anchoring, to prevent flotation.
- .7 The wet well shall include a solid lockable cover, secured with threaded stainless steel fasteners, providing low profile mounting.
- .8 The wet well shall also be vented to prevent sewage gases from accumulating in the wet well.
- .9 The standard wet well dimensions shall be minimum 600mm in diameter and a minimum of 3.05 meters (10 ft) deep from finish grade to inlet valve.

#### **2.6 DISCHARGE HOSE AND DISCONNECT/VALVE**

- .1 All discharge fittings and piping shall be constructed of 304 Series stainless steel, polypropylene, ethylene propylene diene monomer (EPDM), or PVC.
- .2 The discharge hose assembly shall include a shut-off valve rated for two hundred (200) psi water, oil, or gas (WOG) and a quick disconnect feature to simplify

installation and pump removal.

- .3 The bulkhead penetrations shall be factory-installed and warranted by the Successful Proponent to be watertight.

## **2.7 ELECTRICAL QUICK DISCONNECT (EQD)**

- .1 The grinder pump unit shall include NEMA 6P EQD for all power and control functions.
- .2 An integral tube shall allow venting of the control compartment to ensure proper operation of pressure switch level systems.

## **2.8 ANTI-SIPHON VALVE**

The pump discharge shall be equipped with a factory-installed, gravity operated, flapper-type integral anti-siphon valve built into the discharge assembly.

- .1 Moving parts shall be made of 300 series stainless steel and fabric reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength.
- .2 A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure proper operation even at a very low pressure.
- .3 Holes or ports in the discharge piping are not acceptable antisiphon devices, due to their tendency to clog from the solids in the slurry being pumped.

## **2.9 CHECK VALVE**

The pump discharge shall be equipped with a factory installed, gravity operated, flapper-type integral check valve built into the discharge assembly.

- .1 The check valve shall provide a full-ported passageway when open, and shall introduce a friction loss of less than 0.15 meters of water at maximum rated flow.
- .2 Moving parts shall be made of a 300 series stainless steel and fabric reinforced synthetic elastomer to ensure corrosion resistance, dimensional stability, and fatigue strength.
- .3 A nonmetallic hinge shall be an integral part of the flapper assembly, providing a maximum degree of freedom to ensure seating even at a very low back pressure.

- .4 Each grinder pump installation shall also include one (1) separate check valve of the type detailed in this section for installation in the 38mm service lateral between the grinder pump station and the sewer main, preferably next to the curb stop.

The separate check valve shall be provided as a separate line item in the bid schedule.

#### **2.10 CORE UNIT**

- .1 The grinder pump station shall have an easily removable core assembly containing pump, motor, grinder, all motor controls, check valve, anti-siphon valve, EQD, and wiring.
- .2 The watertight integrity of the core unit shall be established by one hundred percent (100%) factory test at a minimum of five (5) pounds per square inch, gauge (psig).

#### **2.11 CONTROLS**

- .1 Non-fouling wastewater level controls shall be provided
- .2 High-level sensing shall be accomplished in the manner detailed above by a separate sensor of the same type.
- .3 Closure of the high-level sensing device shall energize an alarm circuit as well as a redundant pump-on circuit.
- .4 For increased reliability, pump power and high-level alarm functions shall not be controlled by the same switch.
- .5 To ensure reliable operation of pressure switches, each core shall be equipped with a breather assembly, complete with a suitable means to prevent accidental entry of water into the motor compartment.

#### **2.12 ALARM PANEL**

Each grinder pump station shall include a NEMA 4X, ULC/CSA-listed alarm panel suitable for wall mounting.

- .1 The NEMA 4X enclosure shall be manufactured of thermoplastic to assure corrosion resistance. The enclosure shall include a hinged, lockable cover, pad lock, and secured dead front.
- .2 For each core, the panel shall contain one (1) 15-A, double-pole circuit breaker for the power circuit and one (1) 15-A, single-pole circuit breaker for the alarm circuit.

- The panel shall contain terminal blocks, integral power bus, and a complete alarm circuit.
- .3 The alarm panel shall include the following features: audio and visual alarm, push-to-run switch, and high level (redundant) pump starting control. The visual alarm lamp shall be inside a red fluted lens at least 50mm in diameter and 38mm in height. Visual alarm shall be mounted to the top of the enclosure in such a manner as to maintain NEMA 4X rating.
  - .4 The audio alarm shall be a printed circuit board in conjunction with an eighty-five (85) to ninety (90) decibels (dB) buzzer with quick mounting terminal strip mounted in the interior of the enclosure. The audio alarm shall be capable of being deactivated by depressing a push-type switch encapsulated in a weatherproof silicone boot and mounted on the bottom of the enclosure.
  - .5 The entire alarm panel shall be ULC/CSA-listed.
  - .6 The alarm sequence is to be as follows:
    - .a When liquid level in the sewage wetwell rises above the alarm level, visual and audio alarms shall be activated. The contacts on the alarm pressure switch shall close. The redundant pump starting system shall be energized.
    - .b The audio alarm may be silenced by means of the externally mounted, push-to-silence button.
    - .c Visual alarm remains illuminated until the sewage level in the wet well drops below the "off" setting of the alarm pressure switch.

### **2.13 SERVICEABILITY**

- .1 The grinder pump core unit shall have two (2) lifting hooks, complete with nylon lift-out harness, to facilitate easy core removal when necessary.
- .2 All mechanical and electrical connections must provide easy disconnect capability for core unit removal and installation.
- .3 A push-to-run feature shall be provided for field trouble shooting.
- .4 All motor control components shall be mounted on a readily replaceable bracket for ease of field service.
- .5 All maintenance tasks for the pump station must be possible without entry into the pump station wet well.

## **2.14 SAFETY**

- .1 The grinder pump shall be free from electrical and fire hazards as required in a residential environment. As evidence of compliance with this requirement, the completely assembled and wired grinder pump station in its tank shall be ULC/CSA - listed to be safe and appropriate for the intended use.
- .2 The grinder pump shall meet accepted standards for plumbing equipment for use in or near residences; shall be free from objectionable noise, odor, or health hazards; and shall have been tested by an independent laboratory to certify its capability to perform as specified in either individual or low pressure sewer system applications. As evidence of compliance with this requirement, the grinder pump shall bear the National Sanitation Foundation (NSF) seal. Third-party testing to NSF standards will not be accepted.

## **3.0 EXECUTION**

### **3.1 FACTORY TESTING**

- .1 Each grinder pump shall be submerged and operated for a minimum of five (5) minutes. Included in this procedure shall be the testing of all ancillary components such as the anti-siphon valve, check valve, discharge line, and each unit's dedicated level and motor controls. All factory tests shall incorporate each of the above listed items.
- .2 Actual appurtenances and controls that will be installed in the field shall be particular to the tested pump only. A common set of appurtenances and controls for all pumps will not be acceptable.
- .3 The Successful Proponent shall submit certified test results showing the operation of each grinder pump at two (2) different points on its curve, with the maximum pressure no less than sixty (60) psi.
- .4 Completed wet wells shall be factory leak tested to assure the integrity of all joints, seams, and penetrations.

### **3.2 DELIVERY**

- .1 All grinder pump units shall be delivered to the job site one hundred percent (100%) completely assembled, tested, and ready for installation.
- .2 Grinder pump stations will be individually mounted on wooden pallets.
- .3 Grinder pump cores may be shipped in a separate container and are only required to be installed in the wet well.

### **3.3 INSTALLATION SUPPORT**

- .1 The Successful Proponent shall provide the services of qualified factory trained technician(s) who shall provide installation support to the General Contractor with respect to the installation, placement and wiring of each station.
- .2 The Proponent is to provide an estimated upset amount of days for installation support. The services of a trained factory-authorized technician shall be provided at a daily rate based on an 8 hour day on-site. The daily rate shall include expenses and travel time to the site.

### **3.4 START-UP AND FIELD TESTING**

- .1 The Successful Proponent shall provide the services of qualified factory trained technician(s) who shall inspect the final placement, installation and wiring of each station, perform field tests as specified herein, and instruct the Town's personnel in the operation and maintenance of the equipment before the stations are accepted by the Town.
- .2 All equipment and materials necessary to perform testing shall be the responsibility of the General Contractor. This will include, as a minimum, a portable generator (if temporary power is required) and water in each wet well.
- .3 The Proponent is to provide an estimated upset amount of days for start up and field testing. The services of a trained factory-authorized technician shall be provided at a daily rate based on an 8 hour day on-site. The daily rate shall include expenses and travel time to the site.
- .4 Upon completion of the installation, the authorized factory technicians shall perform the following test on each station:
  - .a Make certain the discharge shut-off valve and curb-stop is fully open. These valves must not be closed when the pump is operating.
  - .b Turn on the alarm power circuit.

- .c Fill the wet well with water to a depth sufficient to verify the high level alarm is operating. Shut off water.
  - .d Turn on pump power circuit. Initiate pump operation to verify automatic power controls are operative. Pump should immediately turn on. Within one (1) minute, alarm light will turn off. Within three (3) minutes, the pump will turn off.
- .5 Upon completion of the start-up and testing, the Successful Proponent shall complete a start-up authorization form describing the results of the tests performed for each grinder pump station. Final acceptance of the system will not occur until authorization forms have been received for each pump station installed and any installation deficiencies corrected.

#### **4.0 SPARE CORE**

The Successful Proponent will supply one (1) spare pump core complete with all operational controls, level sensors, check valve, anti-siphon valve, pump/motor unit, and grinder.

#### **5.0 MANUALS**

The Successful Proponent shall supply four (4) copies of Operation and Maintenance Manuals to the Town.

**\*\*\*\*\*END OF SECTION\*\*\*\*\***

## **Appendix B – Price Breakdown**

# Financial Form 1

## Unit Price Table

Proponents must complete and submit one copy of this form as required in the "Proposal Submission" section of the RFP. The Financial Proposal is to be submitted in the Proponent's package in a separate sealed envelope, clearly marked as:

**"Financial Proposal -Supply of Pressure Sewer System Pump Units for Forrester's Cove Sub Division"** with the Proponent's name and address

Item No.	Description	Unit	Qty	Unit Price (written)	Unit Price (figures)	Total Price (Quantity x Unit Price) (in figures)
1	Pump Units	each	30			
2	Pump Unit Replacement Core	each	1			
3	Forcemain Cleanout (enter the Quantity based on the conceptual design)	each				
4	Forcemain Air Relief / Anti Siphon Valve (enter the quantity based on the conceptual design)	each				
5	Main Stop Lateral Tapping Kit	each	30			
6	Service Curb Stop Assembly	each	30			
7	Service Backflow/Check Valve	each	30			
8	Technical Support – Installation (enter the quantity based on the conceptual design and estimated level of effort) Unit price to include travel time and expenses.	day				
9	Technical Support – Commissioning (enter the quantity based on the conceptual design and estimated level of effort) Unit price to include travel time and expenses.	day				
10	Net Price					
11	HST @ 13%					
12	Total Price					

Having examined the RFP Documents for the work and Addenda No. \_\_\_\_ to No. \_\_\_\_ inclusive, all issued by **exp** Services Inc., the undersigned hereby offer to enter into a Contract to perform the work required by the RFP Documents for the amount(s) shown in Financial Form 1.  
 The Quantities shown in this form are estimated. The Contract Price shall be for the Final Sum of the products of the actual Quantities that are incorporated in the work and the appropriate Contract Unit prices.

Proponent Company Name	Signature of Authorized Representative
Business Address	Date

## **Appendix C – Technical Information Questionnaire**

## Technical Form 1

### System Technical Information Summary

**A completed copy of this form (Technical Form 1) must be submitted with each copy of the Technical Submission.**

The following form requires technical input from the proponent related to the proposed system. Information presented in this section will be used for evaluation of proposals. Proponents are required to fill in all information. If a particular item does not apply proponents are to enter a value of zero, or write out "Not Available" or "Not Applicable". Proponents are encouraged to provide supplementary and / or optional equipment, features, etc., information in the Technical Proposal in the form of Cut Sheets, System Brochures, Test Data, etc. Proponents may refer to supplementary information to be provided in the Technical Proposal Submission if additional space is required to convey the requested information.

	Item	Proponent Response
System	Indicate Pump Type (Progressive Cavity or Centrifugal)	
	Is the pump unit Pre-packaged or is there field assembly required? Describe field assembly requirements if applicable.	
	Describe the grinder pump assembly construction and materials.	
	Describe pump impeller/rotor/stator construction and materials	
	Indicate Shut off Head (m)/(psi)	
	Indicate TDH (m)	
	Indicate Flow (l/s)	
	Describe the standard and optional level controls	
	Describe the control panel (ie Indoor/Outdoor/NEMA Certified and Dimensions) Indicate Standard electrical cable length, gauge and NEMA certification	
	Describe Optional Telemetry Available (i.e., scada, autodialer)	

Company Name	Signature of Authorized Representative	/ Date
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		Item	Proponent Response
<b>Inlet/Outlet</b>		Indicate Standard Inlet Dia. and describe construction/materials.	
		Indicate Standard Discharge Dia. and describe construction/materials	
		Describe standard check valve construction/materials	
		Describe standard isolation valve construction/materials	
		Describe standard anti siphon valve construction and materials	

		Item	Proponent Response
<b>Motor</b>		Describe Motor Construction and Materials	
		Describe Motor seals construction and materials	
		Describe Motor Cooling System	
		Indicate RPM	
		Indicate Horsepower	
		Indicate Voltage	
		Indicate Amperage Requirements	

Company Name	Signature of Authorized Representative	/ Date

	Item	Proponent Response
<b>Standard Wet Well</b>	Describe Wet Well Construction and Materials	
	Indicate Maximum standard depth available from finish grade to inlet invert and from finish grade sump. Describe access riser construction, material options, etc. (i.e., standard pipe-section proprietary)	
	Indicate if Cast in Place Concrete Required for standard installations and/or for flotation resistance.	
	Describe the Pump Removal System, Electrical and Mechanical Quick Disconnects, etc.	
	Indicate Weight of Removeable Pump Core Unit (kg/lbs)	
	Indicate the standard working volume (liters)	
	Indicate the standard emergency volume (liters)	
	Indicate standard residual volume (liters)	

	Item	Proponent Response
<b>Warranty, Maintenance and Certifications</b>	Describe the standard warranty. Describe warranty options if available.	
	Describe Installation Support Provided (i.e., from where and expected support requirements in days for this project)	
	Describe Commissioning Support Provided (i.e., from where and expected support requirements in days for this project)	
	Operation Support (ie. from where and typical operation support provided)	
	Indicate Nearest Maintenance Shop Location	
	Describe recommended maintenance requirements and intervals	
	Indicate CSA/ULC Certifications	
	Indicate NSF 46 Certifications	
	Indicate ISO Registration	

Company Name	Signature of Authorized Representative	/ Date

	Item	Proponent Response
<b>Pressure System Design and Construction</b>	Is the pressure system design provided By Manufacturer/Supplier?	
	Describe the Design Model	
	Are Air Release Valves Provided By Manufacturer/Supplier?, if so describe construction and materials.	
	Are curb stop assemblies provided by Manufacturer/Supplier?, if so describe construction and materials.	
	Are Cleanout Assemblies Provided By Manufacturer/Supplier, if so describe construction and materials.	

	Item	Proponent Response
<b>References and Reliability</b>	Provide Estimated Number of Pump Units Installed in Atlantic Canada	
	Provide Estimated Number of Pressure Systems Installed in Canada or Northern US	
	References - Atlantic Canadian Installations (Organization/Contact Person and Phone No.)	
	References - Canadian and Northern US Installations (Organization/Contact Person and Phone No.)	

Company Name	Signature of Authorized Representative	/ Date
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