



State of Rhode Island
Department of Administration / Division of Purchases
One Capitol Hill, Providence, Rhode Island 02908-5855
Tel: (401) 574-8100 Fax: (401) 574-8387

BID 7550904
FURNISH AND INSTALL WASTEWATER SAMPLERS AT ZAMBARANO
HOSPITAL
SPECIFICATIONS

Fiberglass Refrigerated Sampler

Engineering Specifications

Not to exceed maximum dimensions of Height 49.3" X Width 26" X Depth 26"

1) Instrument

There shall be furnished a refrigerated sampler for sequential and composite sampling applications. The unit shall be suitable for outdoor installation without requiring additional enclosures for weather protection. The instrument shall be capable of collecting samples from a variety of sources including open channels, sewers, and storm water conduits. The instrument shall route samples to storage containers for collection and off-site analysis. The instrument shall be suited to collect priority pollutant or general purpose samples in multiple bottles or a single bottle. The sampler controller shall require 12 volt DC power for operation. This power will be supplied from a power converter located inside the sampler. The unit shall be line (AC) powered 120 volt 60Hz.

2) Refrigerator

The controller cover, exterior, and base of the refrigerator shall be constructed of resin transfer molded fiberglass reinforced plastic with a UV -resistant gel-coat, providing exceptional resistance to corrosion and weathering. The interior of the refrigerator shall be food-grade ABS plastic for easy cleaning and shall inhibit bacterial growth. The copper refrigeration lines shall be protected with polyester tubing or phenolic resin. The condenser coil shall be powder-coated with polyester for additional corrosion resistance. The refrigerator evaporator plate shall be aluminum and powder-coated with a food-grade epoxy to resist corrosion. The refrigerant used shall be a non-CFC refrigerant with an ozone depletion potential of zero.

A) The refrigerator shall include 1-1/2 inches of rigid foamed-in-place urethane insulation on the sides to aid in sample preservation. The top insulation shall consist of 3 inches of rigid urethane insulation. The insulation shall use a non-CFC foaming agent. The refrigerator shall have a hinged, reinforced fiberglass controller cover which is capable of being locked. The unit shall have a temperature control knob located under this cover. The refrigerator's door shall also have hasps capable of accepting a padlock to prevent unauthorized tampering with the sample compartment contents. A



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magnetic gasket shall be used to seal the refrigerator door. The refrigerator power supply and solid state thermostat shall be contained in a sealed, NEMA 4X equivalent, irridited aluminum enclosure inside the refrigerator base. All exposed metal components used in the construction of the refrigeration system shall be either plated aluminum, or stainless steel.

B) The unit shall include long-life electronic temperature sensing devices that shall measure the ambient air temperature, evaporator plate temperature, and internal air temperature. Built-in control circuitry shall utilize these sensors to control operation of the compressor, built-in heaters, and the self-defrosting cycle of the evaporator plate. The built-in heaters shall prevent collected samples from freezing if the ambient air temperature drops below freezing. The unit shall use a condensing coil with forced air cooling and the air intake shall be filtered to prevent dirt and other contaminants from entering the condenser.

C) A compressor with a minimum rating of 1/5 horsepower shall be used. The compressor shall be equipped with a temperature safety cutout that will disengage the compressor if a temperature of 221°F (105°C) is reached. The refrigeration system shall contain HFC- 134a as the refrigerant. The refrigerator shall have a 5 minute typical recovery time to return to 39°F (4°C) after the door has been opened for 1 minute in 75°F (24°C) ambient conditions. The collected samples shall be stored in an enclosure capable of operating in ambient temperatures from -20°to 120°F (-29° to 49°C).

3) Sampler Controller

A) All electrical components shall be housed in a single controller. There shall be no external electrical or control components. The controller shall use a 4 line, 20 characters per line, 80 total character display, to show sampler and attached module status and program information. This display shall be angled for easy viewing and backlit for easy use in all light conditions. A 17 position keypad shall be used for all program entries, manual control of the sampler, and data transfer functions. The sealed control unit shall be removable to allow use with either a portable or refrigerated sampler. Program firmware shall be stored in Flash memory. This shall allow program software updates to be transferred to the sampler without opening the sampler enclosure.



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B) The control box shall be constructed of 1/4" thick Noryl® plastic and the enclosure shall conform to NEMA 4X, 6 (IP 67 control box, IP 17 pump) standards for water tight, dust tight, and corrosion resistance and submersion. A desiccator shall be located inside the control box to prevent moisture damage to electrical components.

C) The controller shall have an operating temperature of 32°F to 120°F (0 to 49 °C), and a storage temperature of 0 to 140 °F (-18 to 60 °C).

D) The sampler controller shall have two programming modes: standard and extended. Additionally, two styles of programming shall be available: quick view and sequential programming styles. There shall be a sequence available to select either standard or extended programming. On-line help shall be available to direct the user through the programming sequence or refer to specific sections in the instruction manual. The sampler shall provide 512 kilobytes of battery-backed RAM memory with a minimum life of five years. This memory shall maintain the sampler's program settings, stored programs, and the results of the last sampling sequence when the sampler is turned off or an external power interruption occurred. A user-initiated diagnostics routine shall determine the operational status of the sampler. Any error conditions detected by the diagnostic routines shall be displayed to the user.

E) Standard programming shall allow the user to define specific program operational parameters. Additionally, the sampler shall be able to be programmed to operate on specific days of the week. An option shall be available to automatically re-run the active program. No user re-activation shall be required if this option is selected. The user can program the sampler to collect sequential or composite samples at user-definable intervals. A delay to first sample collection shall be programmable in minutes from 0 to 9,999, or by the real-time clock or eliminated. The user shall be able to enter a 10 character alpha numeric description as a sampling site name.

i) Time Pacing, Standard Programming

The sampler shall use an internal real-time clock to provide time and date information. Uniform time-paced samples shall be collected at regular time intervals from 1 minute to 99 hours and 59 minutes.



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ii) Flow Pacing, Standard Programming

The sampler shall accept a 12V DC flow proportional pulse or isolated dry contact closure from an external flow meter for flow pacing. The pulse or contact closure shall be at least 25 ms in duration. The user shall select the number of flow pulses as the flow interval for each sample collection. If connected to a 700 series flow module, flow pacing shall be stated in interval flow volume between each sample.

F) Extended programming shall allow the user to enter intricate programs for sample collection. All options available in standard programming mode are available with extended programming. The sampler shall have the ability to be programmed for up to 2 real-time pause/resume sampling times. The pause/resume routines and delay to the first sample are independent of the sample pacing interval. The sampler shall be capable of storing up to 5 sampling routines. The duration and frequency of purges can be controlled by the user in this mode. Sample retries and line rinses shall be selectable from 0 to 3. The user shall be able to enter a 10 character alpha numeric description as a sampling site name. The user shall also be able to enter 10 character alphanumeric names for each stored sampling program.

i) Two-part programming shall provide multiple sample pacing for collecting independent samples in distinct bottle sets. This shall be used for storm water runoff monitoring or other applications. Sample volumes and intervals for the independent samples shall be separately programmed. All programming options shall be available for the independent programs. These two distinct programs shall be capable of being initiated separately by external conditions.

ii) Time Pacing of Samples, Enhanced Programming

The sampler shall use an internal real-time clock to provide time and date information. Uniform time-paced samples shall be collected at regular time intervals from 1 minute to 99 hours and 59 minutes. Additionally, non-uniform time interval sampling shall be available. These non-uniform time intervals shall be capable of being paced by clock time, or in specific minute intervals for each sample collected.

iii) Flow Pacing of Samples, Enhanced Programming

The sampler shall accept a 12V DC flow-proportional pulse or isolated dry contact closure from an external flow meter for flow pacing. The pulse or contact closure must be



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at least 50 ms in duration. The user shall select the number of flow pulses as the flow interval for each sample collection.

iv) Flow Dependent Sample Volumes

For extended programs that are uniform time paced, a flow-dependent-sample- volume option shall be offered. If a flow module is attached, the input signal shall be the module's flow volume. Otherwise, it shall be the flow pulse count at the external flow meter connector. The user shall enter the amount of flow required for each 10 ml of sample. At sample time, the sample volume shall be calculated based on the flow that occurred since the last sample. This sample volume will be at least 20 ml, but not more than the bottle volume (or 9990 ml, whichever is smaller). No sample shall be taken at the start time.

v) Event-Paced Sampling

This mode of sampling shall allow the user to select specific external events to pace a sampling routine. A sample shall be collected when specific external events occur. Sampling shall take place with each occurrence of the external event.

G) Sampler Controller Outputs

i) Three optional internal isolated analog outputs shall be available.

These outputs shall be configurable to either 4-20 mA or 0-20 mA. These outputs shall be programmable for any parameter measured by the sampler with the exception of rainfall.

ii) For those programs that have delayed or scheduled start times,

parameter readings shall be displayed while waiting for the start time. At the start time for the sampling program, the totalizer shall be reset to display total flow information for the sampling program. Parameter and flow readings shall also be displayed after the program is complete. Additionally, the sampler shall be capable of operating as a display and logging unit only.



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4) Sample Delivery

A) Samples shall be collected using a peristaltic pump. This pump shall produce typical line velocities of 3.0 feet per second in a 3/8 inch (0.95 em) ID suction line at 3 feet (1m) of head. At 25 feet (7.6 m) of head, the pump shall typically produce a line velocity of 2.2 feet (0.67 m) per second. The pump shall be capable of lifting a sample 28 feet (8 m). The body of the peristaltic pump shall be an integral part of the sampler controller. The pump shall be constructed of high strength Noryl plastic and designed for corrosion resistance and long tubing life. Before and after each sample is collected, the pump shall air-purge the suction line. Pre-purges and post-purges shall be automatically controlled, and no pre-calibration adjustments are required. User-selectable purge lengths shall also be available. The sample stream shall be a direct path from sample source to sample bottle. Samples shall not pass through metering chambers or other diversions. The pump shall include a latched cover and thumbscrew opening for the replacement of pump tubing. The pump shall include a built-in safety interlock. With the opening of the pump's latch and band, all power shall be removed from the sampler's pump motor, to eliminate the possibility of a pump activation injuring personnel.

B) The sampler shall typically deliver sample volumes with an accuracy of ± 10 ml or $\pm 10\%$, whichever is greater, of the programmed value. The sample volume repeatability shall be ± 5 ml or $\pm 5\%$, whichever is greater, of the average of the maximum and minimum sample volume in the sample set. The user can select sample volumes from 10 to 9,990 ml in 1ml increments. The liquid detector also monitors for anomalies in the sample collection process. If no liquid is detected, the sampler shall be capable of retrying the sampling sequence up to three times. Additionally, the sampler shall be capable of being programmed to rinse the suction line with the source liquid up to three times.

C) Liquid Detector

The sampler shall utilize a non-wetted, non-conductive detector to sense the presence of the liquid. The sensor shall not be dependent on, or affected by, any chemical or physical property of the liquid or its contents. The sensor shall not require routine maintenance or cleaning. The liquid detection system shall minimize the effects of changing head,



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intermittent flow in the suction line, or variable battery conditions on sample volume. After initial detection of liquid, the sensor shall monitor for the presence of liquid during the sample collection sequence. Additionally, the liquid detector shall be used to detect bottle full conditions when the sampler is operated in the single bottle sampling mode.

D) Pump Revolution Counter

After liquid detection, the pump revolution counter shall count actual pump revolutions to determine sample volume delivery to the storage containers. If liquid flow is interrupted during the sample collection sequence, the detector shall inhibit the pump revolution counter from incrementing until liquid flow is restored. Automatic compensations for air slugs in the sample shall be made by the delivery system. Additionally, the pump revolution counter shall monitor the total number of pump revolutions and alert the user when a pre-selected number of counts has been reached. This tubing life indicator shall alert the user to the need for pump tubing replacement. This indicator shall be on the sampler's display screen. The pump tubing used shall be specially treated to minimize water extractable pollutants. Specially designed bands shall indicate the correct placement of the tubing inside the pump. The tubing shall typically last for a minimum of 1,000,000 pump counts. One pump revolution is equivalent to 12 pump counts.

E) Sample distribution shall be through the use of a worm gear drive mechanism. This system shall lock the corrosion-resistant distribution arm above the appropriate sample container. A dual optical sensor shall be used for positive location of the distributor arm. A single adjustable distributor arm shall be used for all bottle configurations and sampler mounting possibilities.

5) Suction Lines and Strainers

The sampler shall require a suction line and strainer. The suction line shall be made of {[3/8 inch (.95 cm) ID vinyl] [3/8 inch (.95 cm) ID Teflon®] with a length of 25 feet}.; [The suction line shall have a factory-installed standard 3/8" weighted polypropylene strainer, or an optional (all stainless steel strainer for 3/8" (0.95cm) line) (all CPVC weighted strainer for 3/8" (0.95cm) line).



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6) Sample Collection Containers

The sampler shall be supplied with sample collection container(s). The container(s) shall be:

1- 5 Gallon Polyethylene container with removable cap. One set per sampler.

7) Additional Items shall be provided.

- 1- Supply flow pulse cable. One per sampler.
- 2- Supply one day of startup and training.
- 3- Supply bag of 10 pump tubes.



Request for Quote

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
 ONE CAPITOL HILL
 PROVIDENCE RI 02908

BUYER: Cadoret, David
 PHONE #: 401-574-8131

CREATION DATE : 24-AUG-16
 BID NUMBER: 7550904
 TITLE: FURNISH AND INSTALL WASTEWATER SAMPLERS AT ZAMBARANO HOSPITAL
 BLANKET START : 01-OCT-16
 BLANKET END : 30-JUN-17
 BID CLOSING DATE AND TIME: 19-SEP-2016 10:00:00

B DOA CONTROLLER
I ONE CAPITOL HILL, 4TH FLOOR
L SMITH ST
L PROVIDENCE, RI 02908
T US
O

S DOA-FACILITIES AND MAINTENANCE
H ZAMBARANO HOSPITAL
I 2090WALLUM LAKE ROAD
P PASCOAG, RI 02859-1813
T US
O

Requisition Number: 1474806

Note to Bidders: Questions concerning this solicitation may be e-mailed to the Division of Purchases at doa.purbidinfo@purchasing.ri.gov no later than September 7, 2016 at 5pm (EST). Please reference the RFQ number on all correspondence. Questions should be submitted in a Microsoft word attachment. Answers to questions received, if any, will be posted on the internet as an addendum to this solicitation (www.purchasing.ri.gov). It is the responsibility of all interested parties to download this information.

Line	Description	Quantity	Unit	Unit Price	Total
1	Furnish and install two (2) Temperature controlled automatic samplers for testing discharge of wastewater from the wastewater treatment facility at the Zambarano unit of Eleanor Slater Hospital per attached specs	2.00	Each		

Delivery: _____

Terms of Payment: _____

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer

Contract Terms and Conditions

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Terms and Conditions

BID STANDARD TERMS AND CONDITIONS

TERMS AND CONDITIONS FOR THIS BID

INSURANCE REQUIREMENTS

AN INSURANCE CERTIFICATE IN COMPLIANCE WITH PROVISIONS OF ITEM 31 (INSURANCE) OF THE GENERAL CONDITIONS OF PURCHASE IS REQUIRED FOR COMPREHENSIVE GENERAL LIABILITY, AUTOMOBILE LIABILITY, AND WORKERS' COMPENSATION AND MUST BE SUBMITTED BY THE SUCCESSFUL BIDDER(S) TO THE DIVISION OF PURCHASES PRIOR TO AWARD. THE INSURANCE CERTIFICATE MUST NAME THE STATE OF RHODE ISLAND AS CERTIFICATE HOLDER AND AS AN ADDITIONAL INSURED. FAILURE TO COMPLY WITH THESE PROVISIONS MAY RESULT IN REJECTION OF THE OFFEROR'S BID. ANNUAL RENEWAL CERTIFICATES MUST BE SUBMITTED TO THE AGENCY IDENTIFIED ON THE PURCHASE ORDER. FAILURE TO DO SO MAY BE GROUNDS FOR CANCELLATION OF CONTRACT.

NOTE: IF THIS BID COVERS CONSTRUCTION, SCHOOL BUSING, HAZARDOUS WASTE, OR VESSEL OPERATION, APPLICABLE COVERAGES FROM THE FOLLOWING LIST MUST ALSO BE SUBMITTED TO THE DIVISION OF PURCHASES PRIOR TO AWARD: * PROFESSIONAL LIABILITY INSURANCE (AKA ERRORS & OMISSIONS) - \$1 MILLION OR 5% OF ESTIMATED PROJECT COST, WHICHEVER IS GREATER. * BUILDER'S RISK INSURANCE - COVERAGE EQUAL TO FACE AMOUNT OF CONTRACT FOR CONSTRUCTION. * SCHOOL BUSING - AUTO LIABILITY COVERAGE IN THE AMOUNT OF \$5 MILLION. * ENVIRONMENTAL IMPAIRMENT (AKA POLLUTION CONTROL) - \$1 MILLION OR 5% OF FACE AMOUNT OF CONTRACT, WHICHEVER IS GREATER. * VESSEL OPERATION - (MARINE OR AIRCRAFT) - PROTECTION & INDEMNITY COVERAGE REQUIRED IN THE AMOUNT OF \$1 MILLION.

LICENSE REQUIREMENTS

VENDOR (OWNER OF COMPANY) IS RESPONSIBLE TO COMPLY WITH ALL LICENSING OR STATE PERMITS REQUIRED FOR THIS TYPE OF SERVICE. A COPY OF LICENSE/PERMIT SHOULD BE SUBMITTED WITH THIS BID. IN ADDITION TO THESE LICENSE REQUIREMENTS, BIDDER, BY SUBMISSION OF THIS BID, CERTIFIES THAT ANY/ALL WORK RELATED TO THIS BID, AND ANY SUBSEQUENT AWARD WHICH REQUIRES A RHODE ISLAND LICENSE(S), SHALL BE PERFORMED BY AN INDIVIDUAL(S) HOLDING A VALID RHODE ISLAND LICENSE.

RIVIP INFO - BID SUBMISSION REQUIREMENTS

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer. When delivering offers in person to One Capitol Hill, vendors are advised to allow at least one hour additional time for clearance through security checkpoints.

MAILING ADDRESS FOR BID PROPOSALS ISSUED BY THE STATE OF RHODE ISLAND,
DIVISION OF PURCHASES

All Bid Proposals must be submitted by mail or hand delivered to:

- State of Rhode Island
- Department of Administration
- Division of Purchases, Second floor
- One Capitol Hill

- Providence, RI 02908-5855

DIVESTITURE OF INVESTMENTS IN IRAN REQUIREMENT:

No vendor engaged in investment activities in Iran as described in R.I. Gen. Laws §37-2.5-2(b) may submit a bid proposal to, or renew a contract with, the Division of Purchases. Each vendor submitting a bid proposal or entering into a renewal of a contract is required to certify that the vendor does not appear on the list maintained by the General Treasurer pursuant to R.I. Gen. Laws §37-2.5-3.

DELIVERY PER AGENCY

DELIVERY OF GOODS OR SERVICES AS REQUESTED BY AGENCY.

AWARD

THE STATE, AT ITS SOLE DISCRETION, SHALL RESERVE THE RIGHT TO MAKE ONE OR MULTIPLE AWARDS FOR THIS REQUIREMENT AND/OR TO REJECT ANY OR ALL BIDS.