

Water Chlorine Analyzers

Bid Specifications
Project# 17002

City of Sullivan, Missouri

Legal Notice Invitation to Bid

Sealed bids for water chlorine analyzers with installation will be received by the City of Sullivan, Missouri at the City Hall located at 210 W Washington, Sullivan, MO 63080, until 10:00 o'clock a.m. Wednesday, March 8, 2017. The bids will be publicly opened and read aloud. All bids will be clearly marked "**Water Chlorine Analyzers**".

Bid specifications may be obtained at the Sullivan City Hall, 210 W Washington, Sullivan, MO 63080 Monday through Friday between the hours of 8:00 a.m. and 5:00 p.m.

Conditional bids will not be accepted.

Each bidder shall execute and submit a non-collusion affidavit (copy attached to specifications) with the submission of their bid.

Each bidder shall provide proof of worker's compensation insurance.

Each Bidder shall provide proof that they are enrolled and participate in E-verify. This requirement is required by State or Federal Statute effective January 1, 2009.

All bids shall remain open for thirty (30) days.

The City of Sullivan reserves the right to accept or reject any and all bids and to waive any irregularities in the bidding process.

Instructions to Bidders

PROPOSAL

Proposals shall be made on the form(s) herein provided. Such proposals shall be endorsed **Water Chlorine Analyzers** and addressed to the City of Sullivan, 210 W Washington, Sullivan, MO 63080. Proposals shall include bid proposal, experience statement, non-collusion affidavit, and proof of enrollment and participation in E-Verify.

NON-COLLUSION AFFIDAVIT

Every bidder shall complete, sign, and notarize the non-collusion affidavit hereinafter included in these specifications. Said non-collusion affidavit shall be included with the bid proposal.

E-VERIFY COMPLIANCE REQUIRED

Each Bidder shall provide proof that their company is enrolled in E-Verify, as required by law. Information on E-Verify may be obtained at 1-888-464-4218. There is no charge for this program.

COMPETENCY OF BIDDERS

Each bidder shall furnish satisfactory evidence that he or she has the necessary resources to fulfill the conditions of the contract documents, in the form of an experience statement, list of chlorine analyzers sold with reference contact information, or other such document(s) providing proof of ability to adequately perform the functions of the contract. Each bidder shall furnish three references related to similar chlorine analyzer systems sold.

RIGHT TO REJECT BIDS

The City of Sullivan reserves the right to reject any and all bids and to waive any irregularities in the bidding process, at the sole discretion of the City.

AWARD OF CONTRACT

The contract or part thereof will be awarded to the bidder whose proposal is deemed to be the lowest and best by the City of Sullivan. Failure of the City of Sullivan to execute a signed contract shall render the bids received under this proposal null and void.

BID PROPOSAL

To the City of Sullivan, Missouri, for a Water Level Control System for the following well installations of which the City may accept all or a section thereof.

In accordance with the instructions and specifications contained within the Bid Specifications, the following proposal is respectfully submitted:

	WATER CHLORINE ANALYZER SITE	BID AMOUNT
1	Well #9 - South Highway 185	\$ _____
2	Well #10 - Glaser Road	\$ _____
3	Well #3 - Springfield Road	\$ _____
4	Well #6 - Mattox Drive	\$ _____
5	Well #5 - Edgewood	\$ _____
6	Well #2 - Thurmond Memorial Boulevard	\$ _____
7	Well #7 - Watson Road	\$ _____
Total Bid		\$ _____

By submission of this bid, Bidder certifies that this bid has been arrived at independently without consultation, communication, or agreement as to any matter relating to this bid with any other bidder or any competition, is willing and able to execute this contract on the commencement date of the contract, and is duly authorized to enter this bid on the behalf of any corporation or entity for which this bid has been entered.

Bid Proposal Respectfully Submitted By:

Firm Name

Street Address

Signature

City, State, and Zip Code

Title

Date

Telephone Number

Fax Number

E-mail Address

Federal Identification Number

NON-COLLUSION AFFIDAVIT

STATE OF _____)

ss.

COUNTY OF _____)

_____, being first and duly sworn, deposes and says

that he/she is _____ of _____,
(sole owner, partner, president, etc)

the party making the foregoing proposal or bid; that such bid is genuine and not collusive of sham; that said bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of any affiant or any other bidder, or to fix any overhead, profit, or cost element of said bid price, or of any other bidder, or to secure any advantage against the **City of Sullivan, Missouri** or any person or persons interested in the proposed contract; and that all statements contained in the proposed contract; and that all statements contained in said proposal or bid are true; and further, that such bidder has not, directly or indirectly, submitted this bid, or the contents thereof, or divulged information or data relative thereto any association or to any member or agent thereof.

Affiant

Sworn to and subscribed before me this ____ day of _____, 20__.

Notary Public in and for

_____, County, _____

My commission expires _____.

TECHNICAL SPECIFICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

Contractor shall furnish and install:

- A. One (1) chlorine, pH & Temperature residual systems, each containing a water sample inlet tap, sample tap, flow rotameter, sensor holder, chlorine residual probe, pH probe, temperature probe, analyzer, appropriate valves, piping, mounting hardware and all other accessories to provide a complete and functional analyzing system as shown in the Drawings and as specified herein.

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals.
- B. Section 01720 - Project Record Drawings
- C. Section 11060 - Valves
- D. Section 13400 - Instrumentation and Control
- E. Section 15000 - General Mechanical Requirements
- F. Section 15004 - Polyvinyl Chloride Pipe and Fittings
- G. Section 15190 - Equipment Identification
- H. Division 16 - Electrical

1.3 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. System shall measure chlorine residual and pH value of clean water for process control in the chlorination and neutralization of water.
 - 2. System components shall be mounted on a black polyethylene backboard, nominally 30" H x 24" W x 7" D, mounted at a height and location convenient for maintenance. Or, in the case of indoor locations, may be wall mounted.

3. The chlorine residual shall conform to all requirements of Articles 2.2 and 2.3, respectively, of this specification.

1.4 SUBMITTALS

- A. Submit complete specifications, catalog information and cuts, descriptive drawings and literature for each equipment item to be furnished under this Section, with all exceptions to the Specifications noted. Include the following data:
 1. Installation drawings and details.
 2. Detailed electrical equipment data and wiring diagrams.
 3. Instrumentation data and interconnection diagrams.
 4. Operational information including calibration procedures, technical manuals, and parts list.
 5. Manufacturer's start-up procedures and start-up report form.
 6. Maintenance information, trouble-shooting procedures, materials and other characteristics.
- B. No equipment or accessories shall be ordered until the Engineer has approved the required drawings.
- C. Submittals shall include manufacturer's installation drawings for approval by the Engineer.
- D. The Contractor shall provide with his/her submittals, a manufacturer's suggested list of spare parts for all equipment furnished under this Section. Such list shall include as a minimum, one spare probe for each system, reagents required for zero and calibration, and all spare parts which the manufacturer expects to be required for maintenance and replacement purposes during the first two years of equipment operation. The list shall include suggested quantity, part numbers, part description and current pricing. Prices are to be valid for a period of one year following the date of system commissioning.
- E. Provide manufacturer's certification of satisfactory factory calibration and testing.
- F. Submit outline of O&M Manual format and contents per the requirements of Section 01730, Article 1.7. Also submit one copy of approved O & M's

Manual in Adobe Acrobat format.

1.5 QUALITY ASSURANCE

- A. All components specified herein shall be supplied and assembled by a single manufacturer in order to achieve standardization of operation, maintenance, spare parts, and manufacturer's service.

1.6 WARRANTY

- A. The Contractor shall furnish a one (1) year Warranty for all work covered by this Section.

1.7 MANUFACTURER'S SERVICES

1. Manufacturers' Certificate.

Provide a manufacturer's certificate showing that the equipment has been satisfactory calibrated and tested.

An authorized manufacturer's representative shall inspect the installation of all work furnished under this Section and shall provide a certificate of satisfactory installation in accordance with the provisions of Section 01300 – Submittals.

- B. The Contractor shall provide the services of an experienced, authorized manufacturer's representative for the equipment specified herein who shall be present at the jobsite and/or classroom designated by the City for the minimum man-days listed for the services shown below, travel time excluded:
 - 1. 1 man-day per site for functional testing.

PART 2 PRODUCTS

2.1 CHLORINE RESIDUAL, PH & TEMPERATURE ANALYZER/TRANSMITTER

- A. The chlorine residual monitoring system shall consist of a chlorine sensor, pH sensor, temperature sensor, analyzer/transmitter, interconnecting cable, and mounting hardware for monitoring chlorine, ph and temperature through a flow cell assembly. The analyzer transmitter shall be equipped with a power cord. External power required: 120 VAC, 60 Hz.

- B. Chlorine Sensor shall be amperometric membrane capable of direct measurement of free chlorine residual in clean water supply without the use of liquid reagents. Sensor shall be installed in an in-line flow cell assembly of modular design suitable for connecting the outlet flow to other probe flow cell assemblies. The sensor shall be capable of withstanding a temperature range of 0 to 50 degrees C.
- C. pH Sensor shall be potentiometric capable of direct measurement of pH values in clean water supply. Sensor shall be installed in an in-line flow cell assembly of modular design suitable for connecting the outlet flow to other probe flow cell assemblies. The sensor shall be automatically temperature compensated for Chlorine and capable of withstanding a temperature range of 0 to 80 degrees C.
- D. Temperature Sensor shall provide temperature correction for the pH value. Temperature range will be 32 to 212°F (0 to 100°C) and rated for a maximum pressure of 145 PSI.
- E. Chlorine & pH monitor shall be a microprocessor-based instrument providing a digital display of chlorine residual concentration and pH values, status and error annunciation. Enclosure shall be NEMA 4X suitable for wall mounting. Two programmable alarms with contact rating of 2 amps at 120 VAC shall be provided for high and low set points, adjustable throughout range of the instrument
- F. Three Analog outputs shall be 4-20 ma DC signal linearly proportional to the measured chlorine residual and pH values and able to span within the measuring range into loads in the range of 0 to 600 ohms without load adjustments.
- G. Analog output shall be selectable over process spans of 0-2 or 0-10 parts per million (ppm) for Chlorine.
- H. All adjustments including zero, calibration, and alarm setpoints shall be accessible from the front panel.
- I. Initial calibration ranges:
 - Chlorine: 0.1 - 10.0 ppm
 - pH: 1 - 12
- J. Manufacturer:
 - Prominent Fluid Controls (Pittsburgh, PA) - Model Dialog (DACa) Chlorine/pH/Temp Analyzer or approved equal.

- K. The CL2 analyzer manufacturer must also provide an analog input card for the existing telemetry system (Mission M-800 is the base unit needing expansion)

2.2 PIPING AND ACCESORJES

Manufacturer shall supply all necessary piping, valves and accessories for a complete functional system as shown on the Drawings.

Such items are, but not limited to:

- A. Flow rotameter.
- B. Sample taps.
- C. Adjustable Pressure Regulator,

PART 3 EXECUTION

3.1 GENERAL

- A. Analyzer systems shall be mounted in the locations directed by the City of Sullivan. Contractor shall coordinate with the engineer as to the specific locations for electrical, sample and discharge pipe connections.

The analyzer shall be compared to manual titration for accuracy over the range of chlorine residuals as described above.

3.2 FIELD TESTING

- A. Performance Test: Prior to City acceptance of the installed analyzer systems, demonstrate proper operation of the chlorine residual analyzer at 0, 25, 50, 75 and 100% of calibrated span from the analyzer shall be compared to manual titration for accuracy over the range of chlorine residuals as described above
- B. The Contractor shall furnish all instruments, reagents, samples and labor as required for this procedure.
- C. Any analyzer system failing this performance test shall be re-tested. Upon a second failure, any failing parts will be rejected and replaced until the package system performs as specified.

- D. The analyzer system supplier shall coordinate with the ICS subcontractor to meet all requirements of Section 13400.

3.3 PAINTING

Not used.

3.4 IDENTIFICATION

- A. The Contractor shall furnish and install an identification plate which shall be securely mounted on the enclosure front using ½" lettering for the systems described under this Section in a readily visible location. Inscriptions shall be "CHLORINE/PH RESIDUAL".

END OF SECTION.

Due-Diligence

Interested bidders are encouraged to contact City Engineer Robert Schaffer at 573-468-8965.

Contract Terms

The winning bidder shall enter into a contract with Sullivan, MO subject to the bid specifications contained herein. Failure of the City to enter into contract with the winning bidder according to the specifications contained herein shall be sufficient grounds for the winning bidder to withdraw terms offered to the City under these bid specifications.

The contractor's bid shall be listed as indicated in the Bid Proposal, to be the maximum amount that the contractor may charge the City of Sullivan for all of the services to be provided pursuant to the contract. The contractor's lump sum bid shall be inclusive of every charge relating to the contractor's provision for services including, but not limited to:

1. The contractor's charges for transportation;
2. All fuel and maintenance expenses;
3. Any and all federal, state, or local governmental fees, taxes, or assessments;
4. Contractor's equipment and machinery.

The contractor shall be solely responsible for the payment of all charges relating to the services furnished to the City. Other than the Contractor's lump sum contract fee to be paid as provided herein, the contractor shall not invoice or collect any separate or additional charge from the City.

The City shall award the contract to the lowest and best responsive bidder within thirty (30) days of bid opening. Notwithstanding the provisions contained in the bid specifications, the City reserves the right to reject any and all bids and to negotiate contract terms with the bidder determined to be the lowest and best responsive and responsible bidder.

Contractor shall be an independent contractor and shall furnish his/her own tools, equipment, fuel, and employees. All equipment and tools shall be in proper repair, insured, and properly registered. All employees operating equipment shall meet all necessary licensing and/or registration requirements within the State of Missouri.

Contractor shall be an independent contractor and is solely responsible for reporting income earned under this contract to any appropriate government agency(s).

Contractor shall warrant that all persons assigned by it to the performance of this contract shall be employees of the contractor (or specified subcontractor) and shall be fully qualified to perform the work required. The contractor shall include a similar provision in any contract with any subcontractor selected to perform work under this contract.

Contractor shall carry in full force and effect, insurance necessary to comply with the requirements of the workmen's compensation requirements of the State of Missouri.

Contractor shall require his/her insurance carriers to provide Certificates of Insurance to the City of Sullivan, Missouri showing names of companies, amount of insurance coverage, expiration date or dates, and policy number or numbers.

Contractor shall require his/her insurance carrier to have the City of Sullivan endorsed as an additional insured party on said liability insurance coverage.

General Indemnification. The contractor shall indemnify the City of Sullivan, Missouri, any of its members, employees, agents, officers, and consultants (each an indemnity) against, and hold each indemnity harmless from any and all claims, demands, causes of action, judgments, liens, penalties, costs, and expense whatsoever, including attorney's fees and expenses, of any kind or nature whatsoever, including, but not limited to, claims for bodily injury, illness or death, property damage including loss of use which may at anytime be imposed upon, incurred by or asserted against any indemnity as a result of any performance or lack of performance by the contractor or any of its agents or employees of any of its or their obligations hereunder, or as a result of any negligence of the contractor or any of its agents or employees. This indemnification of the City of Sullivan is not limited by the amount of any insurance coverage available to the contractor. Such indemnification shall not include claims or demands arising out of the negligence or misconduct of the City.

Contractor shall be enrolled and participate in E-Verify, as required by law.

Contractor shall insure all employees employed in the provision of services related to this project are compliant with the OSHA required 10-hour Construction Safety Course for public projects.

This project is a public project and requires contractor to abide by the prevailing wage standards within Franklin County for the completion of the project. Contractor shall supply payroll verification documents to the city, with the submission of the payment request (invoice). Said documents shall be kept on file at the city, as required by law.

The illegal use, possession, dispensation, distribution, manufacture, or sale of a controlled substance or illegal drug by contractor, an employee of the contractor, or approved subcontractor at any service site is prohibited, as is the use or possession of alcohol. Any violation of this prohibition provides sufficient cause for immediate termination of this contract.

Contractor shall provide the City Engineer a written invoice documenting the total monies due.

Contractor shall submit sealed bids for the **Water Chlorine Analyzers** at the Sullivan City Hall located at 210 W Washington, Sullivan, MO 63080 until 10:00 a.m. on Friday, March 3, 2017.

BIDDING REQUIREMENTS

1. GENERAL.

The successful Bidder will be required to furnish equipment, materials, labor, insurance, etc., required to complete the project and to fully comply with the requirements of the specifications and other Contract Documents.

2. PREPARATION OF BID.

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten.

3. INTERPRETATION OF CONTRACT DOCUMENTS.

- A. Bidders shall familiarize themselves with the contemplated Work to insure the fulfillment of the intent of the Contract Documents.
- B. Any Bidder who is in doubt as to the true meaning of any part of the Contract Documents shall promptly request from the City Engineer an interpretation thereof.
- C. Interpretations will be made only by Addendum, duly issued, and a copy of each addendum will be mailed or delivered to each party who has received a set of these Contract Documents. Information obtained from an officer, agent, or employee of the City of Sullivan or any other person shall not affect the risks or obligations assumed by the Contractor or relieve the Contractor from fulfilling any and all of the Conditions of the Contract.
- D. No interpretation addendum will be issued within the last three (3) days before the bid date unless the bid date is changed accordingly to allow time for bidders consideration.
- E. The Bidder shall be solely responsible for any explanation or interpretation of the Contract Documents other than by duly issued addenda.

4. FAMILIARITY WITH SITE AND CONDITIONS.

- A. The Bidder, before submitting his proposal, shall by careful examination, satisfy himself as to the following:
 - 1. Nature and location of Work.

2. Character, quality, and quantity of materials to be encountered.
 3. Character of equipment and facilities needed prior to and during execution of the proposed Work.
 4. General local conditions.
 5. Requirements for maintaining existing facilities in continuous service, if necessary and required.
 6. Existence of any other conditions which might affect the cost or time of completion of the Work.
- B. Each Bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve any Bidder from any obligation in respect to its Bid. Filing the proposal shall confirm that the examination of site and conditions have been made by the Bidder and the existing conditions are accepted by him.

5. WITHDRAWAL OF BIDS.

- A. Proposals may be withdrawn on written or telegraphic request received from Bidders prior to the time fixed for opening, provided the proposal has been properly marked and can be positively identified.
- B. Any Bid received after the time and date specified shall not be considered. No Bidder may withdraw a Bid within ninety (90) days after the actual opening. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the City of Sullivan and the Bidder.

6. CONTRACT.

The Contract when executed shall be deemed to include the entire agreement between the parties thereto, and the Bidder shall not claim any modification thereof resulting from any representation or promise made at any time by any officer, agent, or employee of the City of Sullivan or by any other person.

7. INSURANCE.

The Contractor will be required to carry insurance as required and in the amount herein contained, during the lifetime of this Contract. Certification of Insurance coverage shall be filed with the City of Sullivan prior to the Notice to Proceed on the Project.

8. SAFETY STANDARDS AND ACCIDENT PREVENTION.

With respect to all work performed under this Contract, the Contractor shall:

- A. Comply with the safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of Title 29 of the Code of Federal Regulations Section 1518 as published in the "Federal Register", Volume 36, No. 75, April 17, 1971.
- B. Exercise every precaution at all times for the prevention of accidents and protection of persons (including employees) and property.
- C. Maintain at his/her office or other well known place at the job site, all articles necessary for giving first aid to the injured, and shall make standing arrangements for the immediate removal to a hospital or a doctor's care of persons (including employees), who may be injured on the job site. In no case shall employees be permitted to work at the job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.