



OFFICE OF THE
MAYOR
CITY OF SAN LUIS

Resolution

Resolution No. 658

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA, TO WAIVE PROCUREMENT CODE 3-4-34 REQUIREMENT FOR COMPETITIVE SEALED BIDDING FOR THE PURCHASE AND INSTALLATION OF SENSUS ICE METERS, ICE REGISTERS, AND METER TRANSCEIVER UNITS (MXU) FROM DANA KEPNER; AND ACCEPT AND APPROVE CONTRACTS FOR THE SAME.

Dana Kepner is the exclusive distributor in Arizona for Sensus Metering Systems ; and

WHEREAS, the City Council of the City of San Luis may waive competitive bidding requirements for procurement of goods; and

WHEREAS, the City Council of the City of San Luis has determined that waiving competitive bidding requirements for the following described equipment is in the best interest of the city; and

WHEREAS, the City of San Luis desires to match existing equipment and the use of another provider would result in possible incompatibility with existing equipment and software; the product is being used as continuity investment to convert to an advanced technology; city personnel has specialized training and/or extensive experience with the product; and the use of another product would possibly require considerable training, time, and money to totally change current equipment and software;

NOW, THEREFORE BE IT RESOLVED by the City Council of the City of San Luis, Arizona, does hereby accept and approve the following proposal letter from Dana Kepner, Contract, Meter Pricing Schedule, and Specifications for purchase and installation for all residential and irrigation meter applications.

PASSED AND ADOPTED by the Mayor and Council of the City of San Luis, Arizona, this 22nd day of March 2006.



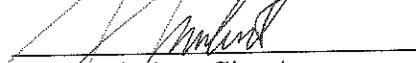
Nieves G. Riedel, Mayor

ATTEST:



Sonia Sanchez, City Clerk

APPROVED AS TO FORM:



Glenn Gimbut, City Attorney



DANA KEPNER COMPANY, INC.
1185 WEST GLENN STREET
TUCSON, ARIZONA 85705
WWW.DANAKEPNER.COM

March 17, 2006

City of San Luis
785N.First Avenue
San Luis, Arizona 85349

Mr. David Ford, Director of Public Works
Mr. Nep Ramirez, Finance Director
Mrs. Olivia Jenkins, Utilities Supervisor

Dana Kepner Company, Inc. Meter Replacement proposal for the City of San Luis Arizona.

Dana Kepner Company is pleased to assist the City of San Luis with their efforts to upgrade and implement their existing Automatic Meter Reading (AMR) system. Through numbers provided by the City we have calculated an approximate cost for electronic meters, transceivers and installation. It is understood that the City of San Luis will be responsible to supply all material needed for the replacement and installation. With the purchase of your first 1500 (AMR) meters and 1500 (MXU's) transceivers, The city will receive at no additional charge an Vehicle Transceiver Unit (VXU) w/GPS mapping and all coordinating software w/two days of training from Sensus Metering System.

The installation of the system will be provided by Dana Kepner Company. The City of San Luis will be responsible to prepare work orders for the project on a daily basis for the install crew. The City will have the responsibility of notifying their customers of the project and that service may be interrupted. Employees of Dana Kepner Company will complete the work orders and at the end of the day return them to the city for processing data. The city will provide Dana Kepner employees with enough work orders to complete a ten hour work day. Dana Kepner Company employees will remove the old meter and replace with a new AMR meter or register, document the register ID number and install the new MXU and record the ID number and document GPS location on work order form. Dana Kepner Company will replace each meter with appropriate material to ensure proper installation, however, in the event of unforeseen problems (i.e., old service lines damaged or shallow meter boxes or old service brass), the problem will be documented on each work order and it will be the City of San Luis responsibility to replace material to ensure proper functionality. It is understood the Dana Kepner Company will keep the old meters to be processed as part of the special pricing agreement for the new meters.

All Sensus Metering System material is backed by their standard warranty. In the event of warranty claim Dana Kepner Company Inc. will assist in processing and implanting the claims. All Dana Kepner Company employees will be provided with workman's compensation and liability insurance. Dana Kepner Company employees will be provided



with transportation and equipment needed for the project. The change out project will take approximately 12 month to complete after the contract is awarded.

Thank you for your interest in allowing Dana Kepner Company Inc. to participate with City of San Luis with this very important project. We are committed to excellent service to ensure that utilities are confident and secure with the future of their utilities expectations. We are anxious to start this project and look forward to your response.

Sincerely,



Frank C. Howe
Municipal Sales
Dana Kepner Company

City of San Luis, Arizona

Contract Meter Pricing

Vendor Number: **00000000** Date: **March 20, 2006**

Materials: **Sensus Water Meters and AMR Meter Reading Equipment and Installation.** Contact: **Olivia Jenkins**

Location: City of San Luis Phone: **928-341-8570**

Delivery Location Address: **788 E. B St or 1311 N. 4th Avenue, San Luis, AZ 85349**

Utilities Office – Well Site #5

In accordance with the City of San Luis all items stated in this contract are for the use of the City of San Luis, Arizona.

Vendor

The undersigned hereby offers and agrees to furnish materials in compliance with all terms, conditions, specifications and amendments in this contract except for any written exceptions in this offer. The signature below certifies his or her understanding and acceptance of the Pricing attached within this pricing contract and agrees to the Terms and Conditions of this contract pricing offer.

Arizona Transaction (Sales) Privilege Tax License Number: _____

For clarification of this offer contact: Dana Kepner Company, Inc
Name: Frank Howe

Federal Employer Identification Number: _____

Telephone: 520-624-7180 Fax 520-624-7280

Dana Kepner Company, Inc.

Authorized Signature for Offer

Company Name

1185 West Glenn

Printed Name

Address

Tucson, Arizona 85706

Title

City State Zip Code

ACCEPTANCE OF CONTRACT (For City of San Luis Use Only)

Your offer is hereby accepted. The Vendor is now bound to sell the materials listed in this offer, including all terms conditions, specifications, amendments, etc., and the Vendors offer as accepted by the City. The Vendor is hereby cautioned not to commence any billable work or provide any material, under this contract until Vendor receives an executed **Purchase Order**.

Attested by:

City Clerk

Janice Sanchez

CC

Contract Number

Official File

Notary / City Seal

City of San Luis, Arizona.

Eff. Date: 3-22-06

Approved as to form:

City Attorney

Entered in on 3-22-06

Nep Ramirez – Finance Director

STANDARD TERMS AND CONDITIONS

Certification: By signature in the Offer and Acceptance section certifies that he or she has read and agreed to the terms and conditions of this Offer and agrees with the materials and or services stated in contract.

1. **Contract:** This contract is for the use of the City of San Luis.
2. **Contract Amendments:** This contract may be modified only by a written Contract Amendment signed by persons duly authorized to enter into contracts on behalf of the City of San Luis and the Vendor.
3. **Contract Applicability:** The Vendor shall conform to the terms, conditions, specifications and other requirements found within the text of this specific contract. All previous agreements, contracts, or other documents, which have been executed between the Vendor and the City of San Luis, are not applicable to this agreement or any resultant contract.
4. **Subcontracts:** No subcontracts shall be entered into by any other party to furnish any of the materials or services specified herein without the advance written approval of the City of San Luis.
5. **Force Majeure:** Except for payment for sums due, neither party shall be liable to the other nor deemed in default under this Contract if and to the extent that such party's performance of this Contract is prevented by reason of force Majeure. The term "force majeure" means an occurrence that is beyond the control of the party affected and occurs without its fault or negligence. Without limiting the foregoing, force majeure includes acts of God; acts of the public enemy; war; riots; strikes; mobilization; labor disputes; civil disorders; fire; floods; lockouts, injunctions-intervention-acts, or failures or refusals to act by government authority; and other similar occurrences beyond the control of the party declaring force majeure which such party is unable to prevent by exercising reasonable diligence. The force majeure shall be deemed to commence when the party declaring force majeure notifies the other party of the existence of the force majeure and shall be deemed to continue as long as the results or effects of the force majeure prevent the party from resuming performance in accordance with this Contract.
6. **Warranties:** Vendor warrants that all material, delivered under this contract shall conform to the specifications of this contract.
7. **Inspection:** All material and/or services are subject to final inspection and acceptance by the City of San Luis.
8. **Licenses:** Vendor and/or contractor shall maintain in current status all Federal, State and Local licenses and permits required for the operation of the business conducted by the Vendor as applicable to this Contract.
9. **Public Record:** Information accepted into this contract shall become the property of the City of San Luis and shall become a matter of public record available for review.
10. **Advertising:** Both named parties in this contract shall not advertise or publish information concerning this Contract, without prior written consent of either party mentioned.
11. **Delivery Orders:** The City of San Luis shall issue a Purchase Order for the materials mentioned and provided within this contract. All such documents shall reference the contract number and the City of San Luis purchase order number.
 1. **Purpose:** The City of San Luis intends to establish a contract for the purchase of Sensus Water Meters, Meter Transceiver Units (MXU) and related Sensus AMR Meter Reading equipment.
 2. **Authority:** This contract as well as any resultant contract is issued under the authority of the City of San Luis. No alteration of any resultant contract may be made without the express written approval of the City Materials Manager in the form of an official contract amendment. Any attempt to alter any contract without such approval is a violation of the contract and the City Procurement Code.

STANDARD TERMS AND CONDITIONS

3. **Cooperative Purchasing:** Any contract resulting from this contract shall be for the use of the City of San Luis. In addition, specific eligible political subdivisions and nonprofit educational or public health institutions may also participate at their discretion. In order to participate in this contract, the specific eligible political subdivision, nonprofit educational or public health institution and the Contractor must be in agreement. Any orders placed to the Contractor will be placed by the specific agencies participating in this purchase. Payment for purchases made under this agreement will be the sole responsibility of each participating agency. The City shall not be responsible for any disputes arising out of transactions made by others.
4. **Contract Type:** Fixed Price
5. **Term of Contract:** The term shall commence on the first day of the month following the date shown and shall continue for a period of one (1) year thereafter, unless terminated, cancelled or extended as otherwise provided herein.
6. **Contract Extension:** By mutual written contract amendment, any resultant contract may be extended for supplemental periods of up to a maximum of forty-eight (48) months.
7. **Shipping Terms:** Prices shall be F.O.B. Destination to the delivery location designated herein.
8. **Delivery:** Delivery of material ordered shall be made within ten (10) days of receipt of a purchase order.
9. **Non-Exclusive Contract:** This contract is for the sole convenience of the City of San Luis.
10. **Taxes:** Prices offered shall not include applicable State and local taxes. The City will shall pay all applicable taxes.
11. **Warranty:** The vendor shall supply a complete and exclusive statement of the nationally published product warranty.
12. **Price Adjustment:** The City of San Luis will review fully documented requests for price increases after any contract has been in effect for one (1) year. Any price increase adjustment will only be made at the time of contract extension and will be a factor in the extension review process. The City of San Luis will determine whether the requested price increase or an alternate option, is in the best interest of the City. Any price adjustment will be effective upon the effective date of the contract extension.
13. **Certificates of Insurance:** Prior to furnishing material under this Contract, evidence that policies providing the required coverage's, conditions and limits required by this Contract are in full force and effect.
14. **Estimated Quantities:** The City anticipates considerable activity resulting from contracts that will have been agreed upon as a result of this contract; however, no commitment of any kind is made concerning quantities actually acquired from this contract.
15. **Maintenance:** The equipment specified in this contract is dependent upon the availability of prompt professional service.
16. **Billing:** All billing notices to the City shall identify the specific item(s) being billed and the purchase order number. Items are to be identified by the name, model number, and/or serial number most applicable. Any purchase/delivery order issued by the requesting agency shall refer to the contract number resulting from this contract.
17. **Serial Numbers:** Vendor shall provide material on which the original manufacturer's serial number has not been altered in any way.

	STANDARD TERMS AND CONDITIONS	
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18. **Brand Names:** Any manufacturer's names, trade names, brand names or catalog numbers used in the specifications are for the purpose of describing and establishing the quality level, design and performance desired. Such references are not intended to limit or restrict bidding by other vendors but are intended to establish the quality, design or performance which is desired. Any offer which proposes like quality, design or performance will be considered.
19. **Cancellation:** The City reserves the right to cancel the whole or any part of this contract due to failure by the contractor to carry out any obligation, term or condition of the contract. The City will issue written notice to the contractor for acting or failing to act as in any of the following:

METER & MXU INSTALLATION TERMS AND CONDITIONS
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Meter Installation

1. The scope of the work is to remove and install meters, Intelligent Communication Encoder (ICE) registers and Meter Transceiver Units (MXU) of the type and size listed on page eight (8) of this document. The total *number* of metered services is about 4800.
2. The Contractor shall keep accurate records for each meter installed. The work shall be planned so that it is begun and completed on the established City meter reading routes, route by route. Contractor may work on more than one route; however, once work has begun on a route it must be diligently prosecuted until all work on that route is completed without delay or interruption.
3. The Contractor shall be responsible for the protection and inventory control of all new meters, ICE registers, MXUs and other equipment and materials to be installed.
4. The installation of new and/or retrofitting of each meter with ICE register along with an MXU shall be included as part of each appropriate unit proposal price schedule item which shall include all work needed for a complete installation including but not necessarily limited to:
 - a. Clearly identify personnel and vehicles involved in project
 - b. Provide all necessary tools, electronic equipment, wire connectors and gaskets
 - c. Clean meter box if necessary
 - d. Determine which MXU/Multi-Port configuration will best serve location
 - e. Trench between meter boxes and bury wire to utilize MXU multi-port capabilities (Approx. 6" Depth)
 - f. Drill hole in side of meter boxes to run wire between meter boxes when necessary
 - g. Drill hole in meter box lid for MXU
 - h. Photograph each meter box before and after installation
 - i. Report broken, collapsed meter boxes or broken, missing lids
 - j. Remove old meter or register, install new meter or register and connect to MXU
 - k. Initiate MXU and verify proper operation
 - l. Check for and report any leaks that can not be stopped at time of installation
 - m. Record all necessary information on old and new meter (i.e. old reading, new reading, serial number, register ID, MXU ID, date of install, etc.)
 - n. Record geo-code data (latitude/longitude)
 - o. Return all work orders on daily or weekly basis as determined by the City
 - p. Provide installation data (ID numbers, geo-codes, etc) in electronic format at regular intervals
5. The Contractor shall dispose of all old meters. Inventory of old meters shall be signed off by the Contractor and the City, certifying the quantity and sizes.
6. The Contractor shall notify the Project Manager of any existing problems prior to beginning replacement work in regards to existing service connection conditions and/or appurtenances.
7. Contractor shall allocate adequate time for coordination and installation training of installation crews.

METER & MXU INSTALLATION TERMS AND CONDITIONS
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8. The City and The Contractor shall meet prior to commencement of any work the Contractor may consider not addressed as part of a proposal item to resolve the question and if necessary to establish fees for services to be provided. Any and all work performed by the Contractor not noticed to the City prior to beginning such work that the Contractor considers to be outside of a proposal item shall be at the Contractor's sole cost and expense.
9. The Contractor will make every attempt to utilize the existing meter box installation to install the new meters and MXUs. However, the City will be responsible to make modifications to installations where installing the new meters and MXUs is not possible. These may include but not be limited to:
 - a. Meters/meter boxes encased in concrete sidewalks or driveways.
 - b. Meters needing to be lowered to accommodate new meter and MXU.
10. Contractor shall be responsible for picking up and installing any City furnished materials at the City yard.
11. The Contractor shall turn off the water supply to the building by operating the shut off valve. After turning off the water supply, the Contractor shall close any main building valve if accessible to eliminate draining the private line, and then begin removing of the existing meter and the installing of the new water meter.
12. The work shall consist of exposing existing meters either by removal of the meter box lid and removing dirt and debris or removal of complete box to allow for replacement with an appropriate new electronic read meter. As required, the Contractor shall install an MXU in the pitlids. The Contractor shall provide a hole cutting device which does not damage the existing pitlid. The City will provide new lids and/or new meter boxes if existing box and/or lid are found to be faulty prior to beginning work. The Contractor shall test each meter installation with the reader unit and probe.
13. When removing or installing meters, spud nut wrenches shall be used in such a manner as to insure the meter body does not twist or turn causing torque or stress in pipes connected to the meter. All pipes shall be secured in such a manner as to isolate the loosening or tightening of the spud nuts from the pipes joint to the City main or resident's house.
14. The cost of drilling bore holes in existing pitlids and the installation of new pitlids or boxes provided by the City shall be included as part of the meter installation proposal item.
15. Before setting the meter, the service line shall be flushed briefly to eliminate any sediment in the inlet pipe. The meter shall be set with the direction of flow as indicated by the arrow on the meter casing.
16. Installation shall be in accordance with the manufacturer's instructions, After installation, the meter shall be checked for leaks by running water through it. Defective installations shall be corrected on the spot.
17. The work site shall be left in the condition in which it was found except for problems needing correction such as sidewalk, curb, street repairs and replacement.
18. The City recognizes that with any meter replacement project the removal and replacement of the meter by even the most careful contractor may result in some leaks beyond the meter/meter box to occur. For its part the City will provide the following items/services:

METER & MXU INSTALLATION TERMS AND CONDITIONS

- a. Supply all Meter and MXU transceiver units and installation materials (i.e. gelcap connectors, meter gaskets, conduit for MXU mounting, etc).
 - b. Provide individual work orders – enough for ten hour day
 - c. Make sure meter boxes are visible and accessible and that the meter is clearly identified as to which account or address they are connected.
 - d. Before commencement of installation and during the installation, the Contractor shall coordinate with the City. The City shall notify all affected parties as to the schedule of work and water shut down, and make arrangements to minimize disruption of water service to affected parties.
 - d. Blue stake area within 20 feet of meter boxes
 - e. Repair or replace meter valves in case of inadvertent breakage
 - f. Repair service lines observed to be leaking after installation
 - g. Replace meter boxes or lids determined to be unusable
19. The Contractor will not be responsible for any plumbing leaks existing prior to his starting work provided he does not start that particular installation before notifying the City. The City will make repairs that are not the Contractor's responsibility and will notify the Contractor when repairs are made so he can reschedule installation.
20. The City shall provide the Contractor with a computerized printout of the old meter make, old meter serial number, account number, and corresponding address. Contractor shall provide meter change out information as needed to keep accurate records of all meters installed during this project.
21. Problems on the City or homeowner side of the meter connection must be addressed to the City for resolution prior to commencing installation.
22. The City shall pay Contractor for completion of the work in an amount equal to the sum of the established unit price times the quantity of that item that is installed. Unit prices are those listed in the Pricing Schedule on Page 8.
23. Contractor shall submit all Applications for Payment, in the form of an Invoice, to the City at the beginning of every month until completed. Standard terms and conditions of Dana Kepner Company, Inc. will apply.
24. The City shall make progress payments on account of the Contract Price on the basis of the progress of the Work; measured by the number of unit's of each item completed times the bid unit price for that item.
25. All monies not paid when due as provided by contract shall bear interest at the maximum rate allowed by law at the place of the Project.

PRICING SCHEDULE

2,128	5/8 x 3/4" SRII TR/PL meter	\$ 95.00	\$ 202,160.00
2,434	5/8"x3/4" SR TR/PL register	60.00	146,040.00
88	3/4" SRII TR/PL meter	120.00	10,560.00
23	1" SRII TR/PL Meter	152.00	3,496.00
27	1 1/2" Turbo Meter w/TR/PL Reg. and strainer	710.00	19,170.00
55	2" Turbo Meter w/TR/PL Reg. and strainer	875.00	48,125.00
660	Single Port 520R MXU Transceivers	140.00	92,400.00
2,056	Dual Port 520R MXU Transceivers	150.00	308,400.00
4700	5/8" - 1" Meter install/replacement	50.00	235,000.00
360	Hrs install Labor for 1-1/2" - 2" Meters	80.00	28,800.00
		Total	<u><u>\$1,094,151.00</u></u>

SPECIFICATIONS
FOR COLD WATER DISPLACEMENT TYPE METERS

1. TYPE:
Magnetic Drive, Sealed Register, Positive Displacement Type Oscillating Piston only.
2. SIZE:
Must conform to American Water Works Standard C-700 as most recently revised.
3. LENGTH:
Must conform to American Water Works Standard C-700 as most recently revised.
4. CASES:
All Meters shall have a non-corrosive Water Works bronze outer case with a separate measuring chamber which can be easily removed from the case. All Meters shall have cast on them, in raised characters, the size and direction of water flow through the meter. Cast Iron frost bottoms, or bronze bottoms shall be provided on 5/8", 3/4", and 1" Meters. 1- 1/2" and 2" meters shall be the split case type with bronze lower and upper shell assemblies. The manufacturer's serial number must be permanently affixed to the maincase to aid in identification and must be visible so that it can be read from directly above the water meter.
5. EXTERNAL BOLTS AND WASHERS:
All external bolts and washers shall be of corrosion resistant material and be easily removed from the maincase. All threaded maincase bolt holes must be covered, to aid in removal of the bolts for repair.
6. ENCODER REGISTER AND REMOTES:
Must conform to American Water Works Standard C-707 as most recently revised.
7. RADIOREAD REGISTER:
The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in gallon units and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device that connects through to the water meter via a TouchPad located external to the meter, and/or by a Meter Transceiver Unit (MXU) for RadioRead Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.
8. On 5/8" – 1" meters the register shall be attached to the meter utilizing a bronze bonnet register box. The register shall be secured to the maincase by means of a tamper-resistant locking screw so that non-utility personnel cannot remove the register. The register must be field replaceable by utility personnel with the use of a manufacturer-supplied field tool. The field tool must not be commercially available. Seal wiring or a frangible head seal screw is not acceptable.
9. On 1-1/2" – 2" meters the register shall be secured to the maincase by means of a locking device located in the interior of the meter so the register cannot be removed externally by non-utility personnel. An external register box assembly is not acceptable.
10. The meter register shall be provided with three terminal connections. The connection between the meter register and the MXU shall be accomplished with the use of all three terminal connections. The register shall transmit the meter reading and register data directly to the interrogation device through the TouchPad or to the MXU when interrogated by an AMR system.

The terminal connections shall be permanently factory sealed to three wire interconnecting cable with an environmentally approved epoxy to prevent moisture penetration and eliminate the need for field sealing requirements.

11. The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. Upon interrogation with an AMR product, the register will transmit an odometer reading containing from 1 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). The odometer reading is to be obtained from the register by "magnetic field position-sensing" technology to determine the rotational position of each odometer wheel. Encoders with a mechanical brush contact with the odometer wheel will not be acceptable. The register can also be programmed to output a factory set, non-programmable identification number, Customer Text of up to 20 alphanumeric characters (field programmable), a reading multiplier ranging from 10^{-99} to 10^{99} (field programmable), and/or a reading measurement unit indicator (for example, US Gallons – field programmable). Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an AMR transponder to transmit data via cable TV, telephone, radio signal, or power lines to an AMR system.
12. **MEASURING CHAMBER:**
The measuring chamber shall be a suitable synthetic polymer and shall not be cast as part of the maincase. All piston assemblies shall be interchangeable in all measuring chamber assemblies of the same size. The measuring chamber piston shall operate against a replaceable control roller, allowing for repair to AWWA standards. The control roller shall rotate on a stainless measuring chamber steel pin, to provide added strength, wear resistance and corrosion resistance. There shall be an elastomeric seal or seals between measured and unmeasured water, preventing leakage around the measuring element.
13. **MAGNETIC COUPLING:**
The motion of the piston will be transmitted to the sealed register through the use of a magnetic coupling.
14. **STRAINERS:**
All meters must be provided with a corrosion-resistant strainer, with an effective straining area at least twice the bore diameter which can be easily removed from the meter without the meter itself being disconnected from the pipeline.
15. **CHANGE GEARS:**
Change gears will not be allowed to calibrate the meter. All registers of a particular registration and meter size shall be identical and completely interchangeable. Should meters arrive with registers containing more than one gear combination, the entire shipment will be returned to the manufacturer freight collect and the next responsible bidder will receive the award.
16. **ACCURACY AND HEADLOSS TESTS:**
Meters shall conform to current AWWA C-700, current revision, test flows, headloss and accuracy standards.
17. **PRESSURE CAPABILITY:**
Meters shall operate up to a working pressure of 150 pounds per square inch (psi), without leakage or damage to any parts. The accuracy shall not be affected by variation in pressure up to 150 psi.
18. **PERFORMANCE WARRANTIES:**
In evaluating bid submittals, warranty coverage will be considered. All bidders are required to submit their most current nationally published warranty statements for water meter maincases, registers and measuring chambers.
19. **SHIPMENT VERIFICATIONS:**
A statistically controlled sample of each meter shipment will be tested by the utility to insure each shipment meets the utility performance and materials specifications.

SPECIFICATIONS
CLASS II TURBINE TYPE METERS

1. **MAINCASES:**
Maincases for all sizes shall be cast Water Works bronze. Size, model and direction of flow shall be cast, in raised characters, on both sides of the maincase.
2. **OPERATING CHARACTERISTICS:**

Meter Size	Low Flow (95% minimum)	Normal Range (gpm) (100.0 ± 1.5%)
1-1/2"	3	4 to 120
2"	3	4 to 160
3"	4	5 to 350
4"	10	15 to 1000
6"	20	30 to 2000
8"	30	35 to 3500
10"	55	55 to 5500

Pipeline size applications of 12" can be accomplished by using 10" size meters with the appropriate tapered, concentric reducers.

3. **PERFORMANCE:**
Meters shall have performance capabilities of continuous operation up to the rated maximum flows as outlined above without affecting long-term meter accuracy caused by undue wear. Meters shall also be rated for a 25% flow capacity in excess of the maximum flows listed above. This would be for intermittent high flow capacity only.
4. **MEASURING CHAMBER:**
The measuring chamber shall be of unitized construction. The complete chamber shall consist of the measuring element, calibration device and totalizing register in one assembly.

The measuring chamber shall be capable of operating within the above listed accuracy limits without recalibration when transferred from one maincase to another of similar size. The measuring element shall be mounted on a horizontal stationary shaft with sleeve bearing and be essentially weightless in water.
5. **REGISTER:**
The register assembly shall be permanently hermetically sealed. All registers of similar size and registration shall have contained with them, a standard ratio gear reduction so as to permit complete interchangeability. The register shall be assembled to the measuring chamber in such a tamperproof manner requiring removal only after the measuring chamber is removed from the maincase.

6. **TOUCHREAD PITLID (TR/PL) REGISTER AND REMOTE MODULE:**
The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in gallons and be capable of direct visual reading both at the meter and by remote reading utilizing a visual interrogation device that connects through to the water meter via a TouchPad located external to the meter, and/or by a Meter Transceiver Unit (MXU) for RadioRead® Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.
7. The meter register shall have three terminal connections. The connection between the meter register and the remote pitlid module shall be accomplished with the use of all three terminal connections by using a 3-conductor cable. This will permit the register to be converted to Automatic Meter Reading (AMR) in the future. The register shall transmit the register data directly to the pitlid when interrogated by the interrogation device. To ensure a reliable interrogation system in the moisture environment of a meter pit or vault, the pitlid-mounted module shall be housed in a separate enclosure with factory sealed connections consisting of an environmentally approved epoxy at both the pitlid module and register terminal connections. This shall be vendor provided to prevent moisture penetration and eliminate the need for field sealing requirements.
8. The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. Upon interrogation with a AutoGun or other AMR product, the register will transmit an odometer reading containing from 1 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). The odometer reading is to be obtained from the register by "magnetic field position-sensing" technology to determine the rotational position of each odometer wheel. Encoders with a mechanical brush contact with the odometer wheel will not be acceptable. The register can also be programmed to output a factory set, non-programmable identification number, Customer Text of up to 20 alphanumeric characters (field programmable), a reading multiplier ranging from 10^{-99} to 10^{99} (field programmable), and/or a reading measurement unit indicator (for example, US Gallons – field programmable). Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an AMR transponder to transmit data via cable TV, telephone, radio signal, or power lines to an AMR system.
9. The pitlid module shall be of a sturdy and tamperproof construction. The module shall allow for ease of installation on any pitlid (plastic, cast iron or concrete) by cutting an appropriately placed 1-3/4" hole in the lid. The entire pitlid module shall be constructed of a suitable synthetic polymer for long service life under normal operating conditions and be suitable for installation in vehicle traffic areas. The module shall be compatible with the TouchProbe, TouchGun, SmartGun, or AutoGun connected to a handheld or visual reader and be capable of reading when placed in any position on the pitlid module (i.e. without special alignment). The meter shall be capable of being interrogated through the pitlid module when the module is submerged in water or covered with up to 3/16" of debris.
10. **MAGNETIC COUPLING:**
All reduction gearing shall be enclosed in the permanently hermetically sealed register. The drive magnet shall be located in the measuring element, and the follower magnet shall be located in the permanently hermetically sealed register. An intermediate magnetically active material shall be required to distribute the magnetic flux uniformly to the follower magnet, thereby ensuring the performance of the meter in longevity, accuracy, low flow sensitivity and extended high flow capacity.
- Other mechanical gearing such as mitre or worm gears will not be considered acceptable.
11. **MAXIMUM OPERATING PRESSURE:**
All meters shall operate without leakage, damage or malfunction up to a maximum operating pressure of 150 pounds per square inch.

12. STRAIGHTENING VANES:

All meters, 1-1/2" to 10" in size, shall have internal straightening vanes installed on the meter's inlet housing to maximize meter accuracy. The straightening vane or component shall not be cast as part of the maincase or molded as part of the measuring chamber and shall be easily removable for ease of maintenance.

13. STRAINERS – INTERNAL AND EXTERNAL:

All meters specified herein shall be provided with a strainer of either the internal (integral) or the external type:

Internal strainer shall be cast as part of the meter's maincase, and the strainer screen and cover plate shall be located on the meter's inlet between the inlet flange and the measuring chamber. This type of strainer shall be acceptable provided the strainer screen is of the V-shaped design, is easily removable and is externally accessible without disturbing the meter's pipeline setting or measuring chamber assembly for ease of maintenance.

In this meter configuration, a test port of appropriate size and capacity located on the meter's maincase adjacent to the outlet flange will be required.

14. External strainer will be required on 6", 8" and 10" size meters and shall be provided assembled on the inlet of the meter package. These strainers shall also have a cover plate for inspection and removal of debris from the V-shaped screen without disturbing the pipeline or the meter's measuring chamber.

15. The following strainer component options shall be specified for purposes of obtaining the desired meter configuration:

Size of Meter Strainer	Strainer Configuration
1-1/2" – 4"	Internal Strainer w/Test Port
1-1/2" – 4"	External Bronze Strainer
6" – 10"	External Ductile/Cast Iron Strainer Body, Attached.

16. CONNECTIONS:

Flanges on 1-1/2" and 2" size meters shall be oval faced and drilled on the horizontal axis with a bolt circle diameter of 4-1/2". Thickness shall be as required for Class 125 round flanges.

Flanges for 3", 4", 6", 8" and 10" size meters shall be of the Class 125 round type, flat faced, and shall conform to ANSI 16.1 for specified diameter, drilling and thickness.

17. GUARANTEE AND MAINTENANCE PROGRAM:

Turbine meters of similar design concept must be available for purchase in all of the sizes specified above. The turbine meters must have a minimum of five (5) years of satisfactory operating experience as marketable products. Limited experimental history is not acceptable.

18. Meters shall be guaranteed against defects in material and workmanship for a period of one (1) year from date of shipment.

19. The meter supplier shall also submit along with the price quotation, a price schedule of its factory maintenance program offering. This maintenance price schedule shall be printed on a brochure, which shall be nationally advertised and shall include offerings for both the complete meter or individual meter component assemblies on an exchange basis.

20. ACCEPTED MODELS:

Sensus Metering Systems: Series "W" Turbo Meter.

SPECIFICATIONS
SINGLE REGISTER COMPOUND METERS

1. **SCOPE:**
The meters must conform to American Water Works Standard C-702, as most recently revised, except as modified herein.
2. **TYPE:**
Meters shall be of the single register compound type which totalizes the output from two (2) interacting measuring chambers. One chamber shall be of the turbine type for measuring high flows; the other a displacement chamber of the oscillating piston type for measuring low flows. An automatic valve mechanism shall direct the flows through the chambers so as to have them function within their normal designed limits. All flows shall first pass through the turbine chamber prior to passing through the oscillating piston measuring chamber so as to ensure continuous registration during low flow to high flow measurement.
3. **SIZE:**
The size of the meter shall be determined by the nominal size of the opening of the inlet and outlet flanges of the meter.
4. **LENGTH:**
The maximum overall length of the unit shall be the face-to-face dimensions as listed below:

Size of Meter	Length
2"	15-1/4"
3"	17"
4"	20"
6"	24"

5. **Cases**
Maincases shall be constructed of Water Works bronze, and in no instance shall repaired casings be acceptable. The maincase shall be so constructed as to contain both the turbine and oscillating piston measuring chambers as separate units. Both measuring chambers must be accessible by removal of a single upper shell assembly. The oscillating piston measuring chamber operation shall not be inhibited by the operation of an external valve. Access to both measuring chambers shall be obtainable without disturbing the maincase as set in the pipeline. All sizes of meters shall include flanged ends.

The maincases shall be fitted with drain plugs for ease of removing water or other debris from the bottom of the maincase. A test port of adequate size must be accessible from the top so as to allow testing in pit settings and confined areas. The port outlet shall be threaded and shall be plugged with a bronze plug.

The size, type and direction of flow through the meter shall be cast in raised characters on the maincase.

6. **STRAINERS:**
External body strainers may be specified as part of the meter assembly package. When specified, the strainer body shall be constructed of Water Works bronze similar to that of the compound meter body. The strainer body shall contain a cover plate which is removable for inspection and debris removal. The strainer screen shall be externally accessible and easily removable without disturbing the pipeline setting of the meter assembly package.
7. **EXTERNAL FASTENERS:**
All external fasteners on the meter shall be of stainless steel or non-ferrous material.

8. **CONNECTIONS:**
Flanges on 2" size meters shall be oval faced and drilled on the horizontal axis with a bolt circle diameter of 4-1/2". Thickness shall be as required for Class 150 bronze round flanges.
Flanges for 3", 4" and 6" size meters shall be of the Class 150 bronze round type, flat faced and shall conform to ANSI B16.24 for specified diameter.
9. **INTELLIGENT COMMUNICATION ENCODER (ICE) REGISTER:**
The meters shall contain one billing register which totalizes the registration from both the turbine and oscillating piston measuring chambers. A coordinator assembly shall be utilized to transfer motion from both measuring chambers to the billing register. The register must be of the straight reading type and have a full test dial on the face of the register that records one-tenth of the right-most odometer wheel. It shall read in gallon units and be capable of direct visual reading both at the meter and by remote reading by a Meter Transceiver Unit (MXU) for remote based Automatic Meter Reading (AMR). The direct read numeral wheel assembly shall be located in the middle of the dial face with reading obtained from left to right using standard notation (billions, millions, and thousands separators and decimal points). All reduction gearing shall be contained in a permanently hermetically sealed, tamperproof enclosure made of a corrosion resistant material.
10. The meter register shall be provided with three terminal connections. The connection between the meter register and the MXU shall be accomplished with the use of all three terminal connections. The register shall transmit the meter reading and register data directly to the interrogation device through the TouchPad or MXU when interrogated. The terminal connections shall be permanently factory sealed to three wire interconnecting cable with an environmentally approved epoxy to prevent moisture penetration and eliminate the need for field sealing requirements.
11. The register output data format shall be 7-bit ASCII (American Standard Code for Information Interchange) digital, plus an even parity bit. Upon interrogation with an AMR product, the register will transmit an odometer reading containing from 1 to 8 digits (field programmable) and a user defined alphanumeric identification of up to 12 characters (field programmable). The odometer reading is to be obtained from the register by "magnetic field position-sensing" technology to determine the rotational position of each odometer wheel. Encoders with a mechanical brush contact with the odometer wheel will not be acceptable. The register can also be programmed to output a factory set, non-programmable identification number, Customer Text of up to 20 alphanumeric characters (field programmable), a reading multiplier ranging from 10^{-99} to 10^{99} (field programmable), and/or a reading measurement unit indicator (for example, US Gallons -- field programmable). Data is to be positive true. The register's ASCII digital output is to be capable of interfacing directly to an AMR transponder to transmit data via cable TV, telephone, radio signal, or power lines to an AMR system.
12. A second non-billing register, located on the coordinator assembly, shall totalize the registration of the oscillating piston measuring chamber only. It shall be of the straight reading type with a six-wheel odometer and test dial indicator. This register assembly may be utilized for accuracy testing and determining proper meter sizing after being placed in service.
13. **REGISTER BOX:**
The register box shall be made of the same material as the maincase. The name of the manufacturer and meter serial number shall be clearly identifiable and located on the register box lid. The register box which encloses the register shall be mounted so as to be oriented for reading in any position.
14. **REGISTER BOX SEALING:**
The register box shall be sealed to the meter in such a manner that unauthorized removal is apparent. Construction shall be such that the seal screws are recessed and their removal is prohibited by properly affixing seal wire through appropriate holes provided in the register box casting body.

15. INTERMEDIATE GEAR TRAINS:

The intermediate gear trains, including all coordinator parts, shall be located in an oil filled, "O"-ring gasketed cavity which is completely separated from pipeline or surface water. The input into the coordinator and intermediate gear trains from the measuring chamber shall be through two sets of permanent ceramic magnets. The output from the coordinator and intermediate gear trains to the billing register shall be magnetically coupled with a set of face type ceramic magnets. The intermediate gear trains and coordinator, along with the odometer for the displacement chamber shall be assembled into a single unit which is housed in the intermediate cavity area.

Change gears for both measuring chambers shall be located on top of the coordinator assembly. There shall be no need to disassemble or remove the coordinator assembly when replacing the change gears in order to adjust accuracy.

16. DISPLACEMENT MEASURING CHAMBER:

The measuring chamber shall be a self-contained unit including a strainer, which can be firmly seated and removed as a unit. No part of this chamber shall be cast as part of the maincase. The measuring chamber shall be of the oscillating piston type and shall be composed of Water Works bronze or a suitable synthetic polymer. The piston, piston roller, and division plate shall be of rubber composition or an approved synthetic polymer as well. All other components of the measuring chamber shall be of corrosion-resistant materials such as stainless steel.

17. TURBINE MEASURING CHAMBER:

The turbine measuring chamber shall be Water Works bronze or suitable synthetic polymer construction and shall be secured by two stainless steel bolts. The turbine chamber shall be positioned so that water must essentially travel in a straight line path from the meter inlet to the meter outlet during high flow operation. An adjustable tungsten carbide bearing shall be utilized to take up the turbine shaft end-play tolerance. The turbine shall be made of polypropylene, mounted on a replaceable #316 stainless steel shaft and rotate on roller bearings. The entire propeller assembly weight, while in operation, shall effectively be offset by magnetic suspension so that the rotating turbine components are essentially weightless in water.

18. AUTOMATIC VALVE:

The automatic valve shall be of the weighted, link-mounted, swing type. All moving shafts and linkage shall contain hard rubber bearings and sleeves. The valve and linkage shall be Water Works bronze; all shafts shall be #316 stainless steel. The valve shall be so positioned in the meter that water passing through it will follow a straight line path in passing from inlet to outlet. The valve will open at a pressure differential of two and one-half (2-1/2) pounds per square inch (psi) or less. To gain access to the valve, only the upper portion of the meter's maincase need to be removed. Neither the oscillating piston or the turbine chamber need to be disturbed.

19. VALVE SEAT:

The valve seat assembly shall consist of a trapezoidal shaped rubber gasket, retained by a bronze or synthetic polymer seat. The valve seat assembly shall be secured by #316 stainless steel screws that are accessible from the maincase opening so as to facilitate easy access for inspection and ease of maintenance.

20. REGISTRATION:

The registration shall accurately be recorded through the normal test flow limits at not less than 98.5 percent nor more than 101.5 percent of actual throughput. At crossover, that point when measurement transfers from one measuring chamber to the other, accuracy must exceed 95 percent. Accuracy at minimum test flow shall be at least 95 percent at the rate of flow specified in the following table:

Size	Normal Test Flow Limits - GPM	Minimum Test Flow - GPM
2"	2 - 160	1/4
3"	1 - 320	1/2
4"	6 - 500	3/4"
6"	10 - 1000	1-1/2"

21. PRESSURE TEST:

Meters shall be guaranteed to operate successfully at a working pressure of 150 pounds per square inch, without leakage or damage to any component.

22. GUARANTEE AND MAINTENANCE PROGRAM:

Meters shall be guaranteed against defects in material and workmanship for a period of one year from the date of shipment. The meter manufacturer shall also submit, along with the price quotation, a price schedule of its factory maintenance program offering. This maintenance price schedule shall be printed on a brochure which shall be nationally advertised and shall include offerings for both the complete meter on an exchange basis and pre-packaged component repair kits. Individual meter parts shall also be made available for purchase as is necessary.

23. APPROVED METERS:

Sensus Metering Systems' SRH Compound Water Meter w/ICE Register

SPECIFICATIONS

METER TRANSCEIVER UNIT (MXU)

1. RADIO SYSTEM DESCRIPTION:

The radio AMR system will have the ability to read meters equipped with absolute encoder registers using either a hand-held interrogation unit or a mobile interrogation unit. The encoder registers will be connected to a MXU that will provide the radio link from the meter to the interrogation unit.

The MXU will have a two-port design that allows multi-meter attachment.

The radio AMR system must utilize a true two-way (interrogate and respond) communication protocol that enhances system integrity and reliability.

Upon completion of the meter reading route, the meter reading data is downloaded from the interrogation unit, using the radio AMR software. The radio AMR software will prepare and format the meter reading data for the printing of selected management reports and the transfer of the meter reading data to the billing software for customer invoicing.

2. FUNCTION:

The MXU will be the interface between the meter and the radio interrogation unit. The MXU will power up when a valid alert signal is received from the reading interrogation unit. The interrogation unit will be either a hand-held or vehicle mounted device. The MXU and interrogation device will utilize a two-way communication protocol. Following the alert signal from the interrogation unit and transmission of meter reading data, the interrogation unit will signal to the MXU that valid reading parameters were met and will instruct the MXU to power down.

The MXU must have the capability of utilizing a reading cycle code which is an element of the transmission protocol. The reading cycle code is utility controlled and changes with each reading cycle. Once an MXU has been successfully interrogated and powered down using a specific reading cycle code, the MXU will not alert again until the code is changed.

The MXU will have a fixed factory set non-programmable identification number to insure absolute identity of the MXU within the radio AMR system.

The MXU will have the capability of storing a utility defined programmable class code. The class code will be used to separate different classes of meters and differentiate the MXU in multi-utility installations.

The MXU will provide for optional connection of a remote reading touchpad as a secondary meter reading source.

3. FCC REGULATIONS:

All equipment must comply with current Federal Communications Commission (FCC) requirements which include proper labeling of the MXU. The bidder must have supporting documentation available upon request to verify compliance.

4. MODULATION:

The radio frequency transmission from the MXU to the interrogation unit must utilize direct sequence spread spectrum, operating in the non-licensed 902-928 MHz band. It shall alert using the 956 MHz from the interrogation unit.

5. POWER:

The MXU will transmit at a minimum of 200 milliwatts of power.

6. **HARDWARE:**

The bidder must be able to supply separate units that accommodate pit and non-pit environments to complement the various installations within the utility. These various enclosures must house the complete single or two-port MXU units which include electronics, battery compartment, and wire connections. When necessary, the port inputs should support multi-meter attachments (port expanders). The MXU will also have an internal antenna as a standard.

The MXUs should have the radio and original battery encased in high density polyethylene (HDPE) to provide protection for the electronic components and be capable of being submersed in a water filled meter box without damage. The unit must be able to be installed through a meter pit lid utilizing a 1-3/4" diameter hole or under the meter pit lid if necessary. When installing the radio through the meter pit lid, the radio must be secured to the meter pit lid by use of a threaded nut. Holes in the housing should be available to allow the utility the ability to secure seal wires to indicate tampering.

The MXU must be able to connect to Sensus Metering Systems' encoders utilizing the 2-wire inductive couple TouchRead system components (TouchPads or TouchRead PitLid TR/PL sensors) which eliminates the use of additional connectors such as gel caps. The MXU must be also supplied with the capability of connecting via a 3-wire connection to an encoder if needed.

The MXU must have a field attachable battery cartridge option available. The battery will be used in conjunction with a hybrid layer capacitor to insure longevity. The battery cartridge must be date stamped for ease of age identification for warranty purposes.

The MXU must contain wiring diagram labels within the unit to aid in and simplify installation. All wires must be color coded and easily identifiable.

All exposed plastic must be UV stable to prevent discoloration.

7. **INSTALLATION AND TRAINING:**

Complete installation and operating instructions must be included for all of the supplied hardware and software equipment. Proposal must include any additional costs for training and assistance to install and begin operation of the MXUs. The vendor will also inform the customer what pre-installation activities are to be completed and what support materials will be needed for the initial installation.

8. **PERFORMANCE WARRANTIES:**

In evaluating bid submittals, warranty coverage will be considered. The vendor shall be required to state its warranty and/or guarantee policy with respect to each item of proposed equipment. The procedure for submitting warranty claims must also be provided.

As a minimum, the electronics and batteries shall be warranted for 20 years from date of shipment for defects in materials and workmanship. Non-performing MXUs and MXU batteries will be replaced at no cost during the first ten (10) years from the date of shipment, and at a prorated, discounted cost during the remain ten (10) years.

9. **SYSTEM MAINTENANCE AND SUPPORT:**

In addition to warranty periods, vendors are required to supply information on required or optional maintenance programs beyond the warranty period for both hardware and software. Features of those programs shall also be included with any additional charges such as hourly rate for on-site and/or remote support. The location of and procedures for obtaining such support shall be stated.

10. **EQUIPMENT COMPATIBILITY:**

The City of San Luis currently utilizes Sensus Model 4002 Handheld Devices (HHD) and AutoRead v. 5.04 Software. All products bid must be compatible with this equipment. No exceptions. .

11. **APPROVED MODELS:**

Sensus Metering Systems: Model 520R MXU.



OFFICE OF THE
MAYOR
CITY OF SAN LUIS

Resolution

Resolution No. 659

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA, TO WAIVE PROCUREMENT CODE 3-4-34 REQUIREMENT FOR COMPETITIVE SEALED BIDDING FOR THE PURCHASE OF METRON-FARNIER ELECTRONIC METERS FOR COMMERCIAL APPLICATIONS AND ACCEPTING AND APPROVING PURCHASE OF SAME.

Metron-Farnier is distributor for Spectrum series meter (1" thru 3") and Enduro series meter (6" or 8") and;

WHEREAS, the City of San Luis may authorize procurements without competitive bidding if a particular situation qualifies for cooperative purchasing; and

WHEREAS, the City of San Luis has the need to account for low flow water consumptions in the commercial, government, and school metering and billing; and

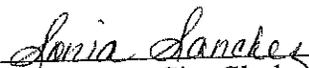
WHEREAS, the City of San Luis desires to acquire metering equipment that guarantees the accountability for low flows and compatibility with other existing electronic reading equipment and software; and the product is to be used as continuity investment to convert to an advanced technology and precise metering for low flows encountered in commercial applications;

NOW, THEREFORE BE IT RESOLVED by the City Council of the City of San Luis, Arizona, does hereby accept and approve the following proposal pricing from Metron-Farnier, for meter pricing for the purchase of 1" and larger water meters for commercial, government, and school meter applications as bid by Flowing Wells Irrigation District, Tucson, Arizona.

PASSED AND ADOPTED by the Mayor and Council of the City of San Luis, Arizona, this 22nd day of March 2006.


Nieves G. Riedel, Mayor

ATTEST:


Sonia Sanchez, City Clerk

APPROVED AS TO FORM:


Glenn Gimbut, City Attorney

**PROPOSAL
FOR
1" AND LARGER WATER METER REPLACEMENT**

*Metron Farnier
Single Jet Technology*

Piggyback: Flowing Wells Irrigation District, Tucson AZ

<u>SIZE</u>	<u>TOTAL METERS</u>
1" -	21
1 1.5" -	23
2" -	65
3" -	7
6" FS -	1

<u>INSTALLATION COSTS -</u>	<u>TOTAL</u>
1" - \$80	\$1,680.00
1 1.5" - \$250	\$5,750.00
2" - \$250	\$16,250.00
3" - \$600	\$4,200.00
6" FS - \$1,800	\$1,800.00
Performance Bond -	\$2,336.06
Misc Appurtances -	\$5,000.00

**TOTAL INVESTMENT TO THE CITY OF SAN LUIS:
\\$124,139.06**

* Spools and test ports for 3" are and additional \$195.00 per should you wish to utilize them.

Flowing Wells Irrigation District - Request For Sealed Bids for Water Meters

Meters Requested

Meter Descriptions

	Estimated Quantities	Unit Cost	Extended Cost
<u>Low Flow Meters</u>			
3/4" Cold Water Meter	100	\$161.00	\$16,100.00
1" Cold Water Meter	10	\$275.00	\$2,750.00
1.5" Cold Water Meter	20	\$461.00	\$9,220.00
2" Cold Water Meter	30	\$922.00	\$27,660.00
3" Cold Water Meter	5	\$1,542.00	\$7,710.00
4" Cold Water Meter	1	\$2,306.00	\$2,306.00
6" Cold Water Meter	1	\$3,579.00	\$3,579.00
<u>High Flow Meters</u>			
4" Cold Water Meter	1	\$2,399.00	\$2,399.00
6" Cold Water Meter	1	\$4,329.00	\$4,329.00
8" Cold Water Meter	1	\$5,509.00	\$5,509.00
6" Fire Meter Assembly*	1	\$6,300.00	\$6,300.00
8" Fire Meter Assembly*	1	\$8,206.00	\$8,206.00
Meter Interface Unit (MIU)	1	\$145.00	\$145.00

*FM Approved Assemblies

Dated _____

Signed _____
Authorized Metron Representative