

# COUNCIL DECISION REQUEST

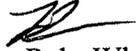
SUBJECT: Design of the SCADA system for the C. C. Cragin Water Pipeline

MEETING DATE: 02-04-10

PAYSON GOAL: NEW:                      EXISTING: X

ITEM NO.:

TENTATIVE SCHEDULE:

SUBMITTED BY: LaRon G. Garrett, Pub. Wks. Dir.  AMOUNT BUDGETED: \$8,785,000

SUBMITTAL TO AGENDA

EXPENDITURE REQUIRED: \$95,815

APPROVED BY TOWN MANAGER

CONT. FUNDING REQUIRED: \$0

  
\_\_\_\_\_

EXHIBITS (If Applicable, To Be Attached): Copy of Standard Engineering Contract

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## POSSIBLE MOTION

I move to approve the contract with Automation Electric for the design of the Supervisory Control and Data Acquisition (SCADA) system for the C. C. Cragin Water Pipeline and authorize the Mayor to sign the necessary contract documents.

## SUMMARY OF THE BASIS FOR POSSIBLE MOTION:

Town of Payson personnel have been working on bringing water from Blue Ridge Reservoir (Now called C. C. Cragin Reservoir) to Payson for over 30 years. We are now beginning to see the realization of this project. On November 19, 2009 the Town Council approved Automation Electric to be the engineer for the design engineer of the Supervisory Control and Data Acquisition (SCADA) system for the C. C. Cragin Water Pipeline and authorized staff to negotiate a final Scope of Services and Professional Fee. Negotiations area now complete and we are ready to approve the contract for the design of the SCADA system. A copy of the Towns standard engineering contract with the negotiated Scope of Services and Fee is attached.

Staff recommends approval of this contract to allow the C. C. Cragin water project to move forward.

**PROS:** Approval will allow the Town to continue working towards making C. C. Cragin water a reality.

**CONS:** None

**PUBLIC INPUT (if any):** N/A

**BOARD/COMMITTEE/COMMISSION ACTIONS/RECOMMENDATIONS (if any) (give dates and attach minutes):** N/A

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## FUNDING:

Acct: 662-5-5451-00-8600 Budget: \$8,785,000 Available

Expense:

Remaining:

3A: \_\_\_\_\_

Date: \_\_\_\_\_

FEB 04 2010 H. I \*

**AGREEMENT  
BETWEEN AUTOMATION ELECTRIC  
AND THE TOWN OF PAYSON  
FOR PROFESSIONAL SERVICES IN CONNECTION WITH  
THE C. C. CRAGIN WATER LINE AND TREATMENT PLANT SCADA DESIGN**

**THIS AGREEMENT** entered into this \_\_\_ day of \_\_\_\_\_, 2010 by and between **AUTOMATION ELECTRIC, 304 S. Brassie Drive, Payson, AZ 85541**, (hereinafter referred to as the "Engineers and Architects" or "E/A") and the Town of Payson, a municipal corporation, located at 303 North Beeline Highway, Payson, Arizona 85541 (hereinafter referred to as "Client").

**RECITALS**

- A. Client desires to engage E/A to provide professional services; and
- B. Client finds that the proposed Scope of Services and terms of this Agreement are acceptable; and
- C. E/A desires to provide said services and agrees to do so for the compensation and upon the terms and conditions as hereinafter set forth.

**NOW, THEREFORE**, based upon the mutual promises, covenants and conditions herein contained, the Parties do hereby agree as follows:

Section 1. Terms and Conditions

- A. Employment of the E/A. Client hereby engages E/A and E/A hereby agrees to perform the professional services as set forth herein.
- B. Scope of Services. E/A shall perform, in a proper and professional manner, the services set forth in the Scope of Services, marked Attachment "A", attached hereto, and by this reference incorporated herein as though set forth in full at this point. The work is generally described as:

Provide Engineering Design for the Supervisory Control and Data Acquisition (SCADA) system for C. C. Cragin Water Line and Water Treatment Plant
- C. Time for Completion. The professional engineering design and reports for **THE C. C. CRAGIN WATER LINE AND TREATMENT PLANT SCADA DESIGN** as defined in Attachment "A", Scope of Services, shall be completed within Three Hundred Sixty Five (365) calendar days from the date of execution of this contract. This time frame may be extended if mutually agreed to in writing by both parties.
- D. Extra Services. E/A shall provide extra services, not specifically called for in Attachment "A", Scope of Services, upon request or authorization of the Client at a fee to be determined at the time of the request. However, it is the intent that the Scope of Services, with modifications by the E/A in the Special Provisions, if any, is complete and sufficient to accomplish the purposes of this Agreement.
- E. Changes. If Client has requested modifications or changes in the extent of the Project, the time of performance of the services of E/A and the compensation therefore

shall be adjusted appropriately and shall be incorporated in written amendments to this Agreement. Notwithstanding the foregoing, E/A shall perform no modification, changes or additional work, except as and until authorized in writing by Client to do so.

F. Fees. Client shall pay E/A, for the services set forth in Attachment "A", Scope of Services, a Lump Sum of Ninety Five Thousand, Eight Fifteen Dollars and NO/100, (\$95,815.00) for Tasks 1-9 and Time and Materials for Tasks not included in the Scope of Services per the fee schedule included in Attachment "A".

G. Payment. E/A will submit to Client monthly invoices based on a percentage of work completed along with all reimbursable expenses incurred. Client will be responsible for paying the invoice in full within thirty (30) days of receipt. If Client fails to make any payment due E/A for services performed as set forth in Attachment "A", Scope of Services, within thirty (30) days after receipt of E/A's bill therefore the amounts due E/A shall include a charge at the rate of 1.50% per month from said day; and in addition E/A may suspend services under this Agreement until it has been paid in full all amounts due it for services and expenses. E/A shall be entitled to actual costs for remobilizing on any work suspended for thirty (30) days or more on account of non-payment or a substantial portion of the fee within the time prescribed in this Agreement.

H. Reimbursables. Unless otherwise stated in Attachment "A", Scope of Services, charges for out-of-pocket expenses not directly furnished by E/A will be paid by Client at a rate of 1.10 times the cost of such expense, up to a maximum of Five Hundred Dollars, excluding subconsultants, in addition to the amount set forth in paragraph 2 (F) herein above. E/A shall not be entitled for payment for printing or copying that occurs during the normal course of work required to accomplish the Scope of Services, except as authorized by the Client. Printing, binding, copying and deliveries of inspection reports, field notes and record drawings for the Client shall not be considered reimbursable.

I. Ownership and Re-Use of Documents. All documents, including original drawings, estimates, specifications, field notes, inspection reports, testing results, record drawings and data are and shall be the property of the Client, and shall be provided to the Client upon request during the term of this Agreement, and without demand at the conclusion of this Agreement. Client will not reuse the documents for any other project unless E/A has given written authorization to do so.

J. Delays Beyond the Control of the E/A. It is agreed that events which are beyond the control of the E/A may occur which may delay the performance of the Scope of Services of this Agreement. In the event that the performance of the Scope of Services by the E/A is delayed beyond its control, the E/A shall notify, in writing, the Client of such delay and the reason therefore, and Client shall extend the time of performance appropriately.

K. Liability of E/A. E/A shall be liable only for damage caused by negligence of it, its employees, sub-consultants or subcontractors. E/A shall notify Client of the engagement of any and all subcontractors or consultants, and client shall have sufficient and adequate opportunity to review the qualifications of such subcontractors or consultants, and shall have the right to approve or disapprove their engagement. Client requires subcontractors or consultants of the E/A shall provide appropriate certificates of insurance to the client prior to their performing of any work relating to this Agreement.

L. Problems. Any problems relating to the services provided herein are to be brought to the attention of E/A as soon as encountered and, if possible, before E/A incurs any obligations. E/A reserves the sole right to correct any errors it is responsible for, including, but not limited to, the selection of a subcontractor or sub-consultant and the negotiation of fees.

M. Indemnification. To the fullest extent permitted by law, the E/A shall defend, indemnify and hold harmless the Town of Payson, its agents, officers, officials and employees from and against all tortuous claims, damages, losses and expenses (including but not limited to attorney fees, court costs, and the cost of appellate proceedings), relating to, arising out of, or alleged to have resulted from the negligent acts, errors, mistakes or omissions of the E/A, its agents, employees, or any tier of E/A's sub-consultants in the performance of this Contract. E/A's duty to defend, hold harmless and indemnify the Town of Payson, its agents, officers, officials and employees shall arise in connection with any tortuous claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death or injury to, impairment, or destruction of property including loss of use resulting therefrom, caused by any E/A's negligent acts errors, mistakes, omissions, work or services in the performance of this Contract including any employee of the E/A, any tier of E/A's subcontractor or any other person for whose acts, errors, mistakes, omissions, work or services the E/A may be legally liable.

The amount and type of insurance coverage requirements set forth in Paragraph N herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

N. Insurance. All insurance required herein shall be maintained in full force and effect until all work or service required to be performed under the terms of the Contract is satisfactorily completed and formally accepted; failure to do so may, at the sole discretion of the Town of Payson, constitute a material breach of this Contract.

The E/A's insurance shall be primary insurance as respects to the Town of Payson, and any insurance or self-insurance maintained by the Town of Payson shall not contribute to it.

Any failure to comply with the claim reporting provisions of the insurance policies or any breach of an insurance policy warranty shall not affect coverage afforded under the insurance policies to protect the Town of Payson.

The insurance policies, except Workers' Compensation, shall contain a waiver of transfer rights of recovery (subrogation) against the Town of Payson, its agents, officers, officials and employees for any claims arising out of the E/A's negligent acts, errors, mistakes, omissions, work or service.

The insurance policies may provide coverage which contain deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to the Town of Payson under such policies. The E/A shall be solely responsible for the deductible and/or self insured retention and the Town of Payson, at its option, may require the E/A to secure payment of such deductibles or self-insured retentions by a Surety Bond or an irrevocable and unconditional letter of credit.

The insurance policies, except Workers' Compensation and Professional Liability, required by this Contract, shall name the Town of Payson, its agents, officers, officials and employees as Additional Insureds.

Required Coverage

General Liability.	\$1,000,000 / occurrence;	\$2,000,000 aggregate.
Workers' Compensation.	\$100,000 / accident;	\$100,000 disease; \$500,000 disease limit
Professional Liability	\$1,000,000 per claim.	

Prior to commencing work or services under this Contract, E/A shall furnish the Town of Payson with Certificates of Insurance, or formal endorsements as required by the Contract, issued by E/A's insurer(s), as evidence that policies providing the required coverage's, conditions and limits required by this Contract are in full force and effect.

In the event any insurance policy(ies) required by this Contract is(are) written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Contractor's work or services as evidenced by annual Certificates of Insurance.

If a policy does expire during the life of the Contract, a renewal certificate must be sent to the Town of Payson fifteen (15) days prior to the expiration date.

O. Termination of Contract. This Agreement may be terminated by either Party at any time upon thirty (30) days prior written notice to the other Party. Upon such termination, Client shall pay E/A all monies owed under this Agreement for all work performed up to the effective date of termination. Unless sooner terminated, this Agreement shall terminate fourteen (14) calendar days after completion of construction. In the event of such cancellation, all work performed by E/A up to that time, including but not limited to field information, studies and rough or final drafts of working papers, shall be delivered to the Client by E/A.

P. Publicity. No information relative to the Project shall be released by E/A for publication, advertising, or for any other purpose without the prior written approval of the Client.

Q. Supplementary Conditions. Supplementary Conditions, if any, shall apply to this Agreement, as set forth in Attachment "B" - Supplementary Conditions, which is attached hereto and incorporated herein by this reference as though set forth in full at this point.

R. Entire Agreement. This Agreement, with attachments, represents the entire understanding between Client and E/A in respect to the Project, all prior understanding and agreements are merged herein and this Agreement may only be modified by an instrument in writing executed with the same formalities as this instrument.

S. Successors and Assigns. Client and E/A each binds himself and his partners, successors, executors, administrators and assigns to the other party to this Agreement and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Except as above, neither Client nor E/A shall assign, sublet or transfer its interest in this Agreement without the written consent of the other; however, E/A may employ others to assist him in carrying out its duties under this Agreement. Nothing herein shall be construed as giving any rights or benefits hereunder to anyone other than Client and E/A.

T. Non-Appropriation/Non-Receipt. Nothing herein shall be construed as obligating the Town to expend, or as involving the Town in any contract or other obligation for the future payment of money in excess of appropriations authorized by law and administratively allocated for this work. Nor shall anything herein be construed as obligating the Town to expend, or as involving the Town in any contract or other obligation for the future payment of money if the Town does not have sufficient revenues for this expenditure.

U. Business License. The E/A shall provide the Town with a copy of its Town of Payson business license. If the E/A is exempt from the Town's business licensing requirements, it shall still provide the Town with the items required under Section 110.03(C)-(D) of the Town Code.

V. Scrutinized Business Operations. Pursuant to A.R.S. §35-391.06, the Parties hereby warrant and represent that they do not have, nor any of their subcontractors have, and during the term of the Contract will not have a scrutinized business operation in either Sudan or Iran.

W. Authorized Presence Requirements/Government Procurement (A.R.S. §41-4401).

W.1 Consultant and any Sub-consultant employed by Consultant warrants their compliance with all Federal immigration laws and regulations that relate to their employees and Arizona Revised Statutes Section 23-214(A).

W.2 A breach of the warranty under Section W.1 above shall be deemed a material breach of this Contract and shall be subject to penalties up to and including termination of the Contract.

W.3 The Town retains the legal right to inspect the papers of the Consultant or Sub-consultant who works on this Contract to ensure that the Consultant or Sub-consultant is complying with Section W.1.

X. Dispute Resolution. This Agreement shall be governed and construed in accordance with the internal laws of the State of Arizona. In particular, this Agreement is subject to the provisions of A.R.S. § 38-511, the terms of which are incorporated herein, and which provides for cancellation of contracts by the municipality for certain conflicts of interest. With the written consent of both Parties, any dispute, controversy, claim, or cause of action arising out of or related to this Agreement may, but in no event need, be settled by submission to binding arbitration in accordance with the rules of the American Arbitration Association and the Arizona Uniform Arbitration Act, A.R.S. § 12-1501, et seq. Judgment upon any award rendered by the arbitrator(s), if filed in Arizona Superior Court, shall be filed in the Superior Court of Gila County, Arizona; or any such dispute, controversy, claim, or cause of action may be litigated in the Superior Court of Gila County, Arizona. The venue for any such dispute shall be Gila County, Arizona, and both Parties consent in advance to such venue and jurisdiction and waive any right to object that Gila County is an inconvenient or improper forum based upon lack of venue. Neither Party shall be entitled to recover from the other party any of its attorneys' fees, costs, or expert witness fees incurred in any such dispute, controversy, claim, or cause of action, but each party shall bear its own attorneys' fees without contribution from the

other party, whether the same is resolved through arbitration, litigation in a court, or otherwise.

**WITNESS WHEREOF**, E/A and Client have executed this Agreement on the day and year first above written.

Town of Payson  
303 N. Beeline Highway  
Payson, AZ 85541  
Telephone: (928) 474-5242  
FAX: (928) 474-7052

By: \_\_\_\_\_  
Mayor

Attest: \_\_\_\_\_  
Town Clerk

Automation Electric  
304 S. Brassie Drive  
Payson, AZ 85541  
Telephone: 928-978-1570

By: \_\_\_\_\_

Title: \_\_\_\_\_

### APPROVAL AS TO FORM

The Town of Payson Legal Department has reviewed this contract and approved it as to form. When reviewing this contract for form, the Legal Department considers whether the following situations have been addressed:

- I. Identification of parties;
- II. Offer and acceptance;
- III. Existence of contract consideration (we do not review to determine if consideration is adequate);
- IV. That certain provisions specifically required by statute are included (i.e., provisions concerning non-availability of funds and conflict of interest, A.R.S. § 38-511).

We have not reviewed the contract for other issues. Therefore, approval as to form should not be considered as approval of the appropriateness of the terms or conditions of the contract or the underlying transaction. In addition, approval as to the form should not be considered approval of the underlying policy considerations addressed by the contract.

Dated this \_\_\_\_ day of \_\_\_\_\_, 2010.

By \_\_\_\_\_  
Samuel I. Streichman, Town Attorney

# Automation Electric

Design, Automation & Scada Systems

304 South Brassie Dr.

Payson, Arizona 85541

Phone: (928) 978 - 1570

Fax: (928) 468 - 2055

email: dewalt@automationelectric.net

Date: January 19, 2010

Re. Cost proposal for CC Craigin Reservoir pipeline, Water Treatment SCADA

1. Initial project scope definition and kickoff meetings.
2. Define data scope, presentation format, collection point and delivery points.

## 2.1 Collection Points:

- a. Blue Ridge dam
- b. Diversion tunnel
- c. Pump shaft
- d. Pumping plant
- e. Priming Reservoir
- f. Generating plant (East Verde origin)
- g. New Treatment plant (including generating station)

## 2.2 Delivery points:

- a. Town of Payson SCADA (2 locations)
- b. SRP data server.

Determine for the above:

- a. What data will be collected at each of the identified sites.
- b. The data interface method with existing equipment.
- c. Design or specify requirement for new equipment.
- d. Tabulate data format and frequency of sampling.
- e. Archiving of data, record keeping requirements.
- f. Reporting and trending.
- g. Distribution of data for realtime access by SRP.

3. Analyze terrain and determine best data transport method.

- a. Collect GPS information on all data collection points.
- b. Identify repeater points for fiber/radio telemetry.
- c. Model and evaluate RF path with software based on a,b.
- d. Conduct radio test to confirm computer model.
- e. Compare fiber vs radio telemetry.

- i) Cost.
- ii) Implementation.
- iii) Securing equipment.
- iv) Serviceability and future replacement.
- v) Implementation during construction phase.

- f. Design telemetry system and specify equipment.
- g. Test and commission.
- h. Compile complete system documentation. (Equipment & User manuals)

4. SRP and TOP data security considerations.

a. Define data access and user rights for

- i) SRP
- ii) TOP

b. Define and implement system security and user access at SCADA nodes.

5. Ground water recharge – define SCADA model to accommodate.

- a. Assist engineering firms in data gathering to model flow and pressure on the existing water distribution system.
- b. Design control model to accommodate ground water recharge using existing SCADA infrastructure.
- c. Design RTU code to facilitate 4.b.
- d. Identify equipment to monitor and control recharge.
- e. Develop and implement instrumentation calibration schedule.
- f. Program and implent SCADA code and security measures
- g. Setup SRP data server.
- h. Test and commission.
- i. Compile complete system documentation. (Equipment & User manuals)

6. System surveillance, pipeline monitoring and overall system security.

- a. Define security requirement for overall system.
- b. Identify soft points that will require video surveillance.
- c. Develop early leak detection system.
- d. Develop response plan for intrusion, leak or other system alarms.
  - i) Reponse contact list.
  - ii) Immediate measure – damage control.
- e. Identify equipment operational parameters and specify.
- f. Design security system and implement.
- g. Test and commission.
- i. Compile complete system documentation. (Equipment & User manuals)

7. Watertreatment plant SCADA interface.

- a. Define and specify PLC and instrumentation for the treatment plant.
- b. Define and develop SCADA interface for treatment plant.
- c. Program and implement SCADA & PLC controls.
- d. Test and commission.
- e. Compile complete system documentation. (Equipment & User manuals)

8. Hydroelectric system SCADA and controls.

- a. Define and specify PLC and instrumentation for the power unit.
- b. Define and develop SCADA interface for power unit.
- c. Program and implement SCADA & PLC controls.
- d. Test and commission.
- e. Compile complete system documentation. (Equipment & User manuals)

9. Meetings & Project Management.

Attend project meetings as required.

Table 1 – Time Allocation Estimates

Item	Description	Labor Est (HRS)	Labor Rate (\$/HR)	Estimate Total (\$)
1	Initial project scope definition and kickoff meetings.	48	115	5,520
2	Define data scope, presentation format, collection points and delivery points.	96	115	11,040
2.1	Collection points	64		
2.2	Delivery points	32		
3	Analyze terrain and determine best data transport method.	150/100	115/65	23,750
4	SRP and TOP data security considerations.	48	115	5,520
5	Ground water recharge – define SCADA model to accommodate.	180/60	115/65	24,600
6	System surveillance, pipeline monitoring and overall system security.	72/30	115/65	10,230
7	Watertreatment plant SCADA interface.	64/20	115/65	8,660
8	Hydroelectric system SCADA and controls.	48/15	115/65	6,495
9	Meetings and project management	T&M	115	TBD
	<b>Total – Items 1 to 8</b>	<b>706/225</b>	<b>115/65</b>	<b>95,815</b>

(706+225)/8 = 116.375 days over the total project span excluding meetings not covered in items 1 to 8.

## Scope of work conditions and exclusions

A. The scope of work for this contract is limited to the items listed above. If additional items are added to the contract, they will be performed in accordance with rates & fees shown in Exhibit A.

B. Reproduction and mileage costs shall be billed as a reimbursable expense in addition to the contract cost in accordance with rates & fees shown in Exhibit A.

C. The fee schedules shown in Exhibit A can be revised to the current annual fee schedule on the anniversary of the contract execution for providing Time and Material services.

Exhibit A – Fee Schedule.

	Rate/Hour
1. Services	
Engineer	\$ 115.00
CAD/Technician	\$ 65.00
2. Travel & Hotel	<i>At Actual Cost</i>
3. Outside Consultants	<i>At Actual Cost</i>
4. Other Reimbursable Costs	
a. Long distance communications	<i>At Actual Cost</i>
b. Filing fees and permits	<i>At Actual Cost</i>
c. Prints, reproductions and photo work	<i>At Actual Cost</i>
d. Special stenographic supplies and drafting supplies	<i>At Actual Cost</i>

5. Sales Taxes and Other.

The above fees and charges excludes all local state and federal taxes. These will be billed monthly as incurred.

*At Actual Cost* – if invoice is paid within ten (10) working days, otherwise a ten percent (10%) markup applies to cover banking and other costs.

Fees and all other charges will be billed monthly as the work progress, and the amount billed shall be due and payable within ten (10) days after the date of such billing. Any portion of a billing not paid within (30) days of the billingshall be considered delinquent and shall bear a delinquency charge of one and one half (1 1/2) percent per month. (annual percentage of 18 percent) on the unpaid balance, but in no event shall said delinquency charge or the payment thereof extend the due date.

Should legal action be necessary to enforce the provisions of any of the contract or agreement entered into, in which this schedule is a part, the client agrees to pay all attorney's fees and court costs incurred in the procecuting thereof.

All fees set forth in any contract or agreement entered into, in which this schedule is a part, are subject to reasonable escalation as required to offset inflationary increases in our cost of doing business.

**ATTACHMENT 'B'  
SUPPLEMENTARY CONDITIONS**

NONE