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SERVICES AGREEMENT

UTILITY SYSTEMS SCIENCE AND SOFTWARE, INC.

[Upgrade 11 Lift Station Remote Terminal Units with Motorola ACE Units]

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On this _____ day of _____, 20___, the CITY OF RIVERSIDE, a California charter city and municipal corporation ("City"), and **UTILITY SYSTEMS SCIENCE AND SOFTWARE, INC.**, a California corporation ("Contractor"), mutually agree as follows:

1.	**Scope of Services**. Contractor shall furnish all labor, materials and equipment for and perform the work of **Upgrading 11 Lift Station Remote Terminal Units with Motorola ACE Units** ("Services"). Contractor shall perform the Services in accordance with the provisions and requirements of the Scope of Services attached hereto as Exhibit "A" and incorporated herein by reference.

2.	**Term**. This Agreement shall be in effect for the date of execution through December 31, 2019, unless otherwise terminated pursuant to the provisions herein.

3.	**Compensation**. City shall pay Contractor for the performance of the Services during the initial term of this Agreement a Contract Price not to exceed **Seventy-Six Thousand Three Hundred Fifty-Three Dollars and Eighty-Eight Cents ($76,353.88)**, unless an increase is agreed to by the parties. City shall pay Contractor for Services performed to City's satisfaction on a monthly basis in accordance with the provisions of the Compensation Schedule attached hereto as Exhibit "B" and incorporated herein by this reference. If the term of the Agreement is extended, Contractor's compensation for the extended term shall be mutually agreed upon in writing by the parties.

4.	**General Compliance with Laws**. Contractor shall keep fully informed of federal, state and local laws and ordinances and regulations which in any manner affect those employed by Contractor, or in any way affect the performance of Services by Contractor pursuant to this Agreement. Contractor shall at all times observe and comply with all such laws, ordinances and regulations, and shall be solely responsible for any failure to comply with all applicable laws, ordinances and regulations.

5.	**Business Tax Certificate**. As a condition of this Agreement, Contractor shall secure a business tax certificate to operate in the City of Riverside pursuant to Chapter 5.04 of the Riverside Municipal Code, and shall also secure any other licenses or permits which may be required.

6.	**Business Tax and Penalties**. Contractor acknowledges and agrees that with respect to any business tax or penalties thereon, utility charges, invoiced fee or other debt which is owed, or which becomes owed, by Contractor to City, City reserves the right to withhold and offset said amounts from any payments, refunds or reimbursements owed by City to Contractor under the Agreement. Notice of such withholding and offset shall promptly be given to Contractor by City in writing. In the event of a dispute as to the amount owed or whether such amount is owed to City,

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City will hold such disputed amount until either the appropriate appeal process has been completed or until the dispute has been resolved.

7. **Personnel.** Contractor shall furnish all personnel necessary to perform the Services and shall be responsible for their performance and compensation. The key personnel are listed in Exhibit "C," attached hereto and incorporated herein by reference. Contractor shall furnish qualified personnel to perform the Services.

8. **Assignment and Subcontracting.** Neither party shall assign any right, interest, or obligation in or under this Agreement to any other entity without prior written consent of the other party. In any event, no assignment shall be made unless the assignee expressly assumes the obligations of assignor under this Agreement, in a writing satisfactory to the parties. Contractor acknowledges that any assignment may, at the City's sole discretion, require City Manager and/or City Council approval. Contractor shall not subcontract any portion of the work required by this Agreement without prior written approval by the responsible City Contract Administrator. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement, including without limitation, the insurance obligations set forth in Section 11. The Contractor acknowledges and agrees that the City is an intended beneficiary of any work performed by any subcontractor for purposes of establishing a duty of care between any subcontractor and the City.

9. **Independent Contractor.** In the performance of this Agreement, Contractor, and Contractor's employees, subcontractors and agents, shall act in an independent capacity as independent contractors, and not as officers or employees of the City of Riverside. Contractor acknowledges and agrees that the City has no obligation to pay or withhold state or federal taxes or to provide workers' compensation or unemployment insurance to Contractor, or to Contractor's employees, subcontractors and agents. Contractor, as an independent contractor, shall be responsible for any and all taxes that apply to Contractor as an employer.

10. **Indemnification.** Contractor shall indemnify and hold harmless the City, and the City's employees, officers, managers, agents and council members from any liability, claim, damage or action whatsoever, arising out of the sole negligence or willful misconduct of Contractor, its officers, employees, subcontractors, agents or including but not limited to property damage, bodily injury, or death. Contractor shall defend, at its sole cost and expense, including but not limited to attorney fees, cost of investigation, defense and settlement or awards, the City and the City's employees, officers, managers, agents and council members in any such action or claim. With respect to any action or claim subject to indemnification herein by Contractor, Contractor shall, at its sole cost, have the right to use counsel of its own choice and shall have the right to adjust, settle, or compromise any such action or claim without the prior consent of City; provided, however, that any such adjustment, settlement or compromise in no manner whatsoever limits or circumscribes Contractor's indemnification of City. Contractor's obligations hereunder shall be satisfied when Contractor has provided to City the appropriate form of dismissal (or similar document) relieving the City from any liability for the action or claim involved. The specified insurance limits required in this Agreement shall in no way limit or circumscribe Contractor's obligations to indemnify and hold harmless the City.

11. **Insurance**.

      11.1   General Provisions. Prior to the City's execution of this Agreement, Contractor shall provide satisfactory evidence of, and shall thereafter maintain during the term of this Agreement, such insurance policies and coverages in the types, limits, forms and ratings required herein. The rating and required insurance policies and coverages may be modified in writing by the City's Risk Manager or City Attorney, or a designee, unless such modification is prohibited by law.

      11.1.1 Limitations. These minimum amounts of coverage shall not constitute any limitation or cap on Contractor's indemnification obligations under Section 10 hereof.

      11.1.2 Ratings. Any insurance policy or coverage provided by Contractor or subcontractors as required by this Agreement shall be deemed inadequate and a material breach of this Agreement, unless such policy or coverage is issued by insurance companies authorized to transact insurance business in the State of California with a policy holder's rating of A or higher and a Financial Class of VII or higher.

      11.1.3 Cancellation. The policies shall not be canceled unless thirty (30) days' prior written notification of intended cancellation has been given to City by certified or registered mail, postage prepaid.

      11.1.4 Adequacy. The City, its officers, employees and agents make no representation that the types or limits of insurance specified to be carried by Contractor pursuant to this Agreement are adequate to protect Contractor. If Contractor believes that any required insurance coverage is inadequate, Contractor will obtain such additional insurance coverage as Contractor deems adequate, at Contractor's sole expense.

      11.2   Workers' Compensation Insurance. By executing this Agreement, Contractor certifies that Contractor is aware of and will comply with Section 3700 of the Labor Code of the State of California requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance before commencing any of the work. Contractor shall carry the insurance or provide for self-insurance required by California law to protect said Contractor from claims under the Workers' Compensation Act. Prior to City's execution of this Agreement, Contractor shall file with City either 1) a certificate of insurance showing that such insurance is in effect, or that Contractor is self-insured for such coverage, or 2) a certified statement that Contractor has no employees, and acknowledging that if Contractor does employ any person, the necessary certificate of insurance will immediately be filed with City. Any certificate filed with City shall provide that City will be given ten (10) days' prior written notice before modification or cancellation thereof.

      11.3   Commercial General Liability and Automobile Insurance. Prior to City's execution of this Agreement, Contractor shall obtain, and shall thereafter maintain during the term of this Agreement, commercial general liability insurance and automobile liability insurance as required to insure Contractor against damages for personal injury, including accidental death, as well as from claims for property damage, which may arise from or which may concern operations by anyone directly or indirectly employed by, connected with, or acting for or on behalf of Contractor.

The City, and its officers, employees and agents, shall be named as additional insureds under the Contractor's insurance policies.

11.3.1 Contractor's commercial general liability insurance policy shall cover both bodily injury (including death) and property damage (including, but not limited to, premises operations liability, products-completed operations liability, independent contractor's liability, personal injury liability, and contractual liability) in an amount not less than $1,000,000 per occurrence and a general aggregate limit in the amount of not less than $2,000,000.

11.3.2 Contractor's automobile liability policy shall cover both bodily injury and property damage in an amount not less than $1,000,000 per occurrence and an aggregate limit of not less than $1,000,000. All of Contractor's automobile and/or commercial general liability insurance policies shall cover all vehicles used in connection with Contractor's performance of this Agreement, which vehicles shall include, but are not limited to, Contractor owned vehicles, Contractor leased vehicles, Contractor's employee vehicles, non-Contractor owned vehicles and hired vehicles.

11.3.3 Prior to City's execution of this Agreement, copies of insurance policies or original certificates along with additional insured endorsements acceptable to the City evidencing the coverage required by this Agreement, for both commercial general and automobile liability insurance, shall be filed with City and shall include the City and its officers, employees and agents, as additional insureds. Said policies shall be in the usual form of commercial general and automobile liability insurance policies, but shall include the following provisions:

> It is agreed that the City of Riverside, and its officers, employees and agents, are added as additional insureds under this policy, solely for work done by and on behalf of the named insured for the City of Riverside.

11.3.4 The insurance policy or policies shall also comply with the following provisions:

a. If the policy is written on a claims made basis, the certificate should so specify and the policy must continue in force for one year after completion of the services. The retroactive date of coverage must also be listed.

b. The policy shall specify that the insurance provided by Contractor will be considered primary and not contributory to any other insurance available to the City and Endorsement No. CG 20010413 shall be provided to the City.

12. **Termination.** City shall have the right to terminate any or all of Contractor's Services and work covered by this Agreement at any time upon thirty (30) calendar days' written notice to Contractor. In the event of such termination, Contractor shall submit Contractor's final written statement of the amount of services provided as of the date of such termination for payment by the City.

Notwithstanding the foregoing, the City may terminate Contractor's performance of this Agreement upon five (5) calendar days' written notice if:

(1)   Contractor fails to promptly begin performance of the Services;

(2)   Contractor fails to perform the Services;

(3)   Contractor discontinues performance of the Services;

(4)   Contractor fails to make payment to employees in accordance with applicable law;

(5)   Contractor disregards laws, ordinances, or rules, regulations, or orders of a public authority having jurisdiction;

(6)   Contractor otherwise is guilty of breach of a provision of this Agreement;

(7)   Contractor becomes insolvent, is adjudicated bankrupt, or makes a general assignment for the benefit of creditors and fails to provide City with adequate assurances of Contractor's ability to satisfy its contractual obligations.

(8)   A receiver, trustee, or other judicial officer shall not have any right, title, or interest in or to this Agreement. Upon that person's appointment, City has, at its option and sole discretion, the right to immediately cancel the Agreement and declare it null and void.

13.   **Non-Discrimination.** During Contractor's performance of this Agreement, Contractor shall not discriminate on the grounds of race, religious creed, color, national origin, ancestry, age, physical disability, mental disability, medical condition including the medical condition of Acquired Immune Deficiency Syndrome (AIDS) or any condition related thereto, marital status, gender, gender identity, genetic information, gender expression, sex or sexual orientation, military and veteran status, in the selection and retention of employees and subcontractors and the procurement of materials and equipment, except as provided in Section 12940 of the California Government Code. Further, Contractor agrees to conform to the requirements of the Americans with Disabilities Act in the performance of this Agreement.

14.   **City's Right to Employ Other Consultants/Contractors.** City reserves the right to employ other Contractors in connection with the Services. If the City is required to employ another contractor to complete Contractor's work, due to the failure of the Contractor to perform, or due to the breach of any of the provisions of this Agreement, the City reserves the right to seek reimbursement from Contractor.

15.   **Conflict of Interest.** Contractor, for itself and on behalf of the individuals listed in Exhibit "C", represents and warrants that by the execution of this Agreement, they have no interest, present or contemplated, affected by the above-described Services. Contractor further

warrants that neither Contractor, nor the individuals listed in Exhibit "C" have any real property, business interests or income interests that will be affected by this project or, alternatively, that Contractor will file with the City an affidavit disclosing any such interest.

16.   **Solicitation.** Contractor warrants that Contractor has not employed or retained any person or agency to solicit or secure this Agreement, nor has it entered into any agreement or understanding for a commission, percentage, brokerage, or contingent fee to be paid to secure this Agreement. For breach of this warranty, City shall have the right to terminate this Agreement without liability and pay Contractor only for the value of work Contractor has actually performed, or, in its sole discretion, to deduct from the Agreement price or otherwise recover from Contractor the full amount of such commission, percentage, brokerage or commission fee. The remedies specified in this section shall be in addition to and not in lieu of those remedies otherwise specified in this Agreement.

17.   **Prevailing Wage.** If applicable, pursuant to Section 1771 of the California Labor Code, Contractors are required to pay the general prevailing rates of per diem wages, overtime and holiday wages as determined by the Director of the Department of Industrial Relations and implemented by Resolution No. 13346 of the City Council of the City of Riverside. The Director's determination of prevailing wage rates is available on-line at www.dir.ca.gov/dlsr/DPreWageDetermination.htm, and is referred to and made a part hereof as though fully set forth herein. California Labor Code Sections 1725.5 and 1771.1 requiring all general contractors and subcontractors to be registered with DIR. Registration can be accomplished through the DIR website by using this link: http://www.dir.ca.gov/Public-Works/PublicWorks.html.

18.   **Notices.** Service of any notices, bills, invoices or other documents required or permitted under this Agreement shall be sufficient if sent by one party to the other by United States mail, postage prepaid and addressed as follows:

To City	To Contractor
City of Riverside	**Utility Systems Science and Software,**
Public Works – Sewer - WQCP	**Inc.**
Attn: Brent Keaster	**Attn: Mark Serres**
5950 Acorn Street	**601 N. Parkcenter Drive, Suite 209**
Riverside, CA 92504	**Santa Ana, CA 92705**

19.   **Venue.** Any action at law or in equity brought by either of the parties hereto for the purpose of enforcing a right or rights provided for by this Agreement shall be tried in the Superior Court of California, County of Riverside and the parties hereby waive all provisions of law providing for a change of venue in such proceedings to any other county.

20.   **Waiver.** No action or failure to act by the City shall constitute a waiver of any right or duty afforded City under this Agreement, nor shall any action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically provided in this Agreement or as may be agreed in writing.

21.   **Severability**. Each provision, term, condition, covenant and/or restriction, in whole and in part, in this Agreement shall be considered severable. In the event any provision, term, condition, covenant and/or restriction, in whole and/or in part, in this Agreement is declared invalid, unconstitutional, or void for any reason, such provision or part thereof shall be severed from this Agreement and shall not affect any other provision, term, condition, covenant and/or restriction of this Agreement and the remainder of the Agreement shall continue in full force and effect.

22.   **Amendments**. This Agreement may be modified or amended only by a written agreement and/or change order executed by the Contractor and City.

23.   **Authority**. The individuals executing this Agreement and the instruments referenced herein on behalf of Contractor each represent and warrant that they have the legal power, right and actual authority to bind Contractor to the terms and conditions hereof and thereof.

24.   **Entire Agreement**. This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the subject matter of this Agreement, and supersedes all prior and contemporaneous understandings or agreements of the parties. Neither party has been induced to enter into this Agreement by, and neither party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

[SIGNATURES ON FOLLOWING PAGE.]

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first above written.

CITY OF RIVERSIDE, a California charter city and municipal corporation

UTILITY SYSTEMS SCIENCE AND SOFTWARE, INC.

By: _____
City Manager

By: _____

MARK SERRES
[Printed Name]

V. P.
[Title]

Attest: _____
City Clerk

Certified as to Availability of Funds

By: _____
Chief Financial Officer

By: _____

ANTHONY CHAVEZ
[Printed Name]

C FO
[Title]

Approved as to Form:

By: _____
Ruthann M. Salera
Deputy City Attorney

EXHIBIT "A"

SCOPE OF SERVICES

Table of Contents

1.0 SYSTEM DESCRIPTION

1.1 INTRODUCTION

US3 understands that the objectives of the proposed system for The City of Riverside are:

- ϖ Comprehensive RTU Field Support.

- ϖ Integration of existing data sets.

- ϖ On-Site Technical Support for 12 months.

- ϖ RTU SCADA Software and Configuration.

- ϖ Provide complete On-Site acceptance testing

- ϖ Provide complete programming and commissioning.

- ϖ Provide comprehensive training for both operators and maintenance personnel.

1.2 SOFTWARE

In general, the software development will be based on the existing Motorola MOSCAD software. All code with the existing RTU locations will be up-dated to the Motorola ACE3600. This will include the following:

Download the latest code associated with each site.

Up-Grade the code from Moscad to ACE3600.

Validate code on the Riverside Test Jig.

1.3 QUALITY ASSURANCE

US3 activities are governed by approved standards, codes, and procedures accepted by IEEE.

The purpose of the US3 program is to ensure City of Riverside that the activities affecting the quality of the project are performed under suitable controlled conditions. The controlled conditions include the systems engineering, specification generation, and unit testing & modeling. Specific areas of the procedures that the US3 Quality Assurance Team will be examining are:

1. Design Control

2. Document Control

3. Procedures, Instructions and Drawings

4. Inspection Control

2 SCOPE OF WORK

The general tasks associated with this scope of work is defined as follows:

- ϖ Download latest MOSCAD RTU Code

- ϖ Up-grade code to Motorola ACE3600

- ϖ System Testing / Staging

- ϖ Implementation of System / optimization in Riverside

- ϖ Customer Training

- ϖ System Documentation

- ϖ On-Site Field Downloading Up to 11+ remote sites are included in this system.

- ϖ Installation of included.

- ϖ Instrument index, showing the input and output connection locations at each remote site. The instrument index will be sent to the customer in order to clarify the nature of what is required. Specifically, parameters for digital inputs, digital outputs, analog inputs, and analog outputs has been determined as follows:

WW Tag Name or Designator
Pump 1 Fail
Pump 2 Fail
Wet Well Low Level RTU 21
Wet Well Hi Level RTU 21
Ultrasonic Fail RTU
Power FaiL RTU
Intrusion RTU
Pump 1 Seal Fail
Pump 2 Seal Fail
Pump 1 Run
Pump 2 Run
Pump 1 Auto
Pump 2 Auto

400 - 401
RTU Stored Data
P1-Daily-RT
P2-Daily-RT
P1-Weekly-RT
P2-Weekly-RT
P1-Monthly-RT
P2-Monthly-RT
P1-Yearly-RT
P1-Yearly-RT-High
P2-Yearly-RT
P2-Yearly-RT-High
P1-Total-RT
P1-Total-RT-High
P2-Total-RT
P2-Total-RT-High
P1-Daily-Starts
P2-Daily-Starts
P1-Weekly-Starts
P2-Weekly-Starts
P1-Monthly-Starts
P2-Monthly-Starts
P1-Yearly-Starts
P2-Yearly-Starts
P1-Total-Starts
P1-Total-Starts-High
P2-Total-Starts
P2-Total-Starts-High
#Fail
#RX
#TX
CommFail
Enable

P1-Daily-RT

2.1.1 Permits/Licenses

No requirements for permits or licenses are anticipated or included for installation of the City of Riverside ACE3600 SCADA system.

Utility Systems Science and Software does not include or accept any responsibility for changes in the scope of work that maybe required by the City of Riverside, Local, Tribal, Federal, or State Building Departments, agencies or inspectors that impact either the permit application process or the actual work to be completed as outlined. Any such changes or upgrades of pre-existing conditions identified as required to meet current County, City, State or other applicable codes will be considered as changes in the original Scope of Work and dealt with as a Change Order. This includes re-use of any City of Riverside, selected used materials or any other pre-existing code deficiencies.

2.1.2 Site Locations

The proposed work is to be completed at City of Riverside. No other locations are considered or included with this proposal.

2.1.3 Delivery

Utility Systems Science and Software will select a surface carrier and ship all electronic equipment to a location mutually agreed to by City of Riverside and Utility Systems Science and Software. City of Riverside will be notified when the equipment has arrived. An inventory will be completed. The equipment will be delivered to the dispatch center as required for installation.

2.1.4 Project Schedule

The Utility Systems Science and Software project manager will develop a project schedule after contract award that will be based on both Utility Systems Science and Software and the deliverables. The project schedule will be reviewed and approved by City of Riverside and will become a part of the contract upon approval.

2.1.5 System Implementation Plan

Implementation of the project will proceed according to the mutually agreed upon Project Schedule and Work Breakdown Structure (WBS). The WBS and schedule define project responsibilities and task dependencies. A detailed WBS is part of this SOW. Utility Systems Science and Software's phased approach to implementation includes on-site staging, installation, optimization and programming, and testing of the communications network.

2.1.6 *System Installation Schedule*

The project schedule is based on the project objectives, functional requirements, timing and resource requirements. US3 uses MS Project to track the project schedule, which will be defined as follows:

- a) Project Controls
- b) Engineering
- c) Design
- d) CAD
- e) Programming
- f) Procurement
- g) Assemble and Test
- h) Installation.

The schedule is based on delivery in six week (6) weeks after award of contract.

US3 will review the project schedule and during the Customer Kickoff Meeting Utility Systems Science and Software and City of Riverside will mutually agree upon the schedule. If City of Riverside provided installation requirements are not completed at the scheduled installation time, Utility Systems Science and Software reserves the right to issue the City of Riverside a change order to cover US3's costs, including, but not limited to, mobilization costs, travel, lodging, equipment storage, etc.

2.2 UTILITY SYSTEMS SCIENCE AND SOFTWARE RESPONSIBILITIES

2.2.1 *Equipment List*

An equipment list reflecting the equipment to be provided for this project is attached.

2.2.2 *Installation Services*

Replace 11 Motorola Moscads with Motorola ACE3600. Tech, one day per site, includes travel. On Site Miscellaneous Materials have been included (it is not anticipated to replace antennas, cables and connectors).

2.2.3 *Project Management*

Utility Systems Science and Software will provide a single point of contact for this project that will have the responsibility of scheduling for the system walk-through, the installs, and the optimization of all console and telephone system equipment. The project manager will be responsible for the timely completion of all aspects of this project and for the final systems acceptance.

2.2.4 Manuals/Documentation

Manuals will be provided for each RTU. System documentation will be provided as agreed to in the kickoff meeting.

2.2.5 Acceptance Test Plan (ATP)

The acceptance test for this dispatch facility will include the testing of the features detailed in the Acceptance Test Plan document, which is attached.

2.2.6 Punch List

Any items determined as "failed" in the Acceptance Test Plan will be placed on a "punch list" for resolution.

2.2.7 Disposition of Punch List

Upon resolution of the punch list items, Utility Systems Science and Software and City of Riverside will sign the Acceptance document and the Warranty period will start. Beneficial Use of the system with minor punch list items will also start the Warranty period.

2.2.8 Transition to Post-Acceptance Support

Utility Systems Science and Software will conduct a Transition meeting to transition the project to post-acceptance support with the warranty provider. Utility Systems Science and Software provides warranty for one year from date of system acceptance, or 18 months from equipment shipment, whichever occurs first.

2.3 CUSTOMER RESPONSIBILITIES

- ☞ US3 will require the use of various City of Riverside resources from time to time. These requirements will be requested through the US3 Project Manager. Resource needs will consist of, but will not be limited to, information concerning the process specific parameters, system operation, and process requirements.

- ☞ Utility Systems Science and Software requires the customer to provide power and I/O connection points to the installed RTU.

- ☞ Signal conditioning for analog inputs is assumed to be 4-20ma. Digital inputs are assumed to be dry.

- ☞ City of Riverside is responsible for providing an Internet Connection near to the Master Computer.

2.3.1 AC Power

The City of Riverside is required to supply an adequate source of all 120 VAC single-phase power within five feet of Utility Systems Science and Software installed equipment

2.3.3 Facilities & Access

The City of Riverside will provide required access and all space necessary for equipment installation.

2.3.4 Existing Equipment

US3 will dispose of the existing hardware appropriately.

2.3.5 General Implementation Terms and Conditions

Utility Systems Science and Software will begin work at a site only after the City of Riverside has notified Utility Systems Science and Software that the sites are ready for installation as set forth in the attached R56 manual. At a minimum, Site Ready shall consist of adequate space in an existing building or shelter to accommodate the equipment to be installed, electrical service and cable routing access in place as defined in this Statement of Work.

2.3.6 Site Preparation

Detailed Site Ready audits will be performed after contract execution. All required site upgrades not identified in this document specifically as a Utility Systems Science and Software deliverable are the responsibility of the City of Riverside. Site preparation is required to meet or exceed the requirements as defined in the Utility Systems Science and Software document "Fixed Network Equipment Installations". Utility Systems Science and Software part number 68-81089E5-0.

2.3.8 Electrical

Requirement-The City of Riverside will supply, as required, electrical service and electrical wiring that meets all applicable city, county, state, and National Electrical Codes (NEC) requirements.

Requirement Not Met-The City of Riverside will be provided written notification of the electrical deficiencies. The City of Riverside may contract Utility Systems Science and Software to perform a system electrical upgrade as a project change order, perform the upgrade themselves or utilize the services of a third party subcontractor.

System Impact-The City of Riverside will be financially responsible for any project delay cost if the site power requirements are not met before the project team schedules site installation.

2.3.9 Equipment Space

Requirement-The City of Riverside will provide the required site floor and desk space for the Utility Systems Science and Software supplied equipment as identified in the approved equipment installation location document.

Requirement Not Met- The City of Riverside will be provided written notification of the deficiencies.

System Impact- The City of Riverside will be financially responsible for any project delay cost if the space requirements are not available according to the project timeline.

2.3.10 Cable Routing

Requirement- The City of Riverside will provide any roof, wall, ceiling, or floor penetration. The City of Riverside must seal these penetrations after the cables have been installed.

Requirement Not Met- If the site penetration requirements are not met the City of Riverside will be notified of the deficiencies. The City of Riverside may contract Utility Systems Science and Software to perform a system cabling penetration upgrade as a project change order, perform the upgrade themselves or utilize the services of a third party subcontractor.

System Impact-The City of Riverside will be financially responsible for any project delay cost if the penetrations are not complete according to the project timeline.

2.3.13 Site Access

Requirement-The City of Riverside is to provide site access for scheduled site walks, installation, optimization, system troubleshooting and completion of Acceptance Test Plan (ATP). Site access includes transportation to sites that are not accessible by regular four-wheel drive vehicles in all weather conditions. Access to sites not directly controlled by the City of Riverside will be the responsibility of the City of Riverside to coordinate and schedule with the Utility Systems Science and Software Project Manager. Scheduled site access times with 48 hours notice is required.

Requirement Not Met- If the site access requirements are not met and resulting in a schedule delay, the financial ramifications of the delay will be presented to the City of Riverside. A delay that impacts Utility Systems Science and Software scheduled resources (direct or contracted) will be addressed in a new project schedule or a change order.

System Impact- The City of Riverside will be financially responsible for any project delay costs if the site access requirements are not met.

2.4 CONTRACT CHANGE ORDERS

Any design or scope of work changes required after contract approval will be processed by the change order process.

Change orders has been mutually agreed upon between Utility Systems Science and Software and the City of Riverside and costs will be quoted to the City of Riverside as required. Changes to the project schedule will also be included in the proposed change order. The City of Riverside agrees to authorize or deny a request for contract change within ten working days.

A Change Order Authorization form is attached for this purpose.

Change Order Request Form

Change Order Request No. _____

Requester:_____   Title_____

Phone No._____   Department _____

Description of Request:_____

_____

Equipment Required: _____

_____

SOW Modification_____

_____

Time Line Modification:_____

_____

Additional Services Required:_____

_____

Justification:_____

_____

Budgetary Dollar Value:

Equipment:_____Services:_____Total:_____

Payment Terms:_____

Other Terms:_____

Unless amended above, all other terms and conditions of the Agreement shall remain in full force and effect.

Approved:

City of Riverside Project Manager _____Date _____

_____

Utility Systems Science and Software Project Manager _____

_____Date _____

Utility Systems Science and Software Engineer _____

_____Date _____

Utility Systems Science and Software Account Manager _____

_____Date _____

3 ACCEPTANCE TEST PLAN

US3 will develop a comprehensive Performance Test Plan. The test plan will include test conditions for coordinating the start and end of each test with the City of Riverside representative. The focus of the test plan will be the following:

1. Identify parameters.

2. Determine relative measurements

3. Identify control parameters to optimize the system.

The completed Test Plan Package will include, as a minimum, the following:

1. Results of testing activities.

2. Associated specifications and drawings, including as-built drawings (as required).

3. Test records, which contain, as a minimum, the following:

    a. A description of the testing activity.

    b. Evidence of completion and verification of testing activity.

    c. Data and results of tests.

    d. Information on conditions adverse to compliance.

    e. Evidence as to the acceptability of results. Actions taken in connection with any deficiencies.

    f. Test results and certificates.

All records will be maintained by US3 until the completion of the contract or when requested by City of Riverside representative or designate.

The Functional Test could include the following (this is preliminary and will be submitted formally to City of Riverside for review and comment):

1. Physical inspection for conformance to drawing and appearance of equipment;

2. Demonstration of the proper functioning of all hardware by a thorough exercising of each device, including CPU's and distributed processors at each RTU.

3. Demonstration of the proper functioning of the System Software;

4. Demonstration of the all functions associated with the software;

5. Simulation of the alarm and status change conditions;

6. Demonstration of analog and digital input conversions, calibrations and transformations .

7. Display of analog and digital output conversions (via Motorola Toolbox).

8. Demonstration of all man/machine interface functions;

9. Simulation of failure situations and fail over of each component that has a back-up unit;

10. Demonstration of the data base management software including tests to verify addition/deletion of points and multiplexes and modifications to various system and application data files;

11. Demonstration of the display generator/editor, log generator/editor and maintenance functions;

12. Demonstration of on-line editing, assembling, compiling, testing and integration;

13. Demonstration of the use of on-line and off-line diagnostics and test programs;

14. Recovery from AC power source failure;

15. Random inspections to verify the accuracy of hardware and software documentation;

16. Demonstration of the accuracy of the system performance monitoring/control software.

ACE3600 Acceptance Test Plan (ATP) Procedure & Check List

Test date:_____/_____/_____Tested by:_____US3
Job #:_____

Customer:_____   Destination:_____

P.O./Contract #_____

1. Unit s/n_____, P/N_____

1.1 Radio Type_____, s/n_____

     Notes:_____

2. Radio frequencies: Tx_____, Rx_____, Modulation:_____

     PL/DPL code_____

3. Site address:_____, Link ID:_____ RTU, FIU or REPEATER type _____

4. Port 1:_____, _____, _____, _____

   Port 2:_____, _____, _____, _____

   Port 3:_____, _____, _____, _____

5. Configuration File name: _____

6. Application file name: _____

7. I/O complement: DI _____, DO _____, AI _____, AO _____, FC _____

7.1 Physical check: Cabinet_____, Internal wiring_____, Radio_____

     CPU _____, I/O Modules_____(w/plugs)

     Line Coupler_____, Battery pack_____, Power Supply _____

Notes:_____

7.2 Radio link voice check: _____ ____CK

8. Check DI's by simulated inputs.   _____ ____CK
   - Monitor at Diagnostics screen

   Notes:_____

9. Check AI's by simulated inputs.   _____ ____CK
   - Monitor at Diagnostics screen

10. Check DO's by forcing bits (use diagnostics screen).   _____ ____CK

   11. Run application. Check rung logic against customer specifications.   _____
____CK

12.1 Attach I/O simulator, verify value transfers to/from RTU/FIU   _____ ____CK

   Notes:_____

13. List special requirements/calculations/interface that unit is to perform:

_____

_____

_____

14. Notes:

_____

_____

15. Unit complete and accepted:_____ Date: ___/___/___

4 WARRANTY

4.1 HARDWARE WARRANTY

US3 guarantees to replace or repair, free of charge for materials and labor for any part of the equipment supplied under the contract that becomes defective because of faulty design, materials or workmanship. This warranty applies for one (1) year from the date of the Riverside's written acceptance of the system following the site acceptance test or eighteen months from time of shipment, whichever is less.

4.2 SOFTWARE WARRANTY

US3 guarantees the software supplied to be free from errors. For the purpose of this warranty, software error is understood to be a program's failure to perform a function as designated in this Sequence of Operation and the US3 user manual. If an error does occur in the software, then US3 shall at its option and expense:

1. Dispatch software staff to the facility to identify and correct erroneous programs.

2. Make instructions available for modifying any erroneous programs.

3. Generate necessary replacement programs at Utility Systems Science and Software's facility for dispatch to the City of Riverside facility.

This warranty shall apply for one (1) year after the date of City of Riverside's written acceptance of the system at the City of Riverside facility. Acceptance not to exceed (30) days after completion of start-up.

4.3 DESIGN WARRANTY

US3 guarantees to City of Riverside that the system to be supplied will be free from hardware and software design errors. If a design error occurs, recognizable by the repeated failure of a single component or program, then US3 will correct the defective unit per the hardware or software warranty described above.

4.4 LIMITS OF LIABILITY

US3 will not accept liability for incidental, special or consequential damages.

EXHIBIT "B"

COMPENSATION

5 COST PROPOSAL

QTY	ITEM #	DESCRIPTION	JOB	UNIT PRICE	LINE TOTAL
1	ACE3600-RADIOS	ACE3600 RADIOS PTO MODEL		0	-
11	F7509A	ACE 3600 MAIN MODEL		1,020.00	11,220.00
11	V114AP	ADD: 6.5 AH BACKUP BATTERY		155	1,705.00
11	V260AJ	ADD: 24V FLOATING POWER SUPPLY		75	825.00
11	V261AC	OPTN,CHGR,ADD: AC PWR PS 100-240 V W/ BAT CHGR		360	3,960.00
11	V103AG	ADD: 3 I/O SLOTS FRAME		75	825.00
11	V224AM	ADD: HOUSING TAMPER SWITCH		50	550.00
11	V276AW	ADD: 40X40 CM PAINTED METAL HOUSING		350	3,850.00
11	V245AF	ADD: 16DI 4DO EE 4AI +/- 20MA		445	4,895.00
6	V265AL	ADD: 16 DI FAST 24V		200	1,200.00
11	V153AH	ADD: 40 PIN TB HOLDER KIT		30	330.00
6	V158AD	ADD: 20 PIN TB HOLDER KIT		20	120.00
11	V448AF	ADD: ACE3600 CPU3680		250	2,750.00
11	VA00362AA	PLUGIN RADIO PORT		100	1,100.00
4	VA00162AA	ADD: UHF R2 MOBILE RADIO		500	2,000.00
4	VA00194AA	ADD: MOTOTRBO ANALOG CONVENTIONAL		350	1,400.00
11	Lot	On-Site Field Programming support		1320	14,520.00
1	Lot	Code coverstion from Moscad to ACE, staging in San Diego and testing.		7260	7,260.00
11	Lot	Installation		1245	13,695.00
11	Lot	Installation Materials		85	935.00
				S&H	

SUBTOTAL	$	73,140.00
SALES TAX		3,213.88
TOTAL	$	76,353.88

CLASSIFICATION	HOURLY BILLING RATE
ENGINEERING & DESIGN	
Associate Engineer I	62.00
Associate Engineer II	66.00
Engineer I	85.00
Engineer II	87.00
Engineer III	88.00
Senior Engineer	165.00
Project Engineer	165.00
Sr. Project Engineer	165.00
PROJECT CONTROL	
Clerical (field)	24.00
Clerical (office)	22.00
Scheduler	61.00
Senior Scheduler	85.00
Project Manager	165.00

EXHIBIT "C"

KEY PERSONNEL

Project Personnel

The fundamental objective is to provide engineers that are qualified to develop the Telecommunications Systems, including communications, electrical and software engineering services. It should be noted that each Lead Engineer, will be a licensed Professional Engineer.

The second objective is to provide a team of engineers that are experienced in the development of SCADA systems.

MARK C. SERRES

Mr. Serres holds a M.S. Electrical and Electronic Engineering. His capabilities include all disciplines for the execution of engineering in the areas of electrical (*power distribution*), computer and process control systems design (DCS), including P&ID's, Loop Diagrams, Elementary and Single Line Diagrams among others. Responsible for SCADA Hardware/Software development & integration, including construction.

US3, Inc. 1990- Present

Title: Sr. Electrical Engineer - Project Manager
Function: Responsible for the planning, design, development and installation of process automation systems for industrial & utility facilities. SCADA capabilities include hardware/software integration from the process(s) using telemetry (RF, Microwave & Satellite) and most computer networks.

ASEA BROWN BAVARIE (ABB) IMPELL CORPORATION - 1986 to 1990

Title: Senior Electrical Engineer
Function: Design and implementation of a SCADA system design for a processing plant, networking PLC's with a plant-wide supervisory computer (TDC-3000). Activities included power distribution, software using CASE (both PLC and supervisory) and P&ID development.

Project: **985 MW GENERATING STATION CONTROLS UPGRADE**
            Project Engineer with the responsibility to include development of piping & instrumentation diagram development, instrument installation details, loop diagrams, elementary and single line diagrams.

Project: **POLYVINYL CHLORIDE (PVC) MODERNIZATION** (Mexico)
            Project Engineer responsibilities included systems integration (both hardware and software) of a DCS (Taylor MOD-300) and instrumentation and control of two new reactors. Designed SCADA system for operation in hazardous location (Class 1, Division 1&2). This system communicated via satellite to Mexico City.

Project: **DISTRIBUTED CONTROL SYSTEM RETROFIT**
Analysis study performed to implement plant control hardware/software to develop a cost effective DCS, P&ID's and control strategy for a pulp & paper mill (both lower and upper levels).

FERANTI ELECTRONICS/HERIOT WATT UNIVERSITY - 1985 to 1986

Title: Research Associate
Function: Designed and developed CAD package for the synthesis of Waveguide Bandpass Filters (for microwave communications).

CERAMATEC, Inc. - 1981 to 1982

Title: Systems Engineer
Function: Designed and fabricated an automated testing system for the development of new solid electrolytics. Responsible for the design of the analog/digital interface circuitry and control software for the entire test facility. Supervisory tasks included the design and test scheduling of protocols for technicians.

EDUCATION
Harvard University, Boston Massachusetts School of Public Health
Graduate Level course in aerosol technology, industrial hygiene and air pollution control
Technology

Heriot Watt University, Edinburgh, Scotland
B.Sc. Electrical and Electronic Engineering (MSEE)

PUBLICATIONS

Real-Time Analysis of NOx Emissions Using Expert Systems
Advances in Instrumentation and Control, ISA

Advanced Diagnostics Using DCS,
Integrating Diverse Suppliers,
Control Versus Performance Monitoring,
Planning for Future Expansion,
Human Factors in DCS Development,
Measuring True Benefits of Process Automation
Guidelines for Integrated Controls and Monitoring for Fossil Fuel Plants, EPRI

Application of CASE Tools for DCS Development and Configuration
Taylor MOD-300 World Conference

PROFESSIONAL COURSES

Taylor Instruments
Distributed Control and Taylor Control Language

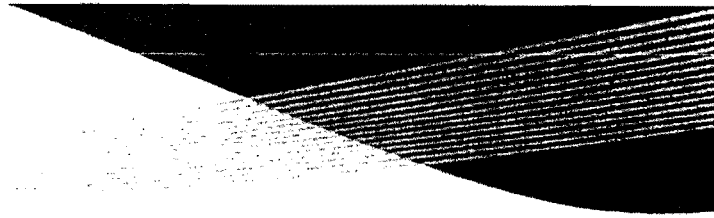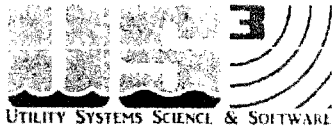Teknowledge M.1 and Knowledge Engineering Methodology
Artificial Intelligence/Expert System Engineering and Design

NEXPERT System Engineering
Artificial Intelligence/Expert System Computer Language Design
UCLA Engineering Extension
Analyzing the Reliability & Performance of Expert Systems

Tom Williams   Engineering Manager
                            BSEE, MSEE

Experience: Process Control Development Engineering and Programming
                   SCADA System Design and Implementation
                   Hardware and Software Selection and Implementation
                   Customer Technical Support and Trouble Shooting
                   On-Site Start-up Support and Training

Projects: Large Scale Wireless SCADA Systems
                   Continuous Lines: Casters, Coating Lines, Tension Levelers
                   Servo-Hydraulic Systems (Coater Machines)
                   Thermo-Oxidizers and Burner Management
                   Conveyor and Material Handling Systems
                   Chemical Reactor Process Controls
                   Pharmaceutical Process Controls
                   Computer Interface Drivers

Operating Systems: VMS, Windows (All)

Software: CAD/CAM (Intergraph Microstation, Autocad)
                   Simatic   Wonderware
                   Control View   Intellution
                   Assemblers   Power BI
                   C++   Pascal
                   Oracle   Sybase
                   GE Cimplicity

Controllers: Allen Bradley   Siemens S7
                   OPTO Mystic   Mitsubishi
                   Modicon

Utility Systems Science & Software   **November 14, 2018**

Brian Royer   Senior Control Systems Engineer
                              BSEE

Experience: Process Control Development Engineering and Programming
Motorola SCADA Software Development
UHF/VHF/800 TRUNK 900 TRUNK
Hardware and Software Selection and Implementation
Customer Technical Support and Trouble Shooting
On-Site Start-up Support and Training

Projects: Trunking 800 MHz ACE System
Wide Area SCADA Systems
Pharmaceutical Process Automation
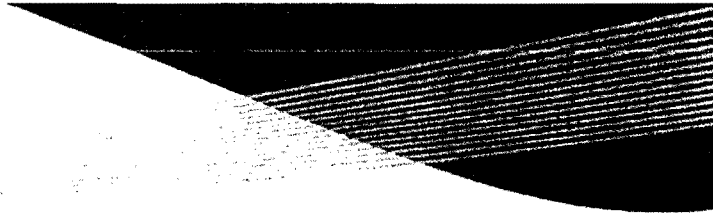CNC Machinery Controllers

Software: Siemens Simatic   Wonderware
ControlView   Intellution

Controllers: Allen Bradley   Modicon
Motorola   Siemens

Saul Hirshamnn   Senior Communications Systems Engineer
BSEE

Experience: Motorola Service Manager for Command & Control
Motorola ACE SCADA Installation Specialist
UHF/VHF/800 TRUNK 900 TRUNK , 900 MAS
Motorola Radio Service
Radio Path Surveys
Customer Technical Support and Trouble Shooting
On-Site Start-up Support and Training

Projects: Trunking 800 MHz ACE System
UHF ACE/INTRAC Systems
Large Scale Water Distribution SCADA Systems
Wide Area Network Installation & Maintenance
Wireless Control System Design

Service: Responsible for Siemens System Implementation

Software: UHF/VHF Trunk Radio Service   Console Configuration
Motorola Network Integration   Most PC based MMI Packages

**Controllers:**   Siemens   Motorola ACE3600
Allen-Bradley   Modicon

Utility Systems Science & Software   November 14, 2018

Rick White   Senior Control Systems Engineer
                    MSEE

Experience: Process Control Development Engineering and Programming
                    Wireless System Development
                    UHF/VHF 800 Trunking, 900 MHz MAS, 900 Trunking
                    Hardware and Software Selection and Implementation
                    Customer Technical Support and Trouble Shooting
                    On-Site Start-up Support and Training

Projects: Water and Wastewater Treatment Plant
                    Wide Area SCADA Systems
                    Emissions monitoring
                    Data Conversion Automation
                    Computer Interface Drivers

Software: Wonderware   Intellution
                    Control View   GE Cimplicity
                    Siematic   Autocad

Controllers: Modicon   Allen Bradley
                    GE Series X   Siemens SX
                    Motorola

Utility Systems Science & Software   **November 14, 2018**
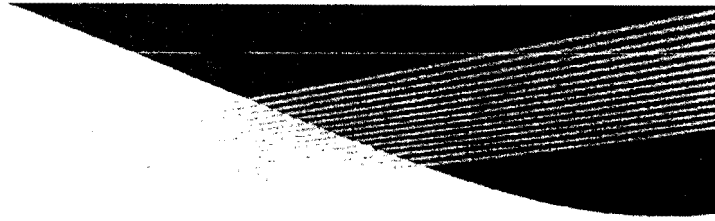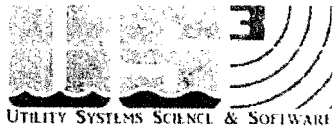
Jose Morales Instrumentation Systems/CAD Technician
ASEE

Experience: CAD Drafting
UL Listed Panel Fabrication and Wiring
Instrumentation Specification Calibration and Installation
Field Wiring, Loop Checks and Trouble Shooting
On-Site Commissioning and Start-up Support

Projects: Semiconductor Automation
Offshore/Onshore Petroleum Production Facilities Automation
Chemical Plant Facilities Automation
Water Treatment Production Facilities Automation
Food and Beverage Processing Plant Automation
Material Handling Systems

Software: Autocad

Controllers: Allen Bradley   GE Series X
Modicon   Siemens SX

Jorge Castillo Senior Control Systems Engineer
BSEE

Experience: Control System Engineering
Project Management
Process Control Development Engineering and Programming
Customer Technical Support and Trouble Shooting
On-Site Start-up Supervision and Training

Projects: Offshore/Onshore Petroleum Production Facilities Automation
Water Treatment Production Facilities Automation
Food and Beverage Processing Plant Automation
SCADA Systems

Software: Siematic   SQL
Autocad   Wonderware
Control View   Intellution
Visual Basic   Oracle

Controllers: Allen Bradley   Motorola
Modicon   Siemens SX