

STAFF REPORT



ITEM NO. 14
CITY OF OCEANSIDE

DATE: February 19, 2014

TO: Honorable Mayor and City Councilmembers

FROM: Water Utilities Department

SUBJECT: **APPROVAL OF A PROFESSIONAL SERVICES AGREEMENT WITH CAROLLO ENGINEERS FOR THE SUPERVISORY CONTROL AND DATA ACQUISITION MAJOR UPGRADES DESIGN PROJECT**

SYNOPSIS

Staff and the Utilities Commission recommend that the City Council approve a professional services agreement in an amount not to exceed \$939,745 with Carollo Engineers, for the preparation of plans, specifications, and bid phase services for the Supervisory Control and Data Acquisition (SCADA) Major Upgrades Design project; authorize a transfer of funds from Infrastructure (objects 5702 and 5703) to Studies and Reports (object 5326); and authorize the City Manager to execute the agreement (Exhibit A).

BACKGROUND

The SCADA system is the electronic system which allows for the remote monitoring and operation of the water and wastewater systems, including the four treatment plants and all reservoirs, lift stations, and pumps. The existing system was installed and upgraded through improvements completed at each facility over the past forty years and range in age from ten to approximately thirty-five years old. A majority of the system is obsolete and parts are not available for repairs and continued operations. A complete overhaul of the SCADA system is necessary. A detailed scope of work is included in the contract documents, Exhibit A.

ANALYSIS

The Water Department initiated a two-phase process to evaluate and select a design consulting firm capable of handling the project which includes, but is not solely limited to, the development of design plans, specifications, and estimates for the replacement of the current Human Machine Interface (HMI) software and hardware; replacement of Programmable Logic Controllers (PLC's), defined data types, defined function blocks along with overall programming to maximize automated controls throughout the water and sewer systems.

The first phase involved vetting qualified design firms experienced in automation upgrade projects similar in size and composition to the one the City is considering. The City issued a Request for Qualifications (RFQ) to six qualified design firms (Exhibit B) that could assist in upgrading the system with an emphasis on enhanced plant automation, better regulatory compliance, and greater use of standardized components. The design firms were allowed to visit all four treatment plants to assess the current level of automation at each facility. The City received three Statement of Qualifications in response to the RFQ.

The second phase of the project was to issue a Request for Proposal (RFP) to the three firms that submitted Statements of Qualifications. The firms were again taken on tours of all four plants for a more detailed assessment and were given additional information regarding the current state of the overall SCADA system.

On November 26, 2013, the Water Utilities Department received proposals from the three qualified design consulting firms. Staff performed a review of the proposals for accuracy and completeness and rated the consultants based on qualifications, performance of similar type work, ability to provide services, quality of proposal, previous work performance for the City, and cost (Exhibit C). Staff has determined that Carollo is the most qualified firm for this project and has provided a comprehensive and competitive price.

FISCAL IMPACT

The Water Department refunded several Sewer and Water bonds in April and July of 2013. Along with the refunding, additional funds were included to facilitate improvements in the Capital Improvement Program. One of the major projects included in the bond refunding was the SCADA Major Upgrades project. The sewer fund allocated \$1,000,000 and the water fund allocated \$2,000,000 in bond proceeds for the project. This funding requires that all work be completed and the proceeds spent within three years of the date of issuance. The anticipated completion date of the Sewer and Water SCADA upgrades is April and July of 2016 respectively. Staff is requesting approval to move \$540,000 in funding from Infrastructure (object 5702 and 5703) to studies & reports (object 5326) to fund this project. Because the amount is over \$50,000, Council approval to reallocate the funds within the same project, but to different objects, is required.

Project	Account	Available Budget	Allocated Amount
Sewer SCADA Upgrades	909130500722.5326.10400	\$250,000	\$200,000
SLR Major Plant Improvements	909125500722.5326.10400	\$1,492,475	\$269,872
Sewer Total		\$1,742,475	\$469,872
Water SCADA Upgrades	908130000712.5326.10400	\$250,000	\$200,000
Weese Filtration Plant Improvements	908125400712.5326.10400	\$1,230,750	\$269,873
Water Total		\$1,480,750	\$469,873
Combined Total		\$3,223,225	\$939,745

The available budget in the respective accounts listed above for this project is \$3,223,225. The total cost for the agreement is \$939,745; therefore, sufficient funds are available. The remaining funds will be used for project implementation and will be brought forward at a future date for Council consideration.

COMMISSION OR COMMITTEE REPORT

The Utilities Commission approved staff's recommendation at its regularly scheduled meeting on January 21, 2014.

CITY ATTORNEY'S ANALYSIS

The referenced documents have been reviewed by the City Attorney's office and approved as to form.

INSURANCE REQUIREMENTS

The City's standard insurance requirements will be met.

RECOMMENDATION

Staff and the Utilities Commission recommend that the City Council approve a professional services agreement in an amount not to exceed \$939,745 with Carollo Engineers, for the preparation of plans, specifications, and bid phase services for the Supervisory Control and Data Acquisition (SCADA) Major Upgrades Design project; authorize a transfer of funds from Infrastructure (objects 5702 and 5703) to Studies and Reports (object 5326); and authorize the City Manager to execute the agreement (Exhibit A).

PREPARED BY:



Jason Dafforn
Water Utilities Division Manager

SUBMITTED BY:



Steven R. Jepsen
City Manager

REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager



Cari Dale, Water Utilities Director



James R. Riley Financial Services Director



Yukari Krause-Brown, Information Technologies Division Manager



- Exhibit A – PSA
- Exhibit B – RFP Mailing List
- Exhibit C – Consultant Rating Form

CITY OF OCEANSIDE

PROFESSIONAL SERVICES AGREEMENT

**PROJECT: WATER AND SEWER SCADA MAJOR UPGRADES – 908130000712
& 909130500722**

THIS AGREEMENT, dated _____, 2014 for identification purposes, is made and entered into by and between the CITY OF OCEANSIDE, a municipal corporation, hereinafter designated as “CITY”, and CAROLLO ENGINEERS, hereinafter designated as “CONSULTANT”.

RECITALS

- A. CITY desires to obtain professional engineering services from an independent contractor for the above named project.
- B. CONSULTANT has submitted a proposal to provide engineering services for the CITY in accordance with the terms set forth in this Agreement.
- C. CITY desires to contract with CONSULTANT as an independent contractor and CONSULTANT desires to provide services to CITY as an independent contractor.
- D. CONSULTANT has demonstrated its competence and professional qualifications necessary for the satisfactory performance of the services designated herein by virtue of its experience, training, education and expertise.

NOW, THEREFORE, THE PARTIES MUTUALLY AGREE AS FOLLOWS:

- 1.0 **SCOPE OF WORK.** The project is more particularly described as follows: Complete design services for the Supervisory Control and Data Acquisition (SCADA) Major Upgrades more particularly described in the Consultants proposal dated January 15, 2014, attached hereto and incorporated herein as Exhibit A.
- 1.1 **PROFESSIONAL SERVICES PROVIDED BY CONSULTANT.** The professional services to be performed by CONSULTANT shall consist of but not be limited to the following:
 - 1.1.1 Work closely with the City Engineer in performing work in accordance with this Agreement in order to receive clarification as to the result which the CITY expects to be accomplished by CONSULTANT. The City Engineer, under the authority of the City Manager, shall be the CITY’S authorized representative in the

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interpretation and enforcement of all work performed in connection with this Agreement. The City Engineer may delegate authority in connection with this Agreement to the City Engineer's designees. For the purposes of directing the CONSULTANT'S performance in accordance with this Agreement, the City Engineer delegates authority to Jason Dafforn, Water Utilities Division Manager.

- 1.1.2 In compliance with Government Code section 7550, the CONSULTANT shall include a separate section in the proposal prepared pursuant to this Agreement, which contains a list of all the subcontractors and dollar amounts of all contracts and subcontracts required for the preparation of work described in this Agreement.
- 1.1.3 Visit and carefully examine the location of the project as often as necessary to become acquainted with all conditions which are visible or could reasonably be discovered, and which might have an impact upon the construction of the project.
- 1.1.4 Design, prepare and submit to the City Engineer, plans and specifications for the construction of the project as described in the Scope of Work, and in the time and manner set forth in this Agreement.
- 1.1.5 Prepare and submit to the City Engineer, concurrently with the design plans, the following:
 - a. A written estimate of probable construction costs.
 - b. A written list of submittals, which the construction contractor will be required to provide during the construction phase of the project.
- 1.1.6 Upon completion of construction, prepare, approve and sign a set of As-Built record drawings.
- 1.1.7 Provide office and field assistance to the City during the bidding and construction periods upon request by City Engineer to include the services listed below:
 - a. Provide consultation and advice to the City during construction of the project.
 - b. Review and comment on detailed construction drawings, shop and erection drawings submitted by the contractor, subcontractors and suppliers for compliance with the construction contract documents.
 - c. Review and comment on laboratory, shop and mill test reports on materials and equipment.

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- d. Review and make recommendations on all construction contract change orders and requests for clarification from the contractor.
- e. Prepare engineering cost estimates.
- f. Prepare design changes and clarifications to the plans and specifications.
- g. Prepare needed reports and notices.
- h. Provide periodic visits to the site to monitor construction.
- i. Attend meetings with the City Engineer or his designees.

1.2 **SERVICES PROVIDED BY CITY.** The CITY shall perform the following services:

- 1.2.1 Provide access to all public improvement plans and records and furnish one copy of drawings and reports requested.
- 1.2.2 Obtain all necessary permits from other regulatory agencies and other Departments. CONSULTANT shall participate in the completion of such forms but CITY will submit these and pay for any applicable fees.
- 1.2.3 Provide sample of title block for the plans and standard form Public Works Construction Contract Documents to be used with the General Provisions (Specifications).
- 1.2.4 Upon request, verify the location of existing CITY owned utilities.
- 1.2.5 Provide all legal advertising mailings and postings required.
- 1.2.6 Duplicate all final plans and specifications.
- 1.2.7 Provide all necessary surveying and testing required for design, including geotechnical engineering services if required during construction.
- 1.2.8 Provide overall project management.
- 1.2.9 Provide coordination of all inquiries from prospective bidders during the bidding period.

2.0 **TIMING REQUIREMENTS**

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- 2.1 Time is of the essence in the performance of work under this Agreement and the following timing requirements shall be strictly adhered to unless otherwise modified in writing as set forth in Section 2.6. Failure by CONSULTANT to strictly adhere to these timing requirements may result in termination of this Agreement by the CITY and the assessment of damages against the CONSULTANT for delays.
- 2.2 Phase I. CONSULTANT shall prepare and deliver a copy of the final design memos to the City Engineer within 90 calendar days of the execution of this Agreement. No work shall be performed by CONSULTANT beyond the Phase I stage until the City engineer has given written approval of the preliminary design and authorization to perform Phase II.
- 2.3 Phase II. CONSULTANT shall prepare and deliver a copy of the 50% design plans to the City Engineer within 120 calendar days of the execution of this Agreement. No work shall be performed by CONSULTANT beyond the Phase II stage until the City Engineer has given authorization to perform Phase III.
- 2.4 Phase III. CONSULTANT shall prepare and deliver a copy of the 90% design plans to the City Engineer within 180 calendar days of the execution of this Agreement. No work shall be performed by CONSULTANT beyond the Phase III stage until the City Engineer has given authorization to perform Phase IV.
- 2.5 Phase IV. CONSULTANT shall prepare and deliver the final design plans to the City Engineer within 210 calendar days of the execution of this Agreement.
- 2.6 CONSULTANT shall submit all requests for extensions of time for performance in writing to the City engineer no later than ten (10) calendar days after the start of the condition which purportedly caused the delay, and not later than the date on which performance is due. The City Engineer shall review all such requests and may grant reasonable time extensions for unforeseeable delays which are beyond CONSULTANT'S control.
- 2.7 For all time periods not specifically set forth herein, the CONSULTANT shall respond in the most expedient and appropriate manner under the circumstances, by either telephone, fax hand delivery or mail.
- 3.0 **DESIGN CRITERIA AND STANDARDS.** All work shall be performed in accordance with applicable CITY, state and federal codes and criteria. In the performance of its professional services, CONSULTANT shall use the degree of care and skill ordinarily exercised by consultants under similar conditions.

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All plans shall be ink drawn on standard mylar sheets available from the CITY at no cost to CONSULTANT. Contract specifications shall conform to the CITY'S specification procedures and the format of the CITY'S standard form Contract Documents for Public Works Construction.

- 4.0 **INDEPENDENT CONTRACTOR.** CONSULTANT'S relationship to the CITY shall be that of an independent contractor. CONSULTANT shall have no authority, express or implied, to act on behalf of the CITY as an agent, or to bind the CITY to any obligation whatsoever, unless specifically authorized in writing by the City Engineer. The CONSULTANT shall not be authorized to communicate directly with, nor in any way direct the actions of, any bidder or the construction contractor for this project without the prior written authorization by the City Engineer. CONSULTANT shall be sole responsible for the performance of any of its employees, agents or subcontractors under this agreement.

CONSULTANT shall report to the CITY any and all employees, agents and consultants performing work in connection with this project, and all shall be subject to the approval of the CITY.

- 5.0 **CITY BUSINESS LICENSE.** Prior to the commencement of any work under this agreement, the CONSULTANT shall obtain and present a copy of an Oceanside City Business License to the City Engineer.
- 6.0 **WORKERS' COMPENSATION.** Pursuant to Labor Code section 1861, the CONSULTANT hereby certifies that the CONSULTANT is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and the CONSULTANT will comply with such provisions and provide certification of such compliance as a part of these Award Documents. The certification shall be in accordance with Subsections 7.3 through 7.8 of this Agreement.
- 7.0 **LIABILITY INSURANCE.**
- 7.1 CONSULTANT shall, throughout the duration of this Agreement, maintain comprehensive general liability and property damage insurance, or commercial general liability insurance, covering all operations of CONSULTANT, its agents and employees, performed in connection with this Agreement including, but not limited to, premises and automobile.

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7.2 CONSULTANT shall maintain liability insurance in the following minimum limits:

Comprehensive General Liability Insurance
(bodily injury and property damage)

Combined Single Limit Per Occurrence	\$ 1,000,000
General Aggregate	\$ 2,000,000*

Commercial General Liability Insurance
(bodily injury and property damage)

General limit per occurrence	\$ 1,000,000
General limit project specific	\$ 2,000,000

<u>Automobile Liability Insurance</u>	\$ 1,000,000
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*General aggregate per year, or part thereof, with respect to losses or other acts or omissions of CONSULTANT under this Agreement.

7.3 If coverage is provided through a Commercial General Liability Insurance policy, a minimum of 50% of each of the aggregate limits shall remain available at all times. If over 50% of any aggregate limit has been paid or reserved, the CITY may require additional coverage to be purchased by the CONSULTANT to restore the required limits. The CONSULTANT shall also notify the CITY'S Project Manager promptly of all losses or claims over \$25,000 resulting from work performed under this contract, or any loss or claim against the CONSULTANT resulting from any of the CONSULTANT'S work.

7.4 All insurance companies affording coverage to the CONSULTANT for the purposes of this Section shall add the City of Oceanside as "additional insured" under the designated insurance policy for all work performed under this Agreement. Insurance coverage provided to the CITY as an additional insured shall be primary insurance and other insurance maintained by the CITY, its officers, agents and employees shall be excess only and not contributing with insurance provided pursuant to this Section.

7.5 All insurance companies affording coverage to the CONSULTANT pursuant to this Agreement shall be insurance organizations authorized by the Insurance Commissioner of the State of California to transact business of insurance in the state or be rated as A-X or higher by A.M. Best.

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- 7.6 CONSULTANT shall provide thirty (30) days written notice to the CITY should any insurance policy required by this Agreement be cancelled before the expiration date. For the purposes of this notice requirement, any material change in the policy prior to the expiration shall be considered a cancellation.
- 7.7 CONSULTANT shall provide evidence of compliance with the insurance requirements listed above by providing, at minimum, a Certificate of Insurance and applicable endorsements, in a form satisfactory to the City Attorney, concurrently with the submittal of this Agreement.
- 7.8 CONSULTANT shall provide a substitute Certificate of Insurance no later than thirty (30) days prior to the policy expiration date. Failure by the CONSULTANT to provide such a substitution and extend the policy expiration date shall be considered a default by CONSULTANT and may subject the CONSULTANT to a suspension or termination of work under the Agreement.
- 7.9 Maintenance of insurance by the CONSULTANT as specified in this Agreement shall in no way be interpreted as relieving the CONSULTANT of any responsibility whatsoever and the CONSULTANT may carry, at its own expense, such additional insurance as it deems necessary.
- 8.0 **PROFESSIONAL ERRORS AND OMISSIONS INSURANCE.** Throughout the duration of this agreement and four (4) years thereafter, the CONSULTANT shall maintain professional errors and omissions insurance for work performed in connection with this Agreement in the minimum amount of One Million dollars (\$1,000,000).

CONSULTANT shall provide evidence of compliance with these insurance requirements by providing a Certificate of Insurance.

- 9.0 **CONSULTANT'S INDEMNIFICATION OF CITY.** To the greatest extent allowed by law (including without limitation, California Civil Code Section 2782.8), CONSULTANT shall indemnify and hold harmless the CITY and its officers, agents and employees against all claims for damages to persons or property arising out of CONSULTANT'S work, including the negligent acts, errors or omissions or wrongful acts or conduct of the CONSULTANT, or its employees, agents, subcontractors, or others in connection with the execution of the work covered by this Agreement, except for those claims arising from the willful misconduct, sole negligence or active negligence of the CITY, its officers, agents, or employees. CONSULTANT'S indemnification shall include any and all costs, expenses, attorneys' fees, expert fees and liability assessed against or incurred by the CITY, its officers, agents, or employees in defending against such claims or lawsuits, whether the same proceed to judgment or not. Further, CONSULTANT at its own expense

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shall, upon written request by the CITY, defend any such suit or action brought against the CITY, its officers, agents, or employees founded upon, resulting or arising from the conduct, tortious acts or omissions of the CONSULTANT.

CONSULTANT'S indemnification of CITY shall not be limited by any prior or subsequent declaration by the CONSULTANT.

- 10.0 **ERRORS AND OMISSIONS.** In the event that the City Engineer determines that the CONSULTANT'S negligence, misconduct, errors or omissions in the performance of work under this Agreement has resulted in expense to CITY greater than would have resulted if there were no such negligence, errors or omissions in the plans or contract specifications, CONSULTANT shall reimburse CITY for the additional expenses incurred by the CITY, including engineering, construction and/or restoration expense. Nothing herein is intended to limit CITY'S rights under Sections 7, 8 or 9.
- 11.0 **NO CONFLICT OF INTEREST.** The CONSULTANT shall not be financially interested in any other CITY contract for this project. For the limited purposes of interpreting this section, the CONSULTANT shall be deemed a "City officer or employee", and this Section shall be interpreted in accordance with Government Code section 1090. In the event that the CONSULTANT becomes financially interested in any other CITY contract for this project, that other contract shall be void. The CONSULTANT shall indemnify and hold harmless the CITY, under Section 9 above, for any claims for damages resulting from the CONSULTANT'S violation of this Section.
- 12.0 **OWNERSHIP OF DOCUMENTS.** All plans and specifications, including details, computations and other documents, prepared or provided by the CONSULTANT under this Agreement shall be the property of the CITY. The CITY agrees to hold the CONSULTANT free and harmless from any claim arising from any use, other than the purpose intended, of the plans and specifications and all preliminary sketches, schematics, preliminary plans, architectural perspective renderings, working drawings, including details, computation and other documents, prepared or provided by the CONSULTANT. CONSULTANT may retain a copy of all material produced under this Agreement for the purpose of documenting their participation in this project.
- 13.0 **COMPENSATION.**
- 13.1 For work performed by CONSULTANT in accordance with this Agreement, CITY shall pay CONSULTANT in accordance with the schedule of billing rates set forth in Exhibit "A", attached hereto and incorporated herein by reference. No rate changes shall be made during the term of this Agreement without prior written

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approval of the City Engineer. CONSULTANT'S compensation for all work performed in accordance with this Agreement shall not exceed the total contract price of \$939,745.

No work shall be performed by CONSULTANT in excess of the total contract price without prior written approval of the City Engineer. CONSULTANT shall obtain approval by the City Engineer prior to performing any work which results in incidental expenses to CITY as set forth in Section 13.2.2.

13.2 CONSULTANT shall maintain accounting records including the following information:

13.2.1 Names and titles of employees or agents, types of work performed and times and dates of all work performed in connection with this Agreement which is billed on an hourly basis.

13.2.2 All incidental expenses including reproductions, computer printing, postage, mileage and subsistence.

13.3 CONSULTANT'S accounting records shall be made available to the City Engineer for verification of billings, within a reasonable time of the City Engineer's request for inspection.

13.4 CONSULTANT shall submit monthly invoices to CITY. CITY shall make partial payments to CONSULTANT not to exceed the total contract price within thirty (30) days of receipt of invoice, subject to the approval of the City engineer, and based upon the following partial payment schedule:

13.4.1 Prior to submittal of the final design memos, partial payments shall not exceed \$211,423.

13.4.2 Prior to submittal of the 50% preliminary design plans, partial payments shall not exceed \$477,553.

13.4.3 Prior to submittal of the 90% preliminary design plans, partial payments shall not exceed \$742448.

13.4.4 Final payment shall be made to CONSULTANT upon CONSULTANT'S preparation of final design plans to the satisfaction of the City Engineer.

14.0 **TERMINATION OF AGREEMENT.** Either party may terminate this Agreement by providing thirty (30) days written notice to the other party.

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If any portion of the work is terminated or abandoned by the CITY, then the CITY shall pay CONSULTANT for any work completed up to and including the date of termination or abandonment of this Agreement, in accordance with Section 13. The CITY shall be required to compensate CONSULTANT only for work performed in accordance with the Agreement up to and including the date of termination.

- 15.0 **ASSIGNMENT AND DELEGATION.** This Agreement and any portion thereof shall not be assigned or transferred, nor shall any of the CONSULTANT'S duties be delegated, without the express written consent of the CITY. Any attempt to assign or delegate this Agreement without the express written consent of the CITY shall be void and of no force or effect. Consent by the CITY to one assignment shall not be deemed to be a consent to any subsequent assignment.

This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

- 16.0 **ENTIRE AGREEMENT.** This Agreement comprises the entire integrated understanding between CITY and CONSULTANT concerning the work to be performed for this project and supersedes all prior negotiations, representations or agreements.

- 17.0 **INTERPRETATION OF THE AGREEMENT.** The interpretation, validity and enforcement of the Agreement shall be governed by and construed under the laws of the State of California. The Agreement does not limit any other rights or remedies available to CITY.

The CONSULTANT shall be responsible for complying with all local, state and federal laws whether or not said laws are expressly stated or referred to herein.

Should any provision herein be found or deemed to be invalid, the Agreement shall be construed as not containing such provision and all other provisions, which are otherwise lawful, shall remain in full force and effect, and to this end the provisions of this Agreement are severable.

- 18.0 **AGREEMENT MODIFICATION.** This Agreement may not be modified orally or in any manner other than by an Agreement in writing, signed by the parties hereto.

- 19.0 **DISPUTE RESOLUTION.**

- a. Any controversy or claim arising out of or relating to this Agreement, or concerning the breach or interpretation thereof, shall be first submitted to mediation, the cost of which shall be borne equally by the parties.

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- b. No suit shall be brought on this contract unless all statutory claims filing requirements have been met.

20.0 **NOTICES.** All notices, demands, requests, consents or other communications which this Agreement contemplates or authorizes, or requires or permits either party to give to the other, shall be in writing and shall be personally delivered or mailed to the respective party as follows:

TO CITY:

City of Oceanside
City Engineer
300 North Coast Highway
Oceanside, CA 92054

TO CONSULTANT:

Jeff Thornbury
Carollo Engineers
615 South Tremont Street
Oceanside, CA 92054

Either party may change its address by notice to the other party as provided herein.

Communications shall be deemed to have been given and received on the first to occur:

- a. Actual receipt at the offices of the party to whom the communication is to be sent, as designated above, or
- b. Three (3) working days following the deposit in the United States mail of registered or certified mail, postage prepaid, return receipt requested, addressed to the offices of the party to whom the communication is to be sent, as designated above.

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21.0 **SIGNATURES.** The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity and authority to enter into and to execute this Agreement on behalf of the respective legal entities of the CONSULTANT and the CITY.

IN WITNESS WHEREOF, the parties hereto for themselves, their heirs, executors, administrators, successors and assigns do hereby agree to the full performance of the covenants herein contained and have caused this Professional Services Agreement to be executed by setting hereunto their signatures on the dates indicated below:

CAROLLO ENGINEERS

CITY OF OCEANSIDE

By: *Jeffrey Thorsley / Vice President*
Name/Title

By: _____
Steven R. Jepsen, City Manager

Date: 1-16-14

Date: _____

By: *Janne Amulof / Vice President*
Name/Title

Date: 1/16/14

APPROVED AS TO FORM:

86-0899222
Employer ID No.

Christina Hamilton, ASST.
City Attorney

NOTARY ACKNOWLEDGMENTS OF CONSULTANT MUST BE ATTACHED.

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT
CIVIL CODE § 1189**

State of California

County of Orange }

On 01/16/2014 before me, Leanne G. Hendricks, Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared Jeffrey Thornbury
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Leanne G. Hendricks
Signature of Notary Public

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Oceanside Prof. Svc. Agr. Document Date: signed 01/16/14

Number of Pages: 12 Signer(s) Other Than Named Above: none

Capacity(ies) Claimed by Signer(s)

Signer's Name: Jeffrey Thornbury

Corporate Officer — Title(s): Vice President

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: Carollo Engineers

Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT
CIVIL CODE § 1189

State of California

County of Orange }

On January 17, 2014 before me, Leanne G. Hendricks, Notary Public,
Date Here Insert Name and Title of the Officer

personally appeared James A. Meyerhofer
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Leanne G. Hendricks
Signature of Notary Public

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: Oceanside Prof. Svc. Agr. Document Date: 01/16/14
Number of Pages: 12 Signer(s) Other Than Named Above: Jeffrey Thornbury

Capacity(ies) Claimed by Signer(s)

Signer's Name: James A. Meyerhofer
 Corporate Officer — Title(s): Vice President
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____

Signer Is Representing: Carollo Engineers

Signer Is Representing: _____

City of Oceanside
Major Plant Automation Upgrades
Project Nos. 908130000712 & 909130500722
ENGINEER's Scope of Work
January 15, 2014

The ENGINEER's scope of work will consist of the following nine major tasks:

Task 1 – Weese Water Filtration Plant (RAWWFP)

The specific automation upgrades that will be evaluated for the RAWWFP are as follows:

1. Design new PLC network. Specify quantity and location of new PLCs. Drawings will show how field wiring is to be routed to new PLCs.
2. Install new PLCs, instruments, and analyzers for process monitoring and control to achieve full compliance with Department of Health Services (DHS) requirements and to enhance the efficiency of the plant operations staff. Automating plant operation & monitoring functions that have historically been performed manually will free up operations personnel to focus other tasks.
3. Develop new process control narratives (control strategies), and plant startup and shutdown procedures. Identify in writing the alarm conditions that will result in plant shutdown and/or production of off-spec (out of DHS compliance) drinking water.
4. Integration of critical unit processes and equipment into the new SCADA system:
 - a. The existing stand-by generator will be integrated such that critical alarms and monitoring data are accessible from SCADA.
 - b. The chemical storage and feed system will be integrated such that critical alarms and monitoring data are accessible from SCADA. The chemical feed systems will be automated such that chemical injecting flow rates are controlled by either a PID flow control algorithm or a flow-pacing algorithm programmed into the PLC; the SCADA system will be configured to allow operator's to select the desired method of chemical injecting flow control.
 - c. Monitor and control the service water pumps in the new HMI and add automatic failover as a control feature.
5. Convert the existing data link between RAWWFP and SLRWWTP, from the existing leased line to a connection through the City's existing WAN. The existing radio link will be investigated to determine whether it is sufficient for future network demands. If it is determined that the the existing radio link is not suffience, the ENGINEER will evaluate alternative methods of communication.
6. Coordinate the automation upgrades with other ongoing projects at the plant, such as the RAWWFP Major Plant Improvements Project.
7. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified and included in this phase of work.

Task 2 – Mission Basin Groundwater Purification Facility (MBGPF)

The specific automation upgrades that will be evaluated for the MBGPF are as follows:

1. Upgrade existing PLCs to convert SCADA communication protocol from Modbus Plus to Modbus TCP. PLC must be compatible with Unity Pro programming software.
2. Integration of the existing stand-by generator such that critical alarms and monitoring data are accessible from SCADA.
3. Design control improvements to the FeMn system.
4. Design control improvements to the GAC system.
8. Develop a plan to relocate the existing communication equipment and main PLC when the existing Operations Building is replaced; it is anticipated that the replacement of the Operations Building will occur sometime during the construction of the SCADA automation upgrades.
9. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified.

Task 3 – La Salina Wastewater Treatment Plant (LSWWTP)

The specific automation upgrades that will be evaluated for the LSWWTP are as follows:

1. Design new PLC network. Quantity and location of PLCs will be determined during design.
2. Replace the existing 900 MHz radio link (via the Oceanside pier) to SLRWWTP with a new communication link that has suitable bandwidth & throughput to support communication with the existing SCADA domain. Potential options for the new communication link are:
 - a. New fiber optic cable.
 - b. Communication via the existing radio link to the City WAN.
3. Design and installation of a new influent plant flow meter ahead of the existing bar screens, and integration of the new flow meter into the plant SCADA system.
4. Design control improvements (automation) for the influent channel gate, and blower failover.
5. Design control improvements for the boiler system and digesters.
6. Incorporate the ferric pumps and odor scrubber into the new HMI.
7. Replace the UV system communication link to SLR (currently leased line) with new communication medium.

8. Replace the Outfall and South Pacific Lift Station communication link to SLR (currently leased line) with new communication medium.
9. Coordinate automation upgrades with other plant major improvements in progress.
10. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified.

Task 4 – San Luis Rey Wastewater Treatment Plant SLRWWTP

The specific automation upgrades will be evaluated for the SLRWWTP are as follows:

1. Integration to allow SCADA monitoring of some existing equipment/processes not currently monitored:
 - a. Digesters 1, 2, and 3.
 - b. Scrubber unit.
 - c. Ferric pumps.
2. Upgrade or replace all PLCs to convert SCADA communication protocol from Modbus Plus to Modbus TCP. This will also require replacement or installation of new communication media (e.g. fiber, copper, etc) to connect all PLCs to the SCADA system.
3. For all instances where PLC processors are replaced, the existing process control & monitoring logic will need to be converted and installed on the new PLC processors.
4. Integration of the existing stand-by generators such that critical alarms and monitoring data are accessible from SCADA.
5. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified.

Task 5 – Wastewater Collection System

The specific automation upgrades that will be evaluated for the facilities comprising the Wastewater Collection System are as follows:

1. Convert all SCADA communication links from Modbus Plus to Modbus TCP.
Implementation of this conversion will require several upgrades:
 - a. Upgrade or replacement of existing sewage lift station PLCs.
 - b. Upgrade or replacement of the communication links between the remote sewage lift stations and SLRWWTP. Most of the existing sewage lift stations communicate via leased lines, and the others communicate via radio. It is understood that abandoning the leased lines could result in a significant operating cost savings for the City, thus other more cost effective options, such as converting all lift stations to radio communications, will be investigated. Maintaining the existing radio paths or implementing new connections to the City's existing WAN will be included in the communication system evaluation.
2. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified.

Task 6 – Water Distribution System

The specific automation upgrades that will be implemented at the facilities comprising the Water Distribution System are as follows:

1. Convert all SCADA communication links from Modbus Plus to Modbus TCP.
Implementation of this conversion will require several upgrades:
 - a. Upgrade or replacement of existing water distribution system facility PLCs.
 - b. Upgrade or replacement of the communication links between the remote water distribution system facilities and SLRWWTP. Many of the existing remote facilities communicate via leased lines, and the others communicate via radio. It is understood that abandoning the leased lines could result in a significant operating cost savings for the City, thus other more cost effective options, such as converting all lift stations to radio communications, will be investigated. Maintaining the existing radio paths or implementing new connections to the City's existing WAN will be included in the communication system evaluation. Because they have historically been the most problematic, upgrading or replacing the leased lines connecting stations LU-41 and LU-42 will take priority over the other existing communication links.
2. Draft a preliminary construction phasing schedule detailing how to best coordinate the stage 2 construction activities.

In the process of conducting field investigation and the Process Control Workshop, additional automation upgrades may be identified.

Tasks 1-6 Subtasks

For tasks 1-6, the ENGINEER will provide the following subtasks ("x" denotes task number):

- Subtask x.01 Field Investigation Site Visit No. 1
- Subtask x.02 Process Control Workshop
- Subtask x.03 Develop Draft Design Memo
- Subtask x.04 Design Memo QA/QC
- Subtask x.05 Draft Design Memo Review Meeting
- Subtask x.06 Compile Final Design Memo
- Subtask x.07 Final Design Memo QA/QC
- Subtask x.08 Field Investigation Site Visit No. 2
- Subtask x.09 Develop 50% Design Drawings
- Subtask x.10 Develop 50% Design Equipment Specifications
- Subtask x.11 Develop 50% Design Process Control Strategies
- Subtask x.12 Develop 50% Construction Cost Estimate
- Subtask x.13 50% Design Package QA/QC
- Subtask x.14 50% Design Package Review Meeting
- Subtask x.15 Develop 90% Design Drawings
- Subtask x.16 Develop 90% Design Equipment Specifications
- Subtask x.17 Develop 90% Design Process Control Strategies
- Subtask x.18 Develop 90% Construction Cost Estimate (GMP)
- Subtask x.19 90% Design Package QA/QC
- Subtask x.20 90% Design Package & GMP Review Meeting

Task 7 – Facility Interconnection Infrastructure

This task will consist of evaluating the existing interconnection communication infrastructure associated with the City's water & sewer facilities and identifying potential upgrades to replace obsolete or malfunctioning equipment, reduce operating costs (e.g. leased communication lines), and/or improve communication signal reliability/bandwidth/throughput.

The design of the facility interconnection infrastructure upgrades selected for implementation, as summarized in Final Design Memo No. 7, will be incorporated into the design packages developed in tasks 1-6.

In the completion of task 7, the ENGINEER will provide the following subtasks:

- | | |
|--------------|--|
| Subtask 7.01 | Field Investigation Site Visit No. 1 |
| Subtask 7.02 | Process Control Workshop |
| Subtask 7.03 | Develop Draft Design Memo No. 7 |
| Subtask 7.04 | Design Memo No. 7 QA/QC |
| Subtask 7.05 | Draft Design Memo No. 7 Review Meeting |
| Subtask 7.06 | Compile Final Design Memo No. 7 |
| Subtask 7.07 | Final Design Memo No. 7 QA/QC |
| Subtask 7.08 | Radio Path Surveys |

Task 8 – Project Management

The ENGINEER will provide the following project management activities:

1. Internal project resource management and coordination necessary to provide the services defined herein.
2. Prepare and submit monthly progress reports to update the City on the status of the project scope, budget, and schedule. Monthly progress reports shall be submitted with monthly invoices.
3. Maintain a detailed project schedule in Microsoft Project (.mpp) format.
4. Schedule and conduct monthly progress meetings and/or conference calls with the pertinent City personnel. Create GMP and discuss the evolution of the GMP as design efforts progress.
5. Prepare and submit invoices monthly to the City.

Task 9 – HMI & PLC Software Standards Development

The ENGINEER will develop HMI & PLC software standards to achieve the following major objectives:

1. Define all data addressing and variable tagging formats.
6. Define Common Control Methods.
7. Define Specific Control Methods.
8. Provide documentation of PLC programs, concentrating on definition of defined data types (DDTs) for equipment assets and Derived Function Blocks (DFB) for specific process control logic.
9. Create libraries that will be housed within the function blocks utilizing the Unity Programming Software.
10. Provide documentation of HMI object oriented graphics, screen hierarchy, screen interface, historical data configuration, and alarming standards.
11. The level of documentation for the PLC and HMI standards will be based on what a qualified technician can understand and utilize to perform his routine programming tasks and software maintenance.
12. Coordinate the PLC and HMI standards development with the facility-specific process control strategies.

In the completion of task 9, the ENGINEER will provide the following subtasks:

Subtask 9.01 PLC Code Standards Engineering and Documentation

The ENGINEER will evaluate the City's existing PLC code to determine the applicable logic to be included in the standards development and the engineering of new DDT's and DFB's required for process logic changes and/or additions.

After evaluation of the existing PLC code, the ENGINEER will develop standards and provide documentation for the following specific functions:

1. Common Control Methods
 - a. Local/Remote Control
 - b. Auto/Manual Control
 - c. Constant speed Control
 - d. Variable Speed Control
 - e. Dual Output Open/Close Valve Control
 - f. Single Output Open/Close Valve Control
 - g. Modulating Valve Control
 - h. Equipment Sequencing
 - i. PID Loops
 - j. Run Time Accumulation

- k. Totalization
 - l. Analog signal
 - m. PLC Status Monitoring
 - n. Communications Health Monitoring
 - o. Power Fail Response
- 2. Alarms
 - a. General
 - b. Discrete
 - c. Analog

Subtask 9.02 HMI Standards Development and Documentation

After reviewing the existing HMI application, the ENGINEER will develop new standards and provide documentation for the following:

- 1. Graphic Screen hierarchy
 - a. Layout
 - b. Navigation
 - c. Device Identification
 - d. Element Styles
 - e. Process Screens
- 2. Graphic Interface Development
 - a. Complete list that fully describes all required template objects that match up to the DFBs developed in subtask 9.01. This involves the object itself (field attributes and UDAs), required scripts and its associated graphics.
 - b. Template Screens
 - c. Screen Naming Convention
 - d. Screen Navigation
 - e. Symbol Color Definitions
 - f. Key Macros
 - g. Custom Scripting
- 3. Alarming
 - a. Severity/Priority
- 4. System Status
 - a. PLC, HMI and Communications Status

The labor effort associated with task 9 is based on the following assumptions:

- 1. As a starting point, PLC and HMI standards previously developed by the ENGINEER will be used and modified to meet the specific needs of the City and the City's

facilities/equipment. The City reserves the right to make any changes desired to the ENGINEER's standards to make them suitable to the City's requirements and needs.

2. The specific PLC and HMI standards developed by the ENGINEER will be limited to those identified above under Subtasks 9.01 and 9.02.

SCADA Upgrades

Company	Address	Contact	Phone
CH2M Hill	402 W. Broadway, Suite 1450, San Diego, CA 92101	Paul Johnson	619-687-0110
Tetra Tech ASL, Inc.	10815 Rancho Bernardo Road, Suite 200, San Diego, CA 92127	Howard Arnold/Steve Tedesco	760-754-0550
HDR Engineering, Inc.	8690 Balboa Ave., Suite 200, San Diego, CA 92123	Susan Buell	858-712-8400
Malcolm Pirnie, Inc. (Arcadis)	1525 Faraday Avenue, Suite 290, Carlsbad, CA 92008	Paul F. Wilson	760-602-3800
PBS&J		Skip Griffin	
Infrastructure Engineering Corporation	301 Mission Avenue, Suite 202, Oceanside, CA 92054	Preston Lewis	760-529-0795
Cornerstone Engineering, Inc.	717 Pier View way, Oceanside, CA 92054-2801	Mike Boraks	760-722-3495
Carollo Engineers	615 South Tremont Street, Oceanside, CA 92054	Jeff Thornbury	760-637-2700
Tetra Tech ASL, Inc.	2141 El Camino Real, Suite J, Oceanside, CA 92054	Howard Arnold	760-754-0550
NV5	1029 Gallery Drive, Oceanside, CA 92057	Julian Palacios	760-476-9193
RMC Water and Environment	603 Seagaze Drive, #125, Oceanside, CA 92054	Scott Goldman, P.E., BCEE	949-420-5314

CONSULTANT PROPOSAL - RATING FORM

NAME OF FIRM: A) Carollo; B) Tetra Tech; C) Westin

DATE: 12/23/2013

PROJECT: SCADA Major Upgrades Design

PROJECT NO.: 908130000712 & 909130500722

ITEM	POINTS	CONSULTANT'S RATING				
		A	B	C	D	E
I. QUALIFICATIONS OF FIRM AND MEMBERS:						
A. Specialized expertise of members	15	15	14	13		
B. Adequacy of staff and resources.	15	15	13	10		
II. PERFORMANCE OF WORK SIMILAR IN CHARACTER:						
A. Comparable work (local area preferred).	10	8	8	6		
B. Proposal submitted by Oceanside firm.	6	6	6	0		
C. Proposal included an Oceanside firm as part of a consulting team.	4	0	0	0		
D. Additional points based on abilities, qualifications, and commitment of Oceanside firm.	5	0	0	0		
III. ABILITY TO PROVIDE SERVICES:						
A. Ability to complete job on time.	10	10	10	6		
IV. QUALITY OF PROPOSAL:						
A. Satisfactorily address all objectives.	10	9	9	7		
B. Provide additional amplifying information.	5	1	3	3		
C. Presentation, clarity, neatness.	5	5	5	4		
V. WORK PERFORMANCE FOR THE CITY:						
A. No work in past 12 months.	10			10		
B. Work in past 12 months - deductions based on Contract amount.		2	2			
VI. PRICE:		\$939,745	1,392,612	2,890,871		
A. Overall cost.	10	10	8	5		
TOTALS:	105	81	78	64	0	0

RANKING:

- 1 Carollo
- 2 Tetra Tech
- 3 Westin
- 4 _____
- 5 _____

RATED BY:

Name/Title: Jason Dafforn, Water Utilities Division Manager

Name/Title: _____

Name/Title: _____

Name/Title: _____

Date: _____