



DATE: October 12, 2011

TO: Honorable Mayor and City Councilmembers

FROM: Water Utilities Department

SUBJECT: **PROFESSIONAL SERVICES AGREEMENT WITH INFRASTRUCTURE ENGINEERING CORPORATION OF OCEANSIDE FOR THE RESERVOIR STRUCTURAL ANALYSIS**

SYNOPSIS

Staff and the Utilities Commission recommend that the City Council approve a professional services agreement with Infrastructure Engineering Corporation of Oceanside in an amount not to exceed \$158,904 for the preparation of the Reservoir Structural Analysis; and, authorize the City Manager to execute the agreement.

BACKGROUND

The City of Oceanside has 12 reservoirs in its potable water distribution system with a storage capacity of 50.5 million gallons. Reservoir age and construction types range from 55 year-old pre-stressed concrete wall with gunite cover, 16-year-old pre-stressed concrete tank with a flat roof, and a 21-year-old steel structure. There is evidence of coating deterioration and gunite cover spalling, stressing wire corrosion, and surface cracks on several reservoirs. A structural analysis of all reservoirs needs to be performed in order to maintain the water storage capacity at maximum to maintain the structural integrity of the reservoirs.

ANALYSIS

On May 26, 2011, a Request for Proposal was sent to eleven consultant engineering firms, including five Oceanside firms, to prepare the Reservoir Structural Analysis (Exhibit A).

On June 29, 2011, the Water Utilities Department received proposals from four consulting firms. Staff reviewed and evaluated the proposals and unanimously chose Infrastructure Engineering Corporation as the best qualified firm to provide the Reservoir Structural Analysis (Exhibit B & C). The project is expected to take 120 days to complete.

FISCAL IMPACT

The Reservoir Structural Analysis account (908754600712.5326.10110) has a current available balance of \$378,748 in the FY 2011-2012 Water Capital Projects Budget. Therefore, budgeted funds are available.

COMMISSION OR COMMITTEE REPORT

The Utilities Commission approved staff's recommendation at its regularly scheduled meeting on September 20, 2011.

CITY ATTORNEY'S ANALYSIS

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

INSURANCE REQUIREMENTS

The City's standard insurance requirements will be met.

RECOMMENDATION

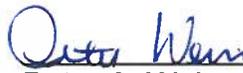
Staff and the Utilities Commission recommend that the City Council approve a professional services agreement with Infrastructure Engineering Corporation of Oceanside in an amount not to exceed \$158,904 for the preparation of the Reservoir Structural Analysis; and, authorize the City Manager to execute the agreement.

PREPARED BY:

SUBMITTED BY:

For 

Greg Blakely
Administration Manager



Peter A. Weiss
City Manager

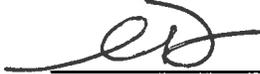
REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager

Cari Dale, Water Utilities Director

Teri Ferro, Financial Services Director







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

RESERVOIR STRUCTURAL ANALYSIS
 (908754600712)
 CONSULTANT MAILING LIST

EXHIBIT A

Company	Address	City	State	Zip	First Name	Last Name	Title	Phone	Fax
O'Day Consultants	2710 Loker Ave. W, Suite 100	Carlsbad	CA	92010	Patrick	O'Day		760-931-7700	
Richard Brady & Associates	3710 Ruffin Road	San Diego	CA	92123	Richard	Brady		858-496-0500	858-496-0505
RBF Consulting	9755 Clairemont Mesa Blvd., Suite 100	San Diego	CA	92124	John	Harris		858-614-5025	
Dudek & Associates, Inc.	605 Third Street	Encinitas	CA	92024	Patty	Post		760-942-5147	
Parsons Water & Infrastructure Inc.	110 West A Street, Suite 1050	San Diego	CA	92101	Luke/Richard	Wendel, P. E./Trembath			
Malcolm Pirnie/ARCADIS	1525 Faraday Avenue, Suite 290	Carlsbad	CA	92008	Paul	Wilson	Sr. Proj. Engineer	760-602-3807	760-602-3838
Infrastructure Engineering Corporation	301 Mission Avenue, Suite 202	Oceanside	CA	92054	Preston	Lewis		760-529-0795	760-529-0785
Comerstone Engineering, Inc.	717 Pier View way	Oceanside	CA	92054	Derrill	Whitten		760-722-3495	(760) 722-3490
Carollo Engineers	615 South Tremont Street	Oceanside	CA	92054	Dennis	Wood		760-637-2700	760-637-2701
Tetra Tech, Inc.	2141 El Camino Real, Suite J	Oceanside	CA	92054	Howard/Steve	Arnold/Tedesco		760-754-0550	
Nolte & Associates	1029 Gallery Drive	Oceanside	CA	92057	Jonathan	Smith			

CONSULTANT PROPOSAL - RATING FORM

EXHIBIT B

NAME OF FIRM: (A) Tetra Tech; (B) Richard Brady & Assoc.; (C) Carollo; (D) Infrastructure Engineering Corp.
 PROJECT: Reservoir Structural Analysis

DATE: 7/29/2011
 PROJECT NO. 908754600712

ITEM	POINTS	CONSULTANT'S RATING				
		A	B	C	D	E
I. QUALIFICATIONS OF FIRM AND MEMBERS:						
A. Specialized expertise of members	15	15	12	14	14	
B. Adequacy of staff and resources.	15	11	14	14	14	
II. PERFORMANCE OF WORK SIMILAR IN CHARACTER:						
A. Comparable work (local area preferred).	10	10	5	10	10	
B. Proposal submitted by Oceanside firm.	6	6	6	6	6	
C. Proposal included an Oceanside firm as part of a consulting team	4	4	0	0	1	
D. Additional points based on abilities, qualifications, and commitment of Oceanside firm.	5	5	5	5	5	
III. ABILITY TO PROVIDE SERVICES:						
A. Ability to complete job on time.	10	10	10	10	9	
IV. QUALITY OF PROPOSAL:						
A. Satisfactorily address all objectives.	10	8	9	7	10	
B. Provide additional amplifying information.	5	5	1	5	5	
C. Presentation, clarity, neatness.	5	5	3	4	5	
V. WORK PERFORMANCE FOR THE CITY:						
A. No work in past 12 months.	10	10	10			
B. Work in past 12 months - deductions based on Contract amount.				2	2	
VI. PRICE:						
A. Overall cost.	10	1	2	9	10	
TOTALS:	105	90	77	86	91	0

RANKING:

- 1 Infrastructure Engineering Corporation (IEC)
- 2 Tetra Tech, Inc.
- 3 Carollo Engineers, Inc.
- 4 Richard Brady & Associates (Brady)
- 5 _____

RATED BY:

- Name/Title: Jason Dafforn, Water/Wastewater Project Manager
 Name/Title: Gary Bodman, Water/Wastewater Project Manager
 Name/Title: _____
 Name/Title: _____
 Name/Title: _____

CITY OF OCEANSIDE

PROFESSIONAL SERVICES AGREEMENT

PROJECT: RESERVOIR STRUCTURAL ANALYSIS (908754600712)

THIS AGREEMENT, dated _____, 2011 for identification purposes, is made and entered into by and between the CITY OF OCEANSIDE, a municipal corporation, hereinafter designated as "CITY", and INFRASTRUCTURE ENGINEERING CORPORATION, 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.** CONSULTANT desires to provide professional engineering services for providing a structural engineering analysis, conclusions, and recommendations for the Reservoir Structural Analysis project (908754600712) for the City's twelve reservoirs as described in the CONSULTANT'S proposal dated June 29, 2011 and listed in the Scope of Services attached hereto as Exhibit A. The project is more particularly described as follows:
 - 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:

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

- 1.1.1 Work closely with the Water Utilities Director 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 Water Utilities Director, under the authority of the City Manager, shall be the CITY'S authorized representative in the interpretation and enforcement of all work performed in connection with this Agreement. The Water Utilities Director may delegate authority in connection with this Agreement to the Water Utilities Director's designees. For the purposes of directing the CONSULTANT'S performance in accordance with this Agreement, the Water Utilities Director delegates authority to Gary Bodman, Water/Wastewater Project 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 outcome of the analysis.
- 1.1.4 Prepare and submit to the City, an engineering structural analysis for the City's twelve (12) reservoirs as described in the Scope of Work, and in the time and manner set forth in this Agreement.
- 1.1.5 Attend meetings with the Water Utilities Director or her 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 Upon request, verify the location of existing CITY owned utilities.
 - 1.2.3 Provide all legal advertising mailings and postings required.
 - 1.2.4 Provide access around each reservoir.
 - 1.2.5 Provide overall project management.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

2.0 TIMING REQUIREMENTS

- 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 2.5. 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 six (6) copies of a preliminary draft of the Reservoir Structural Analysis Report to the Water Utilities Director within 90 calendar days of the execution of this Agreement. No work shall be performed by CONSULTANT beyond the Phase I stage until the Water Utilities Director has given written approval of the preliminary draft of the Reservoir Structural Analysis Report and authorization to perform Phase II.
- 2.3 Phase II. CONSULTANT shall prepare and deliver six (6) copies of a second draft of the Reservoir Structural Analysis Report to the Water Utilities Director within 10 calendar days of the preliminary draft of the Reservoir Structural Analysis Report written approval. No work shall be performed beyond the Phase II stage until the City has given written approval to perform Phase III.
- 2.4 Phase III. CONSULTANT shall prepare and deliver six (6) hard copies and two (2) CD's of the Reservoir Structural Analysis final report within 10 calendar days of the Reservoir Structural Analysis second draft report approval and the Water Utilities Directors' written request to submit the final report.
- 2.5 CONSULTANT shall submit all requests for extensions of time for performance in writing to the Water Utilities Director 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 Water Utilities Director shall review all such requests and may grant reasonable time extensions for unforeseeable delays which are beyond CONSULTANT'S control.
- 2.6 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 REPORT 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.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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 Water Utilities Director. 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 Water Utilities Director. 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 Water Utilities Director.

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.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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.

7.2.1 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.

7.3 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.

7.4 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.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

- 7.5 All insurance companies affording coverage shall provide thirty (30) days written notice to the CITY should the policy 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.
- 7.6 CONSULTANT shall provide evidence of compliance with the insurance requirements listed above by providing a Certificate of Insurance and applicable endorsements, in a form satisfactory to the City Attorney, concurrently with the submittal of this Agreement.
- 7.7 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.
- 7.8 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.** 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

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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 Water Utilities Director 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

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

rate changes shall be made during the term of this Agreement without prior written approval of the Water Utilities Director. CONSULTANT'S compensation for all work performed in accordance with this Agreement shall not exceed the total contract price of \$158,904.

No work shall be performed by CONSULTANT in excess of the total contract price without prior written approval of the Water Utilities Director.

CONSULTANT shall obtain approval by the Water Utilities Director 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 Water Utilities Director for verification of billings, within a reasonable time of the Water Utilities Director'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 Water Utilities Director, and based upon the following partial payment schedule:
 - 13.4.1 Prior to submittal and CITY approval of the preliminary draft of the Reservoir Structural Analysis Report, partial payments shall not exceed \$134,174.00.
 - 13.4.2 Prior to submittal and CITY approval of the second draft of the Reservoir Structural Analysis Report, partial payments shall not exceed \$147,929.00.
 - 13.4.3 Final payment of \$10,975.00 shall be made to CONSULTANT upon Consultant's preparation and submittal, and the City's acceptance, of the final Reservoir Structural Analysis Report.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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

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. A 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.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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

20. **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:

Cari Dale, Water Utilities Director
City of Oceanside
300 North Coast Highway
Oceanside, CA 92054

TO CONSULTANT:

Preston Lewis, President
Infrastructure Engineering Corporation
301 Mission Avenue, Suite 202
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.

RESERVOIR STRUCTURAL ANALYSIS (908754600712)

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:

INFRASTRUCTURE ENGINEERING CORPORATION

CITY OF OCEANSIDE

By: [Signature], PRESIDENT
Name/Title

By: _____
City Manager

Date: 9/19/2011

Date: _____

By: [Signature] / Secretary
Name/Title

APPROVED AS TO FORM:

Date: 9/19/2011

[Signature], ASST.
City Attorney

01-0617154
Employer ID No.

NOTARY ACKNOWLEDGMENTS OF CONSULTANT MUST BE ATTACHED.

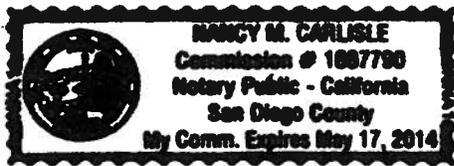
CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of SAN DIEGO

On SEPT. 19, 2011 before me, NANCY M. CARLISLE NOTARY PUBLIC

personally appeared PRESTON H. LEWIS



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 Nancy M. Carlisle
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

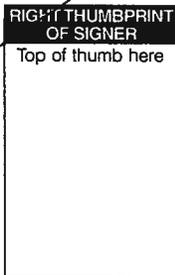
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

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

Signer Is Representing: _____



Signer's Name: _____

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

Signer Is Representing: _____



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

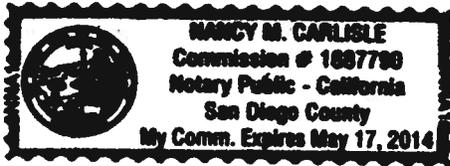
State of California

County of SAN DIEGO

On SEPT. 19 2011 before me, NANCY M. CARLISLE NOTARY PUBLIC

personally appeared VICKI E. SHAW

Name(s) of Signer(s)



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 Nancy M. Carlisle
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

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Title or Type of Document: _____

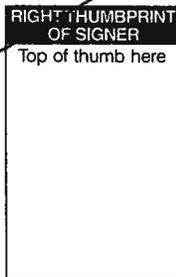
Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

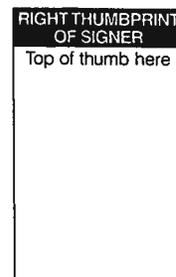
- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



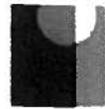
Signer Is Representing: _____

Signer's Name: _____

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



Signer Is Representing: _____



**City of Oceanside
Water Utilities Department
Reservoir Structural Analysis
(908754600712)
Exhibit A: Scope of Services**

June 29, 2011

Introduction

The City of Oceanside operates twelve (12) potable water storage reservoirs in its distribution system. The combined total storage capacity is 50.5 million gallons. Eleven of the reservoirs are of pre-stressed concrete construction and one reservoir is constructed of steel. A summary of the known reservoir characteristics is presented below:

Reservoir Characteristics						
Name of Reservoir	Location	Capacity (MG)	Low Water Level (ft)	High Water Level (ft)	Year of Construction	Construction Type
Fire Mountain Reservoir	2570 Fire Mountain Drive	3	292	322	1956	Pre-stressed concrete, above ground
Talone Reservoir	1355 Paseo Hermosa	5	290	320	1982	Pre-stressed concrete, above ground
Pilgrim Reservoir	5195 Village Drive	5	285.5	321	1978	Pre-stressed concrete, above ground
John Paul Steiger Reservoir (formerly Heritage)	398 Rancho Del Oro Road	3	290	320	1975	Pre-stressed concrete, above ground
Henie Hills Reservoir	2 Barnard Road	3	380	409	1960	Pre-stressed concrete, above ground
Morro Hills #1	1541 Wilshire Road	5	708	738	1963	Pre-stressed concrete, above ground
Morro Hills #2	1541 Wilshire Road	5	708	738	1990	Steel



Guajome Reservoir #1	1398 Temple Heights Road	5	481	511	1962	Pre-stressed concrete, above ground
Guajome Reservoir #2	1398 Temple Heights Road	5	481	511	1982	Pre-stressed concrete, above ground
San Francisco Peak #1	3471 Cannon Road	1.5	545	569	1960	Pre-stressed concrete, above ground
San Francisco Peak #2	3471 Cannon Road	5	481	511	1984	Pre-stressed concrete, above ground
Wire Mountain Reservoir	702 W. Airport Rd	5	290	320	1995	Pre-stressed concrete, partially buried
Total		50.5				

Task 1 - Data Collection and Review

The first step will be obtain and review available data for each reservoir including record drawings, shop drawings, geotechnical reports, past investigation reports, and repair or improvement plans. IEC staff, having performed many prior projects with the Water Utilities Department, will obtain available information referenced above and review and compile the information and distribute it to the project team members for further review.

Task 2 - Field Investigation Plan

On the basis of this data review, we will develop and submit a field investigation plan for City review. The field investigation plan will describe the overall investigation objectives, provide a description of each reservoir, describe the proposed investigatory methods, and procedures (including staffing and safety considerations). The Field Investigation Plan will be provided to the City in Technical Memorandum format for City review and comment. Upon incorporation of City comments, and City review and approval of the final Field Investigation Plan, we will initiate the field work to consist of external and internal investigations. The investigation work will be performed by experienced personnel including IEC, Simon Wong Engineering (SWE), and CSI Services, a leading technical services company that routinely provides similar services to Cities and Water Districts throughout California. Our team will be informally augmented by a local concrete reservoir construction and rehabilitation firm that will provide technical guidance to the project team regarding sound testing the shotcrete cover coat of the concrete reservoirs and the reinforcement investigations.

Task 3 - Field Investigation

The proposed work will consist of an exterior and interior evaluation of the City's 12 reservoirs. This proposal assumes satisfactory access roads that are suitable for the use of a conventional rubber tire boom lift to access around the perimeter of each tank. It is assumed that access to the reservoir interiors can be made from sound ladders and that a crane will not be required for safe access. The internal inspections, i.e., underwater surveys, will be performed while the reservoirs are full of water and shall use



AWWA C652 sanitary procedures and special underwater techniques. The survey will be conducted by a team of highly trained inspectors having exceptional diving and underwater photography skills. During the evaluations, particular attention will be paid to the condition of the following critical areas:

- Roof
- Roof Structure
- Ring Girder
- Shell
- Tank Bottom
- Riser Pipe
- Overflow Pipe/Weir
- Drains/Sumps
- Inlets/Outlets
- Miscellaneous Piping
- Vents/Screens
- Shell and Roof Chine/Joints
- Weld or Bolt Connections
- Ladders/Safety Climbs
- Vandal Deterrents
- Platforms/Railings
- Manways
- Hatches
- Ringwall/Anchor Bolts
- Grade/Tank Crevices
- Water Level Indicators
- CP Equipment/Components

The focus of the inspections will be to evaluate the current condition of the interior and exterior of each reservoir to include watertightness of the structures, exterior surfaces of walls and roofs to identify signs of deterioration or corrosion, including rust stains, efflorescence, cracks, spalling, leaks, dampness, and protective coating failure. Sound testing of the gunite or shotcrete cover coat of the concrete reservoirs will be performed to check for areas of deterioration or other suspect areas for evidence of separation or “disbanding” from the core wall. For the eleven prestressed concrete tanks, we will perform reinforcement investigations on six (6) 8-inch square areas for each reservoir following the procedures as contained in AWWA D-110 Section 6.4.5. Depending on what the inspection team observes at each particular reservoir, more or less test areas may be recommended, but this proposal assumes an average of six for the 11 concrete reservoirs. The tests will be performed using a rotohammer to carefully remove a small (approximately 8-inch square) area of shotcrete to expose the wires or strands. The wires will be visually observed for evidence of deterioration, damage, and corrosion and pH measurements of the surrounding concrete will be taken. Following the observations, the test areas shall be restored using a dry-pack cement-sand mortar.

For the steel tank, we will evaluate the coating systems, and the level of corrosion on the tank. The evaluation will involve visual observations, dry film thickness (DFT) measurements, and adhesion testing. Ultrasonic steel thickness testing and corrosion pit depth measurements may also be completed, if applicable. Where applicable, visual exterior observations will note the degree of exterior chalking and any breaks, blisters, or other coating defects. The degree of chalking will be determined in general accordance with ASTM D4214 “Standard Test Method for Evaluating the Degree of Chalking of Exterior Paint Films” and areas of rusting will be quantified in accordance with ASTM D610 “Standard Test Method for Evaluating the Degree of Rusting of Painted Steel Surfaces.” Dry film thickness (DFT) measurements will be obtained in general accordance with SSPC: The Society of Protective Coatings Paint Application Specification No. 2 “Measurement of Dry Film Thickness with Magnetic Gages” and exterior paint adhesion will be assessed using ASTM D3359 “Standard Test Method for Evaluating



Adhesion by Tape Test, Method A” (modified) and/or ASTM D6677 “Adhesion by Knife Test”. Any blistering will be quantified in accordance with ASTM D714 “Standard Test Method for Evaluating the Degree of Blistering Paints.” The survey will investigate any areas where rust or other corrosion products are in evidence for erosion, cracking, pitting and/or metal loss. Where applicable, corrosion pits will be measured and compared to obtained steel thickness measurements.

On the observable tanks, indications of leakage will be documented and the measurement of bottom sediment will be reported. CSI will also comment on applicable safety, sanitary, vandalism, and seismic concerns. Safety concerns will include ladder size/design observations, fall-prevention systems, and roof access areas. Sanitary concerns will make note of items such as venting and other tank openings such as overflow air-gaps. Vandalism concerns will involve an evaluation of perimeter fencing, locking mechanisms, and climb deterrents. Seismic concerns will address items such as obvious visual indications of tank movement, flexible couplings, and drain locations.

The product of the above will be a written narrative and color pictorial description of the condition of the tanks along with specific recommendations for immediate corrective measures, if such work is required. Recommendations for maintenance work will be based on the coatings’ percentage of failure, ability to be recoated, film heavy metal content, estimated remaining life of the system(s); and/or concerns with any impressed current cathodic protection system. A narrated DVD video for each reservoir will also be included for the underwater inspection.

Coincident with the field investigation work performed under this task, our staff will provide value added services to review other issues commonly found at similar reservoir sites. These shall consist of drainage issues, paving, fencing, access, and piping. Findings shall be documented in the final report; however, significant issues shall be immediately brought to the City’s attention.

Task 4 - Structural Analysis

Following completion of the Field Investigation, SWE will perform the structural analysis for each reservoir/site to identify deficiencies as reviewed against applicable codes and standards such as UBC, ACI, and AWWA. The seismic analysis for the liquid inside the tank will conform to AWWA D-110, which is based on a two degree of freedom system (2DOF). The two degrees of freedom refer to the impulsive and convective components in a seismic event. The impulsive component is the liquid that is constrained at the lower portion of the container. The convective component is the portion of liquid that is at the upper portion that sloshes. The effects of these liquids will be analyzed and the corresponding hydrodynamic stresses calculated. Peak ground accelerations (PGA’s) for each reservoir site will be obtained through the location of longitude and latitude of each reservoir via USGS website. The obtained PGA’s will be used for the reservoir seismic analysis to determine:

- a. Core wall circumferential compression stresses
- b. Core wall vertical prestress
- c. Seismic cable stress
- d. Foot perimeter width
- e. Sloshing and freeboard

Following the reservoir structural and seismic analysis, repair approaches for concrete dome roofs, exterior wall surfaces, interior wall and roof surfaces, interior columns, and observed leakage will be developed.

Task 5 - Report Preparation

The IEC team will integrate the results of the field investigation and structural analysis into a comprehensive report to summarize the project objectives, methods, findings, and recommendations. The report will be structured to provide prioritized recommendations to enable the City to make the



most efficient use of available funding in order to address the most critical areas first. The report will address the following specific areas:

- Reservoir characteristics
- Field investigation procedures
- Field investigation results
- Development of repair approaches and options for each reservoir
- Quantification of repair work to include square footage/linear footage or other measure of concrete or shotcrete repairs, protective coatings, prestressing wire repairs, regrouting, new curbing, crack repair, joint calking, repairs to vertical stress bar cans.
- Discussion of recommended site issues such as access, drainage, fencing, easements, gates, and piping.
- Discussion of recommended seismic retrofits or upgrades
- Planning level costs for each recommended repair or improvements
- Estimation of remaining useful life of reservoirs upon implementation of repairs including lifecycle operation and maintenance costs (50 year).
- Prioritization of the recommended projects.

A preliminary draft report will be provided in Adobe pdf and hard copy (6 copies) format for City review. Upon review and discussion of City comments at a comment review meeting, a second draft report will be provided for final City review. Upon incorporation of comments to the second draft, a final report will be published and 6 hard copies and two soft copies on CD (Adobe pdf) will be provided.

Task 6 – Meetings and Project Management

Project management will consist of the following:

- Develop and maintain project schedule. Meet with the City to review project requirements, identify milestones and critical path items. Prepare schedule for the City's review at the project kick-off meeting. Update schedule as necessary throughout the project.
- Kick-off meeting and progress meetings. Prepare agenda and hold and conduct project meetings as necessary throughout the project duration. Prepare meeting minutes for each meeting.
- Coordinate subconsultants to maintain a unified approach to the project.
- Maintain project documentation, meeting minutes, conversation logs, etc.



**FEE PROPOSAL
CITY OF OCEANSIDE
RESERVOIR STRUCTURAL ANALYSIS (908754600712)**

Subtask Number	Subtask Description Summary	Classification	Principal	Sr. Project Manager	Sr. Project Engineer	Engineer III	Designer	Engineering Technician	Word Processor	Subtask Labor-Hours	Subtask Labor Cost	Direct Cost	Subcontract	Total Cost
TASK 1	DATA COLLECTION AND REVIEW		1	2	4	8	\$135.00	\$65.00	\$75.00	17	\$2,330	\$100	\$3,494	\$5,924
TASK 2	FIELD INVESTIGATION PLAN		2	4	16	8				30	\$4,600	\$50	\$0	\$4,650
TASK 3	FIELD INVESTIGATION (Divers)			4	16	88		96		204	\$20,460	\$1,500	\$56,103	\$78,063
TASK 4	STRUCTURAL ANALYSIS			1	2					3	\$495	\$0	\$17,472	\$17,967
TASK 5	REPORT PREPARATION		4	8	80	40	8		4	144	\$21,020	\$200	\$22,680	\$43,900
TASK 6	MEETINGS AND PROJECT MANAGEMENT		2	24	16				2	44	\$7,450	\$200	\$750	\$8,400
	Task Subtotal - Hours		9	43	134	144	8	96	8	442				
	Task Subtotal - Costs		\$1,710	\$7,955	\$20,770	\$18,000	\$1,080	\$6,240	\$600		\$56,355	\$2,050	\$100,499	\$158,904

TOTAL ESTIMATED FEE TASKS 1-6:

\$158,904

Optional Scope Items:

Reservoir Cleaning (excluding sediment disposal) \$310/hour

Underwater Repairs \$310/hour

1. Assumes work to be completed during same mobilization as inspection
2. Applicable only if divers are used
3. Work will be prevailing wage, as applicable