

# Staff Summary Report



Council Meeting Date: 04/03/08

Agenda Item Number: \_\_\_\_\_

**SUBJECT:** Request approval of a professional services contract with Aqua Engineering, Inc., for design of a new sprinkler system for Kiwanis Park.

**DOCUMENT NAME:** 20080403PWDR03 **KIWANIS COMMUNITY PARK (0706-25)**  
**PROJECT NO. 6303091**

**SUPPORTING DOCS:** Yes

**COMMENTS:** Total cost for this contract shall not to exceed \$274,856.

**PREPARED BY:** Donna Rygiel, Engineering Contract Administrator (x8520)

**REVIEWED BY:** Andy Goh, Deputy PW Manager/City Engineer (x8896)

**APPROVED BY:** Glenn Kephart, Public Works Manager (x8205)

**LEGAL REVIEW AS TO FORM:** Teresa Voss, Assistant City Attorney (x8814)

**FISCAL NOTE:** Sufficient funds are available in Capital Improvement Fund No. 6303091.

**RECOMMENDATION:** Approve contract and authorize the Mayor to sign all necessary documents for the contract.

**ADDITIONAL INFO:** The scope of work for this contract is to design a new sprinkler system that will serve approximately 125 acres of park area. The system will provide service to a variety of sports fields, turf and xeriscape areas and all existing park amenities and facilities.

The fee was negotiated by staff and is considered reasonable for the scope of services. Aqua Engineering, Inc. was selected from our consultant on-call list consistent with Title 41 Arizona Revised Statutes.



CITY OF TEMPE, ARIZONA  
PUBLIC WORKS DEPARTMENT  
DIVISION OF ENGINEERING

**CONTRACT FOR PROFESSIONAL SERVICES**

THIS CONTRACT is made and entered into on the 3<sup>rd</sup> day of April, 2008, by and between the City of Tempe, hereinafter called CITY, and AQUA ENGINEERING, INC., hereinafter called the CONSULTANT.

The CITY engages the CONSULTANT to perform professional services for a project known and described as KIWANIS PARK SPRINKLER SYSTEM REPLACEMENT, Project No. 6303091, hereinafter called the "Project".

**SECTION I - SERVICES OF THE CONSULTANT**

The CONSULTANT shall perform the following professional services to CITY standards and in accordance with the degree of care and skill that a registered professional in Arizona would exercise under similar conditions:

- A. The CONSULTANT shall provide design services as described in Exhibit "A" attached.
- B. The CONSULTANT has assigned Bill Whitmore as the Project Manager for this Contract. Prior written approval is required in the event the CONSULTANT needs to change the Project Manager. The CONSULTANT shall submit the qualifications of the proposed substituted personnel to the City for approval.
- C. The CONSULTANT shall prepare and submit a detailed opinion of probable cost of the project.
- D. The CONSULTANT shall follow and comply with the Public Improvement Project Guide as directed by the CITY.
- E. The CONSULTANT shall prepare plans and technical specifications per the requirements of the applicable chapters of the City's Engineering Design Criteria Manual, latest revision, and the Maricopa Association of Governments (MAG) Standard Specification and Details as amended by the CITY. All plans shall be prepared on CAD as required by the CITY. Final plans shall be submitted on 3 ml double matte black line mylar and shall be 24" x 36" in size.
- F. The CONSULTANT shall submit all final construction documents in both hard copy and electronic format. Plans shall be MicroStation or AutoCAD compatible and all other documents shall be Microsoft Office compatible. The software version used shall be compatible to current City standards. Other support documents, for example, structural calculations, drainage reports and geotechnical reports, shall be submitted in hard copy only.

## **SECTION II - PERIOD OF SERVICE**

The CONSULTANT shall complete all services within 360 calendar days of the "Notice to Proceed" date. In the event delays are experienced beyond the control of the CONSULTANT, the schedule may be revised as mutually agreed upon by the CITY and the CONSULTANT.

## **SECTION III - CONSULTANT'S COMPENSATION**

- A. The method of payment for this CONTRACT is payment by installments. Total compensation for the services performed shall not exceed \$274,856.00, unless otherwise authorized by the CITY. This fee includes the sum of \$186,656.00 for design services; an amount not to exceed \$44,488.00 for bidding and construction phase services based on hourly rates established in the attached Exhibit "A"; an allowance of \$27,336.00 for landscape architectural services; and an allowance of \$16,376.00 for electrical engineering services.
- B. The CITY shall pay the CONSULTANT in installments based upon monthly progress reports and detailed invoices submitted by the CONSULTANT subject to the following limitations:
1. Prior to approval of the preliminary design (60% plans), payments to the CONSULTANTS shall not exceed 60% of the total CONTRACT amount.
  2. Prior to approval of the final design documents, payments to the CONSULTANTS shall not exceed 90% of the total CONTRACT amount. The final approval and payment will be made within a reasonable period of time regardless of the project construction schedule.
- C. The CITY at its discretion may, by written notification, waive the above limitations.
- D. The CITY shall make payments to the CONSULTANT within thirty (30) days after receipt of the progress report and detailed invoice.

## **SECTION IV - THE CITY'S RESPONSIBILITIES**

- A. The CITY shall designate a project manager during the term of this CONTRACT. The project manager has the authority to administer this CONTRACT and shall monitor compliance with all terms and conditions stated herein. All requests for information from or a decision by the CITY on any aspect of the work shall be directed to the project manager.

- B. The CITY shall review submittals by the CONSULTANT and provide prompt response to questions and rendering of decisions pertaining thereto, to minimize delay in the progress of the CONSULTANT'S work. The CITY will keep the CONSULTANT advised concerning the progress of the CITY'S review of the work. The CONSULTANT agrees that the CITY'S inspection, review, acceptance or approval of CONSULTANT'S work shall not relieve CONSULTANT'S responsibility for errors or omissions of the CONSULTANT or it's sub-consultant(s).
- C. Unless included in the CONSULTANT'S Services as identified in Section I, the CITY shall furnish the CONSULTANT gratis, the following information or services for this Project:
1. One copy of its maps, records, laboratory tests, survey ties, and benchmarks, or other data pertinent to the services. However, the CONSULTANT shall be responsible for searching the records and requesting specific drawings or information and independently verifying said information.
  2. Available CITY data relative to policies, regulations, standards, criteria, studies, etc., relevant to the Project.
  3. When required, title searches, legal descriptions, detailed ALTA Surveys, and environmental assessments to the end that the CITY may proceed with the right of way acquisition.

#### **SECTION V - TERMINATION**

The CITY, at its sole discretion, may terminate this CONTRACT for convenience or abandon any portion of the Project for which services have not been performed by the CONSULTANT, upon fourteen (14) days written notice delivered to CONSULTANT personally or by certified mail at 960 W. Elliot Road, Suite 201, Tempe, AZ 85284. This CONTRACT may be terminated pursuant to ARS Sec. 38-511.

Immediately after receiving such notice, the CONSULTANT shall discontinue advancing the services under this CONTRACT and proceed to close said operations under this CONTRACT. The CONSULTANT shall appraise the services it has completed and submit an appraisal to the CITY for evaluation. The CITY shall have the right to inspect the CONSULTANT'S work to appraise the services completed.

CONSULTANT shall deliver to the CITY all drawings, special provisions, field survey notes, reports, estimates and any and all other documents or work product generated by the CONSULTANT under the CONTRACT, entirely or partially completed, together with all unused materials supplied by the CITY.

In the event of such termination or abandonment, the CONSULTANT shall be paid for services performed prior to receipt of said notice of termination including reimbursable expenses then incurred.

If the remuneration scheduled hereunder is based upon a fixed fee or definitely ascertainable sum, the portion of such sum payable shall be proportionate to the percentage of services completed by the CONSULTANT based upon the scope of work set forth in Exhibit A, and shall be agreed upon mutually by the CONSULTANT and the CITY. However, in no event shall the fee exceed that set forth in Section III of the attached CONTRACT.

The CITY shall make final payment within sixty (60) days after the CONSULTANT has delivered the last of the partially completed items and the final fee has been agreed upon.

In the event this CONTRACT is terminated, the CITY shall have the option of completing the work, or entering into a CONTRACT with another party for the completion of the work according to the provisions and agreements herein.

#### **SECTION VI - SUPPLEMENTAL CONTRACT PROVISIONS**

The supplemental contract provisions to this CONTRACT are attached hereto and incorporated herein by reference as if fully set forth.

Kiwanis Park Sprinkler System Replacement  
Project No. 6303091

IN WITNESS WHEREOF, the parties hereto have executed this CONTRACT this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

CITY OF TEMPE, ARIZONA

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

By \_\_\_\_\_  
Public Works Manager

ATTEST:

Recommended By:

\_\_\_\_\_  
City Clerk

 \_\_\_\_\_  
Deputy PW Manager/City Engineer

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**The CONSULTANT warrants that the person who is signing this CONTRACT on behalf of the CONSULTANT is authorized to do so and to execute all other documents necessary to carry out the terms of this CONTRACT.**

CONSULTANT  
Aqua Engineering, Inc.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Federal I.D. No. /Social Security No.

Certified to be a true and exact copy.

\_\_\_\_\_  
Karen M. Fillmore  
Records Specialist

CITY OF TEMPE  
TEMPE, ARIZONA  
DEPARTMENT OF PUBLIC WORKS

AFFIDAVIT OF GENERAL CONTRACTOR / PRIME CONSULTANT  
REGARDING  
HEALTH INSURANCE

\_\_\_\_\_  
Arizona

Date \_\_\_\_\_

**KIWANIS PARK SPRINKLER SYSTEM REPLACEMENT  
Project No. 6303091**

I hereby certify that \_\_\_\_\_ (name of company) currently has, and all of its major subcontractors/subconsultants, defined as doing work in excess of \$30,000.00, will have, during the course of this contract, health insurance for all employees working on this project and will offer health insurance coverage to eligible dependents of such employees, as defined in the accompanying Guidelines. The company's health insurance is as follows:

Name of Insurance Company: \_\_\_\_\_

Type of Insurance (PPO, HMO, POS, INDEMNITY): \_\_\_\_\_

Policy No.: \_\_\_\_\_

Policy Effective Date (MM/DD/YY): \_\_\_\_\_

Policy Expiration Date (MM/DD/YY): \_\_\_\_\_

Signed and dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
General Contractor/Prime Consultant

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

STATE OF ARIZONA            )  
  ) ss  
COUNTY OF MARICOPA        )

SUBSCRIBED AND SWORN to before me this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

\_\_\_\_\_  
Notary Public

My commission expires:  
\_\_\_\_\_

## **City of Tempe**

### **Guidelines for Implementation of Health Insurance**

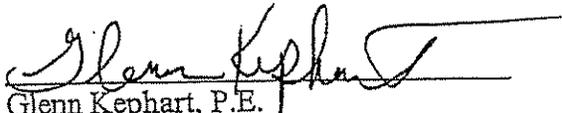
These Guidelines are provided for purposes of implementing Resolution No. 2000.73, which requires all employees of prime consultants, general contractors and major subconsultants and subcontractors to have health insurance and to offer health insurance to their eligible dependants, as determined at the start of each project. Questions regarding these guidelines should be directed to the City of Tempe Engineering Division at (480) 350-8200.

1. All Prime Consultants who enter into a Public Works contract or General Contractors who bid on Public Works projects that are advertised for bid and enter into a contract in excess of \$30,000 with the City of Tempe after January 1, 2001, are required to sign an affidavit in the form attached hereto. The prime consultant or general contractor shall require that all major subconsultants or subcontractors, defined as entities doing work in excess of \$30,000, comply with the health insurance requirements. In signing the affidavit, prime consultants and general contractors may refer to and rely upon these Guidelines for interpretation.
2. Health insurance is required for permanent employees who work for the consultant/contractor more than one hundred and twenty (120) days in any calendar year. A "work day" consists of any time within a twenty-four hour period, regardless of number of hours, that the individual is paid. This requirement excludes students working part-time who are enrolled in a recognized educational institution. Many companies have a grace period or a qualifying period prior to commencement of insurance coverage, which is acceptable so long as the employee coverage begins by the 120<sup>th</sup> day of contract signing. Temporary employees will be covered to the same extent as the City of Tempe covers temporary employees as determined at the start of each project.
3. If a contractor is a "Union" shop and withholds union dues from employees for health insurance coverage that is also offered to their eligible dependents and meets all City requirements, the Contractor may so note on the required affidavit.
4. The health insurance requirements herein apply to all employees that are directly involved with the City of Tempe project including support and administrative personnel.
5. Health insurance coverage must be maintained during the entire time of the contract, including any warranty periods, with the City.
6. All complaints concerning violations of the health insurance requirements shall be filed by an employee, in writing, with the Public Works Department, within thirty (30) days from discovery of the violation. An administrative hearing will be held before the Public Works Manager, and a written decision of findings will be provided to the parties to the hearing within ten (10) days thereafter. Appeal from the decision

of the Public Works Manager may be made within ten (10) days of the date of the decision by filing a notice of appeal in writing with the Public Works Department. If an appeal is timely filed, an administrative hearing will be held before an administrative hearing officer appointed by the City Manager. The decision of the administrative hearing officer shall be final.

7. In the event of a finding by the City of a violation of the insurance provisions, the company in violation of the provision shall be barred from bidding on, or entering into, any public works contract with the City for a minimum period of three (3) years.
8. All consultants and contractors subject to the health insurance requirements shall post, in English and Spanish, notice of the health insurance requirements at their office and at the job site. Signs for posting will be provided by the City.

These "Guidelines for Implementation of Health Insurance", issued and dated this 21st day of August, 2002, hereby amend all guidelines previously issued.

  
Glenn Kephart, P.E.  
Public Works Manager

CITY OF TEMPE, ARIZONA  
PUBLIC WORKS DEPARTMENT  
DIVISION OF ENGINEERING

**SUPPLEMENTAL CONTRACT PROVISIONS**

**SECTION I - INSURANCE**

Without limiting any of their obligations or liabilities, the CONSULTANT, at its own expense, shall purchase and maintain the minimum insurance specified below with companies duly licensed or otherwise approved by the State of Arizona, Department of Insurance, and with forms reasonably satisfactory to the CITY. Each insurer shall have a current A.M. Best Company, Inc. rating of not less than A-VII. Use of alternative insurers requires prior approval from the CITY.

**A. General Clauses**

1. **Additional Insured.** The insurance coverage, except Workers' Compensation and Professional Liability, required by this CONTRACT, shall name the CITY, its agents, representatives, directors, officials, and employees, as additional insured, and shall specify that insurance afforded the CONSULTANT shall be primary insurance, and that any self insured retention and/or insurance coverage carried by the CITY or its employees shall be excess coverage, and not contributory coverage to that provided by the CONSULTANT.
2. **Coverage Term.** All insurance required herein shall be maintained in full force and effect until Services required to be performed under the terms of this CONTRACT are satisfactorily completed and formally accepted; failure to do so may constitute a material breach of this CONTRACT, at the sole discretion of the CITY.
3. **Primary Coverage.** The CONSULTANT's insurance shall be primary insurance as respects the CITY and any insurance or self insurance maintained by the CITY shall be in excess of the CONSULTANT'S insurance and shall not contribute to it.
4. **Claim Reporting.** CONSULTANT shall not fail to comply with the claim reporting provisions of the policies or cause any breach of a policy warranty that would affect coverage afforded under the policy to protect the CITY.
5. **Waiver.** The policies for Workers' Compensation and General Liability shall contain a waiver of transfer rights of recovery (subrogation) against the CITY, its agents, representatives, directors, officers, and employees for any claims arising out of the work of the CONSULTANT.

6. **Deductible/Retention.** The policies may provide coverage, which contains deductibles or self-insured retentions. Such deductible or self-insured retentions shall not be applicable with respect to the coverage provided to the CITY under such policies. The CONSULTANT shall be solely responsible for deductible or self-insured retentions and the CITY may require the CONSULTANT to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.
7. **Policies and Endorsements.** The CITY reserves the right to request and to receive, within 10 working days, information on any or all of the above policies or endorsements.
8. **Certificates of Insurance.** Prior to commencing services under this CONTRACT, CONSULTANT shall furnish the CITY with Certificates of Insurance, or formal endorsements as required by the CONTRACT, issued by CONSULTANT'S insurer(s), as evidence that policies providing the required coverages, conditions, and limits required by this CONTRACT are in full force and effect. Such certificates shall identify this CONTRACT by referencing the project number and/or project name and shall provide for not less than thirty (30) days advance written notice by Certified Mail of cancellation or termination of insurance.
9. **Sub-Consultants/Contractors.** CONSULTANT shall include all sub-consultants and sub-contractors as insured under its policies or shall furnish separate certificates and endorsements for each sub-consultant and sub-contractor.

#### **B. Workers' Compensation**

The CONSULTANT shall carry Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of CONSULTANT employees engaged in the performance of the Services; and Employer's Liability insurance of not less than \$100,000 for each accident, \$100,000 disease for each employee, and \$500,000 disease policy limit.

In case Services are sub-contracted, the CONSULTANT shall require the sub-consultant to provide Workers' Compensation and Employer's Liability to at least the same extent as provided by the CONSULTANT.

**C. Automobile Liability**

The CONSULTANT shall carry Commercial/Business Automobile Liability insurance with a combined single limit for bodily injury and property damages of not less than \$1,000,000 each occurrence regarding any owned, hired, and non-owned vehicles assigned to or used in performance of the CONSULTANT Services. Coverage will be at least as broad as coverage Code 1 "any auto" (Insurance Service Office policy form CA 0001 1/87 or any replacements thereof). Such coverage shall include coverage for loading and unloading hazards.

**D. Commercial General Liability**

The CONSULTANT shall carry Commercial General Liability insurance with a combined single limit of not less than \$1,000,000. The policy shall be primary and include coverage for bodily injury, property damage, personal injury, products, completed operations, and blanket contractual covering, but not limited to, the liability assumed under the indemnification provisions of this CONTRACT, which coverage will be at least as broad as Insurance Service Office policy form CG 0002 1-11-88 or any replacement thereof.

In the event the general liability insurance policy is written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of the Services as evidenced by annual Certificates of Insurance.

Such policy shall contain a "severability of interests" provision (also known as "cross liability" and "separation of insured").

**E. Professional Liability**

The CONSULTANT retained by the CITY to provide the engineering services required by the CONTRACT will maintain Professional Liability insurance covering errors and omissions arising out of the Services performed by the CONSULTANT or any person employed by him, with an unimpaired limit of not less than \$1,000,000 each claim and \$1,000,000 all claims, or 10% of the construction budget, whichever is larger. In the event the insurance policy is written on a "claims made" basis, coverage shall extend for two years past completion and acceptance of Services as evidenced by annual Certificates of Insurance.

**F. Property Coverage – Valuable Papers**

The CONSULTANT shall carry Property coverage on all-risk, replacement cost, agreed amount form with Valuable Papers insurance sufficient to assure the restoration of any documents, memoranda, reports, or other similar data relating to the services of the CONSULTANT used in the completion of this CONTRACT.

## **HEALTH INSURANCE REQUIREMENTS**

All Consultants who enter into a Public Works contract in excess of \$30,000.00 with the City of Tempe, after January 1, 2001, must certify that they have, and all of their major sub-consultants will have, health insurance for all employees. Health insurance must be offered to eligible dependents of all such employees. An affidavit must be signed in the form included herein (Page AFF-1). Major sub-consultants are defined as entities doing work in excess of \$30,000.00 as determined at the start of each project. All required health insurance must be maintained during the entire time of the contract with the City.

Health insurance is required for all consultant and major sub-consultant employees who work more than one hundred and twenty (120) days in any calendar year. A "work day" consists of any time within a twenty-four hour period, regardless of number of hours, that the individual is paid. At this time, health insurance is not required for temporary employees or students working part-time who are enrolled in a recognized educational institution.

The health insurance requirements shall apply to all employees directly involved with this City project including support and administrative personnel.

All complaints concerning violations of the health insurance requirements shall be filed, in writing, with the Public Works Department, within thirty (30) days from discovery of the violation. An administrative hearing will be held before the Public Works Manager, and a written decision of findings will be provided to the parties to the hearing within ten (10) days thereafter. Appeal from the decision of the Public Works Manager may be made within ten (10) days of the date of the decision by filing a notice of appeal in writing with the Public Works Department. If an appeal is timely filed, an administrative hearing will be held before an administrative hearing officer appointed by the City Manager. The decision of the administrative hearing officer shall be final.

In the event of a finding of violation of the insurance provisions, the company in violation of the provision shall be barred from bidding on, or entering into, any Public Works contract with the City for a period of three (3) years from the execution of the contract.

All Consultants subject to the health insurance requirements shall post, in English and Spanish, notice of the health insurance requirements at their office and at the job site. Signs for posting will be provided by the City at the Pre-construction Conference for Contractors and sent with the executed contract for Consultants.

## **SECTION II – WORK FOR HIRE AND OWNERSHIP OF DELIVERABLES**

CONSULTANT shall ensure that all the results and proceeds of CONSULTANT'S work on any projects (and that of its agents, employees, officers, and contractors) shall be owned by the CITY, including the copyright thereto, as work for hire. In the event, for any reason, such results and proceeds are not deemed work for hire, CONSULTANT shall be deemed hereby to have assigned to CITY all of its right, title and interest in such results and proceeds and content to CITY.

All work products (electronically or manually generated), including plans, specifications, cost estimates, tracings, studies, design analyses, original mylar drawings, computer aided drafting and design (CADD) file diskettes which reflect all final drawings, and other related products which are prepared in the performance of this Contract, are the property of the CITY and are to be delivered to the CITY on the particular type of storage media on which they are stored (e.g. CD, thumb drive, etc.) before the final payment is made to the CONSULTANT. The CITY shall retain ownership of these original works. If approved in writing by the CITY, the CONSULTANT may retain the originals and supply the CITY with reproducible mylar copies of the work.

## **SECTION III - CONFLICT OF INTEREST**

The CONSULTANT agrees to promptly disclose any financial or economic interest in the Project property, or any property affected by the Project, existing prior to the execution of this CONTRACT. Further, the CONSULTANT agrees to promptly disclose any financial or economic interest with the Project property, or any property affected by the Project, if the CONSULTANT gains such interest during the course of this CONTRACT.

If the CONSULTANT gains any financial or economic interest in the Project during the course of this CONTRACT, this may be grounds for terminating this CONTRACT at the sole discretion of the CITY.

The CONSULTANT shall not engage the services on this CONTRACT of any present or former CITY employee who was involved as a decision maker in the selection or approval processes, or who negotiated or approved billings or contract modifications for this CONTRACT.

The CONSULTANT agrees that it shall not perform services on this Project for the contractor, sub-contractor, or any supplier.

The CONSULTANT shall not negotiate, contract, or make any agreement with the contractor, sub-contractor, or any supplier with regard to any of the work under this Project, or any services, equipment or facilities to be used on this Project.

#### **SECTION IV - COVENANT AGAINST CONTINGENT FEES**

The CONSULTANT affirms that he has not employed or retained any company or person, other than a bona fide employee working for the CONSULTANT to solicit or secure this CONTRACT, and that he has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of the CONTRACT. For breach or violation of this clause, the CITY may terminate this CONTRACT without liability, or in its discretion may deduct from the Contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage brokerage fee, gift, or contingent fee.

#### **SECTION V - INDEMNIFICATION**

To the fullest extent permitted by law, the CONSULTANT shall defend, indemnify and hold harmless the CITY, its agents, officers, officials, and employees from and against all claims, damages, losses, and expenses (including but not limited to attorney's fees, court costs, and the costs of appellate proceedings), relating to, arising out of, or alleged to have resulted from the negligent acts, errors, mistakes or omissions in the work, services, or professional services of the CONSULTANT, its agents, employees, or any other person (not the CITY) for whose negligent acts, errors, mistakes or omissions in the work, services, or professional services the CONSULTANT may be legally liable in the performance of this contract. CONSULTANT'S duty to defend, hold harmless and indemnify the CITY, its agents, officers, officials, and employees shall arise in connection with any claim for damage, loss, or expenses that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of any person or property, including loss of use resulting therefrom, caused by any negligent acts, errors, mistakes, omissions, work, services, or professional services in the performance of this contract by CONSULTANT or any employee of the CONSULTANT, or any other person (not the CITY) for whose negligent acts, errors, mistakes, omissions, work, or services the CONSULTANT may be legally liable. The amount and type of insurance coverage requirement set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

#### **SECTION VI - DISPUTE RESOLUTION**

In the event of a dispute concerning questions of fact that arise during the course of the CONTRACT, the parties will meet in good faith to attempt to resolve such questions.

## **SECTION VII - ADDITIONAL SERVICES**

Additional services which are outside the scope of basic services contained in this CONTRACT shall not be performed by the CONSULTANT without prior written authorization from the CITY. Additional services, when authorized by an executed contract or an Amendment to this CONTRACT shall be compensated for by a fee mutually agreed upon between the CITY and the CONSULTANT.

## **SECTION VIII - SUCCESSORS AND ASSIGNS**

This CONTRACT shall not be assignable except at the written consent of the parties hereto and it shall extend to and be binding upon the heirs, executors, administrators, successors, and assigns of the parties hereto.

## **SECTION IX- SPECIAL PROVISIONS**

The CONSULTANT shall comply with all applicable Federal, State, and local laws and ordinances at the time the plans are sealed, and will not discriminate against any person on the basis of race, color, or national origin in the performance of this CONTRACT, and shall comply with the terms and intent of Title VII of the Civil Rights Act of 1964, P.L. 88-354.

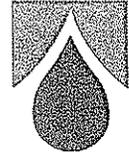
The CONSULTANT further agrees to insert the foregoing provisions in all sub-contracts hereunder, except sub-contracts for standard commercial supplies or raw materials. Any violation of such provisions shall constitute a material breach of this CONTRACT.

This CONTRACT shall be in full force and effect only when it has been approved by the City Council of the City of Tempe, Arizona, and when executed by the duly authorized CITY officials and the duly authorized agent of the CONSULTANT.

# EXHIBIT A

**Aqua Engineering, Inc.**

960 West Elliot Road, Suite 201 Tempe, AZ 85284-1137  
480.222.0360 office  
480.222.0361 fax



March 4, 2008

Mr. Christopher S. Kabala, P.E.  
**City of Tempe – Public Works/Engineering**  
31 East Fifth Street  
Tempe, AZ 85281

**RE: Kiwanis Park Sprinkler System Replacement  
City of Tempe Project #6303091  
Tempe, Arizona**

Dear Chris:

We are pleased to submit this Scope of Work for the Kiwanis Park Sprinkler System Replacement project in Tempe, Arizona. Our Scope and Fees are based on the issues addressed in the qualifications and interview process, our initial project scoping meeting in your office, our initial project site scoping tour with City of Tempe representatives, the information you have provided regarding available and usable electronic file information for the existing irrigation systems, and our telephone conversations.

The defined Scope of Work to be performed and our proposed Fees to be charged are described in Exhibits A and B, respectively.

If you wish to contract our services, please attach this to your standard City of Tempe Contract for Professional Services and return it for our review and signature.

When we receive the executed Agreement and Notice to Proceed from you, we will confer with you about the schedule. Our ability to meet the agreed upon schedule is dependent on timely receipt of the information noted in our Scope of Work. Please note that our fee is subject to review if this agreement is not executed within 90 days.

Please contact us with any questions you may have. We look forward to our work with you.

Respectfully submitted,

Doug Macdonald, ASIC  
Principal

3/5/08

**EXHIBIT A**  
**SCOPE-OF-WORK:**

We propose to provide the following services:

**Task 1.0 Background Research and Base Plan Development**

The following subtasks are related to data collection, background research, base plan development, and evaluation of the existing irrigation system in order to proceed with the comprehensive design and engineering of irrigation improvements for this park site:

- **Task 1.1 – Initial Project Scoping and Kick-Off Meeting**  
Attend one (1) meeting with Client to discuss the project, areas to be irrigated, areas subject to renovation from turfgrass to decomposed granite with desert planting enhancements, expectations of the irrigation system, specialized site conditions, centralized control, equipment preferences, alternative water sources, and other pertinent site and scoping information.
  
- **Task 1.2 – Records Review and Information Research**  
Review available Irrigation Record Drawings and coordinate with appropriate City of Tempe representatives to obtain available documentation and information to effectively evaluate the level of site survey services necessary to develop accurate electronic site plan information for base file development. The available Record Drawings and documentation will also be utilized during the design and engineering phase to evaluate the capability of the existing irrigation system, pumping system and on-site water storage system to service construction phasing of the irrigation improvements.

Collect and review available information pertaining to the existing park facilities and landscape palette. Review information provided for the new ramadas and other new features and their impacts on the landscape conversion areas.

One (1) site visit / client meeting is anticipated during this task.

- **Task 1.3 – Utility Coordination**  
Coordinate with appropriate City, Survey Consultant, and Utility Company representatives to obtain available documentation and information required to effectively identify existing on-site utilities and evaluate potential conflicts as well as the capability of existing utilities to service the proposed irrigation renovation and site improvements.
  
- **Task 1.4 – Site Survey Sub-consultant Coordination**  
Coordinate with local aerial and ground surveying consultants to provide necessary site topographic survey using aerial photogrammetric and ground survey support for base plan development. Information resulting from these survey efforts will be incorporated into the Base Plan Development process. Specific Scope and Cost Proposal for these sub-consulting services are included under the expenses portion of this Scope and Fee document.
  
- **Task 1.5 – Base Plan and Title Block Development**  
Develop irrigation, landscaping and electrical base plans, sheet cuts, and title blocks in 22"x34" sheet format at 1"=20' scale using available electronic file information, site development information provided by City of Tempe representatives, and site survey information provided under this contract work. It is anticipated that this project will consist of approximately 76 project sheets using standard City of Tempe title block format:

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- One (1) Project Cover, Index, and Signature Sheet in standard City of Tempe layout format
- Two (2) Irrigation Legend and Notes Sheets
- Thirty-three (33) Irrigation Plan Sheets at 1"= 20-scale format including:
  - Seventeen (17) Irrigation Plan Sheets for Phase One area
  - Sixteen (16) Irrigation Plan Sheets for Phase Two area
- Five (5) Irrigation Detail Sheets
- One (1) Landscape Renovation Legend and Notes Sheet
- Twenty (20) Landscape Renovation Plan Sheets at 1"= 20-scale format including:
  - Ten (10) Landscape Renovation Plan Sheets for Phase One area
  - Ten (10) Landscape Renovation Plan Sheets for Phase Two area
- One (1) Landscape Renovation Detail Sheet
- One (1) Electrical Engineering Legend and Notes Sheet
- Ten (10) Electrical Engineering Plan Sheets at 1"= 20-scale format including:
  - Five (5) Electrical Engineering Plan Sheets for Phase One area
  - Five (5) Electrical Engineering Plan Sheets for Phase Two area
- Two (2) Electrical Engineering Detail Sheets

**Task 2.0 Construction Document Development**

The following subtasks are related to the design and engineering, and development of bidding and construction documents for the irrigation improvements at this park site:

- **Task 2.1 – Water Resources Review and Coordination**  
 Review existing pumping system design to ensure that the irrigation improvements are designed to operate within the established pumping system parameters. Included in this task will be the following:
  - Anticipated Water Use Requirements - Calculate the irrigated area based on turfgrass and decomposed granite areas identified by City of Tempe representatives. Confirm historical ET data for Tempe, Arizona, and calculate peak season and annual ET for the project. A spreadsheet will be developed to show anticipated peak season and annual water use. This spreadsheet will also be updated as the project proceeds so that water use information remains current with project design elements.
  - Alternative Water Analysis – Coordinate with City of Tempe representatives to discuss the future potential for using reclaimed effluent water as a supplement or alternative to the current water source. This information will be useful in determining any specialized irrigation equipment or identification standards that may need to be incorporated into the design.
  - One (1) site visit and client meeting is anticipated during this task.
  - The results of the above efforts will be summarized in a memorandum to be incorporated into the overall 60% Project Submittal package.
- **Task 2.2 – Permit Matrix**  
 Coordinate with appropriate agencies and City of Tempe representatives to determine permitting requirements for the park improvements, and assist in the development of a Permit Matrix to describe the required permit items.
- **Tasks 2.3 and 2.4 – Irrigation Design and Engineering**  
 The following tasks are related to specific Irrigation Design and Engineering for the renovation and replacement of the irrigation system at this park. The irrigation system design process is anticipated to include the following general tasks:

- Preparation of two separate irrigation construction document packages for Phase One (Task 2.3) and Phase Two (Task 2.4) renovation areas. It is anticipated that the Task 2.3-Phase One construction document package will include all irrigation improvements for the park area to the north of All America Way, and that the Task 2.4-Phase Two construction document package will include all irrigation improvements for the park area to the south of All America Way (the medians on All America Way will be included in whichever package is appropriate based on existing sleeving locations).
- Preparation of irrigation construction drawings to include piping for areas that will be converted from raw water to potable water, piping for areas that will be converted from potable water to raw water, sprinkler and drip irrigation layout, lateral pipe routing and sizing, valve locations and layout, mainline routing and sizing, controller locations and valve sequencing. A computerized hydraulic model of the irrigation system will be developed to optimize the irrigation mainline pipe size and to accommodate the phased construction for the project.
- Preparation of Irrigation Specifications to meet City of Tempe standard format.
- Develop Irrigation Installation Details to meet City of Tempe standard requirements.
- Development of updated Opinion of Probable Cost (OPC) at each Design Submittal level.
- Participation in three (3) design progress and coordination meetings during the Construction Document development and review process for each phase; six (6) meetings total.

Aqua Engineering will provide City of Tempe representatives with the following design submittals for review and comment, permitting, bidding and construction for the two design phases of this project. Fees for Design and Engineering services for each submittal phase are described in the attached Exhibit B Fee Matrix.

#### **Task 2.3 – Phase One Irrigation Design and Engineering Submittals**

- **Task 2.31 – Phase One 60% Design Progress Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 60% completion level for city review and comment. Provide City of Tempe with the following in hardcopy format for their use in printing and distribution:
  - One (1) 11x17 preliminary drawing set in .pdf format
  - One (1) 22x34 preliminary drawing set on reproducible bond
  - One (1) copy of preliminary Specifications and OPC
- **Task 2.32 – Phase One 90% Permit Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 90% completion level for city review and comment. 90% submittal documents will incorporate or address city review comments from the 60% Design Progress Submittal, and will be utilized to obtain appropriate city permits. Provide City of Tempe with the following in hardcopy format for their use in printing and distribution:
  - One (1) 11x17 preliminary drawing set in .pdf format
  - One (1) 22x34 preliminary drawing set on reproducible bond
  - One (1) copy of preliminary Specifications and OPC
- **Task 2.33 – Phase One Final Construction Document Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 100% completion level for bidding and construction. Final Construction Documents will incorporate or address city review comments from the 90% Permit Submittal, and will be utilized for bidding and construction purposes. Provide City of Tempe with the following in hardcopy format for their use in

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printing and distribution:

- One (1) signed and sealed 11x17 drawing set on bond paper
- One (1) signed and sealed 22x34 drawing set on reproducible mylar
- One (1) copy of signed and sealed Specifications
- One (1) copy of final Opinion of Probable Cost for construction elements
- One (1) copy of CD-ROM containing electronic drawing files (in ACAD 2004 format) and construction document files
- **Task 2.34 – Phase One Permitting Assistance (Irrigation, Landscape, Electrical)**  
Provide City of Tempe with necessary documentation for their use in permitting for Phase One irrigation, landscape and electrical related improvements of the project.

**Task 2.4 – Phase Two Irrigation Design and Engineering Submittals**

- **Task 2.41 – Phase Two 60% Design Progress Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 60% completion level for city review and comment. Provide City of Tempe with the following in hardcopy format for their use in printing and distribution:
  - One (1) 11x17 preliminary drawing set in .pdf format
  - One (1) 22x34 preliminary drawing set on reproducible bond
  - One (1) copy of preliminary Specifications and OPC
- **Task 2.42 – Phase Two 90% Permit Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 90% completion level for city review and comment. 90% submittal documents will incorporate or address city review comments from the 60% Design Progress Submittal, and will be utilized to obtain appropriate city permits. Provide City of Tempe with the following in hardcopy format for their use in printing and distribution:
  - One (1) 11x17 preliminary drawing set in .pdf format
  - One (1) 22x34 preliminary drawing set on reproducible bond
  - One (1) copy of preliminary Specifications and OPC
- **Task 2.43 – Phase Two Final Construction Document Submittal (Irrigation, Landscape, Electrical)**  
Prepare and submit construction documents at 100% completion level for bidding and construction. Final Construction Documents will incorporate or address city review comments from the 90% Permit Submittal, and will be utilized for bidding and construction purposes. Provide City of Tempe with the following in hardcopy format for their use in printing and distribution:
  - One (1) signed and sealed 11x17 drawing set on bond paper
  - One (1) signed and sealed 22x34 drawing set on reproducible mylar
  - One (1) copy of signed and sealed Specifications
  - One (1) copy of final Opinion of Probable Cost for construction elements
  - One (1) copy of CD-ROM containing electronic drawing files (in ACAD 2004 format) and construction document files
- **Task 2.44 – Phase Two Permitting Assistance (Irrigation, Landscape, Electrical)**  
Provide City of Tempe with necessary documentation for their use in permitting for Phase Two irrigation, landscape and electrical related improvements of the project.



## **Task 2A - Associated Design and Engineering Tasks**

The following specialties are anticipated in the design and engineering, and development of bidding and construction documents for the irrigation improvements at this park site. Fees for the design and engineering services for these services are presented as Allowances for Billing Rate and Expenses in the attached Exhibit B Fee Matrix:

- **Task 2A.1 – Landscape Architectural Services**

The following tasks are related to anticipated landscape architectural services for the renovation and replacement of the irrigation system at this park. The renovation will include converting some existing turf areas into decomposed granite landscape areas, and providing new plantings which will be serviced by the new irrigation system designed by Aqua Engineering, Inc. The landscape architectural design process is anticipated to include the following general tasks:

- Preparation of two separate construction document packages for Phase One and Phase Two renovation areas to match the areas established in the phased Irrigation Construction Document packages.
- Preparation of landscape architectural construction drawings to include designing new concrete header locations, new plantings, and decomposed granite for these “landscape conversion areas”, and new plantings in the existing entry drive medians where planting enhancements are needed.
  - 60% Design Development plans will include locating new concrete header, identifying a plant palette, new plant locations, and decomposed granite areas. Fees for the landscape conversion areas are based on the understanding of these areas from the team’s initial park walk through on February 13, 2008. The plans will be submitted to Aqua Engineering, Inc. for incorporation into the overall design development plans set.
- Preparation of Landscape Architectural Specifications to meet City of Tempe standard format.
- Develop Planting and Hardscape Installation Details to meet City of Tempe standard requirements.
- Development of updated Opinion of Probable Cost (OPC) at each Design Submittal level.
- Participation in three (3) design progress and coordination meetings during the Construction Document development and review process for each phase; six (6) meetings total.

- **Task 2A.2 – Electrical Engineering Services**

The following tasks are related to electrical engineering services related to the renovation and replacement of the irrigation system at this park. The electrical engineering design process is anticipated to include the following general tasks:

- Preparation of two separate construction document packages for Phase One and Phase Two renovation areas to match the areas established in the phased Irrigation Construction Document packages.
- Preparation of electrical engineering construction drawings to include evaluation of current electrical services at existing controller locations for the park, renovation of existing services as necessary to comply with current codes, extension or renovation of existing services to accommodate new controller locations or relocated controllers as required.
- Preparation of Electrical Engineering Specifications to meet City of Tempe standard format.
- Develop Electrical Engineering Installation Details to meet City of Tempe standard requirements.
- Development of updated Opinion of Probable Cost (OPC) at each Design Submittal level.
- Participation in two (2) design progress and coordination meetings during the Construction Document development and review process for each phase; four (4) meetings total.



### **Task 3.0 Bidding Phase Support Services**

The following services will be provided during the bidding and contractor selection process for each of the two construction phases of this project:

#### **Task 3.1 – Phase One Bidding Support Services**

- **Task 3.11 – Phase One Pre-Bid Conference**  
Attend one (1) Pre-Bid Conference with City and contractor representatives to discuss the project and address specific questions related to the irrigation system design and landscape renovation.
- **Task 3.12 – Phase One Coordination/Clarifications**  
Provide clarification documentation to City for their distribution during bidding process.
- **Task 3.13 – Phase One Addenda**  
Provide Bid Addenda documentation to City for their distribution during bidding process.

#### **Task 3.2 – Phase One Bidding Support Services**

- **Task 3.21 – Phase Two Pre-Bid Conference**  
Attend one (1) Pre-Bid Conference with City and contractor representatives to discuss the project and address specific questions related to the irrigation system design and landscape renovation.
- **Task 3.22 – Phase Two Coordination/Clarifications**  
Provide clarification documentation to City for their distribution during bidding process.
- **Task 3.23 – Phase Two Addenda**  
Provide Bid Addenda documentation to City for their distribution during bidding process.

### **Task 4.0 Construction Observation Support Services**

The following services will be provided on a Hourly Rate and Expense, not to exceed the fees described in the attached Exhibit B Fee Matrix, and as requested by City of Tempe representatives during the construction process for each of the two construction phases of this project:

#### **Task 4.1 – Phase One Construction Observation Support Services**

- **Task 4.11 – Phase One Preconstruction and Construction Progress Meetings**  
Attend one (1) Preconstruction Meeting and three (3) Construction Progress meetings as requested by the Client during irrigation construction. It is anticipated that only one (1) meeting will be required for the associated landscape architectural and electrical engineering services work.
- **Task 4.12 – Phase One Shop Drawing/Submittal Review/Plant Inspection at Nursery**  
Provide two (2) reviews of contractor irrigation and electrical equipment submittals and shop drawings, and decomposed granite sample submittals to confirm conformance with construction documents. Provide two (2) inspections of tagged plant material at local nurseries as coordinated with contractor.
- **Task 4.13 – Phase One Coordination/Clarifications**  
Respond in writing to contractor RFI documentation as required during construction.
- **Task 4.14 – Phase One In-process Site Visits**  
Provide five (5) in-process site visits during construction (three irrigation, one landscape, one electrical) to review contractor progress and to confirm conformance with construction documents.
- **Task 4.15 – Phase One Pre-final Site Observation/Punchlist**  
Provide one (1) site visit during upon substantial completion of irrigation system, landscape, and electrical construction to confirm conformance with construction documents. Prepare punchlist describing construction deficiencies for correction prior to final acceptance.
- **Task 4.16 – Phase One Final Site Observation**



Provide one (1) site visit after correction of punchlist items to confirm that appropriate corrections have been completed.

- **Task 4.17 – Phase One Project Closeout Record Drawings**  
Prepare Record Drawings based on legible redline “as-built” field prints provided by the contractor. Provide City of Tempe with mylar hardcopy and CD-ROM of irrigation Record Drawing set.

#### **Task 4.2 – Phase Two Construction Observation Services**

- **Task 4.21 – Phase Two Preconstruction and Construction Progress Meetings**  
Attend one (1) Preconstruction Meeting and three (3) Construction Progress meetings as requested by the Client during irrigation construction. It is anticipated that only one (1) meeting will be required for the associated landscape architectural and electrical engineering services work.
- **Task 4.22 – Phase Two Shop Drawing/Submittal Review/Plant Inspection at Nursery**  
Provide two (2) reviews of contractor irrigation and electrical equipment submittals and shop drawings, and decomposed granite sample submittals to confirm conformance with construction documents. Provide two (2) inspections of tagged plant material at local nurseries as coordinated with contractor.
- **Task 4.23 – Phase Two Coordination/Clarifications**  
Respond in writing to contractor RFI documentation as required during construction.
- **Task 4.24 – Phase Two In-process Site Visits**  
Provide five (5) in-process site visits during construction (three irrigation, one landscape, one electrical) to review contractor progress and to confirm conformance with construction documents.
- **Task 4.25 – Phase Two Pre-final Site Observation/Punchlist**  
Provide one (1) site visit during upon substantial completion of irrigation system, landscape, and electrical construction to confirm conformance with construction documents. Prepare punchlist describing construction deficiencies for correction prior to final acceptance.
- **Task 4.26 – Phase Two Final Site Observation**  
Provide one (1) site visit after correction of punchlist items to confirm that appropriate corrections have been completed.
- **Task 4.27 – Phase Two Project Closeout Record Drawings**  
Prepare Record Drawings based on legible redline “as-built” field prints provided by the contractor. Provide City of Tempe with mylar hardcopy and CD-ROM of irrigation Record Drawing set.

#### **Assumptions and Exclusions**

- Fees and submittal schedule are based on the agreed to number of meetings, review submittals, and quantity of irrigation plan sheets prior to commencement of contract. If additional meetings, submittals and/or plan sheets are required, fees will be adjusted and submittal schedule will be revised and updated accordingly.
- Well water services, lake storage facility, and pumping systems for irrigation are existing and will remain operational.
- Design of a buildings or enclosures, structural or geotechnical surveying and analysis are not included in this scope and fee proposal. If it is determined that these elements are required for this project, a supplementary fee proposal for these elements will be provided upon Client request.
- Formal submission of a “pricing” package or partially completed documents, other than as stipulated in the scope of work are not included.
- Redesign for changes in design after the drawings have been either partially or completely prepared because of in-process site changes, concept changes, bid alternate packaging, or other unforeseen



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changes during the design process are not included in this scope and fee proposal. If it is determined that any of these elements are required for this project, a supplementary fee proposal for these elements will be provided upon Client request.

- Direct expenses for design related tasks will be invoiced at direct cost as they are incurred, including but not limited to ground transportation, mylars and paper plots, electronic media, photocopies, telephone charges, and expedited mail.
- Direct expenses for aerial photogrammetry at 1"=20' scale (1:2000), and ground survey services including aerial panel control, supplemental topography, and utility investigation will be invoiced at direct cost as they are incurred, based on the approved proposals from Cooper Aerial Surveys and Brady-Aulerich respectively. Specific proposals for surveying services are attached as supplements to this scope and fee proposal.

  
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Kiwanis Park Sprinkler System Replacement  
 City of Tempe Project #6303091  
**EXHIBIT B - FEE MATRIX**  
**March 4, 2008**

Hourly Billing Rates	Doris Macdonald Principal/Charge Engineer/OLAC		Darren Salvador Senior Project Engineer/OLAC		BIM Winemore Project Manager		Zach Temple Project Engineer		Ron Parze CAD Specialist/IT Manager		Lisa O'Brien CAD Technician		Judy Stram Administrative Assistant		Total A/E Labor		Subcontractors			Total		
	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Rate	Hours	Time	Cost	Landscaping Assistance	Final Survey Consultant	Electrical Engineer	Inflation	Contingent	Costs
<b>Task 1: Background Research and Base Plan Development</b>																						
1.1	4	\$500	\$0	6	\$800	6	\$420	6	\$420	2	\$170	2	\$126	2	\$130	2	\$150	\$500			\$1,730	\$2,220
1.2	2	\$250	\$0	4	\$420	12	\$900	12	\$900	2	\$170	2	\$126	2	\$130	2	\$150	\$75			\$2,071	\$2,071
1.3		\$0	\$0	4	\$420	6	\$420	6	\$420	1	\$65	1	\$65	1	\$65	1	\$1,020	\$45			\$1,065	\$1,065
1.4	2	\$250	\$0	6	\$800	4	\$300	4	\$300	4	\$300	4	\$300	4	\$300	13	\$1,245	\$21,960	\$39,685		\$1,325	\$63,170
1.5	2	\$250	\$0	4	\$420	12	\$900	12	\$900	16	\$1,960	35	\$2,280	2	\$130	72	\$5,328	\$400			\$5,728	\$5,728
<b>Task 1 Totals</b>																						
	10	\$1,250	0	24	\$7,620	40	\$3,000	40	\$3,000	19	\$1,616	38	\$2,334	6	\$380	137	\$11,183	\$560	\$21,965	\$0	\$11,918	\$74,864
<b>Task 2: Construction Document Development</b>																						
2.1	2	\$250	2	\$250	4	\$420	12	\$900	2	\$170	2	\$126		\$0	24	\$2,126	\$25			\$2,151	\$2,151	
2.2	4	\$500	\$0	4	\$420	4	\$300	4	\$300		\$0			\$0	12	\$1,220	\$25			\$1,245	\$1,245	
<b>Task 2.1: Phase One Irrigation Design and Engineering Services</b>																						
2.2.1	12	\$1,500	10	\$1,200	52	\$5,460	120	\$8,400	56	\$4,760	120	\$7,560	6	\$390	376	\$28,970	\$500			\$30,470	\$30,470	
2.2.2	8	\$1,000	4	\$200	12	\$1,200	60	\$4,800	28	\$2,380	36	\$2,268	5	\$325	153	\$12,253	\$500			\$12,753	\$12,753	
2.2.3	8	\$1,000	4	\$200	12	\$1,200	60	\$4,800	28	\$2,380	36	\$2,268	5	\$325	153	\$12,253	\$600			\$12,853	\$12,853	
2.2.4	2	\$250	1	\$130	4	\$420	1	\$75		\$0		\$0		\$0	8	\$675	\$100			\$775	\$775	
<b>Task 2.2: Phase Two Irrigation Design and Engineering Services</b>																						
2.2.2.1	12	\$1,500	10	\$1,200	48	\$5,040	100	\$7,500	54	\$4,590	112	\$7,056	6	\$390	342	\$27,376	\$500			\$27,876	\$27,876	
2.2.2.2	8	\$1,000	4	\$200	10	\$1,050	50	\$3,750	26	\$2,100	34	\$2,142	5	\$325	137	\$10,937	\$500			\$11,437	\$11,437	
2.2.2.3	8	\$1,000	4	\$200	10	\$1,050	50	\$3,750	26	\$2,100	34	\$2,142	5	\$325	137	\$10,937	\$600			\$11,537	\$11,537	
2.2.2.4	2	\$250	1	\$130	4	\$420	1	\$75		\$0		\$0		\$0	8	\$675	\$100			\$775	\$775	
<b>Task 2.2 Totals</b>																						
	68	\$8,250	40	\$5,200	160	\$16,680	458	\$34,650	220	\$18,700	374	\$33,642	32	\$2,080	1,150	\$708,942	\$2,450	\$0	\$0	\$712,392	\$712,392	
<b>Task 2.3: Construction Document Allowance Services</b>																						
2A.1	4	\$500	\$0	8	\$840	8	\$600	8	\$600	2	\$126	2	\$126	2	\$130	24	\$2,064	\$150	\$24,980	\$0	\$2,214	\$27,336
2A.2	2	\$250	\$0	4	\$420	4	\$300	4	\$300	2	\$126	2	\$126	2	\$130	14	\$1,226	\$150	\$15,000	\$0	\$1,376	\$16,376
<b>Task 2A Totals</b>																						
	6	\$750	0	\$0	12	\$1,260	12	\$900	0	\$0	4	\$252	4	\$260	38	\$3,222	\$300	\$24,980	\$0	\$16,600	\$3,722	\$46,712

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Kiwanis Park Sprinkler System Replacement

City of Tempe Project #6303091

EXHIBIT B - FEE MATRIX

March 4, 2008

Task	Description	Hourly Billing Rate	Doug Macdonald Senior Project Engineer/CFD		Darrin Salvador Senior Project Engineer/CFD		Bill Whitmore Project Manager		Zach Temple Project Engineer		Ron Pass CAD Specialist/IT Manager		Lisa O'Brien CAD Technician		Judy Skram Administrative Assistant		Total A/E/Labor		Subconsultants			Total Tasks Costs		
			Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time	Cost	Time		Cost	
Task 3: Bidding Phase Support Services																								
Task 3.1: Phase One Bidding Phase Support Services																								
3.11	Pre-Bid Conference-Phase One	\$0	\$0	0	\$650	2	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$780	\$50			\$830		
3.12	Coordination/Clarifications-Phase One	\$125	\$0	2	\$210	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$638	\$25	\$600	\$500	\$1,600		
3.13	Addenda-Phase One	\$125	\$0	2	\$210	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$902	\$100			\$1,052		
Task 3.2: Phase Two Bidding Phase Support Services																								
3.21	Pre-Bid Conference-Phase Two	\$0	\$0	0	\$650	2	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$780	\$50			\$830		
3.22	Coordination/Clarifications-Phase Two	\$125	\$0	2	\$210	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$638	\$25	\$500	\$500	\$1,600		
3.23	Addenda-Phase Two	\$125	\$0	2	\$210	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$902	\$100			\$1,052		
Task 3 Totals																								
4		\$500	0	0	\$2,100	20	\$1,500	0	\$0	8	\$504	2	\$120	4	\$252	1	\$65	12	\$952	\$100	\$1,000	\$0	\$1,000	\$7,084
Task 4: Construction Observation Support Services																								
Task 4.1: Phase One Construction Observation Support Services (Hourly Rate Plus Expense, Not to Exceed - as requested)																								
4.11	Preconstruction and Construction Progress Meetings	\$0	\$0	16	\$1,650	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,540	\$250	\$320		\$2,790		
4.12	Shop Drawing/Submittal Review	\$0	\$0	4	\$420	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,068	\$100	\$400		\$1,468		
4.13	Coordination/Clarifications	\$0	\$0	4	\$420	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$785	\$100			\$885		
4.14	In-process Site Visits	\$0	\$0	24	\$2,520	10	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,465	\$120	\$400	\$400	\$4,385		
4.15	Pre-Final Site Observation/Punchlist	\$0	\$0	8	\$840	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,440	\$65	\$300		\$1,505		
4.16	Final Site Observation	\$0	\$0	8	\$840	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$840	\$65			\$905		
4.17	Project Closeout Record Drawings	\$250	2	\$250	4	\$420	8	\$800	16	\$1,360	24	\$1,512	2	\$120	2	\$150	8	\$632	\$400	\$250		\$4,532		
Task 4.2: Phase Two Construction Observation Support Services (Hourly Rate Plus Expense, Not to Exceed - as requested)																								
4.21	Preconstruction and Construction Progress Meetings	\$0	\$0	16	\$1,650	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,540	\$250	\$320		\$2,790		
4.22	Shop Drawing/Submittal Review	\$0	\$0	4	\$420	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,068	\$100	\$400		\$1,468		
4.23	Coordination/Clarifications	\$0	\$0	4	\$420	4	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$785	\$100			\$885		
4.24	In-process Site Visits	\$0	\$0	24	\$2,520	10	\$750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,465	\$120	\$400	\$400	\$4,415		
4.25	Pre-Final Site Observation/Punchlist	\$0	\$0	8	\$840	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,440	\$65	\$300		\$1,505		
4.26	Final Site Observation	\$0	\$0	8	\$840	8	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$840	\$65			\$905		
4.27	Project Closeout Record Drawings	\$250	2	\$250	4	\$420	8	\$800	16	\$1,360	24	\$1,512	2	\$120	2	\$150	8	\$632	\$400	\$250		\$4,532		
Task 4 Totals																								
4		\$500	4	\$500	\$4,280	\$2	\$800	32	\$2,720	48	\$3,024	22	\$1,430	338	\$2,974	22	\$1,430	338	\$2,974	\$250	\$320	0	\$280	\$16,044
Task 3 and 4 Totals																								
8		\$1,000	4	\$1,000	\$6,380	\$12	\$800	32	\$2,720	56	\$3,628	24	\$1,560	392	\$3,408	24	\$1,560	392	\$3,408	\$250	\$420	0	\$260	\$36,888
Project Totals																								
84		\$10,500	44	\$10,500	\$57,700	\$16	\$8,400	271	\$23,235	468	\$24,464	62	\$4,030	1879	\$16,4219	676	\$4,030	1879	\$16,4219	\$250	\$320	39,884	\$16,044	\$274,856

*Doug Macdonald*

*3/5/08*



## Cooper Aerial Surveys Co.

Cooper Aerial Surveys Co.  
11402 North Cave Creek Rd  
Phoenix, AZ 85020  
(602) 678-5111 Main  
(602) 678-5228 Fax

February 25, 2008

Mr. Bill Whitmore  
Aqua Engineering  
960 West Elliot Road, Suite 201  
Tempe, AZ 85284

Re: Aerial Mapping, Kiwanis Park

Dear Mr. Whitmore,

Cooper Aerial Surveys Co. would like to thank you for the opportunity to assist you in assessing cost for your project. In response to your request, the following is our cost and approach:

### Specifications

Cooper Aerial Surveys Co. will fly and furnish **1:2000 COLOR stereo photography** of Kiwanis Park. Using the stereo photography and the aerial targets provided by Brady Aulreich, Cooper Aerial Surveys Co. will provide a **1"=20' scale map** with a **1' contour interval**. Collection of data will be in the digital terrain modeling (DTM) method. Using the stereo photography and the digital terrain data, Cooper Aerial Surveys Co. will create digital, ortho-rectified imagery.

### Deliverables

- One 2D ACAD-2000 file of the contours and planimetrics
  - One 3D ACAD-2000 file of the contours and planimetrics
  - One 3D ACAD-2000 file of the DTM.
  - One set of ASCII format files of the DTM. (Breaks, Spots, Grid)
  - One digital, ortho-rectified image file in sid/tiff format.
- > Data will be delivered approximately **30 working days** after flight and control check.

### Cost

- |  |                          |
|--|--------------------------|
| • Flight & Photography:                | <b>\$3,690.00</b>        |
| • Aerial Triangulation:                | <b>\$1,600.00</b>        |
| • Mapping:                             | <b>\$12,400.00</b>       |
| • Digital ortho-rectified imagery:     | <b><u>\$4,270.00</u></b> |
| • Total cost for this Project will be: | <b>\$21,960.00</b>       |

### Aerial Targets

A total of **31 horizontally and vertically controlled aerial targets** will be required.

### Approach Specifications

All mapping shall adhere to National Map Accuracy Standards. In summary, 90% of contours must be within  $\frac{1}{2}$  of the contour interval. Well defined objects checked must be within  $\frac{1}{40}$ " horizontal position at map scale. Spot elevations must be within  $\frac{1}{4}$  of the contour interval.

COOPER AERIAL

*[Handwritten signature]*  
2/25/08



## Cooper Aerial Surveys Co.

Cooper Aerial Surveys Co.  
11402 North Cave Creek Rd  
Phoenix, AZ 85020  
(602) 678-5111 Main  
(602) 678-5228 Fax

### Photography

- All photography will be taken with our RC-30 camera system which features both forward motion compensation and a sophisticated gyro mount resulting in superior images.
- The optical axis of the camera will be as near vertical as possible and in no case shall the tilt exceed 3 degrees. The tilt between two consecutive exposures shall not exceed 4 degrees.
- The camera will be oriented to the flight line such that crab does not exceed 3 degrees. The crab between any two consecutive exposures shall not exceed 3 degrees.
- The project area will be photographed in stereo with a forward overlap of 60% and a sidelap of 30%.
- Atmospheric conditions will be optimal, avoiding conditions such as haze, clouds, overcast, snow, dust, precipitation, and smoke so that clear and well-defined images can be obtained.
- Time of day for flight will be when shadows caused by topographic relief, and/or sun angle will be near minimum. Excessive and deep shadows may be cause for rejection of photography. Sun angle shall not be less than 40 degrees.

### Digital Photogrammetric Mapping

Cooper Aerial Surveys Co. will utilize digital stereo plotters to perform the photogrammetric approach of collecting the digital terrain modeling (DTM) with full planimetrics. This approach integrates the most efficient hardware and software systems available to accomplish each phase of the mapping process. PC-based VR-1 software will be used in the real-time stereo compilation and in generating contours from the DTM.

### In Conclusion

Payment terms are net 30 days upon completion of services. This proposal is valid only for the client listed above, and must be signed and returned to Cooper Aerial prior to commencement of work. Please sign below to authorize "notice to proceed" and to accept responsibility for payment.

Again, thank you for allowing Cooper Aerial Surveys Co. the opportunity to propose on this project. If you need further information, or have any questions, please do not hesitate to contact me.

Sincerely,

Emily Awbrey  
[emily@cooperaerial.com](mailto:emily@cooperaerial.com)

Accepted by: Aqua Engineering

Signature \_\_\_\_\_

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

COOPER AERIAL

*[Handwritten signature]*  
3/5/20



**BRADY • AULERICH & ASSOCIATES, INC.**

Civil Engineering • Land Surveying  
Construction Staking

C.E. Aulerich	P.L.S.
Dennis H. Brady	R.L.S.
Robert N. Hermon	P.E./R.L.S.
E. Terry Holbert	R.L.S.
Larry B. James	R.L.S.

March 4, 2008

Mr. Bill Whitmore, ASLA  
AQUA ENGINEERING, INC.  
960 West Elliot Road  
Suite 201  
Tempe, AZ 85284

VIA EMAIL: [bwhitmore@aquaengr.com](mailto:bwhitmore@aquaengr.com) and [dmacdonald@aquaengr.com](mailto:dmacdonald@aquaengr.com)

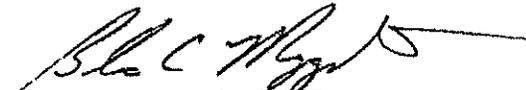
RE: PROPOSAL FOR SURVEY MAPPING CONTROL AND TOPOGRAPHY – TEMPE  
KIWANIS PARK

Dear Bill:

Thank you for permitting Brady•Aulerich & Associates, Inc. to submit our Scope of Services and fee proposal for the above-referenced project. The scope was based on our site inspection on February 20, 2008 and the results of your meeting with the City of Tempe.

If you should have any questions, please do not hesitate to contact me directly at (480) 839-4000 or by email at [bmeggitt@baa-survey.com](mailto:bmeggitt@baa-survey.com). We are Brady•Aulerich & Associates, Inc. thank you and are looking forward to successfully working together with your team on this project.

Sincerely,  
BRADY•AULERICH & ASSOCIATES, INC.



Blair C. Meggitt, R.L.S.

BCM:abc

Attachments: Scope of Services  
Exhibits A and B





**BRADY • AULERICH & ASSOCIATES, INC.**

Civil Engineering • Land Surveying  
Construction Staking

C.E. Aulerich	P.L.S.
Dennis H. Brady	R.L.S.
Robert N. Hermon	P.E./R.L.S.
E. Terry Holbert	R.L.S.
Larry B. James	R.L.S.

**SCOPE OF SERVICES  
FOR  
TEMPE KIWANIS PARK**

**I. AERIAL PANEL CONTROL (see attached Exhibit A provided by Cooper Aerial Surveys, Inc.)**

A. To enable 1" = 20' Map Scale, 1' Contour Interval, 1:2000 Photography and Mapping, Establish 31 Aerial Control Panels

Fixed Fee.....\$8,500.00

Note: Aerial control will be established on City of Tempe Horizontal and Vertical Control Datum.

**II. SUPPLEMENTAL TOPOGRAPHY**

A. Utilizing 1" = 20' Scale Mapping

Fixed Fee.....\$19,200.00

Note: Detailed supplemental topography will be performed to locate improvements of features which are not able to be shown by Aerial Photography Mapping due to tree cover, buildings, canopies, bridges, ground cover, etc. Items to be field located and/or visually identified shall include, but not limited to:

- |                            |                                  |
|----------------------------|----------------------------------|
| • Tree Identification      | • Park Benches                   |
| • Irrigation Control Boxes | • Goal Posts                     |
| • Headers (Mow Curb)       | • Bleachers                      |
| • Boulders                 | • Fence & Gates                  |
| • Art Work                 | • Sister City Park Improvements  |
| • Planters                 | • Ground Cover Identification    |
| • Retaining Walls          | • Corporate Area Improvements    |
| • Weir Boxes               | • Playground and Activity Fields |
| • Concrete Pads            | • BBQ Grills                     |

*[Handwritten signature]*  
7/5/3

**SCOPE OF SERVICES  
FOR  
TEMPE KIWANIS PARK  
(Page Two)**

**III. QUALITY CONTROL INSPECTION**

After receipt of the Aerial Photography and Mapping, a Quality Control Field Inspection shall be performed with Aqua Engineering, Inc. and the Registered Land Surveyor from Brady-Aulerich & Associates, Inc. to identify specific supplemental topography features needed for design.

Fixed Fee.....\$500.00

**IV. UTILITY LOCATIONS**

**A. Surface Evidence**

- Field location of surface evidence of utilities for water, gas, electric, irrigation structures, sewer, telco and cable will be performed and placed on the Base Mapping.

Note: Utility providers will be contacted to obtain information from their data bases.

Fixed Fee.....\$8,160.00

**V. BOUNDARY IDENTIFICATION (see attached Exhibit B for Project Limits)**

It is anticipated the Boundary Lines of Record will be calculated and shown on the Base Mapping file.

Note: Calculations will be based on City of Tempe Horizontal Datum.

Fixed Fee.....\$1,600.00

**VI. DETAIL SHEETS**

Detail sheets at 1" = 10', 1' Contour Intervals with spot elevations shall be provided in the area under the bridge at All America Way and the east side of the Recreation Center due to the lack of visualization by aerial mapping.

Also, a detail sheet shall be provided within the highly sensitive Sister City Park area.

Fixed Fee.....\$1,925.00

All of the above information shall be provided in layers on Acad 08 utilizing the aerial mapping as the base Dwg. file.

**Total Fixed Fee.....\$39,885.00**



**SCOPE OF SERVICES  
FOR  
TEMPE KIWANIS PARK  
(Page Three)**

Respectfully Submitted,  
BRADY-AULERICH & ASSOCIATES, INC.

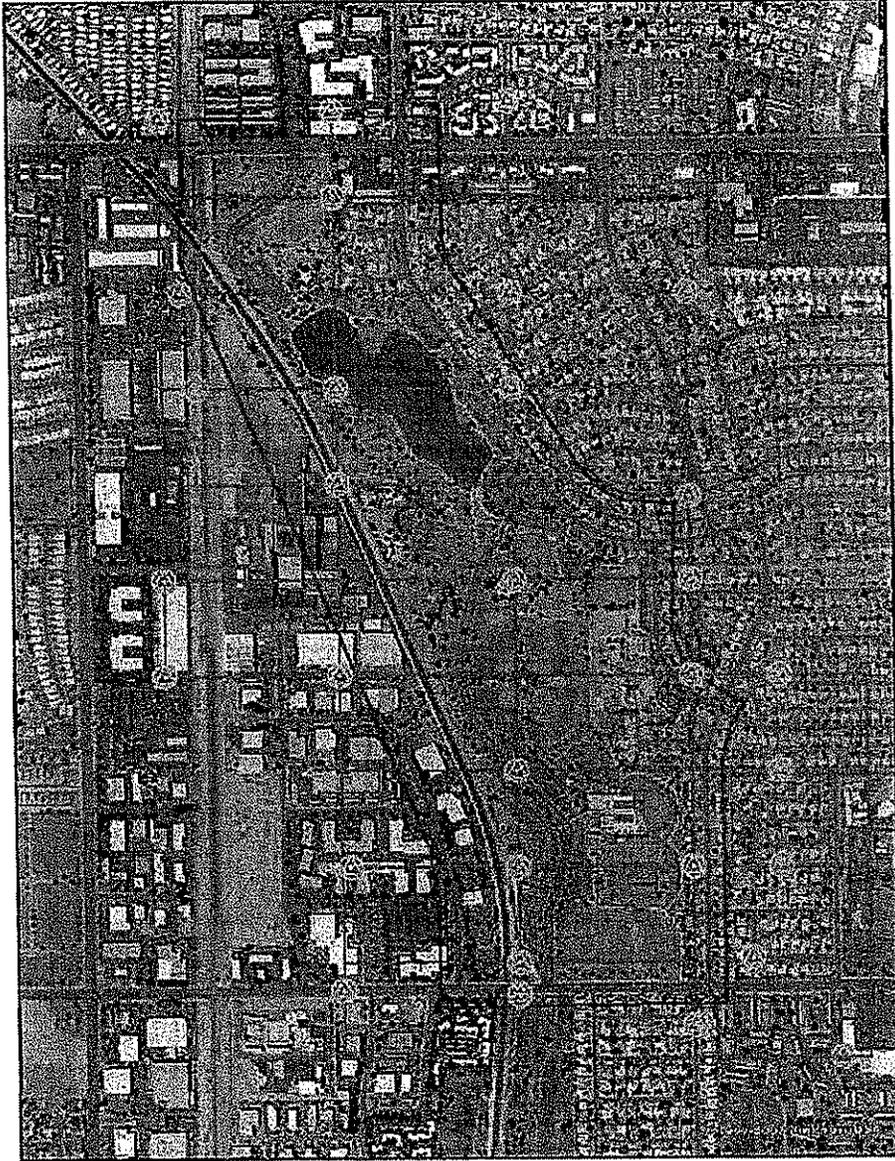
Accepted by:  
AQUA ENGINEERING, INC.

  
Blair C. Meggitt, R.L.S.      3-4-08  
Date

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

  
2/11/03

# EXHIBIT "A"



## Kiwanis Park

Photography: 1:2000  
Map Scale 1"=20'  
Contour Interval 1-foot



**Cooper Aerial  
Surveys Co.**

11602 North Cave Creek Rd.  
Flagstaff, Arizona 86022  
Ph (602) 678-6111

*Handwritten signature*  
7/5/20

