



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP14-028**

1. Agenda Item Number: 27
2. Council Meeting Date: September 12, 2013

TO: MAYOR & COUNCIL

3. Date Prepared: August 22, 2013

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Sunrise Engineering, Inc., for the Pecos Well Equipping Design.

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Sunrise Engineering, Inc., for well equipping design for the re-drilled Pecos Well, pursuant to Annual Contract No. EN1310-101, Project No. WA1301-201, in an amount not to exceed \$84,621.

7. BACKGROUND/DISCUSSION: The Pecos Well was originally drilled and equipped in 1999. The well site is located south of Pecos Road, east of Alma School Road. This well produced excellent volume and water quality until 2012, when the well casing failed due to excessive corrosion. Drilling of a replacement well is currently underway, as part of a separate contract.

The project scope will provide design to reposition and reuse, where possible, existing well piping, pumps, electrical service, and chlorination systems, as well as landscaping for the newly expanded well site. Equipping of this well will maintain water production capacity in the central area of Chandler, and help maintain adequate water supply redundancy.

The contract completion time is 224 calendar days following Notice to Proceed.

8. EVALUATION: This project is being performed under the Annual Permitting, Study, Design, and Post-Design Services for Water and Wastewater facilities, Contract No. EN1310-101 to Sunrise Engineering, Inc. The costs proposed for this project have been evaluated by staff and are determined to be reasonable.

9. FINANCIAL IMPLICATIONS:

Cost: \$84,621
Savings: N/A
Long Term Costs: N/A
Fund Source:

Acct. No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
601.3820.6713.6WA034	Water Bonds	Well Construction/Rehabilitation	Yes	\$84,621

10. PROPOSED MOTION: Move City Council award a Project Agreement to Sunrise Engineering, Inc., for well equipping design for the re-drilled Pecos Well, pursuant to Annual Contract No. EN1310-101, Project No. WA1301-201, in an amount not to exceed \$84,621.

ATTACHMENTS: Location Map, Project Agreement

APPROVALS

11. Requesting Department

13. Department Head

Houston Anderson FOR:
John Knudson, Utilities Engineering Manager

Dave Siegel
Dave Siegel, Municipal Utilities Director

12. Transportation & Development

14. City Manager

Bob Fortier
Bob Fortier, Capital Projects Manager

Rich Dlugas
Rich Dlugas

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1310-101**

PROJECT AGREEMENT NO: WA1301-201

This PROJECT AGREEMENT is made this ____ day of _____, 2013, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and **Sunrise Engineering, Inc., a Utah Corporation licensed to do business in the State of Arizona**, (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1310-101.

CITY and Sunrise Engineering, Inc., in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is Pecos Well Equipping Design, Project Number WA1301-201. The scope of work consists of design services for the Pecos Well Equipping project, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

The Annual Consultant shall not accept any change of scope, or change in contract provisions, unless issued in writing, as a contract amendment and signed by the Contract Administrator.

ARTICLE 2 - CONTRACT PRICE:

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed Eighty Four Thousand Six Hundred Twenty One Dollars (\$84,621) determined and payable as set forth in Annual Contract EN1310-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is Two Hundred Twenty Four calendar days and Annual Consultant agrees to complete all work within Two Hundred Twenty Four (224) calendar days of the date CITY issues a Notice to Proceed.

ARTICLE 4 – GENERAL:

This Project Agreement is entered into pursuant to Annual Contract No. EN1310-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

EXHIBIT A SCOPE OF WORK

INTRODUCTION

The City of Chandler is planning to install pumping equipment at their Pecos well site (southeast of Alma School Road and Pecos Road), where there is an existing well that is going to be abandoned and a new well drilled to the north. Work under this scope includes providing well equipping and facility design services which will result in a set of biddable contract documents for the reconfigured well site.

The existing well was drilled in 1999 and is no longer producing desired flows due to a partially collapsed casing. The City of Chandler is working with Southwest Ground-water Consultants, Inc. (SGC) on the new well location, depth and to determine the optimum pump depth location. Once this work is completed and it is determined that the new well will produce the desired results, the well equipping and site design for this project will move forward.

The existing well was once achieving 2,500 gpm (gallons per minute). The new well will consist of an 18-inch casing with hopes of achieving the same flow of 2,500 gpm. The existing pump to waste is 8-inch diameter pipe and the existing transmission is 16-inch diameter pipe.

The well facility components to be designed by ANNUAL CONSULTANT include:

- A new well pump, mechanical piping, valves, connection to the existing water distribution system at site
- Demolition of existing pump house and well seal to minimum of five feet (5') below grade
- A new 10"-12" PVC pump to waste discharge line from well site to SRP irrigations structure on Pecos Road (requiring jack and boring under roadway)
- Pump to waste to also include connection to drywell
- A new foundation/well seal for new well that will be used by the existing pump house to be relocated
- Electrical power supply reconfiguration to well pump, pump house and masonry wall lighting
- Chlorination line reconfiguration
- Site paving with grading and drainage to use existing drywell and reconfigure retention basin
- A perimeter masonry security wall along new property lines of site expansion (exterior walls and an access gate are in place at the well site, but the northern wall will be removed and the site expanded to the north)
- Allowances for landscape architecture, potholing of existing utilities, geotechnical investigation and unforeseen conditions

ANNUAL CONSULTANT will coordinate with the City regarding any pertinent data needs associated with the execution of the project and will reasonably rely on the accuracy, timeliness and completion of the information.

ANNUAL CONSULTANT shall provide the following services:

PHASE 1 – PRELIMINARY DESIGN

TASK 1.1 Pre-Design Report: ANNUAL CONSULTANT shall prepare five (5) copies of a pre-design report summarizing the well facilities requirements and design criteria the well site, including:

- Site Layout
- Pump selection criteria
- Piping materials and pressure classes

- Thrust restraint methods
- Valve selection and location
- Chlorination facilities
- Site structural facility requirements and foundation design
- Electrical power evaluation
- Preliminary SCADA control concepts
- Drywell criteria
- Well discharge to waste evaluation
- Construction and maintenance access

ANNUAL CONSULTANT shall determine whether the existing power distribution supply has sufficient capacity to provide electrical service for the new pump. If not, ANNUAL CONSULTANT shall make recommendations for delivery of new electrical service from a utility company. The City will coordinate with the Utility to obtain the new electrical service.

TASK 1.2 Topographic Surveying & Base-mapping: ANNUAL CONSULTANT shall prepare a topographic survey for the site and proposed pump to waste alignment and tie-in at SRP irrigation structure on Pecos Road. Survey to include verification of benchmarks, spot elevations, contours, depiction of existing utilities, drainage features, facilities, visual property information and major vegetation.

TASK 1.3 Rights-of-Way/Easements Determination: ANNUAL CONSULTANT shall determine existing rights-of-ways boundaries and easements by researching online information from the county.

TASK 1.4 Meetings, Project Management & QA/QC: This task includes the project management, administration, meetings, correspondence and quality control of this phase (Phase 1) of the project by ANNUAL CONSULTANT. Three (3) meetings have been budgeted for this task which include the following:

1. Kick-off/data collection meeting
2. Pre-Design Report Submittal
3. Report Comment/Review Meeting and Final Design Scoping /Design Kickoff Meeting

PHASE 2 –DESIGN, CONSTRUCTION DOCUMENTS & PERMITTING

The purpose of this phase is to prepare final construction drawings, specifications and construction cost estimates (engineer's preliminary opinion of probable costs). This phase will include submittals and reviews at 60% and 90% -complete and Final Construction Documents. ANNUAL CONSULTANT shall complete the specifications using the ANNUAL CONSULTANT's master specifications (City of Chandler's as directed) and in accordance with the City's General Conditions for construction. ANNUAL CONSULTANT will prepare drawings using AutoCAD Civil 3D 2013 software.

For the 60% submittal, ANNUAL CONSULTANT shall prepare:

- Design Development Drawings
- Preliminary Cost Estimate

For the 90% submittal, ANNUAL CONSUTLANT shall prepare:

- Detailed Design Drawings
- Technical Specifications
- Engineer's Cost Estimate

ANNUAL CONSULTANT shall provide five (5) copies full size and five (5) copies true half-size (11" x 17") of the 60% and 90% deliverables to the City. The list of project drawings provided below will be refined as the project progresses.

ANNUAL CONSULTANT shall conduct workshops to review the City's comments at the 60% and 90% submittal phases.

ANNUAL CONSULTANT shall modify the contract documents to reflect all agreed-upon final review comments from the City, and ANNUAL CONSULTANT's quality control review team.

ANNUAL CONSULTANT shall submit one reproducible set of 100% complete (Final) Mylars and five (5) copies of the final Bid Documents (full-size drawings and specifications) to the City. ANNUAL CONSULTANT shall deliver electronic drawings to the City in AutoCAD format.

TASK 2.1 Mechanical Design: ANNUAL CONSULTANT shall prepare the required technical specifications and design drawings for mechanical improvements, including a new vertical turbine pump, pump enclosure, motor, and other associated connections. Based on the results of the final hydraulic calculations and capacity (as determined by Southwest Groundwater and City), ANNUAL CONSULTANT shall identify pump suppliers recommended for consideration by the City. ANNUAL CONSULTANT shall provide system curves, pump curves, and specifications for the recommended pumping units to the City for review.

The design will also include mechanical piping to connect the new pump discharge to the existing water distribution system, existing chlorination facilities, new pump to waste line and existing drywell.

TASK 2.2 Civil Design: ANNUAL CONSULTANT shall prepare the required technical specifications and design drawings for civil improvements at the well site to include layout design and grading. ANNUAL CONSULTANT shall include exterior walls. ANNUAL CONSULTANT shall prepare a drainage memorandum to address the onsite storm drainage.

TASK 2.3 Electrical Design: ANNUAL CONSULTANT shall prepare the required technical specifications and design drawings for electrical improvements at the well site. ANNUAL CONSULTANT shall prepare a one-line diagram for the purpose of identifying well pump power distribution layout, motor control, preliminary demand and connected electrical loads and utility service requirements.

TASK 2.4 Structural Design: ANNUAL CONSULTANT shall prepare the required technical specifications and design drawings for structural improvements at the well site, including a new perimeter wall (match existing) and a new foundation/well seal for the relocated existing well pump house enclosure.

TASK 2.5 Cost Estimating: ANNUAL CONSULTANT shall prepare a preliminary cost estimate at the 60% design phase and an engineering cost estimate at the 90% design phase.

TASK 2.6 Permitting: ANNUAL CONSULTANT shall assist the City in preparing an ATC (Approval to Construct) permit application from MCESD (Maricopa County Environmental Services Department) and from the City's Planning and Development Department. AOC (Approval of Construction) permit application from MCESD and As-Built certification are not included in this scope.

TASK 2.7 Bidding Services: ANNUAL CONSULTANT shall attend one pre-bid meeting to answer any questions during the meeting and will respond to other design inquiries during the bidding period. It is assumed that contractor inquiries will be routed through the City and

ANNUAL CONSULTANT will respond directly to the City. It has been assumed that the City will communicate directly with all contractors. ANNUAL CONSULTANT shall also support the City in the evaluation of qualified bid submittals.

TASK 2.8 Meetings, Project Management & QA/QC: : This task includes the project management, administration, meetings, correspondence and quality control of this phase (Phase 2) of the project by ANNUAL CONSULTANT. Three (3) meetings have been budgeted for this task which include the following:

1. 60% Submittal Comment Review Meeting
2. 90% Submittal Comment Review Meeting
3. Final Construction Documents Review Meeting

PHASE 3 –ALLOWANCES

The tasks in this phase will be used as allowances as described below:

TASK 3.1 Reimbursable Expenses: This will be an allowance used for reimbursable expenses which may include, but are not limited to, reprographics (documents, plans, reports, maps, mileage, etc.), including one (1) Final Mylar Set of plans for the City of Chandler.

TASK 3.2 Legal Descriptions/Exhibits: This project may require legal descriptions for land acquisition, permanent easements or Temporary Construction Easements (TCE's). If authorized by the City, ANNUAL CONSULTANT will prepare a legal description and exhibit for these scenarios. The preparation of up to four (4) legal descriptions/exhibits is budgeted for this task. The City will be responsible for obtaining signatures from home/business owners for these land acquisitions and/or easements.

TASK 3.3 Utility Potholing: After the City comments from the 60% plan submittal are received by ANNUAL CONSULTANT, utility potholing will be performed by a subcontractor of the ANNUAL CONSULTANT. ANNUAL CONSULTANT will prepare a pothole request order (exhibit and list for needed pothole locations) and coordinate with the subcontractor and the City. Blue Stake will be called in prior to any potholing. The City will send plans to utility owners for conflict review and arrange for any relocation with the respective owners (of non-City owned utilities) as necessary. After the utility potholing information is received it will be incorporated into the 90% plan submittal. Five (5) utility potholes have been budgeted for this task allowance. Only minor traffic control is anticipated as being necessary, such as traffic cones and a truck mounted message board provided by subcontractor. All permitting requirements and expenses will be the responsibility of the City.

TASK 3.4 Landscape Architecture: This project may require some minor landscape architecture design. If this work becomes necessary it will be performed by ANNUAL CONSULTANT under this task. The scope is undetermined at this time, but when determined, the required scope of work shall not exceed the budgeted amount for this task.

TASK 3.5 Additional Services for Unforeseen Conditions: Due to the nature of this project additional services may be required during the course of design and/or construction from the ANNUAL CONSULTANT. Additional services (detailed description to be defined later) will be provided upon written authorization from the City.

TASK 3.6 Jensen Systems Preliminary Design – Instrumentation and Controls (I&C): This task is set up as an allowance for Jensen Systems to oversee and provide preliminary design recommendations to be included in the Pre-Design Report. Modifications to the existing instrumentation may include control systems such as radio telemetry, monitoring and

control from the City's SCADA, flow, level, pressure, chlorination monitoring and control, local and remote alarms and other communications, etc.

TASK 3.7 Jensen Systems Final Engineering – Instrumentation and Controls (I&C): This task is set up as an allowance for Jensen Systems to oversee and provide final engineering design, construction documents for modifications to the existing instrumentation and control systems such as radio telemetry, monitoring and control from the City's SCADA, flow, level, pressure, chlorination monitoring and control, local and remote alarms and other communications, etc.

Scope of Work Conditions & Exclusions

- A. The City of Chandler shall be responsible for providing the following:
 - a. As-Built (Record Drawings) of the existing well facility
 - b. Geotechnical information for the existing well facility
 - c. City quarter section utility maps and electronic GIS map files
 - d. Access to the city's Land Base (GIS)
 - e. Registration of new well with ADWR (Arizona Department of Water Resources)
- B. The following are responsibilities of the City during the project:
 - a. Make available pertinent data affecting design including but not limited to well test reports, hydraulic grade levels and system maps
 - b. Pay City permit fees
 - c. Reproduce bidding documents
 - d. Distribute bidding documents to prospective bidders
- C. Any items not specifically included within the scope of this proposal are excluded. If additional items are added to the contract, they will be performed in accordance with the fees, terms and conditions contained in the aforementioned contract.
- D. The scope of work for the services to be performed as part of this contract has been summarized in the attached Cost Summary shown in Exhibit B. These services shall be performed on a lump sum basis.

Schedule

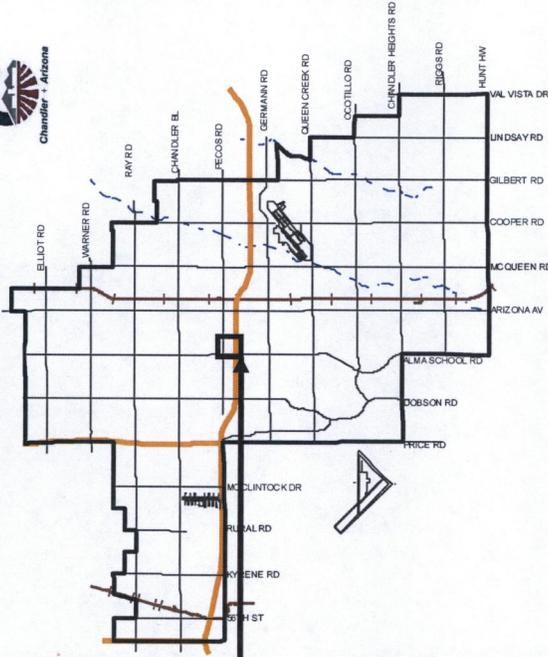
The following is a proposed schedule (assuming 5-day work-weeks) from NTP (Notice to Proceed):

- | | |
|---|----------------|
| • NTP from City of Chandler | |
| • Kick-off Meeting | NTP + 2 weeks |
| • Complete Survey | NTP + 3 weeks |
| • Submit Pre-Design Report | NTP + 6 weeks |
| • City Review of Pre-Design Report Complete | NTP + 8 weeks |
| • Submit 60% Design | NTP + 16 weeks |
| • City Review of 60% Complete | NTP + 18 weeks |
| • Submit 90% Design & Specifications | NTP + 22 weeks |
| • City & SRP Review of 90% Complete | NTP + 26 weeks |
| • Submit 100 % (Final) Contract Documents | NTP + 30 weeks |
| • MCESD ATC & SRP Permitting | NTP + 32 weeks |

Project Area Limits



WEST PECOS WELL EQUIPPING DESIGN PROJECT NO. WA1301-201



MEMO NO. CP14-028

