| Chandler · Arizona | PURCHASING ITEM FOR COUNCIL AGENDA Memo No. CP17-004 | 1. Agenda Item Number: 22 |
|---|---|---|
| | | 2. Council Meeting Date: July 28, 2016 |

| | | |
|---|---|---|
| TO: | MAYOR AND COUNCIL | 3. Date Prepared: July 12, 2016 |
| THROUGH: | CITY MANAGER | 4. Requesting Department: Municipal Utilities |

**5. SUBJECT**: Project Agreement with Wilson Engineers, LLC, for the Tumbleweed Aquifier Storage and Recovery Well Sand Separator System Design Services

**6. RECOMMENDATION**: Staff recommends City Council award a Project Agreement to Wilson Engineers, LLC, for design services, for the Tumbleweed Aquifier Storage and Recovery Well Sand Separator System, pursuant to Annual Water and Wastewater Services Contract No. EN1517.101, Project No. WW1610.201, in an amount not to exceed $213,320.

**7. BACKGROUND/DISCUSSION**: The City operates and maintains ten Aquifer Storage and Recovery (ASR) Wells in the vicinity of Tumbleweed Park. The ASR Wells are cycled seasonally. In the summer, the wells are pumped to recover water for use in the reclaimed water irrigation system. In the winter, excess reclaimed water is injected through the wells for storage in the upper aquifer. To optimize operations and extend the life of the ASR Wells, the wells are occasionally pumped to purge and clean the well. Purge water from this process generally contains small volumes of sand and is currently sent through the sewer collection system to the Airport Water Reclamation Facility (AWRF) for retreatment. Over time, sand builds up in the sewer pipes, requiring additional maintenance efforts to keep the lines clear.

Staff has identified a sand separator system as a means to eliminate the retreatment of purged water and the deposition of sand in the sewer collection system. The purged water from all wells will be re-piped into the proposed Tumbleweed ASR Wells sand separator system, and the reclaimed water will be pumped back to the reclaimed water system for irrigation use. Separated solids will be hauled away for landfill disposal. The location of the facility and construction activities will be coordinated with the Parks Division.

The project scope of work consists of: development of preliminary design, final design, geotechnical, and drainage reports, preparation of construction documents, permitting assistance, and bid services.

**8. EVALUATION PROCESS**: This project is being performed under the Annual Water and Wastewater Services Contract No. EN1517.101, to Wilson Engineers, LLC. The costs proposed for this project have been evaluated by staff and are determined to be reasonable. The contract completion time is 270 calendar days following Notice to Proceed.

**9. FINANCIAL IMPLICATIONS**:

Cost: $213,320
Savings: N/A
Long Term Costs: N/A

Fund Source:

| Account No.: | Fund Name: | Program Name: | CIP Funded: | Amount: |
|---|---|---|---|---|
| 611.3910.6817.6WW189 | Wastewater Bond | Effluent Reuse Storage & Recovery Wells | Yes | $213,320 |

**10. PROPOSED MOTION**: Move City Council award a Project Agreement to Wilson Engineers, LLC, for design services, for the Tumbleweed Aquifier Storage and Recovery Well Sand Separator System, pursuant to Annual Water and Wastewater Services Contract No. EN1517.101, Project No. WW1610.201, in an amount not to exceed $213,320.

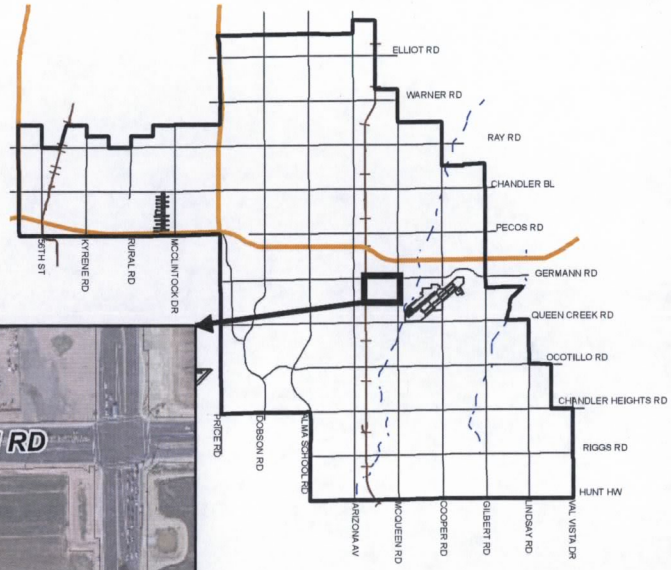
**ATTACHMENTS:** Location Map, Agreement

**APPROVALS**

| 11. Requesting Department | 13. Department Head |
|---|---|
| For | |
| Gina Ishida-Raybourn, Acting Utilities Engineering Manager | John Knudson, Municipal Utilities Director |
| **12. Transportation & Development** | **14. City Manager** |
| Bob Fortier | Marsha Reed |
| Bob Fortier, Capital Projects Manager | Marsha Reed |

Chandler + Arizona

# TUMBLEWEED AQUIFER STORAGE AND RECOVERY (ASR) WELLS PROJECT NO. WW1610.201



**MEMO NO. CP17-004**

● ASR WELLS

▨ PROPOSED VAULT LOCATION

NTS

ChanGIS

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**PROJECT AGREEMENT**
**PURSUANT TO ANNUAL CONTRACT NO. EN1517.101**

**PROJECT AGREEMENT NO: WW1610.201**

This PROJECT AGREEMENT is made this day of 2016, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Wilson Engineers, LLC, registered in the state of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1517.101.

CITY and Wilson Engineers, LLC, in consideration of the mutual covenants herein set forth, agree as follows:

**ARTICLE 1 - DESCRIPTION OF WORK:**

This project is **Tumbleweed ASR Well Sand Separator System**, Project Number **WW1610.201**. The scope of work consists of design services for a sand separator system for the Tumbleweed ASR Wells, 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 Two Hundred Thirteen Thousand Three Hundred Twenty Dollars ($213,320) determined and payable as set forth in Annual Contract EN1517.101 and Exhibit B attached hereto and made a part hereof by reference.

**ARTICLE 3 - CONTRACT TIME:**

The contract time is Two Hundred Seventy calendar days and Annual Consultant agrees to complete all work within Two Hundred Seventy (270) 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. EN1517.101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Project Agreement on the day and year first written above.

This Project Agreement will be effective on this _____day of_____, 2016.

CITY OF CHANDLER

_____
MAYOR DATE:

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

APPROVED AS TO FORM:

_____
City Attorney By:

ATTEST:

_____
City Clerk

FOR THE ANNUAL:

By:
Title: PRINCIPAL

ADDRESS FOR NOTICE
Mr. Steve Todd
Wilson Engineers, LLC
9633 S. 48th St., Ste. 290
Phoenix, AZ 85044-5658

Phone: 480-893-8860

**EXHIBIT A**
**SCOPE OF WORK**

ANNUAL CONSULTANT shall provide the following services:

**TASK 1.0 PRELIMINARY DESIGN**

The ANNUAL CONSULTANT shall develop sand separator alternative conceptual layouts to present to the City for their input and approval. The ANNUAL CONSULTANT shall conduct a kick off meeting, monthly design meetings, and submittal review meetings during the course of the project. A total of six meetings are anticipated for this project.

**Subtask 1.1 Draft Preliminary Design Report.** Six (6) copies of the draft report for sand separator system shall be submitted to the City and MCESD for review. The purpose of the report is to document the engineering design basis for the facilities to be constructed as a part of this project.

**Subtask 1.2 Final Design Report.** Incorporate comments received from the City and MCESD on the Draft Design Report and submit six (6) copies of the Final Design Report.

**Subtask 1.3 Geotechnical Report.** Geotechnical investigation for the project is anticipated. After the completion of the geotechnical investigation, a report shall be submitted with recommendations for the design of new structures and trench backfill requirements.

**Subtask 1.4 Drainage Report.** The Annual Consultant shall update the current drainage report following requirements outlined by the City of Chandler. The drainage report shall be submitted to the City for review and approval.

**Subtask 1.5 Topographic Survey.** Topographic survey for the area is currently available and some surface and structure elevations will be surveyed under this Project. A survey control sheet will be provided and established based on the existing City of Chandler datum used for the project site.

**Task 2.0 CONSTRUCTION DOCUMENTS**

The purpose of this Task is to define the level of engineering design services to be provided for the preparation of Construction Documents for the Sand Separator System at the Tumbleweed ASR wells site.

**Subtask 2.1 Preparation of 60% Plans.** Prepare preliminary (60%) construction documents including plans, and table of contents for specifications. The 60% plans shall include the following detailed design areas:

- Civil: Site plan and piping locations.
- Mechanical: Sand separator system, solids pump station and associated piping and valve layouts
- Electrical and Instrumentation: Preliminary Process & Instrumentation Diagrams.

Five copies of the 60 percent plans will be submitted for review to the City's Engineering and Operations Departments. One review meeting will be conducted to discuss any comments received from the City.

**Subtask 2.2 Preparation of 90% Plans and Specifications (Agency Review Set).** Prepare preliminary (90%) construction documents including plans, specifications, and a construction cost estimate for the Sand separator system. The plans shall incorporate the comments received on the Design Report / 30% submittal and comments received from 60% drawings. Three packages of 90% set of drawings shall include the following detailed design areas.

- Civil: Site plan, piping locations, grading, and drainage.
- Structural and Mechanical
- Electrical and Instrumentation: Power supply requirements, control descriptions and instrumentation.

Five (5) copies of the preliminary, 90 percent, plans and specifications will be submitted for review to the City's Municipal Utilities Department. One review meeting will be conducted to discuss any comments received from the City.

**Subtask 2.3 Preparation of Final Plans and Specifications**. The final 100% plans and specifications shall be prepared incorporating the City's and Maricopa County's comments. One (1) reproducible set of plans and specifications shall be prepared to produce bid sets. Final plans shall be prepared for all three packages as described below.

- Civil: Site plan, partial grading, and yard piping
- Structural and Mechanical
- Electrical and Instrumentation Drawings
- Final Specifications

**Task 3.0 MCESD / CITY PERMITTING**

**Subtask 3.1 Maricopa County Environmental Services Department Approval to Construct (ATC).** The ANNUAL CONSULTANT shall prepare the ATC application and submit the appropriate paperwork (consisting of Agency Review Plans, Specifications, and Design Report) for the Sand Separator System Design at the Tumbleweed ASR wells site to the MCESD and obtain approval. The Annual Consultant shall meet with MCESD staff to discuss the sand separator system and address any questions or comments.

**Subtask 3.2 City Permitting**
4.2.1 Building, Grading and Drainage Permit. The Annual Consultant shall complete the Building Permit application and submit four copies (4) of the Agency Review Plans and Specifications to the City Building Department for review and approval. The Annual Consultant shall complete the Grading and Drainage Permit Application and submit four copies (4) of the Agency Review Plans to the City Development Services Department. The ANNUAL CONSULTANT shall revise the drawings as necessary to address City's comments and if necessary, make additional submittals for obtaining approvals from the City.
**NOTE: It is assumed that the City of Chandler will pay all review fees directly.

**TASK 4.0 BID SERVICES**

**Subtask 4.1 Pre-Bid Conference.** Attend the pre-bid conference to answer bidder questions pertaining to the Contract Documents.

**Subtask 4.2 Questions/RFI Responses.** Receive and respond to bidder inquires after the pre-bid conference.

**Subtask 4.3 Prior Approval Review / Addenda.** Review equipment submittals presented for prior approval (according to the City's requirements) and prepare addenda required to clarify or modify the Contract Documents.

**Subtask 4.4 Bid Opening.** Attend the bid opening, review bids, and make recommendation for award.

# EXHIBIT B
# FEE SCHEDULE

| Task | Task Description | Principal $ 205.00 | Sr Project Mgr $ 195.00 | Project Eng $ 140.00 | Sr Designer II $135 | CADD Tech III $ 85.00 | Admin. Assist III $ 75.00 | Total Hours | Total Fee |
|---|---|---|---|---|---|---|---|---|---|
| **Task 1.0 - Preliminary Design** | | | | | | | | | |
| 1.1 | Draft Preliminary Design Report | 4 | 16 | 80 | 40 | 40 | 8 | 188 | $ 24,540 |
| 1.2 | Final Design Report | 2 | 12 | 48 | 16 | 24 | 4 | 106 | $ 13,970 |
| 1.3 | Geotechnical Investigation | | | 4 | | | | 4 | $ 560 |
| 1.4 | Drainage Report | | 2 | 4 | | | | 6 | $ 950 |
| 1.5 | Topographical Survey | | 2 | 4 | | 4 | | 10 | $ 1,290 |
| | **Subtotal - Preliminary Design** | 6 | 32 | 140 | 56 | 68 | 12 | 314 | $ 41,310 |
| **Task 2.0 - Construction Documents** | | | | | | | | | |
| 2.1 | Preparation of 60% Plans | 4 | 80 | 112 | 84 | 80 | 8 | 368 | $ 50,840 |
| 2.2 | Preparation of Agency Review (90%) Plans | 4 | 112 | 124 | 76 | 116 | 36 | 468 | $ 62,840 |
| 2.3 | Preparation of Final Plans and Specifications | 2 | 36 | 54 | 36 | 32 | 16 | 176 | $ 23,770 |
| | **Subtotal - Final Design** | 10 | 228 | 290 | 196 | 228 | 60 | 1012 | $ 137,450 |
| **Task 3.0 - MCESD/CITY Permitting** | | | | | | | | | |
| 3.1 | Maricopa County Environmental Services ATC | 2 | 4 | 8 | | | | 14 | $ 2,310 |
| 3.2 | City Permitting | 2 | 8 | 8 | | 2 | 2 | 22 | $ 3,410 |
| | **Subtotal - Final Design** | 4 | 12 | 16 | 0 | 2 | 2 | 36 | $ 5,720 |
| **Task 4.0 - Bid Services** | | | | | | | | | |
| 4.1 | Pre-Bid Conference | | 2 | 2 | 2 | | | 6 | $ 940 |
| 4.2 | Questions / RFI Response | | 4 | 8 | 12 | | | 24 | $ 3,520 |
| 4.3 | Equipment Prequalification Review / Issue Addenda | | 2 | 4 | 4 | 4 | 4 | 18 | $ 2,130 |
| 4.4 | Attend Bid Opening | | | 2 | 2 | | | 4 | $ 550 |
| | **Subtotal - Bid Services** | 0 | 8 | 16 | 20 | 4 | 4 | 52 | $ 7,140 |
| | **Owner's Allowance** | | | | | | | | $ 10,000 |
| | **Subtotal - Wilson Labor Summary** | 20 | 280 | 462 | 272 | 302 | 78 | 1414 | $ 201,620 |

**II. Other Direct Costs**

| Task No(s). | Expense Description | Unit | Total Units | Cost / Unit | Total |
|---|---|---|---|---|---|
| 1.5 | Topographic Site Survey (Allowance) | LS | 1 | $ 2,200 | $ 2,200 |
| 1.3 | Geotechnical Investigation (Allowance) | LS | 1 | $ 2,500 | $ 2,500 |
| 2.0 | Structural Design (Allowance) | LS | 1 | $ 5,500 | $ 5,500 |
| 3.1 | MCESD Review Fees - Non-expedited | LS | 1 | $ 1,500 | $ 1,500 |
| | **Subtotal - Other Direct Costs** | | | | $ 11,700 |

**III. TOTAL FEE PROPOSAL**

| | | |
|---|---|---|
| I | **LABOR SUMMARY** | **$ 201,620** |
| II | **OTHER DIRECT COSTS** | **$ 11,700** |
| III | **TOTAL FEE** | **$ 213,320** |