



**PURCHASING ITEM
FOR
COUNCIL AGENDA
CP14-163**

1. Agenda Item Number:

28

2. Council Meeting Date:

May 8, 2014

TO: MAYOR & COUNCIL

3. Date Prepared: April 22, 2014

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Engineering Services Contract to Wilson Engineers, LLC, for Ocotillo Water Reclamation Facility (OWRF) Process Improvements.

6. RECOMMENDATION: Staff recommends City Council award an Engineering Services Contract to Wilson Engineers, LLC, for Ocotillo Water Reclamation Facility (OWRF) Process Improvements, Contract No. WW1413-201, in an amount not to exceed \$1,572,480.

7. BACKGROUND/DISCUSSION: The OWRF located at 3333 South Old Price Road, has been in operation since 1985. In 2013, the City completed a comprehensive assesment of the facility and identified a number of items that require rehabilitation or upgrades to ensure continued reliable and efficient operation.

This project scope of work consists of engineering services for the design of process improvements and rehabilitation including: modifications to the Airport Lift Station to accommodate a combined influent pump station, permanent odor control facilities for the lift station, headworks facilities rehabilitation, modifications to the existing liquid stream biological treatment basins and existing aeration system, addition of a fourth secondary clarifier, hydraulic improvements to the existing secondary clarifiers, filters, and chlorine contact basins, and replacement of valves and piping at the effluent pump station. In addition, the consultant will provide consolidation of record drawings of existing infrastructure, preparation of multiple contract documents, permitting, and Construction Manager at Risk coordination for the OWRF.

8. EVALUATION PROCESS: On February 27, 2014, the consultant was selected in accordance with State law, and City policies and procedures. Staff reviewed the scope of work, billing rates, and total fee for this project, compared them to historical costs, and determined they are reasonable. The contract completion time is 365 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$1,572,480
Savings: N/A
Long Term Costs: N/A
Fund Source:

<u>Account No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
611.3910.6718.6WW621	Wastewater Bond	Water Reclamation Facility Improvements	Yes	\$1,572,480

10. PROPOSED MOTION: Move City Council award an Engineering Services Contract to Wilson Engineers, LLC, for Ocotillo Water Reclamation Facility (OWRF) Process Improvements, Contract No. WW1413 -201, in an amount not to exceed \$1,572,480.

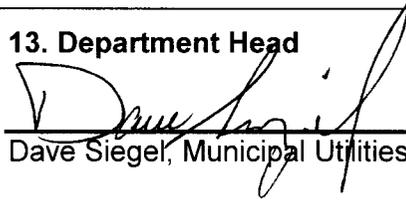
Attachments: Contract, Location Map

APPROVALS

11. Requesting Department


John Knudson, Utilities Engineering Manager

13. Department Head


Dave Siegel, Municipal Utilities Director

12. Transportation & Development


Bob Fortier, Capital Projects Manager

14. City Manager


Rich Dlugas



**OCOTILLO WATER RECLAMATION FACILITY (OWRF)
PROCESS IMPROVEMENTS
PROJECT NO. WW1413-201**



MEMO NO. CP14-163



PROJECT AREA



ENGINEERING SERVICES CONTRACT

PROJECT TITLE: **Ocotillo Water Reclamation Facility (OWRF) Process Improvements**

PROJECT NO: **WW1413.201**

This contract is made and entered into by and between the City of Chandler, Arizona, a municipal Corporation, hereinafter called the CITY, and Wilson Engineers, LLC, registered in the state of Arizona, hereinafter called ENGINEER.

WHEREAS, ENGINEER represents ENGINEER has the expertise and is qualified to perform the services described in this Contract; and

WHEREAS, the Mayor and City Council/City Manager of the City of Chandler are authorized and empowered by the provisions of the City Charter to execute contracts for Professional Services;

NOW THEREFORE, for and in consideration of the mutual covenants and conditions hereinafter contained, it is agreed by and between the CITY and ENGINEER, as follows:

1. DESCRIPTION OF PROJECT:

Design and permit process improvements at the Ocotillo Water Reclamation Facility (OWRF) located on the southeast corner of Old Price Road and Queen Creek Road. The OWRF is an existing wastewater treatment facility owned by the City that has been in operation since the 1980's. In 2013, the City completed a comprehensive Process Facility Assessment of the OWRF and identified a number of items within the facility that require rehabilitation or upgrades to ensure continued reliable and efficient operation. This effort will be conducted in multiple tasks.

2. SCOPE OF WORK:

ENGINEER shall provide those services described in Exhibit A attached hereto and made a part hereof by reference.

3. PAYMENT SCHEDULE:

For services described in paragraph 2 of this Contract, the CITY shall pay ENGINEER a fee based on the fee schedule attached hereto and made a part hereof by reference Exhibit B not to exceed the sum **One Million Five Hundred Seventy Two Thousand Four Hundred Eighty dollars (\$1,572,480)**. Payment will be made monthly on the basis of progress reports. An Application and Certification for Payment Sheet must be provided. In addition, the following must also be included: a clear, detailed invoice reflecting items being billed for, a summary sheet showing percentage of work completed to date, amount/percent billed to date and current status of all tasks within a project; any/all backup documentation supporting the above items. Work schedule updates will be included in the monthly progress payment requests.

4. PERIOD OF SERVICE:

ENGINEER shall complete all services described in paragraph 2 within **Three Hundred Sixty Five (365)** calendar days after "Notice to Proceed" is issued by the CITY. In the event delays are experienced beyond the control of ENGINEER, the completion date may be extended as mutually agreed upon by CITY and ENGINEER.

5. OPINIONS OF PROBABLE COSTS (ESTIMATES):

Any opinions of probable project cost or probable construction cost provided by ENGINEER are made on the basis of information available to ENGINEER and on the basis of ENGINEER's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s) methods of determining prices, or over competitive bidding or market conditions, ENGINEER does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost ENGINEER prepares.

6. APPROVALS:

All work shall be subject to the approval by the City Engineer.

ENGINEER agrees to exercise the skill and care which would be exercised by comparable professional engineers performing similar services at the time and in the locality such services are performed. If the failure to meet these standards results in faulty work, ENGINEER shall undertake at its own expense, the corrective adjustments or modifications.

7. REPORTING:

Written monthly reports, along with updated work schedules, will be made by ENGINEER in the format prescribed by the CITY. These reports will be delivered to the CITY per schedule. When requested by the CITY, ENGINEER will attend Council meetings and provide finished documents including correspondence for Council action, supporting charts, graphs, drawings and colored slides of same.

8. STANDARDS OF PERFORMANCE:

A ENGINEER shall be familiar with CITY's Standard Details and Specifications and other relevant CITY regulations (http://www.chandleraz.gov/content/UDM_SDnSpecs.pdf). ENGINEER shall ensure there are no conflicts among the Contract Documents including, but not limited to, the CITY's General and Supplementary Conditions for Construction Contracts, the plans and specifications prepared by ENGINEER, any standard details or specifications incorporated therein by reference, and the Construction Contract.

B Correction of Mistakes: ENGINEER shall be responsible for the completeness and accuracy of the work prepared or compiled under ENGINEER's obligation for this project and shall correct, at ENGINEER's expense, all errors or omissions therein which may be disclosed. Correction of errors disclosed and determined to exist during any construction of the project on architectural or engineering drawings and specifications shall be accomplished by ENGINEER. The cost of the design necessary to correct those errors attributable to ENGINEER and any damage incurred by CITY as a result of additional construction costs caused by such engineering or architectural errors shall be chargeable to ENGINEER and shall not be considered a cost of the Work. The fact that CITY has reviewed or approved ENGINEER's work shall in no way relieve ENGINEER of any of its responsibilities.

9. INDEMNIFICATION:

To the fullest extent permitted by law, but only to the extent caused by the negligence, recklessness or intentional wrong conduct, ENGINEER, its successors, assigns and guarantors, shall defend, indemnify and hold harmless City and any of its elected or appointed officials, officers, directors, commissioners, board members, agents or employees from and against any and all allegations, demands, claims, proceedings, suits, actions, damages, including, without limitation, property damage,

environmental damages, personal injury and wrongful death claims, losses, expenses (including claim adjusting and handling expenses), penalties and fines (including, but not limited to, attorney fees, court costs, and the cost of appellate proceedings), judgments or obligations, which may be imposed upon or incurred by or asserted against the City by reason of this Contract or the services performed or permissions granted under it, or related to, arising from or out of, or resulting from any negligent or intentional actions, acts, errors, mistakes or omissions caused in whole or part by ENGINEER, or any of its subcontractors, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, relating to the discharge of any duties or the exercise of any rights or privileges arising from or incidental to this Contract, including but not limited to, any injury or damages claimed by any of ENGINEER's and subcontractor's employees.

10. **INSURANCE:**

1. General.

A. At the same time as execution of this Contract, ENGINEER shall furnish the City of Chandler a certificate of insurance on a standard insurance industry ACORD form. The ACORD form must be issued by an insurance company authorized to transact business in the State of Arizona possessing a current A.M. Best, Inc. rating of A-7, or better and legally authorized to do business in the State of Arizona with policies and forms satisfactory to CITY. Provided, however, the A.M. Best rating requirement shall not be deemed to apply to required Worker's Compensation coverage.

B. ENGINEER and any of its subcontractors, subconsultants or sublicensees shall procure and maintain, until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, the insurances set forth below.

C. The insurance requirements set forth below are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

D. The City in no way warrants that the minimum insurance limits contained in this Contract are sufficient to protect ENGINEER from liabilities that might arise out of the performance of the Contract services under this Contract by ENGINEER, its agents, representatives, employees, subcontractors, sublicensees or subconsultants and ENGINEER is free to purchase any additional insurance as may be determined necessary.

E. Failure to demand evidence of full compliance with the insurance requirements in this Contract or failure to identify any insurance deficiency will not relieve the ENGINEER from, nor will it be considered a waiver of its obligation to maintain the required insurance at all times during the performance of this Contract.

F. Use of SubContractors: If any work is subcontracted in any way, ENGINEER shall execute a written Contract with Subcontractor containing the same Indemnification Clause and Insurance Requirements as the City requires of ENGINEER in this Contract. ENGINEER is responsible for executing the Contract with the Subcontractor and obtaining Certificates of Insurance and verifying the insurance requirements.

2. Minimum Scope and Limits Of Insurance. ENGINEER shall provide coverage with limits of liability not less than those stated below.

A. Commercial General Liability-Occurrence Form. ENGINEER must maintain "occurrence" form Commercial General Liability insurance with a limit of not less than \$2,000,000 for each occurrence, \$4,000,000 aggregate. Said insurance must also include coverage for products and completed operations, independent contractors, personal injury and advertising injury. If any Excess

insurance is utilized to fulfill the requirements of this paragraph, the Excess insurance must be “follow form” equal or broader in coverage scope than underlying insurance.

B. Automobile Liability-Any Auto or Owned, Hired and Non-Owned Vehicles
Vehicle Liability: ENGINEER must maintain Business/Automobile Liability insurance with a limit of \$1,000,000 each accident on ENGINEER owned, hired, and non-owned vehicles assigned to or used in the performance of ENGINEER’s work or services under this Contract. If any Excess or Umbrella insurance is utilized to fulfill the requirements of this paragraph, the Excess or Umbrella insurance must be “follow form” equal or broader in coverage scope than underlying insurance.

C. Workers Compensation and Employers Liability Insurance: ENGINEER must maintain Workers Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of ENGINEER employees engaged in the performance of work or services under this Contract and must also maintain Employers’ Liability insurance of not less than \$1,000,000 for each accident and \$1,000,000 disease for each employee.

D. Professional Liability. If the Contract is the subject of any professional services or work performed by ENGINEER, or if ENGINEER engages in any professional services or work adjunct or residual to performing the work under this Contract, ENGINEER must maintain Professional Liability insurance covering errors and omissions arising out of the work or services performed by the ENGINEER, or anyone employed by ENGINEER, or anyone whose acts, mistakes, errors and omissions the ENGINEER is legally liable, with a liability limit of \$1,000,000 each claim and \$2,000,000 all claims. In the event the Professional Liability insurance policy is written on a “claims made” basis, coverage must extend for 3 years past completion and acceptance of the work or services, and ENGINEER, or its selected Design Professional will submit Certificates of Insurance as evidence the required coverage is in effect. The Design Professional must annually submit Certificates of Insurance citing that the applicable coverage is in force and contains the required provisions for a 3 year period.

3. Additional Policy Provisions Required.

A. Self-Insured Retentions Or Deductibles. Any self-insured retentions and deductibles must be declared and approved by the City. If not approved, the City may require that the insurer reduce or eliminate any deductible or self-insured retentions with respect to the City, its officers, officials, agents, employees, and volunteers.

B. City as Additional Insured. The policies are to contain, or be endorsed to contain, the following provisions:

1. The Commercial General Liability and Automobile Liability policies are to contain, or be endorsed to contain, the following provisions: The City, its officers, officials, agents, and employees are additional insureds with respect to liability arising out of activities performed by, or on behalf of, ENGINEER including the City’s general supervision of the ENGINEER; Products and Completed operations of ENGINEER; and automobiles owned, leased, hired, or borrowed by ENGINEER.

2. ENGINEER’s insurance must contain broad form contractual liability coverage and must not exclude liability arising out of explosion, collapse, or underground property damage hazards (“XCU”) coverage.

3. The City, its officers, officials, agents, and employees must be additional insureds to the full limits of liability purchased by ENGINEER even if those limits of liability are in excess of those required by this Contract.

4. ENGINEER's insurance coverage must be primary insurance with respect to the City, its officers, officials, agents, and employees. Any insurance or self-insurance maintained by the City, its officers, officials, agents, and employees shall be in excess of the coverage provided by ENGINEER and must not contribute to it.

5. ENGINEER's insurance must apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

6. Coverage provided by ENGINEER must not be limited to the liability assumed under the indemnification provisions of this Contract.

7. The policies must contain a severability of interest clause and waiver of subrogation against the City, its officers, officials, agents, and employees, for losses arising from Work performed by ENGINEER for the City.

8. ENGINEER, its successors and or assigns, are required to maintain Commercial General Liability insurance as specified in this Contract for a minimum period of 3 years following completion and acceptance of the Work. ENGINEER must submit a Certificate of Insurance evidencing Commercial General Liability insurance during this 3 year period containing all the Contract insurance requirements, including naming the City of Chandler, its agents, representatives, officers, directors, officials and employees as Additional Insured as required.

9. If a Certificate of Insurance is submitted as verification of coverage, the City will reasonably rely upon the Certificate of Insurance as evidence of coverage but this acceptance and reliance will not waive or alter in any way the insurance requirements or obligations of this Contract. If any of the required policies expire during the life of this Contract, the ENGINEER must forward renewal or replacement Certificates to the City within 10 days after the renewal date containing all the necessary insurance provisions.

11. AMENDMENTS:

Whenever a change in the scope of work contemplated in this Contract is determined to be necessary, the work will be performed in accordance with the Contract provided, however, that BEFORE such work is started, a Contract Amendment shall be executed by the CITY and ENGINEER. Additions to, modifications of, or deletions from the project provided herein may be made and the compensation to be paid to ENGINEER may be adjusted accordingly by mutual agreement of the contracting parties. It is agreed that no claim for extra work by ENGINEER will be allowed by the CITY except as provided herein, nor shall ENGINEER do any work not covered by this Contract unless such work is authorized through an executed amendment.

12. TERMINATION FOR CAUSE:

This Contract may be terminated by CITY for cause should the ENGINEER fail to perform any provision of this Contract, including without limitation, for any of the following reasons:

- (a) ENGINEER abandons Work;
- (b) ENGINEER assigns or attempts to assign its rights or obligations under this Contract or any part thereof to any third-party (without the prior written consent of CITY);
- (c) ENGINEER is adjudged bankrupt or insolvent, makes a general assignments for the benefit of creditors, has a trustee or receiver appointed for its property, or files a petition to take advantage of any debtor's act;
- (d) ENGINEER fails or refuses to perform any obligation under the Contract, or fails to remedy such nonperformance within seven (7) days after its occurrence;

- (e) ENGINEER fails to comply with any applicable Laws and fails to remedy such nonperformance within seven (7) days after its occurrence;
- (f) ENGINEER fails to achieve the required dates for performance required pursuant to the Contract.

13. TERMINATION FOR CONVENIENCE:

CITY may at any time and for any or no reason, at its convenience, terminate this contract or any part of the services to be rendered pursuant thereto by written notice to ENGINEER specifying the termination date. Immediately after receiving such notice, ENGINEER shall discontinue advancing the work under this Contract and shall deliver to the CITY all drawings, notes, calculations, sketches and other materials entirely or partially completed, together with all unused materials supplied by the CITY.

ENGINEER shall receive as compensation in full for services performed to date of such termination, a fee for the percentage of work actually completed. This fee shall be a percentage of ENGINEER(S) fee described in this Contract under paragraph 3 and shall be in the amount to be agreed mutually by ENGINEER and the CITY. The CITY shall make this final payment within sixty (60) days after ENGINEER has delivered the last of the partially completed items.

14. OWNERSHIP OF INSTRUMENTS OF SERVICE UPON TERMINATION FOR CAUSE AND/OR FOR CONVENIENCE:

Upon Termination for Cause or for Convenience, the CITY shall have ownership of the Instruments of Service.

15. OWNERSHIP OF DOCUMENTS:

All documents, including, but not limited to, tracings, drawings, original mylars, estimates, field notes, investigations, design analysis and studies which are prepared in the performance of this Contract are to be, and remain the property of, the CITY. ENGINEER shall furnish the CITY, upon its request, originals or reproducible of technical specifications and copies of all other documents listed above. ENGINEER shall endorse, by his professional seal, all plans and engineering data furnished by him.

16. RE- USE OF DOCUMENTS:

The parties agree the documents, drawings, specifications and designs, although the property of CITY, are prepared for this specific project and are not intended nor represented by ENGINEER to be suitable for re-use for any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at CITY's sole risk and without liability or legal exposure to ENGINEER.

17. NO KICK-BACK CERTIFICATION:

ENGINEER warrants that no person has been employed or retained to solicit or secure this Contract upon a Contract or understanding for a commission, percentage, brokerage or contingent fee; and that no member of the City Council or any employee of the CITY has any interest, financially or otherwise, in the ENGINEERING firm.

For breach or violation of this warranty, the CITY shall have the right to annul this Contract without liability, or at its discretion to deduct from the Contract Price or consideration, the full amount of such commission, percentage, brokerage or contingent fee.

18. CONFLICT OF INTEREST:

ENGINEER stipulates that its officers and employees do not now have a conflict of interest and it further agrees for itself, its officers and its employees that it will not contract for or accept employment for the performance of any work or services with any individual business, corporation or government unit that would create a conflict of interest in the performance of its obligations pursuant to this Contract.

Pursuant to A.R.S. Section 38-511, the City may cancel this contract within three (3) years after its execution, without penalty or further obligation by the City if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the City of Chandler is, at any time while the contract is in effect, an employee of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract.

19. ARIZONA LAW, JURISDICTION AND VENUE, AND FEES AND COSTS:

- 19.1 Arizona Law. This Contract shall be governed and interpreted according to the laws of the State of Arizona.
- 19.2 Jurisdiction and Venue. The parties agree that this Contract is made in and shall be performed in Maricopa County. Any lawsuits between the Parties arising out of this Contract shall be brought and concluded in the courts of Maricopa County in the State of Arizona, which shall have exclusive jurisdiction over such lawsuits.
- 19.3 Fees and Costs. Except as otherwise agreed by the parties, the prevailing party in any adjudicated dispute relating to this Contract is entitled to an award of reasonable attorney's fees, expert witness fees and costs including, as applicable, arbitrator fees; provided, however, that no award of attorney's fees shall exceed ten percent (10%) of the damages awarded the prevailing party unless the non-prevailing party has been determined to have acted in bad faith or in a frivolous manner during the adjudication.

20. CONTROLLING LAW:

The law of the state of Arizona shall govern this Contract.

21. REQUIRED COMPLIANCE WITH ARIZONA PROCUREMENT LAW:

Compliance with A.R.S. § 41-4401. Pursuant to the provisions of A.R.S. § 41-4401, the Engineer hereby warrants to the City that the Engineer and each of its subcontractors ("Subcontractors") will comply with all Federal Immigration laws and regulations that relate to the immigration status of their employees and the requirement to use E-Verify set forth in A.R.S. §23-214(A) (hereinafter "Engineer Immigration Warranty").

A breach of the Engineer Immigration Warranty (Exhibit C) shall constitute a material breach of this Contract that is subject to penalties up to and including termination of the contract.

The City retains the legal right to inspect the papers of any Engineer or Subcontractor employee who works on this Contract to ensure that the Engineer or Subcontractor is complying with the Engineer Immigration Warranty. The Engineer agrees to assist the City in the conduct of any such inspections.

The City may, at its sole discretion, conduct random verifications of the employment records of the Engineer and any Subcontractors to ensure compliance with Engineers Immigration Warranty. The Engineer agrees to assist the City in performing any such random verifications.

The provisions of this Article must be included in any contract the Engineer enters into with any and all of its subcontractors who provide services under this Contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a Engineer or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

In accordance with A.R.S. §35-393.06, the Engineer hereby certifies that the offeror does not have scrutinized business operations in Iran.

In accordance with A.R.S. §35-391.06, the Engineer hereby certifies that the offeror does not have scrutinized business operations in Sudan.

22. NO ASSIGNMENT:

ENGINEER shall not assign, transfer, convey or subcontract this contract or the services to be rendered pursuant thereto without the prior written consent of CITY

23. NOTICES:

Any notice required under this Contract shall be in writing, addressed to the appropriate party at its address on the signature page and given personally or by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names to this _____ day of _____ 2014.

CITY OF CHANDLER

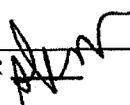
MAYOR Date

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
Phone: 480-782-3307
Fax: 480-782-3355

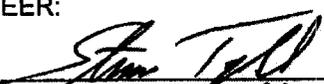
ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney by:  SEAL

ENGINEER:

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

ATTEST: If Corporation

Secretary

EXHIBIT A SCOPE OF WORK

ENGINEER shall design and permit process improvements at the Ocotillo Water Reclamation Facility (OWRF) including:

- **Task 1.0 – Consolidate Record Drawings of Existing Infrastructure:** ENGINEER shall provide engineering services to consolidate the construction documents from prior OWRF Projects into one overall facility as-built set including all previous projects within the confines of the current facility boundaries.
- **Task 2.0 – Bioxide Dose Optimization:** ENGINEER shall assist the City in optimizing the dosage of bioxide for the purposes of controlling odors in the collection system. The dose optimization scope should also consider impact on the Ocotillo WRF prior to determining the dose.
- **Task 3.0 – Evaluation of Conversion of Old Airport LS to a Reclaimed Water Pump Station:** ENGINEER shall conduct a preliminary evaluation of the conversion the currently abandoned Airport lift station to a low head reclaimed water pump station that conveys flows to the Airport WRF from Ocotillo WRF. The preliminary evaluation should include the improvements necessary to the infrastructure such as pumps, piping, valves, inlet and discharge piping and electrical. The evaluation shall include conversion of the existing 24-inch Wastewater force main on Queen Creek Road to convey reclaimed water and steps necessary for this conversion.
- **Task 4.0 – Basis of Design:** ENGINEER shall prepare a report that presents the Basis of Design (approximately 30% design level) for the improvements selected from the 2013 Process Facility Assessment that will be included along with other items identified in the scope of work.
- **Task 5.0 – Construction Documents:** ENGINEER shall prepare detailed construction documents for selected improvements.
- **Task 6.0 – Permitting:** ENGINEER shall prepare and submit materials necessary to obtain required permits to construct and operate from the City of Chandler, Maricopa County Environmental Services Department, and the Arizona Department of Environmental Quality.
- **Task 7.0 – CMAR Coordination:** ENGINEER shall coordinate with the City's selected Construction Manager at Risk (CMAR) Contractor to develop construction cost estimates, prepare construction schedules, identify issues with maintaining existing plant operations during construction (MOPO) and evaluate value engineering alternatives.

ENGINEER shall provide design, preparation of contract documents, permitting and CMAR coordination services. No post design services are included at this time. The following major facility components will be included in the design:

- Modifications to the Airport Lift Station to accommodate a combined influent pump station.
- Permanent odor control facilities for the Airport Lift Station.

- Preliminary Treatment Facilities Rehabilitation (interim)
 - Interim Headworks Building Rehabilitation
 - Interim influent pump station rehabilitation
 - Interim odor control facilities rehabilitation including chemical feed facilities
- Modifications to the existing liquid stream biological treatment basins including
 - Installation of mixers in aeration basins
 - Installation of devices to monitor several parameters
- Modifications to the existing aeration system and blower controls.
- Addition of a fourth secondary clarifier.
- Hydraulic improvements to the existing secondary clarifiers, filters, and chlorine contact basins.
- Replace valves and piping at the effluent pump station.
- Replace PLC's and communication system throughout the facility.
- Provide power monitoring and upgraded controls at the existing emergency generators.
- Modifications to the sampling equipment at the Effluent Electrical Building
- Evaluation of an optimum bioxide dosage for collection system odor control
- Evaluation of conversion of the recently abandoned Airport LS to a low head Reclaimed Water Pump Station

PERMITTING SUMMARY:

The following permits shall be acquired as part of this project:

- City of Chandler - Building Permit
- Maricopa County Environmental Services Department - Approval to Construct
- Arizona Department of Environmental Quality - "Other Amendment" to the Existing OWRF APP

Specific services not included in this Scope are as follows:

- Landscaping services. It is assumed that landscape design services will not be required for this project, therefore not included in the scope of services.
- Construction Phase Engineering Services and Construction Administration Services.

The detailed engineering services to be provided are defined in the following tasks.

Task 1.0 – Consolidate Record Drawing of Existing Infrastructure

The purpose of this Task is to consolidate the record drawings of the original OWRF, modifications to the OWRF, and other projects located within the OWRF site, verify the current accuracy of the record drawings through field investigations (with limited pot holing), and to update the record drawings based on any observed modifications made to the facilities by City Staff. This task will include:

1.1 Data Collection & Utility Coordination: Collect and review record drawings for projects previously completed within the limits of the existing OWRF including:

- Ocotillo Water Reclamation Facility (Original 5 MGD)
- Ocotillo Water Reclamation Facility (Expansion to 10 MGD)
- Ocotillo Water Reclamation Facility (Effluent system upgrades)
- Ocotillo GRIC Pump Station and pipeline
- OWRF Blower Replacement Project
- Any other modifications completed by the staff

1.2 Site Survey: Due to the history of projects at and adjacent to the Ocotillo Water Reclamation Facility, perform a topographic survey of the overall OWRF site to document the current conditions and surface features.

NOTE: A survey allowance of \$10,000 is included

1.3 Coordinate Utility Investigations: Coordinate with the CMAR to locate and document underground utilities that vary from available plans. A limited pot holing allowance is included. It is also assumed that further underground verification may be performed by the CMAR Contractor.

NOTE: A potholing allowance of \$ 10,000 is included.

1.4 OWRF Field Investigations / As-built Verification: After collecting and evaluating the existing OWRF record drawing information, the Engineer will interview the City's Municipal Utilities Department personnel in order to determine the extent of modifications made to the OWRF following its final completion. The Engineer shall also visit the OWRF to document specific modifications within reasonable view with the intent being to incorporate the facility modifications into the overall record drawings package. For purposes of this project, visible modifications to the mechanical, electrical, and instrumentation and control systems will be documented.

1.5 Draft – Overall Consolidated Record Drawings: Consolidate the record drawings for all previous OWRF Projects. Prepare an updated site plan documenting the as-built condition including known buried utility infrastructure, surface features, and incorporating improvements identified during the site visits. Five (5) hardcopies of the Draft Overall Record Drawings Package and one (1) electronic PDF format on CD will be submitted for review to the City.

1.6 Final – Overall Consolidated Record Drawings: Incorporate the City's comments on the Draft Overall Record Drawings Package. Five (5) hardcopies of the Final Overall Record Drawings Package, one (1) electronic copy in PDF format on CD, and one (1) electronic CADD format on CD will be submitted to the City.

Task 2.0 OWRF Bioxide Dose Optimization

The City currently has a bioxide dosing facility located near the diversion structure located just north of the 101 freeway along Price Road. The dosing facility is operated by STES. This facility is utilized to manage odors in the 66-inch diameter line and the collection system in the vicinity of the OWRF. This task identifies the effort associated with optimization of bioxide dosage.

2.1 Data Collection: Collect the existing odor and bioxide dosage data along with the OWRF process data for evaluating current conditions. Obtain the dosing station design information such as metering pump capacity, current dosing pattern, and the layout.

2.2 Preparation of testing plan: Prepare a testing plan that outlines different doses of bioxide, identifies odor logger locations, duration of each dose, and the parameters that are necessary for monitoring at the OWRF during this time.

2.3 Analysis and Recommendation: After obtaining the chemical dosing information and the odor data, the ENGINEER shall analyze the information (provided by the City Staff) and recommend optimum levels of bioxide dosage.

Task 3.0 Evaluation of old Airport LS conversion to convey Reclaimed Water from OWRF to AWRF

The purpose of this task is to assess the existing infrastructure at the old Airport LS to convey reclaimed water flows from the OWRF to the AWRF. The existing 24-inch wastewater force main located on Queen Creek Road will be used to convey these flows. The force main will be repurposed and the lift station would also be evaluated for repurposing of any inlet, discharge piping including electrical infrastructure that is currently available and along with any new infrastructure needed for completion of this pump station. Deliverable includes a 15% level design, conceptual level costs (for CIP preparation), and an outline of the work necessary for implementation. Any modifications that are necessary and can be incidental to the influent pump station work will be discussed with the City and may be included in the detailed design of the Process Improvements project.

Task 4.0 – Basis of Design

The purpose of this Task is to evaluate the implementation of the improvements identified in the 2013 Facility Assessment and to prepare a report that presents the Basis of Design (approximately 30% design level) for all of the improvements that will be included in this project. This task will include:

4.1 Draft Basis of Design Report: Based on the available data, site investigations, and the City's current design standards, ENGINEER shall prepare a design report for the OWRF Process Improvements Project that includes the preliminary site plan and facility layout, design criteria and standards for the unit process upgrades, process modifications, pump station modifications, miscellaneous pipelines, other mechanical items, preliminary Process and Instrumentation Diagrams (P&IDs), estimated site power requirements, preliminary construction cost estimate, identification of any additional design issues and recommendations. Wilson Engineers shall submit six (6) hardcopies of the Design Basis Report to the City of Chandler for review and one (1) electronic PDF format on CD. A review meeting will be conducted to discuss comments on the Design Basis Report.

4.2 Final Basis of Design Report: Incorporate City comments on the draft report and submit three (3) hardcopies of the final design report and one (1) PDF format on CD to the City.

4.3 Drainage Report and Preliminary Plan: ENGINEER shall prepare a Drainage Report and Grading & Drainage Plan to update and document the existing drainage conditions at the OWRF. The Drainage Report will be submitted to the City with the Agency Review plans and specifications.

Task 5.0 – Construction Documents

The purpose of this task is to prepare the detailed construction documents for the project that will be used to by the regulatory agencies to issue permits for the construction of the improvements and the CMAR to prepare construction cost estimates and construct the improvements. The City may elect to complete the design work in different phases. This task will include:

5.1 Preparation of 60% Plans: Prepare preliminary (60%) construction documents (plans only) for the OWRF Process Improvements. The 60% plans shall include preliminary plan sheets for the following disciplines:

- General
- Civil
- Mechanical

- Structural
- Electrical
- Instrumentation and Controls

Five (5) hardcopies and one (1) PDF format on CD of the preliminary 60% plans will be submitted for review to the City's Development Services Division and Municipal Utilities Department. An Engineer's Opinion of Probable Costs will be prepared based upon the 60% plans. One review meeting will be conducted to discuss any comments received from the City.

5.2 Preparation of 90% Plans and Specifications (Agency Review Set): Prepare preliminary (90%) construction documents including plans and specifications. The plans shall incorporate the comments received on the 60% submittal. Six (6) hardcopies and one (1) PDF format on CD of the 90% plans and specifications will be submitted for review. An Engineer's Opinion of Probable Costs will be prepared based upon the 90% plans and specifications. A review meeting will be conducted with the City to review and discuss all comments received on the 90% Plans.

5.3 Preparation of 100% Plans and Specifications: The final 100% plans and specifications will be prepared incorporating City's and Maricopa County Environmental Services Department's (MCESD's) comments. Six (6) hardcopies and one (1) PDF and one (1) CADD format on CD set of permit plans and specifications will be provided with one (1) Mylar hardcopy of the Plans cover sheet. An Engineer's Opinion of Probable Costs will be prepared based upon final plans and specifications.

Task 6.0 – Permitting

The purpose of this Task is to prepare and submit materials necessary to obtain required permits to construct and operate from the City of Chandler, Maricopa County Environmental Services Department, and the Arizona Department of Environmental Quality. This task will include:

6.1 City Development Services Permits & Approvals: ENGINEER shall submit the Agency Review Plans, Drainage Report, and plan review applications and documents to the City's Development Services Division for Building, Site, and Civil Plan review approvals. ENGINEER shall also provide additional information as requested by from City plan reviews and staff.

NOTE: It is assumed that all City permit fees for the project will be paid directly by the City and thus are not included within this scope of services.

6.2 MCESD ATC: One set of the agency review plans and specifications will be submitted to the MCESD for non-expedited review to obtain the Approval to Construct (ATC). One review meeting will be conducted to discuss any comments received from the County.

NOTE: A \$5,000 allowance has been included based on the MCESD review fees estimated for the project (multiple packages). Approval of Construction (AOC) submission is not included within this scope of services.

6.3 ADEQ APP Other Modification: ENGINEER shall prepare the necessary Other permit modification application and the technical materials necessary to modify the City's existing OWRF Aquifer Protection Permit. It is anticipated that no hydrological data analysis will be necessary to support the Other Modification to the current APP.

NOTE: Actual permit fees are unknown therefore an allowance of \$15,000 is included in the fee proposal for ADEQ Permitting.

Task 7.0 – CMAR Coordination

It is the City's intent to contract for construction services using the Construction Manager at Risk project delivery method. The CM at Risk will be contracted to provide design phase services and then during construction will provide all services required of a general contractor. The relationship between the CM at Risk and the ENGINEER is intended to be collaborative and proactive, both participating as advisors to the City during the design phase. The City wants to incorporate a contractor's perspective and input to the Project planning and design decisions and have the ability to select certain components of the Project for construction prior to full completion of design. Design Phase services by the CM at Risk shall include:

- Provide a cost model to confirm budgets and guide design decisions;
- Provide detailed independent cost estimating based on current market conditions;
- Provide a construction management plan and schedule;
- Provide alternate systems evaluation and constructability studies;
- Provide long-lead procurement studies and initiate procurement of long-lead items;
- Assist in the permitting process;
- Provide procurement services for selection of subcontractors and suppliers;
- Prepare the Guaranteed Maximum Price (GMP) for construction;

The purpose of this Task is to coordinate with the CMAR Contractor regarding constructability issues, value engineering ideas, construction cost estimating, scheduling, and MOPO issues throughout the design phase of the project. This task will include:

7.1 CMAR Coordination: The ENGINEER's effort to coordinate with the CM at Risk shall consist of:

- Solicit CM at Risk input during design development as appropriate;
- Provide information for cost estimating;
- Provide input to construction management plan and schedule;
- Provide assistance with long-lead procurement activities;
- Evaluate alternative systems suggested by CM at Risk;
- Respond to constructability review comments;
- Attend subcontractor pre-selection meetings conducted by CM at Risk;
- Prepare addenda as required;
- Assist and review during GMP development;
- Perform GMP proposal review and prepare recommendation to City;
- Assist City with review of the subcontractor/supplier bid and selection process.

The City intends to issue multiple GMPs to the CM at Risk Contractor to proceed with early construction of certain project features before the full project design is complete and request a GMP for that portion of the work. The ENGINEER shall assist the City with above task for multiple GMP packages.

**EXHIBIT B
FEE SCHEDULE**

TASK	TASK DESCRIPTION	Fee
TASK 1 - CONSOLIDATE RECORD DRAWING OF EXISTING INFRASTRUCTURE (OWRF)		
1.1	Data Collection & Utility Coordination	\$ 11,900
1.2	Site Survey	\$ 3,360
1.3	Coordinate Utility Investigations	\$ 8,200
1.4	Field Investigations / As-built Verification	\$ 14,300
1.5	Draft - Overall Consolidated Record Drawings	\$ 21,380
1.6	Final - Overall Consolidated Record Drawings	\$ 11,440
SUBTOTAL TASK 1		\$ 70,580
TASK 2 - BIOXIDE DOSE OPTIMIZATION		
2.1	Data Collection and Evaluation	\$ 1,300
2.2	Preparation of Testing Plan and Assistance	\$ 5,960
2.3	Analysis and Recommendation	\$ 9,710
SUBTOTAL TASK 2		\$ 16,970
TASK 3 - EVALUATION OF CONVERSION OF EXISTING AIRPORT LS		
3.1	Preliminary Evaluation of Existing Airport LS Conversion	\$ 28,700
TASK 4 - BASIS OF DESIGN		
4.1	Draft Basis of Design Report	\$ 77,580
4.2	Final Basis of Design Report	\$ 49,280
4.3	Drainage Report and Preliminary Plan	\$ 13,020
SUBTOTAL TASK 4		\$ 139,880
TASK 5 - CONSTRUCTION DOCUMENTS		
5.1	Preparation of 60% Plans	\$ 382,700
5.2	Preparation of 90% Plans and Specifications (Agency Review Set)	\$ 523,000
5.3	Preparation of 100% Plans and Specifications	\$ 186,310
SUBTOTAL TASK 5		\$ 1,092,010
TASK 6 - PERMITTING		
6.1	City Development Services Permits & Approvals	\$ 10,590
6.2	MCESD ATC	\$ 9,930
6.3	Aquifer Protection Permit Other Modification	\$ 16,180
SUBTOTAL TASK 6		\$ 36,700
TASK 7 - CMAR CORDINATION		
7.1	CMAR Coordination	\$ 62,640
SUBTOTAL DIRECT LABOR		\$ 1,447,480
II. ALLOWANCES AND SUBCONSULTANTS FEES		
1.0	Surveying Services Allowance	\$ 10,000
2.0	Potholing Allowance	\$ 10,000
3.0	MCESD Fees Allowance	\$ 5,000
4.0	ADEQ Permitting Fee Allowance	\$ 15,000
5.0	Misc. Reimbursable (Printing, mileage, etc) Allowance	\$ 10,000
6.0	Owner's Allowance	\$ 75,000
SUBTOTAL - ALLOWANCES AND SUBCONSULTANT FEES		\$ 125,000
TOTAL FEE		\$ 1,572,480

EXHIBIT C
Engineer Immigration Warranty
To Be Completed by Engineer Prior to Execution of Contract

A.R.S. § 41-4401 requires as a condition of your contract verification of compliance by the Engineer and subcontractors with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of its employees.

By completing and signing this form the Engineer shall attest that it and all subcontractors performing work under the cited contract meet all conditions contained herein.

Project Number/Division: WW1413.201		
Name (as listed in the contract):		
Street Name and Number:		
City:	State:	Zip Code:

I hereby attest that:

1. The Engineer complies with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of those employees performing work under this contract;
2. All subcontractors performing work under this contract comply with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of their employees; and
3. The Engineer has identified all Engineer and subcontractor employees who perform work under the contract and has verified compliance with Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214.

Signature of Engineer (Employer) or Authorized Designee:

Printed Name: _____

Title: _____

Date (month/day/year): _____