



**PURCHASING ITEM  
FOR  
COUNCIL AGENDA  
CP15-181**

**1. Agenda Item Number:** 24  
**2. Council Meeting Date:** February 26, 2015

**TO: MAYOR & COUNCIL**  
**THROUGH: CITY MANAGER**

**3. Date Prepared:** February 11, 2015  
**4. Requesting Department:** Municipal Utilities

**5. SUBJECT:** Professional Services Contract to Wilson Engineers, LLC, for Construction Management Services, for Phase I of the Ocotillo Water Reclamation Facility Process Improvements

**6. RECOMMENDATION:** Staff recommends City Council award a Professional Services Contract to Wilson Engineers, LLC, for construction management services, for Phase I of the Ocotillo Water Reclamation Facility Process Improvements, Project No. WW1413.451, in an amount not to exceed \$1,213,500.

**7. BACKGROUND/DISCUSSION:** The Ocotillo Water Reclamation Facility (OWRF), located at 3333 South Old Price Road, has been in operation since 1985. In 2013, the City completed a comprehensive assessment of the OWRF and identified rehabilitation items that will ensure its continued reliable and efficient operation to meet regulatory requirements.

Phase I construction includes interim improvements to the influent pump station and headworks building. Additional tasks included in the project are modifications to odor control, treatment facilities to improve operational efficiencies and replacement of aging piping, electrical and communication systems.

The project scope of work consists of construction management and inspection services for Phase I of this project, including shop drawing review, design modifications to fit field conditions, operator training, and warranty assistance.

A Construction Manager at Risk Contract, Project No. WW1301.401, to Sundt-McCarthy, an Arizona Joint Venture, for Phase I of the OWRF expansion and related facilities, is also scheduled for this Council meeting.

**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 330 calendar days following Notice to Proceed.

**9. FINANCIAL IMPLICATIONS:**  
Cost: \$1,213,500  
Savings: N/A  
Long Term Costs: N/A  
  
Fund Source:  

Account No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
611.3910.6814.6WW6	Wastewater Bonds	Water Reclamation Facility Improvements	Yes	\$1,213,500

**10. PROPOSED MOTION:** Move City Council award a Professional Services Contract to Wilson Engineers, LLC, for construction management services, for Phase I of the Ocotillo Water Reclamation Facility Process Improvements, Project No. WW1413.451, in an amount not to exceed \$1,213,500.

**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

## PROFESSIONAL SERVICES CONTRACT

Project Name: Ocotillo Water Reclamation Facility Process Improvements  
Project No. WW1413.451

THIS CONTRACT is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2015, by and between the City of Chandler, a Municipal Corporation of the State of Arizona, hereinafter referred to as "CITY", and Wilson Engineers, LLC, hereinafter referred to as "CONSULTANT".

WHEREAS, the Mayor and City Council of the City of Chandler is authorized and empowered by provisions of the City Charter to execute contracts for professional services; and

WHEREAS, CONSULTANT represents that CONSULTANT has the expertise and is qualified to perform the services described in the Contract.

NOW THEREFORE, in consideration of the mutual promises and obligations set forth herein, the parties hereto agree as follows:

### 1. CONTRACT ADMINISTRATOR:

1.1 To provide the professional services required by this Contract CONSULTANT shall act under the authority and approval of City Engineer or designee, (the Contract Administrator), who shall oversee the execution of this Contract, assist the CONSULTANT with any necessary information, audit billings, and approve payments. The CONSULTANT shall channel reports and special requests through the Contract Administrator.

1.2 CITY reserves the right to review and approve any/all changes to CONSULTANT'S key staff assigned to the CITY project by the firm during the term of this Contract.

### 2. SCOPE OF WORK:

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

### 3. ACCEPTANCE AND DOCUMENTATION:

Each task shall be reviewed and approved by CITY to determine acceptable completion. All documents, including but not limited to, data compilations, studies, and reports which are prepared in the performance of this Contract, shall be and remain the property of CITY and shall be delivered to CITY before final payment is made to CONSULTANT.

### 4. FEE SCHEDULE:

For the services described in paragraph 2 of this Contract, CITY shall pay CONSULTANT a fee not to exceed the sum of One Million Two Hundred Thirteen Thousand Five Hundred dollars (\$1,213,500) in accordance with the fee schedule attached hereto as Exhibit B and incorporated herein by reference.

**5. TERM:**

Following execution of this Contract by CITY, CONSULTANT shall immediately commence work and shall complete all services described herein within Three Hundred Thirty (330) calendar days from the date hereof.

**6. TERMINATION FOR CAUSE:**

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

- (a) CONSULTANT abandons Work;
- (b) CONSULTANT 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) CONSULTANT 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) CONSULTANT fails or refuses to perform any obligation under the Contract, or fails to remedy such nonperformance within seven (7) days after its occurrence;
- (e) CONSULTANT fails to comply with any applicable Laws and fails to remedy such nonperformance within seven (7) days after its occurrence;
- (f) CONSULTANT fails to achieve the required dates for performance required pursuant to the Contract.

**7. 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 CONSULTANT specifying the termination date. Immediately after receiving such notice, CONSULTANT 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.

CONSULTANT 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 CONSULTANT (S) fee described in this Contract under paragraph 3 and shall be in the amount to be agreed mutually by CONSULTANT and the CITY. The CITY shall make this final payment within sixty (60) days after CONSULTANT has delivered the last of the partially completed items.

**8. 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.

**9. INDEMNIFICATION:**

To the fullest extent permitted by law, but only to the extent caused by the negligence, recklessness or intentional wrong conduct, CONSULTANT, 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 CONSULTANT, 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 CONSULTANT's and subcontractor's employees. The amount and type of insurance coverage requirements set forth in the Agreement will in no way be construed as limiting the scope of indemnity in this paragraph.

**10. INSURANCE REQUIREMENTS:**

1. General.

A. At the same time as execution of this Contract, CONSULTANT 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. CONSULTANT 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 CONSULTANT from liabilities that might arise out of the performance of the Contract services under this Contract by CONSULTANT, its agents, representatives, employees, subcontractors, sublicensees or subconsultants and CONSULTANT 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 CONSULTANT 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, CONSULTANT shall execute a written Contract with Subcontractor containing the same Indemnification Clause and Insurance Requirements as the City requires of CONSULTANT in this Contract. CONSULTANT 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. CONSULTANT shall provide coverage with limits of liability not less than those stated below.

A. Commercial General Liability-Occurrence Form. CONSULTANT 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: CONSULTANT must maintain Business/Automobile Liability Insurance with a limit of \$1,000,000 each accident on CONSULTANT owned, hired, and non-owned vehicles assigned to or used in the performance of CONSULTANT'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:** CONSULTANT must maintain Workers Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of CONSULTANT 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 CONSULTANT, or if CONSULTANT engages in any professional services or work adjunct or residual to performing the work under this Contract, CONSULTANT must maintain Professional Liability insurance covering errors and omissions arising out of the work or services performed by the CONSULTANT, or anyone employed by CONSULTANT, or anyone whose acts, mistakes, errors and omissions the CONSULTANT 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 CONSULTANT, 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, CONSULTANT including the City's general supervision of the CONSULTANT; Products and Completed operations of CONSULTANT; and automobiles owned, leased, hired, or borrowed by CONSULTANT.

2. CONSULTANT'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 CONSULTANT even if those limits of liability are in excess of those required by this Contract.

4. CONSULTANT'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 CONSULTANT and must not contribute to it.

5. CONSULTANT'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 CONSULTANT 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 CONSULTANT for the City.

8. CONSULTANT, 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. CONSULTANT 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 CONSULTANT must forward renewal or replacement Certificates to the City within 10 days after the renewal date containing all the necessary insurance provisions.

**11. ENTIRE CONTRACT:**

This Contract constitutes the entire understanding of the parties and supersedes all previous representations, written or oral, with respect to the services specified herein. This Contract may not be modified or amended except by a written document, signed by authorized representatives or each party.

**12. CONFLICT OF INTEREST:**

CONSULTANT 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, CITY may cancel this Contract within three (3) years after its execution, without penalty or further obligation by CITY if any person significantly involved in initiating, negotiating, securing, drafting or creating this Contract on behalf of CITY is, at any time while this Contract is in effect, an employee of any other party to this Contract in any capacity, or a consultant to any other party of this Contract with respect to the subject matter of this Contract

**13. ARIZONA LAW, JURISDICTION AND VENUE, AND FEES AND COSTS:**

13.1 Arizona Law. This Contract shall be governed and interpreted according to the laws of the State of Arizona.

13.2 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.

13.3 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.

**14. ARIZONA LAW:**

This Contract shall be governed and interpreted according to the laws of the State of Arizona.

**15. REQUIRED COMPLIANCE WITH ARIZONA PROCUREMENT LAW:**

Compliance with A.R.S. § 41-4401. Pursuant to the provisions of A.R.S. § 41-4401, the Consultant hereby warrants to the City that the Consultant 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 "Consultant Immigration Warranty").

A breach of the Consultant 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 Consultant or Subcontractor employee who works on this Contract to ensure that the Consultant or Subcontractor is complying with the Consultant Immigration Warranty. The Consultant 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 Consultant and any Subcontractors to ensure compliance with Consultants Immigration Warranty. The Consultant agrees to assist the City in performing any such random verifications.

The provisions of this Article must be included in any contract the Consultant 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 Consultant or subcontractor. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

16. **NOTICES:**

All notices or demands required to be given pursuant to the terms of this Contract shall be given to the other party in writing, delivered by hand or registered or certified mail, at the addresses set forth below, or to such other address as the parties may substitute by written notice given in the manner prescribed in this paragraph.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names to this \_\_\_\_ day of \_\_\_\_\_, 2015.

CITY OF CHANDLER

CONSULTANT

\_\_\_\_\_  
MAYOR Date

By: Steve Todd  
Title: Principal

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

ADDRESS FOR NOTICE  
Wilson Engineers  
9633 S 48<sup>th</sup> St #270  
Phoenix, AZ 85044  
Phone: 480-873-8860

APPROVE AS TO FORM

ATTEST: If Corporation

\_\_\_\_\_  
City Attorney by: CA

\_\_\_\_\_  
Secretary

ATTEST:

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

SEAL

## EXHIBIT A SCOPE OF WORK

CONSULTANT shall provide the following services related to the construction and post construction phases of the Project:

### **SECTION 100 - GENERAL**

Section 200 - Project Administration Services During Construction

Section 300 - Engineering Services During Construction

Section 400 - Resident Services During Construction

Section 500 - Special Services

The level of effort associated with these services is proposed in Exhibit B.

This Scope of Services will be performed during the construction and post-construction phases of the Project. Some of the post-construction services are prescribed as Special Services, Section 500.

Construction contract documents (construction documents) are defined as the agreement, general conditions, supplemental conditions, drawings, standard details, specifications, addendum, and executed change orders prepared for construction of the Project.

### **SECTION 200 - PROJECT ADMINISTRATION SERVICES DURING CONSTRUCTION**

#### **Task 210 - Representation on Behalf of City**

The ANNUAL CONSULTANT will consult with and advise CITY and act as its representative during construction. The extent and limitations of the duties, responsibilities and authority of ANNUAL CONSULTANT as assigned herein shall not be modified, except as ANNUAL CONSULTANT may otherwise agree in writing. All CITY instructions to Contractor(s) will be issued through ANNUAL CONSULTANT who will have authority to act on behalf of CITY to the extent provided in this scope of services except as otherwise provided in writing.

ANNUAL CONSULTANT will not be responsible for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s) (unless otherwise specified in the construction contract documents) or the safety precautions and programs associated with the work of Contractor(s).

ANNUAL CONSULTANT will make site(s) visits appropriate for the size of Project and type of construction at periods appropriate to the various stages of construction to inspect, as an experienced and qualified professional, the progress and quality of the executed work of Contractor(s) and to determine if such work is proceeding in accordance with the Contract Documents.

ANNUAL CONSULTANT's efforts shall be directed toward providing a greater degree of confidence for CITY that the completed work of Contractor(s) will conform to the Contract Documents, but ANNUAL CONSULTANT will not be responsible for the failure of Contractor(s) to perform the work in accordance with the Contract Documents.

On the basis of on-site examination of materials, equipment, and workmanship, ANNUAL CONSULTANT will keep CITY informed of the progress of the work, will endeavor to guard CITY against defects and deficiencies in such work and will disapprove or reject work failing to conform to the Contract Documents. This task shall include the following items:

- 1) Conduct preconstruction conference: the ANNUAL CONSULTANT will conduct a preconstruction conference. At the conference, the ANNUAL CONSULTANT will identify field services to be provided by the ANNUAL CONSULTANT and discuss appropriate coordination procedures. The ANNUAL CONSULTANT will prepare an agenda for the meeting and will prepare and distribute the meeting minutes. The ANNUAL CONSULTANT's Resident Project Representative (RPR) will conduct the meeting.

2) Provide construction administration, quality control, and coordination: the ANNUAL CONSULTANT will provide construction administration and quality control services during the course of construction to assure that the overall technical correctness of the construction phase services and that specified procedures are being followed and that schedules are being met. The ANNUAL CONSULTANT will provide coordination functions during the construction phase as follows;

- A) hold coordination meetings with the CITY representative and other City staff as appropriate;
- B) coordinate with regulatory and approving agencies and utilities as required;
- C) coordinate the work of specialty subconsultants assigned to the Project; and
- D) verify Contractor's Material Safety Data Sheets (MSDS) are on file at the job site.

3) Provide project documents: The ANNUAL CONSULTANT will maintain and provide the following detailed project records and documentation during the construction phase:

- A) The Project records shall include correspondence, schedules, submittals, test data, project data, payments, change orders, meeting minutes, clarifications, mark-ups of drawings and specifications, control system documentation and other such documentation. Project records shall be delivered to the CITY's representative upon completion of the construction contract. Records shall be maintained under Section 400 at the RPR's field office. A duplicate set of records shall also be maintained in the ANNUAL CONSULTANT's Office.
- B) Status reports for the construction contract shall be provided under Task 410.

#### **Task 220 - Administer the Construction Schedule**

The ANNUAL CONSULTANT's opinions concerning the various scheduling documents produced or used by the Contractor are for information and are not controlling on the Contractor. It is the Contractor's responsibility to continue to exercise its independent judgment concerning means, methods and sequences of construction it employs. The Contractor remains solely responsible for meeting contract time(s) given in the construction documents.

1) Review progress schedule: The ANNUAL CONSULTANT will review and critique the Contractor's progress schedule in accordance with the construction documents. The ANNUAL CONSULTANT will examine the work sequence, durations, interim milestones, and other appropriate scheduling features in accordance with the requirements of the construction documents. The ANNUAL CONSULTANT will prepare a summary of the review comments and will meet and discuss the schedule comments with the Contractor and the CITY's representative.

2) Review progress schedule updates: The ANNUAL CONSULTANT will review the Contractor's progress schedule updates to the construction schedule in accordance with the construction documents. The ANNUAL CONSULTANT will perform a review of progress accomplished during the period and compare to planned schedule and discuss significant discrepancies with the Contractor. The ANNUAL CONSULTANT and Contractor will establish, based on the data, the percent of Project completion. ANNUAL CONSULTANT will meet with Contractor on monthly basis to review and update the schedule data. Based upon the schedule update, the ANNUAL CONSULTANT will recommend processing progress payments. The primary performance of the task will be performed under Task 400.

#### **Task 225 – Perform Site Visits**

The ANNUAL CONSULTANT's design staff may make site visits appropriate for the type of construction at periods appropriate to the various stages of construction to observe, as an experienced qualified professional, the progress and quality of the executed work of a Contractor and to determine in general, if such work is proceeding in accordance with the design intent. The ANNUAL CONSULTANT's site visit shall support the inspection needs and requirements established by the CITY's Building Service Department.

### **Task 230 - Review Shop Drawings and Test Results**

The ANNUAL CONSULTANT will receive, review, evaluate, and distribute (or take other appropriate action in respect of) shop drawings, samples, test results, and other data which Contractor is required to submit. The ANNUAL CONSULTANT's review shall be for conformance with the design concept of the Project and compliance with the information given in the construction documents. Such review or other action shall not extend to means, methods, sequences, techniques or procedures of construction selected by Contractor(s), or to safety precautions and programs associated thereto. The ANNUAL CONSULTANT will receive and review (for general contents as required by the construction documents) maintenance and operating schedules and instructions, operation and maintenance manuals, guarantees, and certificates of inspection which are to be assembled by Contractor(s) in accordance with the construction documents.

The ANNUAL CONSULTANT will maintain a submittal log showing dates of submittal, transmittal action to other subconsultants, dates of return and review action. Copies of the log shall be furnished to the CITY and the Contractor monthly. The ANNUAL CONSULTANT will promptly and in accordance with Project schedule requirements, review and approve, reject or take other appropriate action on the Contractor's request for substitutions. The ANNUAL CONSULTANT will not approve any proposed substitution unless such substitution conforms to the Project design concept and the construction contract documents including the contract price.

Task effort is based on receiving a total of 250 shop drawings. Submittal review efforts are based upon a maximum of two (2) reviews per submittal and that no more than fifty percent (50%) of the total number of first submittals will require two (2) reviews.

### **Task 240 - Issue Interpretations and Clarifications**

The ANNUAL CONSULTANT will issue the CITY's instructions to Contractor(s); issue necessary interpretations and clarifications of the construction documents; have authority, as CITY's representative, to require special inspection or testing of the work; act as initial interpreter of the requirements of the construction documents and judge the acceptability of the work thereunder, and make decisions on all claims of CITY and Contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the construction documents pertaining to the execution and progress of the work. The ANNUAL CONSULTANT will render interpretations or decisions in good faith and in accordance with the requirements of the construction documents. Task effort is based on review of 300 RFIs.

The ANNUAL CONSULTANT will respond to the CITY's representative and/or Contractor to clarify and/or interpret technical or design related questions. Routine technical interpretations shall be responded to under Task 410. The ANNUAL CONSULTANT will respond to issues raised during construction regarding interpretation and clarification of the contractual administrative and technical requirements of the construction documents. The ANNUAL CONSULTANT will serve as the CITY's advisor in resolution of these issues. Clarifications shall be issued to the Contractor under Task 410.

### **Task 250 - Certify Contractor Progress Payments**

The ANNUAL CONSULTANT will review, prepare comments, and reach agreement with the Contractor on the progress represented in the Contractor's schedule of values. The monthly schedule update, schedule of values, in combination with the ANNUAL CONSULTANT's field inspections, and the progress schedule shall be used by the ANNUAL CONSULTANT to determine the appropriateness of the Contractor's request for payment.

The ANNUAL CONSULTANT, as an experienced and qualified professional, and on review of applications for payment and the accompanying data and schedules, determine the amounts owing to Contractor and recommend in writing, payments to Contractor in such amounts; such recommendations of payment will constitute a representation to CITY, based on such inspections and review, that;

- 1) the work has progressed to the point indicated;
- 2) to the best of ANNUAL CONSULTANT's knowledge, information and belief, the quality of such work is in accordance with the Contract Documents (subject to an evaluation of such work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the construction documents, and to any

qualifications stated in the recommendation); and

- 3) payment of the amount recommended is due and owing to the Contractor.

For unit price work, the ANNUAL CONSULTANT's recommendations for payment will a determination of completed quantities of such work.

#### **Task 260 – Substantial and Final Completion Inspection**

Following notice from the Contractor, The ANNUAL CONSULTANT will conduct an inspection to determine if the Project or the work associated with interim milestones is substantially complete in accordance with the construction documents. If the ANNUAL CONSULTANT considers the work substantially complete, the ANNUAL CONSULTANT will deliver to the CITY and the Contractor the Certificate of Substantial Completion and the punch list, the date for completion of the punch list, and recommend the division of responsibilities between the CITY and the Contractor. If the work is not substantially complete, the process shall be repeated until the work is substantially complete.

The ANNUAL CONSULTANT will, upon completion of the punch list items as notified by the Contractor, make final inspection to determine if the finished work has been completed to the standard required by the construction documents, determine whether required inspections and approvals for permit compliance have been satisfactorily completed, and Contractor has fulfilled the obligations so that ANNUAL CONSULTANT may recommend, in writing, final payment to Contractor and may give written notice to CITY and the Contractor that the work is acceptable, subject to any conditions therein expressed and in consultation with the CITY whether the work is finally complete. At or prior to the final inspection, the ANNUAL CONSULTANT will request the Contractor prepare and furnish;

- 1) certification that all obligations for payment for labor, materials or equipment related to the work have been paid or otherwise satisfied;
- 2) certification that all insurance and bonds required of the Contractor beyond final payment is in effect and will not be canceled or allowed to expire without notice to the CITY;
- 3) the written consent of surety for final payment;
- 4) record document information is complete and submitted;
- 5) all keys, manuals, required spare parts, guaranties and warranties, and other documents necessary for close-out of the work; and
- 6) verification of permit close-out including the Certification of Occupancy.

If the work is not finally complete, the process shall be repeated until the work is finally complete.

Promptly after the work is determined to be finally complete and the ANNUAL CONSULTANT determines that the Contractor has properly submitted the items required for final inspection, the ANNUAL CONSULTANT will determine whether the Contractor is entitled to final payment and, if so, will so certify to the CITY.

The ANNUAL CONSULTANT's certification that the Contractor is entitled to final payment constitutes the ANNUAL CONSULTANT's representation to the CITY that;

- 1) the work complies with (a) the construction contract documents, (b) applicable building codes, rules or regulations of all governmental authorities having jurisdiction over the Project, and (c) applicable installation and workmanship standards;
- 2) the Contractor has submitted proper Final Completion close-out documents; and
- 3) the Contractor is entitled to final payment.

The ANNUAL CONSULTANT will provide to the CITY, at the time it submits a signed final payment request from the Contractor, all Final Completion close-out documents.

ANNUAL CONSULTANT will not be responsible for the acts or omissions of any Contractor, or subcontractor, or any of the Contractor(s)' or subcontractor(s)' agents or employees or any other persons (except ANNUAL CONSULTANT's own employees and agents) at the site(s) or otherwise performing any of the Contractor(s)' work; however, nothing contained in Tasks 210 through 260, inclusive, shall be construed to release ANNUAL CONSULTANT from liability for failure to properly perform duties in accordance with this scope of services.

### **SECTION 300 - ENGINEERING SERVICES DURING CONSTRUCTION**

#### **Task 320 - Minor Changes, Change Order Requests, and Change Orders**

The ANNUAL CONSULTANT, without the CITY's prior approval, may authorize or direct minor changes in the Work which are consistent with the intent of the construction contract documents and which do not involve a change in Project cost, time for construction, Project scope, aesthetics, or approved design elements. Any such minor changes shall be implemented by written field order. Except as provided in this paragraph, the ANNUAL CONSULTANT shall not have authority to direct or authorize changes in the Work without the CITY's prior written approval; however, the ANNUAL CONSULTANT shall provide a copy of any written field order to the CITY.

The ANNUAL CONSULTANT will promptly consult with and advise the CITY concerning, and shall administer and manage, all change order requests and change orders.

The ANNUAL CONSULTANT will prepare, when requested by the CITY, required drawings, specifications and other supporting data regarding minor changes, change order requests and change orders.

The ANNUAL CONSULTANT will prepare and submit change order requests explaining the merits for the change and a recommendation for the CITY's approval and acceptance.

The ANNUAL CONSULTANT will negotiate an agreement with the Contractor as to scope of work and cost, time or both associated with the change in Work. The change order shall include a written justification for the cost of the Work.

The ANNUAL CONSULTANT will administer and manage minor changes, change order requests, and change orders on behalf of the CITY. Change orders shall be prepared on a standard form provided by the CITY.

Should a change order request be accepted by the CITY in the absence of an agreement with the Contractor as to cost, time, or both, the ANNUAL CONSULTANT will;

- 1) receive and maintain all documentation pertaining to the change order request required of the Contractor;
- 2) examine such documentation on the CITY's behalf;
- 3) take such other action as may be reasonably necessary or as the CITY may request; and
- 4) make a recommendation to the CITY concerning any appropriate adjustment in the construction cost and/or time and prepare a change order for Contractor's acceptance and City approval.

Changes and substitutions shall be limited to the scope of the Project as defined by the construction documents or additional work as may be requested by the CITY.

#### **Task 330 – Material Testing**

The ANNUAL CONSULTANT will provide material testing service for tests as required to be performed by the CITY in the construction contract documents.

The ANNUAL CONSULTANT will provide the services of a professional construction materials inspection and testing laboratory that meets ASTM E 329 requirements. Inspection and testing shall be coordinated with the construction schedule. Testing and inspection services shall include placement inspection and testing of compacted select fill and backfill, ordinary backfill, paving base, pavement subgrade, and subgrade courses; asphaltic concrete pavement inspection and field density tests and concrete testing and inspection. Samples for testing shall be collected from the construction site and delivered to the laboratory. The laboratory shall provide a construction

materials technician (technicians) to perform the field construction materials inspection and field testing services herein outlined.

ANNUAL CONSULTANT will review laboratory reports and reports of inspection and testing activities describing the tests and inspections made and maintain files of this documentation to be turned over to the CITY. The laboratory shall itemize any changes in specifications or acceptance criteria authorized by the ANNUAL CONSULTANT and report the actual condition of all items tested and inspected. The laboratory shall report directly to the ANNUAL CONSULTANT's Resident Project Representative and shall receive direction with respect to work activities, duties, duration, reporting procedures, etc., from the ANNUAL CONSULTANT's Resident Project Representative.

The ANNUAL CONSULTANT's laboratory (and its technician(s)) will inspect and test for the following:

- 1) Soils Testing: Select backfill, backfill and subgrade materials under and around structures, paved areas, pipe trenches, and duct bank/conduit, etc., for compaction to the appropriate percentage of the moisture-density specified for each material. Selection of areas to be tested shall be made by the ANNUAL CONSULTANT. Placement of select backfill shall be periodically monitored by the technician for compliance with project materials quality specifications. Field moisture-density tests shall be conducted by the technician at the frequency directed by the ANNUAL CONSULTANT. In-place density tests and sampling shall be conducted by the Technician on the compacted asphalt pavement at the frequency designated by the ANNUAL CONSULTANT. Moisture-density relationships shall be determined in accordance with the moisture-density specifications specified for this Project, utilizing the appropriate method for each material type. Optimum moisture and maximum density remolded swell and plasticity index testing as required for each sample submitted. Soil sieve analyses shall be conducted prior to placement of select backfill, and embedment and all granular fill materials.
- 2) Concrete Placements: The laboratory's technician shall monitor the concrete materials, as delivered to the Project site, for compliance with the requirements of the Construction Contract Documents. These requirements include temperature, slump, air content, time of delivery and composition as delivered. The technician shall report any deviations from the Construction Document requirements to the ANNUAL CONSULTANT's Resident Project Representative. ANNUAL CONSULTANT's Representative will determine the acceptability of the products. The technician shall prepare and deliver (to the laboratory for testing) the concrete test cylinders in accordance with the Construction Contract Documents and appropriate American Concrete Institute (ACI) Standards.

Deliver to the laboratory, from the construction site, the concrete test cylinders prepared by the Technician. Provide test cylinder control system in accordance with the Laboratory's standard control procedure.

- 3) Testing of Hot Mix Asphaltic Concrete: Bitumen extraction, aggregate gradation, bitumen content, laboratory density and stability test shall be performed for paving operations.
- 4) Additional Testing: Additional testing services that may be required throughout the life of the construction period will be provided at the ANNUAL CONSULTANT's request. Fees for these services will be invoiced through the ANNUAL CONSULTANT to the CITY at the laboratory's standard unit rates in effect at the time these services are provided.

Written reports of all testing results which identify the required data and identify conformance or non-conformance with the Construction Contract Document will be maintained by the ANNUAL CONSULTANT and provided to the CITY at the completion of the Project. The ANNUAL CONSULTANT will take appropriate action on all such testing and inspection reports, including acceptance, rejection, requiring additional testing or corrective work, or such other action the ANNUAL CONSULTANT deems appropriate. The ANNUAL CONSULTANT will promptly reject Work which does not conform to and comply with testing requirements.

#### **Task 340 -- Record Drawings**

The ANNUAL CONSULTANT will prepare a set of record drawings showing those changes made during construction. Record drawing information shall be based on marked-up prints, drawings, and other data furnished by Contractor(s) to ANNUAL CONSULTANT which ANNUAL CONSULTANT will review for accuracy and completeness. Use the original cover sheet with all the signatures and Engineer's seals for the record drawings.

The ANNUAL CONSULTANT will prepare the following:

- 1) One (1) full size black line copies and three (3) 11" x 17" black line copies to submit to the CITY. Record drawing information will be added electronically to existing AutoCad files by the ANNUAL CONSULTANT as the record set. The record drawings shall be conformed to reflect shop drawing review, substitutions, clarifications and change order information.
- 2) Ten (10) sets of electronic files representing record drawing information. Five sets of electronic files will be AutoCad files and five sets will be PDF files. *(Note: The record drawing electronic files will be used as facility drawings by the City. The sealed set of record drawings defined in Task 340.1 above shall represent the official record drawing set for the Project.)*

The ANNUAL CONSULTANT's Resident Project Representative will review and coordinate the record drawings. The record drawings shall be available to the CITY within thirty (30) days of receipt of all data in its entirety from the Contractor.

#### **Task 350 – Manufacturer Operation and Maintenance Manual**

Prepare a record of manufacturer or supplier furnished operating and maintenance manual that reflects the intent of design and the manufacturer's installation, operation, and maintenance requirements. The record may comprise catalog-cuts or manuals of materials or equipment supplied by the manufacturer that demonstrate compliance with contract documents. It is expected that the Contractor will furnish manufacturer's manuals prior to installation of the respective equipment. A record of manufacturer operation and maintenance manuals will be maintained by the ANNUAL CONSULTANT as the information is submitted by the Contractor. The preliminary record shall be submitted to the CITY on or about 80 percent construction completion; and a final record shall be submitted within 60 days following substantial completion.

The review of manufacturer operations and maintenance manuals will occur under Task 230. The development of facility operation and maintenance manual will occur under Task 540, Operations Manual.

#### **Task 370 – Special Inspections**

Perform Structural, Electrical, Mechanical, and other Special Inspections as required by the City of Chandler Building Code (Modified International Building Code). Provide Special Inspection Reports, and signed and sealed Special Inspection Certificates as required by City of Chandler Building Safety Department.

### **SECTION 400 - RESIDENT SERVICES DURING CONSTRUCTION**

#### **A - General**

The Resident Project Representative will be furnished and will act as directed by ANNUAL CONSULTANT, in order to assist ANNUAL CONSULTANT in inspecting performance of the work of the Contractor(s). Through more extensive on-site inspections of the work in progress and field checks of materials and equipment by the Resident Project Representative and Inspector(s), ANNUAL CONSULTANT will endeavor to provide further protection for CITY against defects and deficiencies in the work of Contractor(s); but the furnishing of such resident project representation will not make ANNUAL CONSULTANT responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions or programs, or for Contractor(s) failure to perform their work in accordance with the Contract Documents.

Resident Project Representative, as ANNUAL CONSULTANT's agent, will act as directed by and under the supervision of ANNUAL CONSULTANT, and will confer with ANNUAL CONSULTANT. Resident Project Representative's dealings in matters pertaining to the on-site work shall in general be only with ANNUAL CONSULTANT and Contractor, and dealings with subcontractors shall only be through or with the full knowledge of Contractor. Written communication with CITY will be only through or as directed by ANNUAL CONSULTANT, and when appropriate, may be through the Resident Project Representative.

## **B – Duties and Responsibilities**

### **Task 410 - Field Administration**

**Schedules:** Review the progress schedule, schedule of Shop Drawing submissions and schedule of values prepared by Contractor, and consult with ANNUAL CONSULTANT concerning their acceptability.

**Meetings:** Conduct preconstruction conferences and periodic construction progress meetings. Prepare and distribute minutes of such meetings.

**Liaison:** Serve as ANNUAL CONSULTANT's liaison with Contractor, working principally through Contractor's superintendent and assist the superintendent in understanding the meaning of the Construction Documents. Assist ANNUAL CONSULTANT in serving as CITY's liaison with Contractor, when Contractor's operations affect CITY's on-site operation. As directed by ANNUAL CONSULTANT, assist in obtaining from CITY additional details or information, when required at the job site for proper execution of the work.

**Shop Drawings and Samples:** Shop drawings and samples which are furnished by Contractor will be received and reviewed as defined in Task 230. Advise ANNUAL CONSULTANT and Contractor or its superintendent prior to the commencement of any work requiring a Shop Drawing or sample submission if the submission has not been approved by ANNUAL CONSULTANT.

**Interpretation of Construction Documents:** Receive and transmit clarifications and interpretations of the construction documents to/from the Contractor and ANNUAL CONSULTANT as described in Task 240. Resident Project Representative will notify the CITY's representative of the ANNUAL CONSULTANT's decision prior to issuance to the Contractor.

**Changes:** Consider and evaluate Contractor's suggestions for changes in drawings or specifications and report suggestions with recommendations to ANNUAL CONSULTANT. Notify the CITY's representative of changes or alterations believed to be in the CITY's best interest. Provide the CITY's representative with support information of proposed changes. Prepare drawing, details, and specifications needed to describe and justify the change. Prepare an estimate of the cost and time impact of the change and negotiate scope, cost, and schedule with the Contractor.

**Records:** Maintain at the job site files for correspondence, reports of job conferences, shop drawings and samples submissions, reproductions of original construction documents including all addenda, change orders, field orders, additional drawings issued subsequent to the execution of the construction contract, ANNUAL CONSULTANT's clarifications and interpretations of the construction documents, progress reports, and other Project related documents.

Prepare daily reports recording Contractor's work performed on the job site, major construction equipment on-site, weather conditions, data relative to questions of extras or deductions, list of visiting officials and representatives of manufacturers, fabricators, suppliers and distributors, daily activities, decisions, on-site equipment, subcontractors on-site, inspections in general and specific inspections in detail as to inspecting test procedures. Send record copies to ANNUAL CONSULTANT.

Record names, addresses and telephone numbers of the Contractor's staff, subcontractors and major suppliers of materials and equipment.

Maintain notes to be capable of cross referencing the Contractor's record drawing information for accuracy and completeness.

Receive, review and process daily inspection reports.

Maintain a digital photographic file of the progress of the construction activities throughout the duration of the Project. This photo file will consist of color photographs taken to document specific construction activities where the information may be of future value. The photographs will be labeled as to the subject, and date of the photo and the photos will be kept in files which have been formatted to represent the specific construction area of the Project.

**Reports:** Each month, furnish ANNUAL CONSULTANT and CITY the Project progress meeting minutes (as the construction contract status report) describing the progress of the work and Contractor's compliance with the approved progress schedule and schedule of shop drawing submissions.

The report will include as a minimum;

- 1) total Project cost to date;
- 2) total Project cost during the period;
- 3) planned versus actual progress;
- 4) actual and/or potential defaults or violations of the construction documents;
- 5) remedies to the above;
- 6) change order activity summary (Task 320); and
- 7) other Project issues.

Consult with ANNUAL CONSULTANT in advance of scheduled major tests, inspections or start of important phases of the work.

Promptly notify the ANNUAL CONSULTANT of any accident relating to the Project.

**Contractor Pay Applications:** Review applications for payment as described in Task 250 with Contractor(s) for compliance with the established procedure for their submission and forward those with recommendations to ANNUAL CONSULTANT, noting particularly their relation to the schedule of values, work completed, and materials and equipment delivered at the site but not incorporated in the work.

**Certificates, Maintenance and Operation Manuals:** During the course of the work, review and determine that certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed; and deliver this material to ANNUAL CONSULTANT for review and forwarding to CITY prior to final acceptance of the work.

#### **Task 420 - On-Site Inspection and Review of Work**

The Resident Project Representative shall maintain a presence at the Project site with sufficient frequency to be knowledgeable about the progress and quality of the work to:

- 1) Conduct on-site inspections of the work in progress to assist ANNUAL CONSULTANT in determining if the work is proceeding in accordance with the construction documents and that completed work conforms to the construction documents.
- 2) Report to ANNUAL CONSULTANT whenever it is believed that any work is unsatisfactory, faulty or defective or does not conform to the construction documents, or does not meet the requirements of inspections, tests or approval required to be made, or has been damaged prior to final payment; and advise ANNUAL CONSULTANT when it is believed work should be corrected or rejected or should be uncovered for inspection, or requires special testing, inspection or approval.
- 3) Verify that tests, equipment and systems start-up and operating and maintenance instructions are conducted as required by the construction documents and in presence of the required personnel, and that Contractor maintains adequate records thereof; inspect, record and report to ANNUAL CONSULTANT appropriate details relative to the test procedures and start-ups.
- 4) Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to ANNUAL CONSULTANT.

### **Task 430 - Completion**

The Resident Project Representative will assist ANNUAL CONSULTANT during the inspection for Substantial Completion and Final Acceptance as described in Task 260 as follows:

- 1) Before ANNUAL CONSULTANT issues a Certificate of Substantial Completion, submit to Contractor a list of inspected items requiring completion or correction in accordance with the requirements of the construction documents.
- 2) After the Contractor has completed the work of the list of Subtask 430.1 and upon request of the Contractor, Resident Project Representative will conduct final inspection with the ANNUAL CONSULTANT, CITY and Contractor. If necessary, prepare a final list of items to be completed or corrected in accordance with the requirements of the construction documents.
- 3) After the Contractor has completed the work of the final list of Subtask 430.2 and upon written notice from the Contractor, review and determine that items on the final list have been completed or corrected and make recommendations to ANNUAL CONSULTANT concerning acceptance.

### **C - Limitations of Authority**

Except upon written instructions, Resident Project Representative:

- 1) will not authorize any deviation from the Contract Documents or approve any substitute materials or equipment;
- 2) will not undertake any of the responsibilities of Contractor, subcontractors or Contractor's superintendent, or expedite the work;
- 3) will not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Construction Documents;
- 4) will not advise on or issue directions as to safety precautions and programs in connection with the work; and
- 5) will not authorize CITY to occupy the Project in whole or in part.

### **SECTION 500 - SPECIAL SERVICES**

#### **Task 510 - Warranty**

Services after completion of the construction phase, such as inspections upon request during the 12-month guarantee period, reporting discrepancies under guarantees in the construction contract documents, and provide assistance for resolution of defects to be corrected under warranty. The ANNUAL CONSULTANT will conduct an 11-month site walk-through with the CMAR and the City prior to expiration of the warranty period.

#### **Task 515 - Training**

The ANNUAL CONSULTANT will review Contractor's training plan and instruction materials for compliance with construction documents. Contractor or Manufacturer training presentations shall be scheduled and coordinated with City personnel and facility operation. ANNUAL CONSULTANT will provide instruction to City personnel on the Project objectives, design intent, and system operational procedures.

Specific training services shall consist of the following:

- 1) Contractor's and manufacturer's training.

ANNUAL CONSULTANT will coordinate and monitor the Contractor's and manufacturer's training of CITY personnel.

- A) Discuss the preliminary course and lesson plan development with the Contractor and the manufacturer. One meeting shall be held with CITY's operational staff and the Contractor for this discussion.
  - B) Review and approve lesson plans and course materials.
  - C) Liaison between CITY and Contractor.
  - D) Monitor training sessions;
    - 1) monitor attendance;
    - 2) evaluate course; and
    - 3) assist classroom discussions.
  - E) Report to CITY for each training class conducted.
- 2) System training.

ANNUAL CONSULTANT will provide training on the design and operation of the major process systems to the CITY personnel.

- A) Prepare a training outline, schedule and lesson plan format for review and approval by CITY staff. Review the training outline in one meeting with CITY staff and incorporate comments and revisions as appropriate.
- B) Develop training lesson plans and presentation materials including training guides for the major process systems and submit the lesson plans to CITY staff for review before finalizing. The lesson plans shall include the following subjects;
  - 1) purpose and design intent of system;
  - 2) process operations and principles;
  - 3) system controls and control
  - 4) specific safety procedures and hazards;
  - 5) specific sampling, monitoring, and process calculations; and
  - 6) in-plant orientation and hands-on demonstration.
- C) Conduct training on the major process systems. Training may consist of classroom training for each system, followed by field orientation or hands-on instruction.

**Task 540 - Operations Manual**

The ANNUAL CONSULTANT will develop additional content to be added to the current facility Operations Manual. In addition, the ANNUAL CONSULTANT will update the current Operations Manual content to reflect modifications to existing facilities.

The City intends to develop a facility-wide Electronic O&M Manual (EOM) as part of the subsequent Expansion Project. The effort included for modifications to the existing Operations Manual is limited (as it is interim) to obtain permits and provide sufficient information to the staff to operate the facility.

Additions and modifications to the facility Operations Manual will cover new, modified and upgraded treatment processes and major auxiliary systems included in the Project. New areas of the facility will be created as new sections of the Manual and will be completed in conjunction with the specific completion milestones of construction.

The specific chapters to be developed or updated with the assistance of CITY staff include:

1. Headworks Building
2. Aeration Basins, including blowers
3. Effluent Facilities
4. Temporary Chemical Feed Facilities
5. Electrical and Instrumentation

Prior to submitting the final version of the Operations Manual and transferring to the CITY, the ANNUAL CONSULTANT will conduct a detailed final validation and field verification process. Through this important quality control activity, the ANNUAL CONSULTANT will verify that:

- 1) Content has been field-verified and checked at the installation.
- 2) Photographs are current and are reflective of well-maintained and clean conditions.
- 3) Relevant documentation, such as scanned documents, figures and drawings are appropriately categorized for insertion into the database.
- 4) Standard Operating Procedures are accurate and reflect actual "as-operated" conditions.

#### **Task 550 - Instrumentation and Control System**

The ANNUAL CONSULTANT will provide assistance to the CONTRACTOR during the PLC conversion phase of the project. As part of this task the ANNUAL CONSULTANT will assist the contractor in implementation of functional requirements outlined in the project documents. The ANNUAL CONSULTANT shall conduct weekly meetings with the CONTRACTOR and the CITY to clarify and review CONTRACTORs progress of the work regarding I&C and programming work.

#### **Task 555 – Start up Testing and MOPO Coordination**

The Contractor will be working at an operating wastewater treatment facility. There will be several shutdowns associated with the new work that needs to be performed within the vicinity of existing structures, process areas, channels etc. Extensive coordination is required with the Contractor to keep plant shutdowns to a minimum.

The ANNUAL CONSULTANT shall review the Contractors proposals for any temporary conveyance and/or processing facilities. For work within the areas of process shutdowns, the ANNUAL CONSULTANT shall review list of labor materials, estimation of time, and equipment necessary and written description of the work.

New process areas will come on line as soon as they are installed and start up services will need to be completed to bring equipment online. The ANNUAL CONSULTANT shall provide start up assistance services. Such services will include review of contractor's start-up checklist, prepare and coordinate a start-up plan and procedures for CITY personnel use, supervise during start up procedures, trouble shoot and assist the CITY staff during the period of initial operation.

The start-up process will include a planned, systematic approach to verify that facility systems operate as intended and there is an orderly transition from construction phase to routine operation. The start-up program will include four phases with estimated durations as follows:

Start-up Plan: ANNUAL CONSULTANT will prepare a start-up plan and procedures for the CITY staff and Contractor. The start-up plan will include identification of key milestone activities necessary for orderly start-up of the facilities. The milestone activities will include coordination of chemical deliveries, completion of any construction activities required for substantial completion, coordination of required Contractor maintenance activities, etc.

- A) The ANNUAL CONSULTANT will start-up and test new facilities. Following a sequentially coordinated initial start-up of the facility, the facility/process would be operated continuously.

- B) The ANNUAL CONSULTANT will verify that each process, associated mechanical equipment, associated hydraulic control devices, and conveyance components operate properly under actual operating conditions. This includes the verification that all hardwired electrical control interlocks and safeguards are functioning properly.
- C) The ANNUAL CONSULTANT will maintain documentation of the areas of operational concern encountered during the manual start-up phase with a determination of whether the item of concern is a Contractor warranty issue or requires a design modification. The ANNUAL CONSULTANT will monitor the documented concerns and promptly notify the Contractor of all warranty issues.
- D) Design modifications will be promptly evaluated by the ANNUAL CONSULTANT and recommendations shall be presented to the CITY for a determination of the necessity for implementation.
- E) The ANNUAL CONSULTANT will complete the necessary check out of the instrumentation system components and initial loading of the control software simultaneously computer operation mode can be verified for each process.

**Allowance – Electronic Document Delivery and Printing Costs**

An allowance of \$3,500 is allocated for printing, mileage, and other reimbursable costs.

**EXHIBIT B  
FEE SCHEDULE**

TASK No.	TASK DESCRIPTION	Staff Hours										TOTAL HOURS	Wilson Engineers LABOR COST	Credits Engineers	Other Subs	TOTAL COST	
		Principal	Senior PM/EN	Project Manager	Proj. Engr/ ELEC Designer	Lead INSP	Senior INSP	Tech	Clarion	CLERICAL	Other						
<b>SECTION 200 - PROJECT ADMINISTRATION SERVICES DURING CONSTRUCTION</b>																	
210	Representation on Behalf of Owner	8	56	0	0	0	80	0	0	0	0	122	\$ 30,240	\$ 15,500			\$ 45,740
220	Administer the Construction Schedule	2	96	0	0	0	90	0	0	0	0	178	\$ 25,470	\$ -			\$ 25,470
225	Perform Site Visits	4	24	24	40	40	40	24	24	0	0	82	\$ 13,750	\$ 8,750			\$ 22,500
230	Review Shop Drawings & Test Results	4	60	40	300	40	24	40	24	144	612	500	\$ 74,280	\$ 36,500	\$ 4,500		\$ 115,280
240	Issue Interpretations & Clarifications	8	40	40	220	40	24	40	24	88	500	308	\$ 60,460	\$ 20,000	\$ 3,000		\$ 83,460
250	Clarify Progress Payments	4	40	0	0	0	80	24	0	0	0	84	\$ 19,080	\$ -			\$ 19,080
260	Substantial & Final Completion	4	8	0	0	0	40	32	0	0	0	84	\$ 11,620	\$ -			\$ 11,620
	<b>SUBTOTAL - PROJECT ADMINISTRATION</b>	34	364	104	560	340	104	40	240	240	1786	786	\$ 237,850	\$ 90,250	\$ 7,500		\$ 335,600
<b>SECTION 300 - ENGINEERING SERVICES DURING CONSTRUCTION</b>																	
320	Minor Changes, Change Order Requests etc	15	40	40	124	40	40	40	84	24	348	348	\$ 44,140	\$ 25,500			\$ 69,640
330	Material Testing	8	24	24	68	24	40	40	120	40	260	260	\$ 8,240	\$ -	\$ 15,000		\$ 23,240
340	Record Drawings	4	4	16	76	4	16	4	16	4	116	116	\$ 25,140	\$ 16,500	\$ -		\$ 41,640
350	Manufacturer O&M Manuals	4	4	16	76	4	16	4	16	4	116	116	\$ 14,200	\$ 7,200	\$ -		\$ 21,400
370	Special Inspections	16	52	80	348	84	128	200	68	200	68	786	\$ 21,000	\$ 22,800	\$ -		\$ 43,800
	<b>SUBTOTAL - PROJECT ADMINISTRATION</b>	47	124	180	688	200	200	200	200	200	1166	1166	\$ 113,720	\$ 72,800	\$ 15,000		\$ 201,520
<b>SECTION 400 - RESIDENT ENGINEERING SERVICES DURING CONSTRUCTION</b>																	
410	Field Administration	4	40	0	0	0	96	40	0	0	180	180	\$ 25,940	\$ 6,000	\$ -		\$ 31,940
420	On-site Inspection and Review of the work	8	128	0	0	0	708	1080	0	0	1904	1904	\$ 252,880	\$ 115,000	\$ -		\$ 367,880
430	Completion	24	24	0	0	0	96	80	0	0	208	208	\$ 27,880	\$ 8,500	\$ -		\$ 36,380
	<b>SUB TOTAL - RESIDENT ENGINEERING</b>	36	192	0	0	0	900	1180	0	0	2292	2292	\$ 306,500	\$ 129,500	\$ -		\$ 436,000
<b>SECTION 500 - SPECIAL SERVICES</b>																	
510	Warranty	0	0	4	0	0	40	20	0	0	64	64	\$ 6,500	\$ 3,000	\$ -		\$ 9,500
515	Training	0	8	8	24	0	0	0	0	0	40	40	\$ 5,640	\$ 3,500	\$ -		\$ 9,140
540	Operational Manual	0	6	12	60	0	0	0	32	8	120	120	\$ 13,900	\$ 6,500	\$ -		\$ 20,400
550	Instrumentation and Control System	16	72	16	60	116	8	0	288	8	288	288	\$ 41,120	\$ 6,500	\$ -		\$ 47,620
555	Startup, Testing and MO/PO Coordination	16	76	8	60	80	108	24	8	8	390	390	\$ 52,320	\$ 18,500	\$ -		\$ 70,820
	Reimbursable Costs	32	164	48	204	120	244	64	16	16	692	692	\$ 2,450	\$ 1,650	\$ -		\$ 4,100
	<b>SUBTOTAL - SPECIAL SERVICES</b>	64	264	76	244	200	344	104	48	48	1312	1312	\$ 124,830	\$ 41,650	\$ -		\$ 166,480
	<b>TOTAL - LABOR SUMMARY</b>	94	772	232	1112	1424	1636	304	332	332	5765	5765	\$ 782,000	\$ 334,000	\$ 22,500		\$ 1,138,500
	<b>Owner's Allowance</b>																\$ 75,000.00
																	\$ 1,213,500

EXHIBIT C

Consultant Immigration Warranty

To Be Completed by Consultant Prior to Execution of Contract

A.R.S. § 41-4401 requires as a condition of your contract verification of compliance by the Consultant 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.

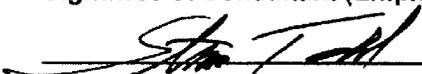
By completing and signing this form the Consultant shall attest that it and all subcontractors performing work under the cited contract meet all conditions contained herein.

Project Number/Division:	WW1413.451
Company Name (as listed in the contract):	Wilson Engineers
Street Name and Number:	9633 S 48th St #290
City: Phoenix State: AZ Zip Code:	85044

I hereby attest that:

1. The Consultant 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 Consultant has identified all Consultant 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 Consultant (Employer) or Authorized Designee:



Printed Name: Steve Todd

Title: Principal

Date (month/day/year): 2-12-15



# OCOTILLO WATER RECLAMATION FACILITY (OWRF) PROCESS IMPROVEMENTS PROJECT NO. WW1413.451



MEMO NO. CP15-181

