



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA12-074**

1. Agenda Item Number:
15

2. Council Meeting Date:
November 17, 2011

TO: MAYOR & COUNCIL
THROUGH: CITY MANAGER

3. Date Prepared: November 1, 2011

4. Requesting Department: Municipal Utilities

5. SUBJECT: Award a Project Agreement to Wilson Engineers for Ocotillo Water Reclamation Facility (OWRF) - Airport Water Reclamation Facility (AWRF) Lift Station and Deep Sewer, Project No. WW1104-451, in an amount not to exceed \$1,379,810 contingent upon written notification from Intel and appropriate funding, and authorize an increase to annual contract EN1003-101 to Wilson Engineers, from \$1,500,000 to \$3,000,000.

6. RECOMMENDATION: Staff recommends Council award a Project Agreement to Wilson Engineers for Ocotillo Water Reclamation Facility (OWRF) - Airport Water Reclamation Facility (AWRF) Lift Station and Deep Sewer, Project No. WW1104-451, in an amount not to exceed \$1,379,810 contingent upon written notification from Intel and appropriate funding, and authorize an increase to annual contract EN1003-101 to Wilson Engineers, from \$1,500,000 to \$3,000,000.

7. BACKGROUND/DISCUSSION: This project provides for construction management and improvements to the City's wastewater infrastructure accommodating Intel's plant expansion on South Dobson Road. This project includes a 42" sewer line from Intel's property line north connecting to a 66" diameter sewer line upstream of OWRF. The project also includes construction of the lift station and diversion structure of the 66" diameter sewer and installation of the pumps, piping, electrical items, and startup testing for the new facility.

Council approved the Phase I Construction Manager at Risk contract with Achen-Gardner Construction on October 27, 2011. A second Guaranteed Maximum Price (GMP) for Phase II will seek Council approval in the winter of 2012.

8. EVALUATION: On May 26, 2011 Council approved annual contract EN1003-101 to Wilson Engineers for permitting, assessment, and design of water and wastewater facilities. Staff reviewed the scope of work, billing rates, and total fee for this project, compared them to historical costs, and determined they are reasonable.

9. FINANCIAL IMPLICATIONS:

Cost: \$ 1,379,810
Savings: N/A
Long Term Costs: N/A
Fund Source:

Acct. No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
614.3910.5219.6WW642	Wastewater SDF	South Chandler Sewer Line Expansion	Yes	\$ 180,534
615.3910.5219.6WW022	Wastewater Operating	Water Reclamation Facility Expansion	Yes	\$1,199,276

10. PROPOSED MOTION: Move Council award a Project Agreement to Wilson Engineers for Ocotillo Water Reclamation Facility (OWRF) - Airport Water Reclamation Facility (AWRF) Lift Station and Deep Sewer, Project No. WW1104-451, in an amount not to exceed \$1,379,810 contingent upon written notification from Intel and appropriate funding, and authorize an increase to annual contract EN1003-101 to Wilson Engineers, from \$1,500,000 to \$3,000,000 and authorize the Mayor to sign the contract documents.

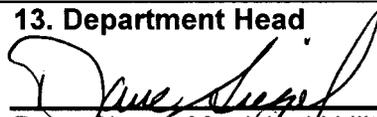
ATTACHMENTS: Location Map, Project Agreement

APPROVALS

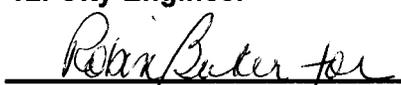
11. Requesting Department


John Knudson, Senior Engineer

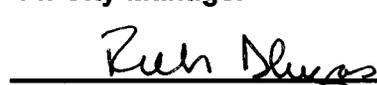
13. Department Head


Dave Siegel, Municipal Utilities Director

12. City Engineer

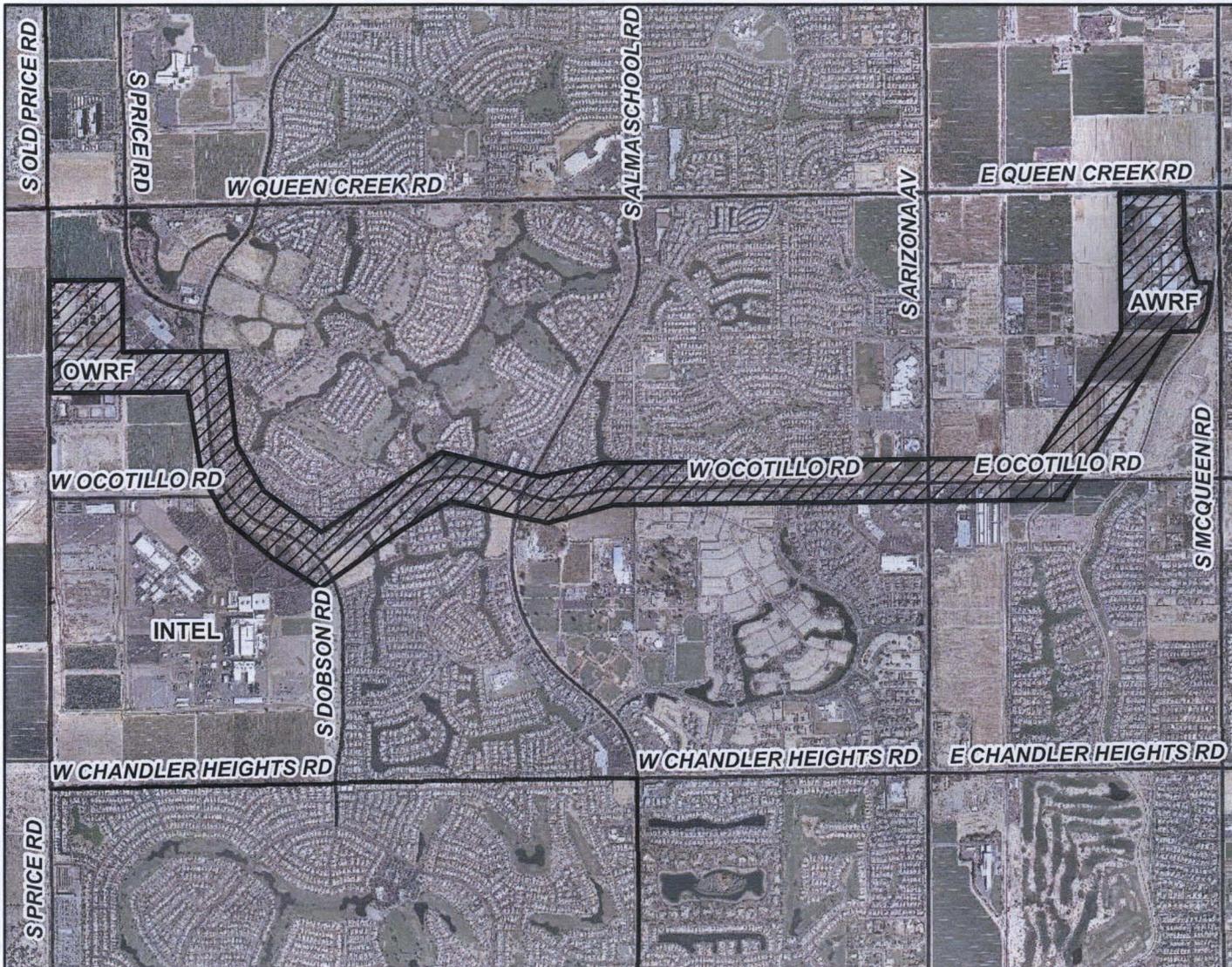

Sheina Hughes, City Engineer

14. City Manager


Rich Dlugas



**OCOTILLO WATER RECLAMATION FACILITY (OWRF),
AIRPORT WATER RECLAMATION FACILITY (AWRF),
LIFT STATION & DEEP SEWER CM SERVICES
PROJECT NO. WA1104-451**



MEMO NO. CA12-074

 PROJECT SITE



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1003-101**

AGREEMENT NO: WW1104-451

This AGREEMENT is made this ____ day of _____, 2011, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Wilson Engineers, LLC, registered in the state of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1003-101.

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

ARTICLE 1. DESCRIPTION OF WORK

This project is Ocotillo Water Reclamation Facility (OWRF)/Airport Water Reclamation Facility (AWRF) Lift Station and Sewer Line, Project Number WW1104-451. The scope of work consists of construction management services for OWRF – AWRF Lift Station and Sewer Line all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

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

ARTICLE 2. CONTRACT PRICE

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed One Million Three Hundred Seventy Nine Thousand Eight Hundred Ten Dollars (\$1,379,810) determined and payable as set forth in Annual Contract EN1003-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3. CONTRACT TIME

The contract time is three hundred sixty five days and Annual Consultant agrees to complete all work within Three Hundred Sixty Five (365) days of the date CITY issues a Notice to Proceed.

ARTICLE 4. GENERAL

This Project Agreement is entered into pursuant to Annual Contract No. EN1003-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

ARTICLE 5. 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 ("Subconsultants") 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 Subconsultant employee who works on this Contract to ensure that the Consultant or Subconsultant is complying with the Contractor 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 Subconsultant to ensure compliance with Contractors 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 subconsultant. 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 Consultant hereby certifies that the offeror does not have scrutinized business operations in Iran.

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

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

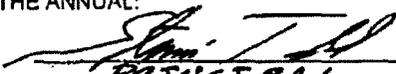
This Agreement will be effective on this _____ day of _____, 2011.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR

DATE:

By: 

Title: PRINCIPAL

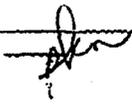
ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

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

APPROVED AS TO FORM:

Phone: 480-893-8860

Fax: 480-893-8988

City Attorney By: 
ATTEST:

City Clerk

EXHIBIT A

SCOPE OF WORK

Section 100 - General

Section 200 - Project Administration Services during Construction

Task 210	Representation on Behalf of City
Task 220	Administer the Construction Schedule
Task 230	Review Shop Drawings and Test Results
Task 240	Issue Interpretations and Clarifications
Task 250	Certify Contractor Progress Payments
Task 260	Substantial Completion and Final Inspection

Section 300 - Engineering Services during Construction

Task 310	Survey
Task 320	Minor Changes, Change Order Requests, and Change Orders
Task 330	Material Testing
Task 340	Record Drawings and Project Documents
Task 350	Manufacturer Operation and Maintenance Manuals

Section 400 - Resident Services during Construction

A. General

B. Duties and Responsibilities:

Task 410	Field Administration
Task 420	On-Site Inspection and Review of the work
Task 430	Completion

C. Limitations of Authority

Section 500 - Special Services

Task 510	Warranty
Task 515	Training
Task 540	Operations Manual
Task 550	Instrumentation and Control System
Allowance	Material Testing Services
Allowance	Printing Costs

CONSTRUCTION ADMINISTRATION AND INSPECTION SCOPE OF SERVICES

SECTION 100 - GENERAL

This Scope of Services prescribes engineering services to be provided by ANNUAL CONSULTANT for the City of Chandler (CITY). The engineering services are related to the construction and post construction phases of the Project and will consist of the following:

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. The duration of construction is specified to be 17 months; post-construction services are prescribed as Special Services, Section 500.

The ANNUAL CONSULTANT acknowledges that the CITY has retained other consultants, engineering and otherwise, and that coordination between other consultants and the ANNUAL CONSULTANT will be necessary from time to time to ensure proper performance of these services. The ANNUAL CONSULTANT agrees to provide such coordination as necessary within the scope of services.

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 shall 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.

ANNUAL CONSULTANT shall 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 shall 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 shall keep CITY informed of the progress of the work via monthly progress reports, and will guard CITY against defects and deficiencies in such work and shall 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 shall 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 shall prepare an agenda for the meeting and shall prepare and distribute the meeting minutes. The ANNUAL CONSULTANT's Resident Project Representative (RPR) shall conduct the meeting.
- 2) **Provide construction administration, quality control, and coordination:** the ANNUAL CONSULTANT shall 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 shall provide coordination functions during the construction phase as follows:
 - A) hold coordination meetings with the CITY representatives and other City staff as appropriate but no less than once per week or as directed by the CITY;
 - B) coordinate under CITY direction with regulatory and approving agencies and utilities as required;
 - C) coordinate the work of specialty subconsultants assigned to the Project including inspections; and
 - D) verify Contractor's Material Safety Data Sheets (MSDS) are on file at the job site.
- 3) **Provide project documents:** The ANNUAL CONSULTANT shall 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 215 - 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 shall review and critique the Contractor's progress schedule in accordance with the construction documents. The ANNUAL CONSULTANT shall examine the work sequence, durations, interim milestones, and other appropriate scheduling features in accordance with the requirements of the construction documents. The ANNUAL CONSULTANT shall prepare a summary of the review comments and shall meet and discuss the schedule comments with the Contractor and the CITY's representative.
- 2) Review progress schedule updates: The ANNUAL CONSULTANT shall review the Contractor's progress schedule updates to the construction schedule in accordance with the construction documents. The ANNUAL CONSULTANT shall 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 shall establish, based on the data, the percent of Project completion. ANNUAL CONSULTANT shall meet with Contractor on monthly basis to review and update the schedule data. Based upon the schedule update, the ANNUAL CONSULTANT shall recommend processing progress payments. The primary performance of the task will be performed under Task 400.

Task 220 - Perform Site Visits

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

Task 230 - Review Shop Drawings and Test Results

The ANNUAL CONSULTANT shall 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 shall 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 shall 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 shall 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 shall not approve any proposed substitution unless such substitution conforms to the Project design concept and the construction contract documents including the contract price.

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 shall 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 shall render interpretations or decisions in good faith and in accordance with the requirements of the construction documents.

The ANNUAL CONSULTANT shall 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 shall respond to issues raised during construction regarding interpretation and clarification of the contractual administrative and technical requirements of the construction documents. The ANNUAL CONSULTANT shall 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 shall 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, shall 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 and quantities have been verified;
- 2) ANNUAL CONSULTANT affirms that to its knowledge, information and belief, and based on inspections performed and as an experienced and qualified professional, 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 justified to the Contractor.

Task 260 – Substantial and Final Completion Inspection

Following notice from the Contractor, The ANNUAL CONSULTANT shall 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 shall deliver to the CITY 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 CITY shall deliver any communications to the contractor regarding substantial completion.

Upon recommendation of Substantial Completion, the ANNUAL CONSULTANT shall complete the Approval of Construction Application and Engineer's Certificate of Completion and submit to the Maricopa County Department of Environmental Services (including the necessary testing results). If necessary, the ANNUAL CONSULTANT shall also conduct a site visit with a representative of the Maricopa County Department of Environmental Services. The intent of this site visit will be to allow the County to review the facility prior to issuing the Approval of Construction Certificate.

The ANNUAL CONSULTANT shall, 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. At or prior to the final inspection, the ANNUAL CONSULTANT shall 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 shall 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 shall determine whether the Contractor is entitled to final payment and, if so, shall 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 shall 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 310 – Survey Reference Point

The ANNUAL CONSULTANT shall perform surveying services as specified as being performed by the CITY or ANNUAL CONSULTANT in the construction documents. This includes;

- 1) establish a base line and two (2) bench marks for use by the Contractor; and
- 2) verify the Contractor's understanding of the facility's existing horizontal and vertical controls used to locate and layout the Project.

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 shall promptly consult with and advise the CITY concerning, and shall administer

and manage, all change order requests and change orders.

The ANNUAL CONSULTANT shall 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 shall 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 shall 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 shall 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 shall:

- 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.

Nothing in this agreement shall relieve ANNUAL CONSULTANT of its responsibility to correct its plans, designs, and any costs including rework resulting from its mistakes, errors, or omissions in the underlying design.

Task 330 – Material Testing

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

The ANNUAL CONSULTANT shall 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 shall 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)) shall 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 shall 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 shall be maintained by the ANNUAL CONSULTANT and provided to the CITY at the completion of the Project. The ANNUAL CONSULTANT shall 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 shall promptly reject Work which does not conform to and comply with testing requirements.

Task 340 – Record Drawings

The ANNUAL CONSULTANT shall 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 shall review for accuracy and completeness. Use the original cover sheet with all the signatures and ANNUAL CONSULTANT's seals for the record drawings. The ANNUAL CONSULTANT shall prepare the following:

- 1) Four (4) full size black line copies, three (3) 11" x 17" black line copies, and one (1) full size black line copy on 4 mil Mylar to submit to the CITY. Record drawing information shall 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 shall 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 Manuals

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 shall 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.

SECTION 400 - RESIDENT SERVICES DURING CONSTRUCTION

A – General: ANNUAL CONSULTANT shall furnish a Resident Project Representative in order to assist in inspecting performance of the work of the Contractor(s). 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.

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 CITY concerning their acceptability.

Meetings: Conduct preconstruction conferences and periodic construction progress meetings. Prepare and distribute agendas and minutes for each meeting.

Liaison: Serve as CITY's liaison with Contractor, working principally through Contractor's superintendent and assist the superintendent in understanding the meaning of the Construction Documents. 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 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 as described in Task 240. ANNUAL CONSULTANT shall notify the CITY's representative of the recommendation prior to issuance to the Contractor.

Changes: Consider and evaluate Contractor's suggestions for changes in drawings or specifications and notify the CITY of changes or alterations believed to be in the CITY's best interest. Provide the CITY 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 and Reports: 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, 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.

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 shall consist of color photographs taken to document specific construction activities where the information may be of future value. The photographs shall be labeled as to the subject, and date of the photo and the photos shall be kept in files which have been formatted to represent the specific construction area of the Project.

Reports: Each month, furnish 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 shall 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 CITY in advance of scheduled major tests, inspections or start of important phases of the work.

Promptly notify the CITY 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, 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 CITY prior to final acceptance of the work.

Start-up Assistance: Start-up services shall be sufficient to transfer finished work from a construction status to operating, functional system(s). Such services may include review of contractor's start-up plan, prepare and coordinate a start-up plan and procedures for City personnel use, supervise during start-up procedures, and assist City personnel during a period of initial operation.

Special Inspections: During the course of the work, arrange and coordinate Special Inspections for structural, geotechnical, and electrical work as required by the Special Inspection Certificates issued by the City.

Task 420 - On-Site Inspection and Review of Work

The ANNUAL CONSULTANT 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 determine if the work is proceeding in accordance with the construction documents and that completed work conforms to the construction documents.
- 2) Report to CITY 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 CITY when it is believed work should be corrected or rejected or should be uncovered for inspection, or requires special testing, inspection or approval.

**EXHIBIT B
FEE SCHEDULE**

I. LABOR SUMMARY

TASK No.	TASK DESCRIPTION	Staff Hours											TOTAL HOURS	TOTAL COST
		PRIN \$195	PM \$150	SE \$125	PE \$105	CM \$180	RE \$150	INSP \$110	TECH \$ 80	CLER \$ 65				
SECTION 200 - PROJECT ADMINISTRATION SERVICES DURING CONSTRUCTION														
210	Representation on Behalf of City	4	16	16		24							60	\$ 9,500
215	Administer the Construction Schedule		16	8		40						40	104	\$ 13,200
220	Perform Site Visits	4	60	104	140								308	\$ 37,480
230	Review Shop Drawings & Test Results	4	40	640	824					40	80		1628	\$ 181,700
240	Issue Interpretations & Clarifications	4	60	400	600					40	40		1144	\$ 128,580
250	Certify Contractor Progress Payments		24			16	34						74	\$ 11,580
260	Substantial & Final Completion		16	16									32	\$ 4,400
SUBTOTAL - PROJECT ADMINISTRATION		16	232	1184	1564	80	34	0	80	160			3360	\$ 386,440
SECTION 300 - ENGINEERING SERVICES DURING CONSTRUCTION														
310	Survey Reference Point		4	8	8								20	\$ 2,440
320	Minor Changes, Change Order Requests, and Change Orders	16	24	172	256	48	120	40	80	40			796	\$ 95,140
330	Material Testing		8	16	16		12	40					92	\$ 11,080
340	Record Drawings	8	24	104	160		12	40	240				588	\$ 60,360
350	Manufacturer O&M Manuals			16	16									\$ 3,680
SUBTOTAL - ENGINEERING SERVICES DURING CONSTRUCTION		24	60	316	456	48	144	120	320	40			1496	\$ 172,700
SECTION 400 - RESIDENT ENGINEERING SERVICES DURING CONSTRUCTION														
410	Field Administration		48	96	64	18	96	112			40		474	\$ 58,460
420	On-site Inspection and Review of Work		24			96	1760	2384			40		4304	\$ 549,720
430	Completion					16	24	40					80	\$ 10,880
SUB TOTAL - RESIDENT ENGINEERING		0	72	96	64	130	1880	2536	0	80			4858	\$ 619,080
SECTION 500 - SPECIAL SERVICES														
510	Warranty		12	40		4	48	64					168	\$ 21,760
515	Training		16	24	40			40					120	\$ 14,000
540	Operations Manual	4	8	96	160					40	40		348	\$ 36,580
550	Instrumentation and Control System		16	84	60								160	\$ 19,200
SUBTOTAL - SPECIAL SERVICES		4	52	244	260	4	48	104	40	40			796	\$ 91,540
TOTAL - LABOR SUMMARY		44	416	1840	2344	262	2106	2760	440	320			10500	\$1,269,760
II. SUBCONSULTANTS / EXPENSES														
Allowance - Structural Engineering and Special Inspections (Nabar Stanley Brown)												\$ 85,050		
Allowance - Materials Testing Services (ATEQ)												\$ 20,000		
Allowance - Printing Expenses												\$ 5,000		
TOTAL - LABOR AND EXPENSE SUMMARY												\$1,379,810		

EXHIBIT C

**Contractor 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 subconsultants 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/Annual Consultant shall attest that it and all subconsultants performing work under the cited contract meet all conditions contained herein.

Project Number: WW1104-451 OWRF – AWRF Lift Station and Sewer Line		
Name (as listed in the contract):		
Street Name and Number:		
City: Chandler	State: AZ	Zip Code:

I hereby attest that:

1. The Engineer/Annual 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 subconsultants 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/Annual Consultant has identified all consultant and subconsultant 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/ Annual Consultant (Employer) or Authorized Designee:



Printed Name: STEVE TORIO

Title: PRINCIPAL

Date (month/day/year): 11-2-11