



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA12-005**

1. Agenda Item Number:

24

2. Council Meeting Date:
July 28, 2011

TO: MAYOR & COUNCIL

3. Date Prepared: July 11, 2011

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Award a project agreement to Black & Veatch for design of a wastewater force main, Project No. WW1105-201, in an amount not to exceed \$490,325, contingent upon written notification from Intel and appropriate funding.

6. RECOMMENDATION: Staff recommends Council award a project agreement to Black & Veatch for design of a wastewater force main, Project No. WW1105-201, in an amount not to exceed \$490,325, contingent upon written notification from Intel and appropriate funding.

7. BACKGROUND/DISCUSSION: Staff recommends a new lift station and sewer force main to transfer wastewater flows from the Ocotillo Water Reclamation Facility (OWRF) to the Airport Water Reclamation Facility (AWRF) for treatment. The need for increased pumping capacity is the result of industrial expansion on South Dobson Road. This new force main will add system redundancy to the City's smaller existing pump back and force main system. The force main will be constructed using the Construction Manager @ Risk method and will be contracted separately.

Design and construction of the lift station will be completed under separate contracts.

8. EVALUATION: On May 26, 2011 Council approved annual contract EN1003-103 to Black & Veatch 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: \$490,325
Savings: N/A
Long Term Costs: N/A

Fund Source:

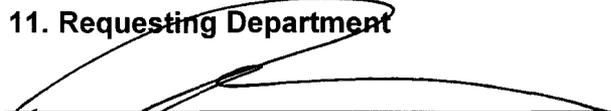
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
615.3910.0000.6814.12S022	Wastewater Operating	Water Reclamation Facility Expansions	FY 2011-12	\$490,325

10. PROPOSED MOTION: Move to approve a project agreement to Black & Veatch for design of a wastewater force main, Project No. WW1105-201, in an amount not to exceed \$490,325, contingent upon written notification from Intel and appropriate funding, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Project Agreement, Location Map

APPROVALS

11. Requesting Department


John Knudson, Senior Engineer

13. Department Head


Dave Siegel, Municipal Utilities Director

12. City Engineer


Sheina Hughes, City Engineer

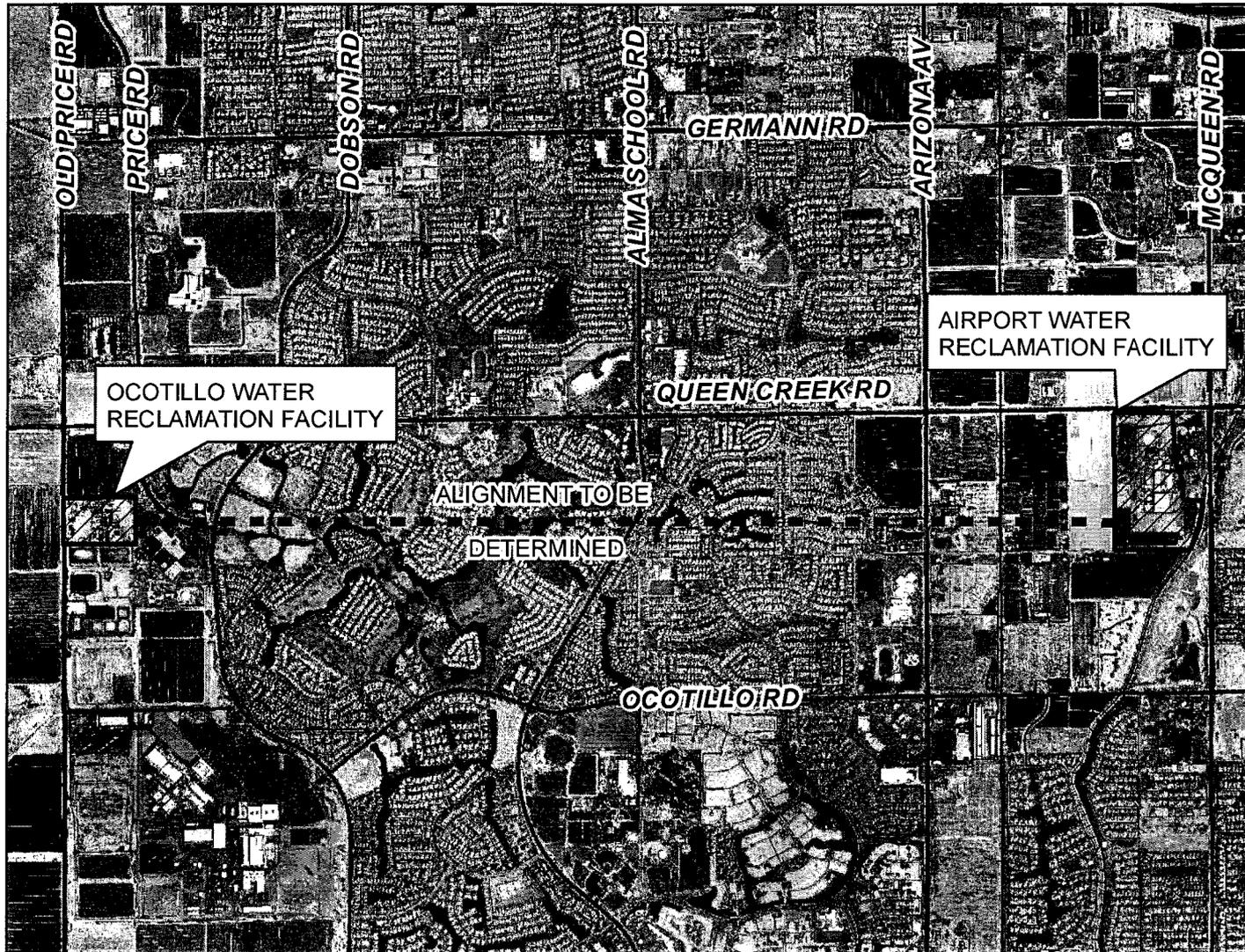
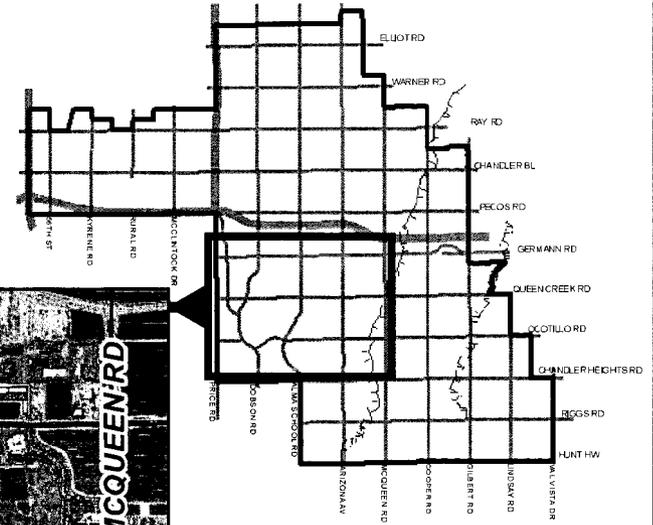
14. City Manager


Rich Dlugas



Chandler + Arizona

WASTEWATER FORCE MAIN PROJECT NO. WW1105-201



MEMO NO. CA12-005

 PROJECT AREA



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1003-103**

AGREEMENT NO: WW1105-201

This AGREEMENT is made this day of 2011, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Black & Veatch Corporation, a Delaware Corporation licensed to do business in the state of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1003-103.

CITY and Black & Veatch Corporation, in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1. DESCRIPTION OF WORK

This project is South Chandler Force Main Ocotillo Water Reclamation Facility (OWRF) to Airport Water Reclamation Facility (AWRF), Project Number WW1105-201. The scope of work consists of engineering services related to a 36" wastewater force main connecting the Ocotillo WRF to the Airport WRF, 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 Four Hundred Ninety Thousand Three Hundred Twenty Five Dollars (\$490,325) determined and payable as set forth in Annual Contract EN1003-103 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3. CONTRACT TIME

The contract time is Two Hundred Seventy days and Annual Consultant agrees to complete all work within Two Hundred Seventy (270) days of the date CITY issues a Notice to Proceed.

ARTICLE 4. GENERAL

This Project Agreement is entered into pursuant to Annual Contract No. EN1003-103 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: Dan Meyer
Title: Vice President

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

ADDRESS FOR NOTICE
Ms. Teresa Smith-DeHesus
Black & Veatch
3133 E. Camelback Rd., Ste. 210
Phoenix, AZ 85016

APPROVED AS TO FORM:

Phone: 802-381-4400
Fax: 802-381-4440

ATTEST: City Attorney By: _____ *[Signature]*

City Clerk

EXHIBIT A SCOPE OF WORK

INTRODUCTION

The Intel Ocotillo Site discharges its wastewater to the City of Chandler (City) Ocotillo Water Reclamation Facility (OWRF). The current expansion of Intel's facility will increase the flows received by the OWRF. Instead of increasing treatment capacity at the OWRF, a 20-mgd wastewater pump station, 36" force main, and receiving station are planned to convey flow from the OWRF to the City's Airport Water Reclamation Facility (AWRF).

A 24" force main already exists between the two WRFs. The new 36" force main would provide redundancy and higher capacity. The alignment of this existing 24" force main is largely within Ocotillo Road. The new 36" force main may follow this Ocotillo alignment or it may be placed within the Queen Creek Road right of way. The final alignment will be provided by the City. For the purposes of this Scope, the Ocotillo Road alignment will be assumed. Scope of work also assumes the general alignment route selection will be finalized by the City on or prior to the notice to proceed for this project.

The Scope of Work to be provided by ANNUAL CONSULTANT includes a Preliminary Design and Data Collection phase, and the Final Design phase of the 36" wastewater force main. This pipeline design will begin at the property line of the OWRF and end at the property line of the AWRF. At each WRF location, the pipeline will connect to 36" pipe being designed and constructed by others as part of the pump station and receiving station work. The pipeline will enter Price Road approximately midway between Queen Creek Road and Dobson Road. Heading southeast in Price Road, the pipeline alignment will then turn south in Dobson Road. At Ocotillo Road, the pipeline will turn northeast and continue in Ocotillo for approximately 14,700 feet. 3,100 feet east of Arizona Avenue, the alignment turns north in Centre Pointe Parkway. At the Spur Road alignment, the pipeline turns east again towards the SRP Consolidated Canal. The pipeline will then follow just outside of the canal ROW to the south end of the AWRF property. The total estimated length of the pipeline for this scope is 26,000 feet.

Construction of this project will be performed by a Construction Manager at Risk (CMAR) delivery method. The City will select the CMAR Contractor during the design phase of the project.

TASK 100 – PRELIMINARY DESIGN PHASE / DATA COLLECTION

The preliminary design phase includes those tasks needed to take the project to Level 1 (30 percent complete) design drawings and specifications.

The Preliminary Design includes the following tasks.

101 Hydraulic & Surge Analyses Review

It is assumed that both hydraulic and surge analyses will be performed by the pump station designer and the results/recommendations provided to ANNUAL CONSULTANT in a report or technical memorandum. ANNUAL CONSULTANT shall review these analyses in support of the pipeline design and will discuss with the City any recommendations made by the surge analyses results to be incorporated into the design. It is assumed the surge analyses results will include (1) steady state operating conditions, (2) hydraulic transient conditions, (3) requirements for air release and vacuum valves as well as (4) in-line valve closure requirements.

102 Geotechnical Investigations and Report

ANNUAL CONSULTANT shall perform a subsurface geotechnical investigation on the final alignment chosen by the City to characterize subsurface conditions along the pipeline alignment. It is assumed rock will not be encountered along the alignment. The work includes layout, drilling, and surveying of 25 soil borings along the pipeline alignment, field soils testing, collection of soil samples, laboratory testing including moisture content, grain size analysis, consolidation, unconfined compression, direct shear, proctor compaction, swell, pH, and chlorides. If rock is encountered during the sampling work, additional rock coring and testing will be added to scope. This will be in addition to the level of effort currently included.

ANNUAL CONSULTANT shall conduct soil resistivity surveys along the pipeline alignment at intervals of approximately 3,000 feet using the Wenner 4-pin method to measure the electrical resistivity of the soil in accordance with ASTM G57. ANNUAL CONSULTANT shall analyze soil samples collected for corrosion studies for pH, resistivity, sulfide reaction, oxidation/reduction, and chloride. The electrical resistivity of the samples shall also be measured and correlated with the results of the field resistivity survey. ANNUAL CONSULTANT shall incorporate the results of the soil resistivity testing in the corrosion evaluation task.

ANNUAL CONSULTANT shall analyze the results of the field investigations and testing and develop recommendations for pipeline embedment, trench backfill, soil preparation, compaction, excavation effort and any

other required soil mitigation measures. The geotechnical report will also include a description of site geology and subsurface conditions.

103 Selection of Pipeline Material

ANNUAL CONSULTANT shall analyze alternative materials of construction for the force main for the flow, pressure, operating and soil conditions. Materials to be considered include HDPE, ductile iron, and centrifugally cast, glass-fiber reinforced, polymer mortar pipe. The pipeline material evaluation will be based on factors including durability, operating conditions suitability, ease of repair, ease of connection and restraint, corrosion resistance, availability, hydraulic capacity and costs. ANNUAL CONSULTANT shall prepare a technical memorandum, TM-1 and will include the material evaluation as well as the recommended alternative(s).

104 Aerial Mapping and Surveying

ANNUAL CONSULTANT shall obtain aerial mapping and field surveying of the final pipeline alignment chosen by the City from a Registered Land Surveyor. Aerial imagery and mapping shall include no less than 10 feet outside of the right-of-way when the pipeline alignment is within an arterial roadway or 50 feet each side of the alignment when crossing unimproved ground. Aerial mapping will include generation of topographic contours at 1 foot intervals.

ANNUAL CONSULTANT shall perform land surveying for the pipeline alignment to identify detailed visible items not presented in aerial mapping such as valves, meters, fences, major landscaping and trees, visible utilities, power poles, manholes, and other visible planimetry. ANNUAL CONSULTANT shall contact Blue Stake and, if Blue Stake provides paint marks for underground utilities, shall locate these paint marks by field survey, and include them in the detailed topographic mapping.

ANNUAL CONSULTANT shall compile data collected through aerial mapping and field survey into the base topographic map. All mapping will meet National Map Accuracy Standards.

105 Utility Engineering & Potholing

ANNUAL CONSULTANT shall coordinate and assemble data relevant to the utilities engineering work associated with the pipeline along the final alignment chosen by the City. The ASCE "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data" CI/ASCE 38-02 provides a rational basis for establishing the level of effort expended and detail provided for buried utilities on plans. All subsurface utility data will be depicted to Level D as defined in ASCE 38-02.

ANNUAL CONSULTANT shall send copies of the project maps to utility companies, and shall solicit their record drawings and special design, construction, and right-of-way requirements. ANNUAL CONSULTANT shall investigate submittal and schedule requirements associated with obtaining permits from utilities. Using available information, ANNUAL CONSULTANT shall record the horizontal and vertical (where available) locations of the utilities. Additionally, ANNUAL CONSULTANT shall determine the size and type of material of the pipelines or cables, and whether they are cathodically protected, from available information.

Based on the above, ANNUAL CONSULTANT shall identify utilities which may conflict with the pipeline and identify critical pothole locations. The "potholing" of these locations will be coordinated with the ANNUAL CONSULTANT's potholing subconsultant and surveying subconsultant and will be completed during the early stages of final design; for budget purposes, costs are included for up to 5 potholes located in unpaved areas and 20 potholes located in paved areas.

ANNUAL CONSULTANT shall maintain a utility coordination file which will provide a listing of contacts made and summary of discussions.

106 Pipeline Alignment Refinements

The gross alignment of the pipeline (Ocotillo Road or Queen Creek Road) will be determined by the City. Using the results of the utility coordination, potholing, survey, and geotechnical report, ANNUAL CONSULTANT shall refine the pipeline alignment and design requirements to maintain appropriate offsets with other utilities, minimize major utility crossings, and aid constructability. Once the City has approved of the alignment refinement, preliminary design for the Drawings and Specifications will commence.

107 Right-of-Way and Easement Identification

For those portions of the pipeline outside of existing right-of-ways, ANNUAL CONSULTANT shall identify permanent and temporary construction easement requirements for the pipeline alignment based on construction and operation and maintenance considerations. ANNUAL CONSULTANT shall determine the approximate total acreage required and shall prepare legal descriptions for the land acquisition. The City will be responsible for title

search and owner correspondence activities. Preparation of up to six legal descriptions is included in this scope of work.

108 Pipeline Crossings Design

Three major crossings have been identified that will require trenchless construction methods. These are Arizona Avenue, Alma School Road, and the Union Pacific Rail Road. The particular type of tunneling method will depend on the selected pipe material, geotechnical evaluation, and the physical characteristics of the crossing. ANNUAL CONSULTANT shall develop preliminary details for these crossings, including location of boring and receiving pits and casing details, if applicable.

Additionally, the pipeline will cross two concrete irrigation ditches extending from the SRP canal ROW. These crossings may also require trenchless construction.

109 Pipeline Basis of Design

ANNUAL CONSULTANT shall summarize the results from Tasks 101 through 110 in the pipeline basis of design memorandum, TM 2. ANNUAL CONSULTANT shall provide a total of five copies of the draft Technical Memorandum, TM 2, for City review. ANNUAL CONSULTANT shall incorporate review comments received in the Final TM 2 and shall provide a total of five copies of the Final Technical Memorandum, TM 2, to the City.

110 Pipeline Level 1 (30 Percent) Design Drawings and Specifications

ANNUAL CONSULTANT shall develop the Level 1 (30 percent) design drawings and specifications. The Level 1 (30 percent) design drawings and specifications will include.

- Preliminary plan and profile drawings for the entire pipeline at final design scale (1 inch = 40 feet horizontal, 1 inch = 5 feet vertical). These drawings will show pipe centerline (with control), parcel boundaries, identified right-of-way, major utility, road, drainage and irrigation ditch crossings, and the location of major pipeline appurtenances.
- A survey control sheet showing key control points.
- Temporary construction and permanent easement limits and existing ownership names and assessor's parcel numbers.
- Preliminary drawings of standard pipe details.
- Preliminary plan and profile and details for the trenchless construction installation of pipeline crossings.
- Depth of cover.
- Pipeline protection requirements such as concrete encasement.
- Deflection angles and bends.
- Longitudinal and transverse separations to adjacent pipelines and utilities.
- Preliminary specifications including:
 - Pipeline materials
 - Pipeline casing pipe (if applicable)
 - Trench excavation and backfill
 - Trenchless construction

ANNUAL CONSULTANT shall review the Level 1 documents for quality control and constructability. Comments received will be incorporated into the Level 1 submittal.

This Scope of Work is based on the assumption that traffic control plans for construction within existing roadways will be the sole responsibility of the Contractor(s) within his construction means and methods. Traffic control engineering and plans are not included with this scope. The requirements of the traffic control relative to jurisdictional agency requirements will be included in the project specifications.

150 Corrosion Evaluation (Allowance)

ANNUAL CONSULTANT shall perform an investigation along the final alignment chosen by the City to determine the corrosion potential along the pipeline route. Sources of corrosion that will be considered are soils, water, and stray electrical currents from protected buried pipelines. ANNUAL CONSULTANT shall also evaluate the potential for electrical coupling with existing electrical power transmission lines. ANNUAL CONSULTANT shall identify

preliminary recommendations for corrosion protection and mitigation of electrical coupling. ANNUAL CONSULTANT shall perform the following activities:

- Review Existing Information and Alignment Reconnaissance. Review existing pipelines and power transmission lines in the vicinity of the proposed alignment. Review soil characteristics for corrosion potential.
- Evaluate Stray Current Interference. The potential for stray direct current interference from existing cathodic protection systems in the vicinity of pipeline alignment will be evaluated. Owners of facilities with cathodic protection systems, such as natural gas pipelines, will be contacted to determine current output and the location of rectifiers in the vicinity of the identified pipeline and facilities.
- Evaluate Electrical Coupling. The potential for electrical coupling between the new pipeline and any high-voltage power transmission lines in the immediate vicinity will be assessed. This task will include a preliminary assessment of the need for further modeling studies and mitigation of induced voltage in the pipeline due to operation of any power line. Preliminary recommendations for grounding or other requirements for corrosion protection and personnel safety during operation of the pipeline will be included.

Deliverable

ANNUAL CONSULTANT shall submit the following at the 30 percent preliminary design level: Contract drawings – five (5) sets of ½-sized drawings; contract specifications – five (5) sets.

ANNUAL CONSULTANT shall note review comments received from the City in a comment resolution document and, where appropriate, incorporate into the Level 2 design.

TASK 200 – FINAL DESIGN

Final Design will commence with the City's acceptance of the Level 1 design. The Final Design phase work is divided into three (3) principal subtasks: 60 percent Design Submittal, 90 percent Design Submittal, and the 100 percent

Clarifications to Design Scope

- A copy of the proposed drawing list is included for information.
- The preliminary plan & profile sheets will include appurtenance locations. The plan and profile drawings will be prepared on a 1"=40' horizontal scale (approximately 1,000 ft. per sheet) and a 1"=5' vertical scale, with one foot contours.
- Traffic control plans for construction within existing roadways will be the sole responsibility of the Contractor(s) within his construction means and methods. Traffic control engineering and plans are not included with this scope. The requirements of the traffic control relative to jurisdictional agency requirements will be included in the project specifications.
- At the end of the project the AutoCAD version 2008 format design drawings will be provided to the City.
- The contract specifications will be developed using the City's master front-end documents and Black & Veatch's technical specifications as applicable. The specifications will include the following:
 - City's boilerplate for technical specifications prepared by the City including:
 - Agreement
 - General Conditions
 - Supplemental Conditions
 - B&V Standard Technical Specifications and any required supplemental conditions.
 - City of Chandler Standard Pipeline and Roadway Pavement Replacement Details.
 - All public information / approval will be prepared and provided by others.

201 Level 2 (60 percent) Pipeline Design Submittal

This subtask includes the preparation of the 60 percent Design Submittal. ANNUAL CONSULTANT shall advance the design and design documents from the preliminary design level to the 60 percent level of design by performing design calculations, preparing layouts and details, and updating the contract drawings. Design development will include:

- Plan & profile drawings with the majority of appurtenances, permanent and temporary construction easements shown.
- Pre-final pipeline appurtenance detail sheets.
- Trenchless construction plans, sections and details.
- Trenchless construction staging areas delineated.
- Pipeline connection details.
- Corrosion control plans and Level 2 details
- Preliminary specifications for pipe and pipeline appurtenances including:
 - Pipeline schedules
 - Valve schedules
 - Pipeline materials,
 - Pipeline installation
 - Pipeline Pressure testing
 - Pipeline casing pipe (if applicable)
 - Trench excavation and backfill
 - Trenchless construction

ANNUAL CONSULTANT shall review the Level 2 documents for quality control and constructability. ANNUAL CONSULTANT shall incorporate comments received into the Level 2 submittal and prepare a QC comment resolution document.

Deliverable

ANNUAL CONSULTANT shall submit the following at the 60 percent preliminary design level: Contract drawings - five (5) sets of 1/2-sized drawings; contract specifications – five (5) sets.

ANNUAL CONSULTANT shall note review comments received from the City in a comment resolution document and, where appropriate, incorporate into the Level 3 design.

202 Level 3 (90 percent) Pipeline Design Submittal

ANNUAL CONSULTANT shall advance the design and design documents from the 60 percent level of design to the 90 percent level of design by performing design calculations, preparing plans and details, and completing specifications. Design development will include:

- Plan & profile drawings with the appurtenances, permanent and temporary construction easements shown.
- Complete the pipeline appurtenance detail sheets.
- Complete trenchless construction plans, sections and details.
- Delineation of trenchless construction staging areas and temporary easements.
- Pipeline connection details.
- Corrosion control plans, schedules, and details.
- Pipeline schedules.
- Complete technical specifications.

ANNUAL CONSULTANT shall review the Level 3 documents for quality control and constructability and prepare a QC comment resolution document.

Deliverable

ANNUAL CONSULTANT shall submit the following for each bid package at the 90 percent preliminary design level: Contract drawings – five (5) sets of ½-sized drawings; contract specifications – five (5) sets.

ANNUAL CONSULTANT shall note review comments received from the City in a comment resolution document and, where appropriate, incorporate into the Final design.

203 Final Design Submittal

ANNUAL CONSULTANT shall incorporate comments received during the 90 percent design review into the final contract documents. ANNUAL CONSULTANT shall deliver completed contract drawings and specifications originals to the City for final review. Following the incorporation of any additional comments, ANNUAL CONSULTANT shall sign and deliver these contract documents to the City as camera-ready contract documents.

Deliverable

ANNUAL CONSULTANT shall submit the following: Contract drawings – one set of signed/sealed full-sized drawings; contract specifications – one digital pdf of the signed and sealed final design submittal.

TASK 300 – CMAR CONTRACTOR COORDINATION

301 GMP Review

ANNUAL CONSULTANT shall assist the City with the review of the Contractor's Guaranteed Maximum Price (GMP) Proposal at the 60% and 90% Submittal stages.

302 Design Coordination

Participation by the CMAR Contractor in the Design Review Workshops and submittal review process is expected. Written submittal review comments provided by the Contractor will be addressed in the following submittal where appropriate. Other CMAR design coordination includes:

- Answering CMAR technical questions
 - Construction cost estimates will be prepared by the CMAR Contractor. Consultant will answer questions regarding the work being designed.
 - The Pipeline Construction Project Schedule will be developed throughout the design phase by the CMAR. Consultant will provide input into the schedule by identifying key design milestones.

Construction Phase Services such as submittal reviews, responses to Contractor RFI's, and preparation of facility O&M manuals is not included in this Scope of Services. This work would be provided under a separate contract.

TASK 400 – PROJECT COORDINATION

401 Coordination with other Consultants

This subtask covers the coordination of design activities with the work activities being performed by other consultants related to the new Pump Back Lift Station at the OWRF and the new Receiving Station at the AWRF. Such coordination will be by meeting, email or telephone exchange. ANNUAL CONSULTANT shall record and track information exchanged as part of the project documentation.

402 Permitting

ANNUAL CONSULTANT shall coordinate with and prepare all documentation to apply for Maricopa County Environmental Services Department (MCESD) Approval to Construct. Permit fees will be paid by the City. ANNUAL CONSULTANT shall submit permit documentation for the Approval to Construct

ANNUAL CONSULTANT shall provide information such as alignment, plans and profiles in support of the City's application for a Union Pacific Railroad Pipeline License. It is assumed the City will prepare all Licensing forms and application and pay all license fees for crossing the Union Pacific Railroad.

The CMAR will be responsible for applying for and obtaining all Arizona Pollution Discharge Elimination System (AZPDES) Construction General Permit (CGP) (AZPDES Permit No. AZG2003-001 including a Stormwater Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) for the pipeline.

403 Design Review Workshops

In addition to the monthly progress meetings, ANNUAL CONSULTANT shall hold design review workshops to receive and discuss the City's and CMAR's comments relative to design-related submittals. This will include the following:

- 30 percent Design Submittal
- 60 percent Design Submittal
- 90 percent Design Submittal

Documents to be discussed at the meetings will be submitted to the City as soon as they are available prior to the meeting.

ANNUAL CONSULTANT shall prepare draft bid package review comment summaries and action items listings for City review within one week of the meeting for the City's review; following receipt of the City's comments on the bid package review comment summaries and action items listings, the project team will prepare the comment resolution summary documents.

404 Right of Entry Agreements

A number of Right of Entry (ROE) Agreements will be needed in order to obtain permission to perform the geotechnical investigations. This task includes preparing the ROE agreements, calling the property owners, sending the ROE agreements, recalling the property owners if necessary, and tracking the ROE agreement status. ANNUAL CONSULTANT shall coordinate with the City's Real Estate group on contact with property owners.

TASK 500 – PROJECT MANAGEMENT

The purpose of the project management task is to manage the efforts of project team members and subconsultants; coordinate the project design and progress with the City's staff; coordinate internal QA/QC procedures; and otherwise direct work so as to ensure satisfactory completion of work elements on schedule and within budget.

501 Project Administration

ANNUAL CONSULTANT shall provide the City with monthly progress reports. Each progress report will contain the following information: a description of work completed in the last month, percentage of task completion, key issues identified, and any requests for information that are outstanding. Informal project administration meetings, e-mail, and phone contact will be maintained with the City's Project Manager between regular monthly reports.

502 Project Management Work Plan

ANNUAL CONSULTANT shall prepare and maintain a detailed Project Management Work Plan (PM Work Plan) throughout the term of the Project. The PM Work Plan is for internal project use and will include, at a minimum, the following information:

- Final Scope of Work.
- Project communications protocol.
- Project team organization and roles.
- Project team contact information.
- Document filing procedures.

As part of the PM Work Plan, ANNUAL CONSULTANT shall prepare a Quality Assurance/Quality Control (QA/QC) plan. The QA/QC plan will define requirements and procedures for checking, reviewing, distributing, tracking, and controlling documents for QA/QC.

503 Project Drawing Standards

ANNUAL CONSULTANT shall prepare a project standards memorandum at the beginning of the design phase. This memorandum will address the criteria to be used CAD preparation of contract drawings. ANNUAL CONSULTANT shall prepare the memorandum to facilitate consistency among all of the bid package design teams.

Items to be addressed will include:

- Conversion of surveying information to contract drawings.
- Drawing layout procedures.
- Drawing layer and text conventions.
- Standard abbreviations and symbols.

504 Progress Meetings

ANNUAL CONSULTANT shall conduct project progress meetings on a monthly basis. Progress meeting will be held at the City's Public Works office. Additional meetings may be required and will be conducted via teleconference where appropriate. Progress meetings will be utilized to discuss project technical issues and alternatives, and to keep the City staff informed regarding the status of the work.

ANNUAL CONSULTANT shall prepare draft agendas for review by the City in advance for regularly scheduled meetings and workshops. Documents to be discussed at the meetings will be submitted to the City as soon as they are available prior to the meeting.

ANNUAL CONSULTANT shall prepare draft meeting minutes and workshop notes for City review within one week of the meeting; minutes will include an action items log and a decision log. ANNUAL CONSULTANT shall email an electronic copy of the draft meeting minutes to the City's Project Manager.

505 Trending (Change Tracking)

ANNUAL CONSULTANT shall monitor the changes to project scope, schedule, and construction cost trends. ANNUAL CONSULTANT shall present the scope, schedule and costs trend register table to the City once a month. The trend register table will show deviations from the original plan quantified in terms of both cost and schedule.

The trend register summary table will be used for early identification of potential cost and project schedule issues. If the potential for overruns in either cost or schedule arises due to project changes, the project team has the opportunity to decide what corrective steps should be taken.

ALLOWANCES

The following reimbursable expenses will have established allowances for this project:

- Mail and Courier.
- Reproduction.
- Additional utility potholing
- Additional legal descriptions

In addition to the reimbursable expenses that have established allowances, an additional allowance has been established for Additional Engineering Services such as for additional pot-holes / surveying as required and not included in the Fee for Services or above Allowances. These funds may only be utilized by the ANNUAL CONSULTANT after receiving written approval from the City.

**EXHIBIT B
FEE SCHEDULE**

Task	Description	Principal/ Director	Sr. Manager	Technical Expert	Manager	Sr. Proj. Engineer	Lead Engineer	Staff Engineer	Sr. Designer	Sr. Tech/ Admin	Technician	Admin.	Total
Pump Back Force Main Design													
Task Group 100 - Preliminary Design and Data Collection													
101	Hydraulic & Surge Analyses Review		1	4		8							13
102	Geotechnical Investigation and Report		8	16		8		4					36
103	Selection of Pipe Material (TM1)	2	4	24		12		18		2			60
104	Aerial Mapping and Surveying					8		12				4	24
105	Utility Engineering and Potholing		2			16		16		4			36
106	Pipeline Alignment Refinements	2	8			24		40		24			98
107	ROW and Easement Identification		4			22		32		16			74
108	Pipeline Crossing Design		4	32		12		24		16			88
109	Pipeline Basis of Design (TM2)	2	4	2		16		24		8		4	60
110	Pipeline Level 1 Drawings and Specs	2	8	32		40		40		80		18	218
150	Corrosion Potential Evaluation	(ALLOWANCE)											
Task Group 200 - Final Design													
201	Level 2 Drawings and Specs		32	40		80		100		180		6	438
202	Level 3 Drawings and Specs		32	40		100		162		250		8	580
203	Final Drawings and Specs		32	24		60		80		100		6	302
Task Group 300 - CMAR Contractor Coordination													
301	GMP Review	2	4	6		16		40					68
302	Design Coordination		3			12		12					27
Task Group 400 - Project Coordination													
401	Coordination w/ Other Consultants		4			16		24				4	48
402	Permitting		2			12		24		4		4	46
403	Design Review Workshops	12	12			12		24					60
404	Right of Entry Agreements		2			16		20		8		2	48
Task Group 500 - Project Management													
501	Project Administration	6	72			12				16		36	142
502	Project Management Work Plan		2			4				2			8
503	Project Drawing Standards					2		2		6			10
504	Progress Meetings	24	24			24		24				4	100
505	Trending		4			8							12
Total Hours		52	258	220	0	540	0	710	0	716	0	92	2598
Billing Rate per Hour		185.00	175.00	175.00	155.00	145.00	130.00	120.00	115.00	100.00	80.00	75.00	
Total Labor		\$10,140	\$46,900	\$38,600	\$0	\$78,300	\$0	\$85,200	\$0	\$71,600	\$0	\$6,900	\$337,640
Expenses													\$10,000
Total Basic Services													\$347,640
ALLOWANCES													
150	Corrosion Potential Evaluation			80									\$14,000
Subconsultants													
	Geotechnical Report												\$24,600
	Surveying												\$59,580
	Utility Potholing												\$24,625
Total Allowances													\$122,785
Other Engineering Allowance													\$20,000
TOTAL FEE ESTIMATE													\$490,325

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: WW1105-201		
Name (as listed in the contract): <i>South Chandler Force Main OWRP to AWRP</i>		
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:

Dan W Meyer

Printed Name: Dan W Meyer

Title: Vice President

Date (month/day/year): 7-19-11