



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP13-132**

1. Agenda Item Number:
26
2. Council Meeting Date:
February 28, 2013

TO: MAYOR & COUNCIL

3. Date Prepared: February 7, 2013

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Dobson South Water Production Facilities Improvements Construction Management (CM)

6. RECOMMENDATION: Staff recommends Council award a Project Agreement to CH2MHill, pursuant to annual contract EN1003-104, for CM Services for Dobson South Water Production Facilities Improvements, Project No. WA1108-451, in an amount not to exceed \$213,158.

7. BACKGROUND/DISCUSSION: This project agreement is for construction management services. The project designer is responsible for monitoring construction activities to ensure the project's completion according to construction documents. This project is a continuation of Municipal Utilities ongoing efforts to rehabilitate and modernize the City's older water production facilities. The Dobson South Water Production Facility was originally constructed to support water distribution system needs in the southwest portion of the City. The facility consists of a two-million gallon above ground steel reservoir and associated six-million gallons per day (mgd) capacity pumping station. The station is not in operation and is in need of rehabilitation to accommodate anticipated future operational needs within its service area. Work will include rehabilitation and painting of the steel storage reservoir and replacement of pump and electrical equipment with more efficient variable speed pumps and motors. The completed facility will play an important future role in maintaining water supply and pressure levels for the surrounding service area, particularly during peak demand hours.

Construction activity was hard bid and the award will be brought forward as a separate item on this Agenda.

8. EVALUATION: On May 26, 2011, Council approved annual contract EN1003-104 to CH2MHill for permitting, assessment, and design of water and wastewater facilities. Staff reviewed the scope of work, billing rates, total fee for this project, compared them to historical costs, and determined they are reasonable.

9. FINANCIAL IMPLICATIONS:

Cost: \$213,158
Savings: N/A
Long Term Costs: N/A

Fund Source:

Acct. No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
601.3820.6716.6WA230	Water Bond	Water Production Facility Improvements	Yes	\$213,158

10. PROPOSED MOTION: Move Council award a Project Agreement to CH2MHill, pursuant to annual contract EN1003-104, for CM Services for Dobson South Water Production Facilities Improvements, Project No. WA1108-451, in an amount not to exceed \$213,158, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Project Agreement, Map

APPROVALS

11. Requesting Department

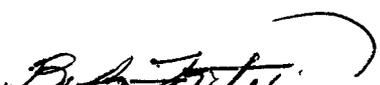
13. Department Head


John Knudson, Utilities Engineering Manager


Dave Siegel, Municipal Utilities Director

12. Transportation & Development

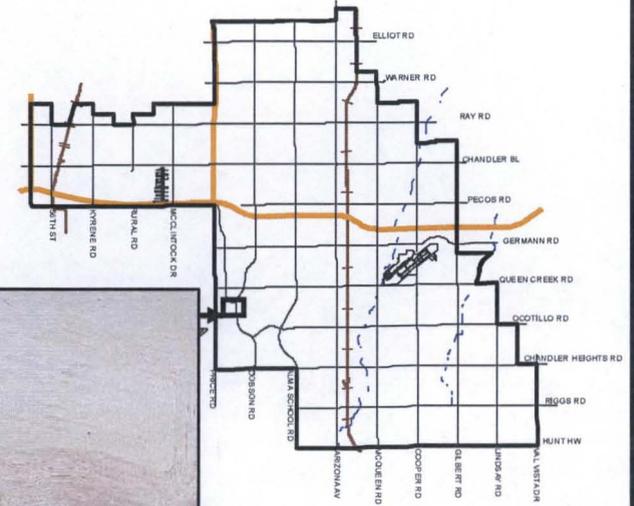
14. City Manager


Bob Fortier, Capital Projects Manager


Rich Dlugas



DOBSON SOUTH WATER PRODUCTION FACILITY IMPROVEMENTS CM SERVICES PROJECT NO. WA1108-451



MEMO NO. CP13-132

 PROJECT SITE



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1003-104**

AGREEMENT NO: WA1108-451

This AGREEMENT is made this day of 2013, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and CH2M Hill Engineers, Inc., a corporation of the State of Florida licensed in the State of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1003-104.

CITY and CH2M Hill Engineers, Inc., in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is Dobson South Water Production Facility Improvements Construction Management Services, Project Number WA1108-451. The scope of work consists of Construction Management services for the Dobson South Water Production Facility Improvements, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

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

ARTICLE 2 - CONTRACT PRICE:

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed Two Hundred Thirteen Thousand One Hundred Fifty Eight Dollars (\$213,158) determined and payable as set forth in Annual Contract EN1003-104 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is Three Hundred days and Annual Consultant agrees to complete all work within Three Hundred (300) days of the date CITY issues a Notice to Proceed.

ARTICLE 4 – GENERAL:

This Project Agreement is entered into pursuant to Annual Contract No. EN1003-104 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

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

This Agreement will be effective on this _____ day of _____, 2013.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: Thomas McLean
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
Mr. Tom McLean
CH2M Hill
2625 S. Plaza Dr., Ste. 300
Tempe, AZ 85282-3397

APPROVED AS TO FORM:

Phone: 480-966-8188
Fax: 480-966-9450

City Attorney By: [Signature]
ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

BACKGROUND

The City of Chandler (CITY) has completed the design for the Dobson South Water Production Facility Tank and Booster Station Rehabilitation Project, Chandler, AZ. CH2MHILL (CONSULTANT) is the project's design professional and will provide services during construction. The following key assumptions were made in the development of this scope of work and in estimating the level of effort for the project:

- The opinion of probable construction cost for the project is \$2,200,000 and the contractor low bid price is \$1,758,000.
- A pre-bid conference was conducted by the CITY on January 8, 2013. The project's bid opening was held on January 29, 2013.
- The CONSULTANT's services are based upon a construction duration of 270 calendar days to Substantial Completion and 300 calendar days to Final Completion as advertised in the Contract Documents.
- The Contract Documents consist of one (1) set of drawings (16 drawings inclusive) and one set of project specifications dated August 2012.
- Based on the requirements in the Contract Documents, it is anticipated that there will be 30 CONTRACTOR submittals including shop drawings, informational submittals, and operations and maintenance manuals to be reviewed. The CONSULTANT's services for submittal review are based on 4 hours of review time each.
- It is anticipated that there will be 24 Requests for Information (RFIs) based on an average of 1.5 RFIs per drawing. The CONSULTANT's services for RFI response is based on 3 hours of response time per RFI.
- The CITY will be actively involved in the construction process to make decisions, provide approvals, and perform other actions necessary for the completion of the construction.
- The CONSULTANT general nature of the work will be to provide construction management services, review of CONTRACTOR's work in accordance with the Contract Documents, engineering services during construction, and construction close-out. The CONSULTANT will not be responsible for the means, methods, techniques, sequences or procedures of the CONTRACTOR.
- The CITY will review all bids and evaluate them for responsiveness and bid amount. The CITY will perform any additional investigation such as verifying the financial and performance history documentation submitted. The CITY will prepare and issue the notice of award and the notice to proceed to the CONTRACTOR.
- The CITY will verify that the required permits, bonds and insurance have been obtained and submitted by the CONTRACTOR prior to the CITY issuing construction Notice to Proceed. The CONTRACTOR will be required to list CH2M HILL as the CITY REP as an additional insured and indemnified party along with the CITY for construction.
- CONSULTANT will administer up to two subcontracts for (1) Materials Testing and Coatings Inspection and (2) Process Instrumentation and Control Systems (PICS) Integration.
- The CITY will obtain and provide to the CONTRACTOR those permits issued by the CITY of Chandler in accordance with the general conditions.

- The fee estimate breakdown is included in Attachment A. This fee estimate is based on work being completed in calendar year 2013.

CONSTRUCTION MANAGEMENT

The CONSULTANT will provide services to assist in coordinating the site activities, communication, reporting, and administering the contract for construction. The CONSULTANT will implement and maintain regular communications with the CONTRACTOR during the construction. The CONSULTANT will receive and log all major communications from the CONTRACTOR and will coordinate the communications between the CITY and CONTRACTOR. The CONSULTANT will not communicate directly with the CONTRACTOR's subcontractors.

Project Management Manual

The CONSULTANT will develop a general work plan that defines the CONSULTANT's delivery approach, staffing, responsibilities and project deliverables. The CONSULTANT will establish a system and set of procedures for managing, tracking and storing all relevant documents between the CONTRACTOR, CONSULTANT, and the CITY produced during Construction and Closeout phases of the project. The CONSULTANT will, in coordination with the CITY, maintain hard copy records, suitably organized, of all relevant documentation. The CONSULTANT will implement procedures for the logging and tracking of all relevant correspondence and documents to assist the CITY in monitoring all outstanding decisions, approvals or responses required from the CITY.

Progress Reports

The CONSULTANT will keep the CITY advised of the progress of the construction throughout. The CONSULTANT will periodically provide construction progress summaries via email that may include items related to construction schedule, expected date of completion, contract price, retainage, pending changes to the contract price or completion date and other issues material to the cost and time for completion of the construction and attachments of documentation logs including the CONTRACTOR's Quality Control Reports. In addition, the CONSULTANT will provide monthly reports and invoices to the CITY activities related to the CONSULTANT's scope.

Pre-Construction Conference

The CONSULTANT will coordinate, conduct and attend one pre-construction conference with the CONTRACTOR and the CITY to review the project communication, coordination and other procedures and discuss the CONTRACTOR's Quality Control System. The CONSULTANT will lead the meeting and record the results of this conference.

Progress Meetings

The CONSULTANT will conduct up to 22 bi-weekly 1 hour progress meeting followed by a 1 hour site visit with the CONTRACTOR, subcontractors as appropriate, and CITY attending. The progress meeting conducted by CONSULTANT will review work progress, progress schedule, quality control, schedule of submittals, application for payment, contract modification, and other matters requiring discussion and resolution. These meetings will be combined with pre-installation meetings and quality control meetings as defined by the specifications. Up to two CONSULTANT staff will be in attendance inclusive of the inspector that will attend as part of task 3.1.

Work Change Directives

The CONSULTANT will issue field instructions, orders or similar documents during construction as provided in the contract for construction. The CONSULTANT may authorize minor variations in the work which do not involve an adjustment in the CONTRACTOR's contract price nor time for construction and are not inconsistent with the intent of the contract documents. Additionally, the

CONSULTANT will assist the CITY with the issuance of field directives to authorize allowances in the contract for construction. The CONSULTANT will also review CONTRACTOR requested changes to the contract for construction. The CONSULTANT will make recommendations to the CITY regarding the acceptability of the change order and, upon approval of the CITY, assist the CITY in negotiations of the requested change. Upon agreement and approval, the CONSULTANT will assist the CITY in preparing final change order documents. Up to 16 work change directives and CONTRACTOR change orders are anticipated based on 1 per drawing sheet.

The CONSULTANT will maintain logs regarding the status of field directives, including pending field directives and their amounts. The CONSULTANT will also receive, log, and notify the CITY about all letters and notices from the CONTRACTOR concerning claims or disputes between the CONTRACTOR and CITY pertaining to the acceptability of the work or the interpretation of the requirements of the contract for construction.

Review of Contractor Application for Payment

The CONSULTANT will receive and review the CONTRACTOR's requests for payment and will determine whether the amount requested reflects the progress of the CONTRACTOR's work, and is in accordance with the contract for construction. The CONSULTANT also will review the CONTRACTOR's schedule of values at the beginning of construction. The CONSULTANT will provide recommendations to the CITY as to the acceptability of the requests, in addition will advise the CITY as to the status of the total amounts requested, paid, and remaining to be paid under the terms of the contract for construction.

Recommendations by CONSULTANT to the CITY for payment will be based upon the CONSULTANT's knowledge, information and belief from its observations of the work on site and selected sampling that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by the CONSULTANT to ascertain that the CONTRACTOR has completed the work in exact accordance with the contract for construction.

Review of CONTRACTOR's Construction Schedule

The CONSULTANT will review the CONTRACTOR's baseline construction schedule and verify that it is consistent with the requirements of the contract for construction. The CONSULTANT will also review the CONTRACTOR's monthly schedule updates as submitted with the payment application. The CONSULTANT will advise the CONTRACTOR of any areas where the schedule is not in compliance with the contract for construction. The CONSULTANT will provide comments to the CITY to assist the CITY in approving, accepting or taking other action on the CONTRACTOR's schedule, in accordance with the contract for construction. The CONSULTANT's review and comments will not be considered as a guarantee or confirmation that the CONTRACTOR will complete the work in accordance with the contract for construction.

Safety

The CONSULTANT will manage the health, safety and environmental activities of its staff and the staff of its subcontractors to achieve compliance with applicable health and safety laws and regulations. The CONSULTANT will coordinate its health, safety and environmental program with the responsibilities for health, safety and environmental compliance specified in the contract for construction. The CONSULTANT will coordinate with responsible parties to correct conditions that do not meet applicable federal, state and local occupational safety and health laws and regulations, when such conditions expose CONSULTANT staff, or staff of CONSULTANT subcontractors, to unsafe conditions.

The CONSULTANT will notify affected personnel of any site conditions posing an imminent danger to them which CONSULTANT observes. The CONSULTANT is not responsible for health or safety precautions of construction workers. The CONSULTANT is not responsible for the CONTRACTOR's compliance with the health and safety requirements in the contract for construction, or with federal, state, and local occupational safety and health laws and regulations.

REVIEW OF CONTRACTOR'S WORK

Construction Inspections

The CONSULTANT will conduct periodic on-site observations of the CONTRACTOR's work for the purposes of determining if the work generally conforms to the contract for construction and that the integrity of the design concept as reflected in the contract for construction has been implemented and preserved by the CONTRACTOR. The CONSULTANT will not provide a full time Resident Engineer/Inspector. All inspection will be provided on an as needed basis to confirm compliance with the Contract Documents. For the purposes of this scope of work up to three site visits per week for 4 hours each by one Inspector are anticipated. As necessary, a CITY inspector will be assigned to this project for certain aspects of the work based on the CITY's discretion.

The inspector will prepare written reports of their observations. The inspector will attend the bi-weekly progress meetings. The CONSULTANT's inspection staff will obtain from the CONTRACTOR monthly photographs of the work in progress. The CONSULTANT's observation of the work is not an exhaustive observation or inspection of all work performed by the CONTRACTOR. The CONSULTANT does not guarantee the performance of the CONTRACTOR. The CONSULTANT's observations will not relieve the CONTRACTOR from responsibility for performing the work in accordance with the contract for construction.

The CONSULTANT will observe the CONTRACTOR's quality control coordination. Should CONSULTANT discover or believe that any work by the CONTRACTOR is not in accordance with the contract for construction, or is otherwise defective, or not conforming to requirements of the contract or applicable rules and regulations, CONSULTANT will bring this to the attention of the CONTRACTOR's Quality Control Manager and the CITY. The CONSULTANT will thereupon monitor the CONTRACTOR's corrective actions and will advise the CITY as to the acceptability of the corrective actions.

Substantial and Final Completion

The CONSULTANT will assist the Owner with inspections at substantial and final completion, in accordance with the contract for construction. The CONSULTANT will prepare up to two (2) separate punch lists of items requiring completion or correction. The CONSULTANT will make recommendations to the CITY regarding acceptance of the work based upon the results of the final inspection.

Engineering Reviews

Submittal Reviews

The CONSULTANT will obtain from the CONTRACTOR and review a proposed submittal schedule of shop drawings, samples, submittals, and operation and maintenance (O&M) manuals required by the contract for construction, along with the anticipated dates for submission. The CONSULTANT will coordinate with the design team for the reviews of the CONTRACTOR's, shop drawings, samples, submittals, and O&Ms in accordance to the contract documents. CONSULTANT's review of all shop drawings, samples and submittals will be for general conformance with the design concept and general compliance with the requirements of the contract for construction. Such review will not relieve the CONTRACTOR from its responsibility for performance in accordance with the contract for construction.

Requests for Information

The CONSULTANT will review the CONTRACTOR's requests for information (RFI) or clarification of the contract for construction. The CONSULTANT will coordinate such review with the design team and with the CITY as appropriate. The CONSULTANT will coordinate and issue responses and log the CONTRACTOR's requests. The CONSULTANT will assist the CITY in reviewing and responding to the CONTRACTOR's requests for substitution of materials and equipment. The CONSULTANT will review such requests and will advise the Owner as to the acceptability of such substitutions.

Process Instrumentation and Control Systems (PICS) Integration

The CONSULTANT will contract with a PICS Integrator for the work tasks related to the installation and implementation of the Process Instrumentation and Control Systems (PICS) as indicated in their engineering services proposal including site inspections, point to point testing verification, calibration verification, installing and testing software, and operator training. The CONSULTANT will coordinate construction activities with the PICS integrator when work activities are scheduled. The CONSULTANT will schedule and conduct up to 2 coordination meetings to review task requirements as outlined in the specifications with up to one CONSULTANT representative attending. Attendees will include CONSULTANT, CITY, CONTRACTOR, PLC programmer, and PICS subcontractor/Installer.

Specialty Inspections and Testing

The CONSULTANT will provide specialty inspections and testing in accordance with the construction specifications. This will include such work as structural, electrical, mechanical, coatings, and corrosion. Up to one corrosion and coating inspections at 2 days by CONSULTANT's corrosion expert will be conducted for the tank during coating preparations. A report will be issued via email following the inspection to provide the results of the testing and any clarification on the CONTRACTOR's work.

The CONSULTANT will contract for material testing to independently verify the quality of the CONTRACTOR's work in an amount not to exceed \$9,937. The testing is anticipated to consist of soil proctors, soil density testing, concrete and shotcrete testing, and coatings testing and inspection. The CONSULTANT will review the reports and other information prepared by the independent firms and provide to the CITY.

Equipment Testing and Facility Startup

Start up planning meetings shall be conducted by CONSULTANT in order to facilitate completion and communication of the start-up plan. The CONSULTANT will review start up plan which include facility and performance demonstration plan, and witness performance tests as intended to confirm as manufactured individual components operate in a manner that meets specified performance requirements as specified in the contract documents.

CONSULTANT will provide up to 3 days of witness pump testing in the field after pump installation to verify pump performance in accordance with the specifications. The CONTRACTOR will perform testing under the witness of the CONSULTANT. Upon completion of equipment the CONSULTANT will receive and review functional and performance test results, and advise the CITY that the equipment is functioning in accordance with the contract for construction.

As part of the Start Up plan, the CONSULTANT will receive and review disinfection plan and procedures including review and approval of independent testing agency for performing water quality sampling and testing. CONSULTANT's inspector will witness disinfection performance. Upon receiving water quality test results from the CONTRACTOR, the CONSULTANT will review and advise the CITY on the acceptance and water quality is met based upon the conformance of bacterial limitations for public drinking water.

Project Close-out

The CONSULTANT will assist the CITY in closing out the contract for construction and commencement of the CITY's use of the completed work.

MCESD Approval of Construction

The CONSULTANT will assist the CITY with securing the Approval of Construction (AOC) from the Maricopa County Environmental Services Department (MCESD). The CONSULTANT will review all Approval to Construct Permit Stipulations and prepare all required documentation, and will submit on behalf of the CITY to MCESD. The CITY will pay all permit related fees directly to the County.

Close-out Documentation

The CONSULTANT will coordinate with the CONTRACTOR for the submission of required warranties, guarantees, lien releases and other similar documents as required by the contract for construction. The CONSULTANT will advise the CITY as to the acceptability and compliance of these documents with the contract for construction. The CONSULTANT will provide to the Owner an organized set of project documents and records.

Record Drawings

The CONSULTANT will coordinate the CONTRACTOR's submittal of construction red lines of drawings, specifications and other record documents in preparation for finalizing record drawings and will transmit these to the Owner. The CONSULTANT will meet with the CONTRACTOR to discuss the preparation and submittal of as-built or record drawings.

Up to 4 electronic CDs (pdf and AutoCAD format) will be submitted to the CITY. Based on experience of similar work and drawing count, up to 4 hours of CAD technician labor is anticipated for each sheet. An As-Built Certification note will be included on each drawing that contain as-built changes that will state: "I certify that the "as-built" information shown hereon was obtained under my direct supervision and is correct and complete to the best of my knowledge and belief." This note will be sealed by a Registered Professional Engineer in Arizona. The following note will be included in the title block for each drawing: "This drawing was originally sealed on referenced date by referenced PE, a registered Professional Engineer in Arizona."

EXHIBIT B FEE SCHEDULE

Description	PM/CM	Inspector	Project Engineer	Design Manager	Structural Engineer	Mechanical Engineer	Elec/E&C Engineer	Coatings	CAD	Admin	PIC	Total Hours	Total Cost
Billable Rates	180	115	125	168	115	150	150	180	85	80	195		
Construction Management	146	60	15	15	-	-	-	-	-	30	20	286	\$ 43,875
Project Management Manual	4	8								6	2	20	\$ 2,510
Progress Reports	20	40								24	10	94	\$ 12,070
Pre-Construction Conference	8	4									2	14	\$ 2,290
Project Meetings	30		15	15								6	\$ 10,965
Work Change Directives	32											32	\$ 5,760
Review Payment Applications	30											30	\$ 5,400
Review Construction Schedule	18											18	\$ 3,240
Safety	4	8										12	\$ 1,640
Review of Contractor's Work	48	472	-	-	-	-	-	-	-	-	-	520	\$ 62,920
Construction Inspections	40	448										488	\$ 58,720
Substantial and Final Completion	8	24										32	\$ 4,200
Engineering Reviews	18	-	164	-	12	48	90	40	-	4	-	376	\$ 53,340
Submittal Reviews			60		8	16	20	16				120	\$ 16,700
Requests for Information			40		4	8	12	8				72	\$ 9,900
PICS Integration	4		12				24					40	\$ 5,820
Specialty Inspections and Testing	6		12				18	16				52	\$ 8,160
Equipment Testing and Facility Startup	8		40			24	16				4	92	\$ 12,760
Project Close-Out	6	16	36	12	-	-	-	-	64	12	-	146	\$ 15,836
MCESD Approval of Construction			20	4								24	\$ 3,172
Close-Out Documentation	6	16									8	30	\$ 3,560
Record Drawings			15	8					64		4	92	\$ 9,104
Total (Base)	218	548	215	27	12	48	90	40	64	46	20	1,328	\$ 175,971
Subconsultants and Direct Reimbursables Allowance							Subs	Travel		Expenses			
PICS							\$ 20,250	\$ 6,100		\$ 900			\$ 20,250
Materials Testing							\$ 9,937						\$ 9,937
Total (Subconsultants and Direct Reimbursables Allowance)							\$ 30,187	\$ 6,100		\$ 900			\$ 37,187
TOTAL (Base + Subconsultants and Direct Reimbursable Allowance)													\$ 213,158