



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP14-126**

1. Agenda Item Number:
23
2. Council Meeting Date:
May 8, 2014

TO: MAYOR & CITY COUNCIL

3. Date Prepared: April 22, 2014

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Dibble Engineering, Inc., for Large Water Valve Assessment Services.

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Dibble Engineering, Inc., for Large Water Valve Assessment Services, pursuant to Annual Contract No. EN1307-101, Project No. WA1410-101, in an amount not to exceed \$197,100.

7. BACKGROUND/DISCUSSION: The City's water transmission network includes two-hundred large diameter valves that are between 20-inches and 48-inches in diameter. The majority of the City's large diameter valves are butterfly valves with direct-bury installation. The City proposes to implement a comprehensive assessment, preventative maintenance, and rehabilitation for large diameter valves. These large valves are critical for shutdowns during a water main break.

The project scope of work consists of the consultant working with Water Distribution staff for data collection, field verification of valve location, condition assessment, and prioritization of possible valve replacement. Standard details for future large valve installations will also be developed.

An amendment for an annual limit increase to Annual Contract No. EN1307-101 with Dibble Engineering, Inc., is also going forward this Council Meeting.

8. EVALUATION: This project is being performed under the Annual Water and Wastewater Facilities Permitting, Studies, Design, and Post-Design Services Contract, No. EN1307-101, with Dibble Engineering, Inc. The costs proposed for this project have been evaluated by staff and are determined to be reasonable. The contract completion time is 180 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$197,100
Savings: N/A
Long Term Costs: N/A
Fund Source:

<u>Account No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
601.3820.6712.6WA023	Water Bond	Main Replacements	Yes	197,100

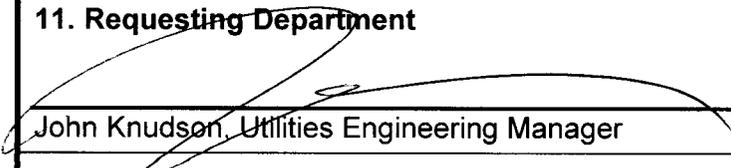
10. PROPOSED MOTION: Move City Council award a Project Agreement to Dibble Engineering, Inc., for Large Water Valve Assessment Services, pursuant to Annual Contract No. EN1307-101, Project No. WA1410-101, in an amount not to exceed \$197,100.

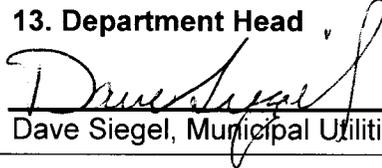
ATTACHMENTS: Project Agreement

APPROVALS

11. Requesting Department

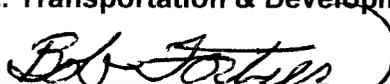
13. Department Head

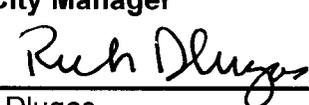

John Knudson, Utilities Engineering Manager


Dave Siegel, Municipal Utilities Director

12. Transportation & Development

14. City Manager


Bob Fortier, Capital Projects Manager


Rich Dlugas

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1307-101**

PROJECT AGREEMENT NO: WA1410-101

This PROJECT AGREEMENT is made this _____ day of _____ 2014, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Dibble Engineering, Inc. (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1307-101.

CITY and Dibble Engineering, in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is Large Water Valve Assessment, Project Number WA1410-101. The scope of work consists of providing program development, analysis, and management services for CITY's large diameter water valve assessment and rehabilitation program, 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 Hundred Ninety Seven Thousand One Hundred Dollars (\$197,100) determined and payable as set forth in Annual Contract EN1307-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is One Hundred Eighty calendar days and Annual Consultant agrees to complete all work within One Hundred Eighty (180) calendar days of the date CITY issues a Notice to Proceed.

ARTICLE 4 – GENERAL:

This Project Agreement is entered into pursuant to Annual Contract No. EN1307-101 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 Project Agreement on the day and year first written above.

This Project Agreement will be effective on this _____ day of _____, 2014.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: Steven E. Rex
Title: COO

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 Rex
Dibble Engineering, Inc.
7500 N. Dreamy Draw Dr., Ste. 200
Phoenix, AZ 85020

APPROVED AS TO FORM:

Phone: 602-957-1155

Fax: 602-957-2838

City Attorney By: [Signature]

ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

ANNUAL CONSULTANT shall provide program development, analysis, and management services in support of the proposed large water valve assessment and rehabilitation program. This program is only applied to large diameter valves, defined as valves 20-inches and larger.

1.0 Existing Data Collection

ANNUAL CONSULTANT will gather and compile available data for existing large valves within the CITY's system. Data will be obtained from the following sources:

- CITY GIS database
- Construction record drawings
- Available Operation and Maintenance manuals
- Manufacturer/local supplier records (if available)

CITY shall provide hard copies of archived documents from CITY records, as available. ANNUAL CONSULTANT will obtain and research all other listed data sources.

Deliverables

- Inventory log of data collected

Meetings

- (1) Existing database review meeting with CITY MUD staff
- (2) Existing historic data collection coordination meetings with CITY staff

2.0 Field Verification

CITY will make field visits to visually verify the location of each large diameter valve listed in the database and verified in Task 3.0. Field verification will include visual confirmation of surface level features (e.g. box and cover or vault lid) and approximate location of valve relative to aerial mapping record. Valves observed to be at alternate locations, or valves not found during field verification, will be noted in the database record and identified to the City for updated GPS coordination collection. At City direct, ANNUAL CONSULTANT may collect corrected GPS location information utilizing the Survey / GPS Location allowance.

ANNUAL CONSULTANT will create a prioritized list for CITY field visits. ANNUAL CONSULTANT will identify standard data collection fields to be completed during field visits, and (if necessary) create ~~standard forms for data collection procedures. ANNUAL CONSULTANT will receive and review field~~ visit information gathered by CITY and identify any required follow-up field visits.

Deliverables

- Standard Data Collection procedure forms
- Large diameter valve list/database

Meetings

- (1) Field coordination meeting with CITY's MUD staff

3.0 GIS Database Verification and Update

ANNUAL CONSULTANT will cross-check the existing GIS database against the documentation gathered in Tasks 1.0 and 2.0 to determine if the existing database accurately reflects the valves noted in applicable record drawings. Additional valves noted in record drawings and updated valve GPS locations identified in Task 2.0 will be noted (in spreadsheet form) for CITY to add to or modify within the CITY's database record.

Deliverables

- Listing of required GIS database updates, presented in spreadsheet form.

Meetings

- None

4.0 Valve Record Database Integration

ANNUAL CONSULTANT will compile data gathered in Tasks 1.0, 2.0 and 3.0 into a master spreadsheet record documenting relevant data for each valve for integration into the CITY's GIS database. Anticipated data to be included in the master data spreadsheet include the following:

- Valve Manufacturer
- Date of Installation
- Valve Type
- Appurtenances (Vault, Access Manhole, Bypass)
- Manufacturer's reported number of turns to closure

CITY will integrate existing valve record data spreadsheet into the CITY's GIS database record.

Deliverables

- Spreadsheet data of existing large valves, including valve record data. Deliverable will be provided in conjunction with final program documents.

Meetings

- None

5.0 Valve Location/Criticality Analysis

ANNUAL CONSULTANT will evaluate existing valve locations with respect to apparent system interconnectivity and response to valve closure and isolation. Each valve will be assigned a criticality ranking based on a qualitative assessment of:

- Service area impacts if valve is closed
- Ability of the water treatment plant to maintain delivery capacity

It is noted that this analysis does NOT include numeric modeling of the water distribution system, and is qualitative in nature. Due to the interconnectivity of the water distribution system, estimations of system performance and areas of impact will be generalized in nature.

~~ANNUAL CONSULTANT will analyze valve locations within roadways and intersections for operator access considerations. Analysis will be based on proximity to major intersections and anticipated traffic safety requirements to perform routine or emergency operations. ANNUAL CONSULTANT will make recommendations for relocation of valves based on the interconnectivity and operator access analysis.~~

Deliverables

- Technical memorandum summarizing the findings of the analysis. Preliminary memorandum will be provided for review; CITY comments will be incorporated into final memorandum. Memorandum will document the following:
 - Critical Ranking Criteria
 - Individual valve ranking
 - Recommended valve relocations

Meetings

- (1) Critical isolation analysis meeting with CITY's MUD staff
- (1) Preliminary technical memorandum review meeting with CITY's MUD staff

6.0 Valve Maintenance and Improvement Program Development

The CITY currently has a valve exercise program in place for small diameter distribution valves. The CITY may extend this program to large diameter valves as part of a systematic large valve program, including valve exercising, maintenance, and improvements. This program is expected to include several components, including:

- Spare parts stocking and inventory system (CITY to develop)
- Valve exercise program (Extension of existing small valve exercise program)
- Emergency valve maintenance protocol (CITY to develop)
- Routine valve maintenance program
- Valve rehabilitation/improvement program

ANNUAL CONSULTANT will develop recommendations for standard protocols for the Routine valve maintenance program and the Valve rehabilitation/improvement program in accordance with the following subtasks.

6.1 Routine Valve Maintenance Program

ANNUAL CONSULTANT will develop program documents to implement a standardized protocol for a large valve routine maintenance program. Initial prioritization for valve maintenance will be developed based on the results of the location/criticality analysis from Task 5.0, valve age from Task 1.0, and historic maintenance records. Program elements are anticipated to include:

- Recommended routine maintenance intervals
- Recommended routine maintenance tasks / best practices (based on AWWA guidelines)
- Recommended routine maintenance reporting form for documentation
- Initial prioritization list for routine valve maintenance

6.2 Valve Rehabilitation/Improvement Program

ANNUAL CONSULTANT will develop program documents for the rehabilitation of existing large valves and improvements to the valve and appurtenance configuration to meet the standard large valve configuration developed in Task 7.0. Initial prioritization for valve rehabilitation will be developed based on the results of the location/criticality analysis from Task 5.0, valve age and appurtenance configuration from Task 1.0. Program documents are anticipated to include:

- Valve inventory identifying recommended improvements at each valve location
- Initial prioritization list for valve rehabilitation/improvement

For the valves identified as the highest priority for rehabilitation/improvement, ANNUAL CONSULTANT will prepare project definition documents. Definition documents will include the following:

- Project map showing existing valve location, and new valve location, if appropriate
- Project description
- Engineer's Opinion of Probable Cost

It is anticipated that project definition documents will be limited to a maximum of five (5) valves.

Deliverables

- Program handbooks for:
 - Routine Valve Maintenance Program
 - Valve Rehabilitation / Improvement ProgramHandbook(s) will be prepared in preliminary format for CITY review. Final handbooks will be prepared incorporating CITY comments.
- Project definition documents for highest priority

Meetings

- (1) Program prioritization criteria meeting
- (1) Preliminary handbook review meeting

7.0 Design Standard Development

ANNUAL CONSULTANT will prepare standardized large valve configuration and appurtenance design documents. Design documents are anticipated to include:

- Recommended standard detail(s) as required for:
 - Large valve location
 - Large valve installation configuration
 - Large valve vault
 - Large valve bypass
 - Water Transmission Main Access manway
- Recommended standard specification, formatted as a revision to the City of Chandler Supplement to the Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction
- Recommended revisions to City of Chandler Technical Design Manuals 1 & 2 (Water & Wastewater System Design)
- Recommended revisions to the City of Chandler Approved Products List

Deliverables

- Standard detail(s)
- Standard specification(s)
- Design manual update(s)
- Approved product list update(s)

All documents will be provided in preliminary form for CITY review. Final documents will incorporate requested CITY revisions.

Meetings

- (1) Standard configuration brainstorming meeting
- (1) Preliminary standard document review meeting with CITY MUD staff
- (1) Preliminary standard document review meeting with CITY staff

8.0 Program Management and Meetings

ANNUAL CONSULTANT will provide comprehensive program management and oversight for the delivery of all scoped services. Program management will include staff management and direction, CITY coordination, schedule management, and project oversight.

ANNUAL CONSULTANT will participate in program meetings as identified in this scope of work. ANNUAL CONSULTANT will be responsible for preparation of meeting agendas and distribution of meeting minutes. Program meetings are anticipated to include the following:

Task	No. of Meetings
Project Kickoff	1
Monthly Program Meetings	6
Task 1.0	1
Task 2.0	3
Task 6.0	2
Task 7.0	3
Total	16

ASSUMPTIONS, CLARIFICATIONS, & EXCLUSIONS

- Survey / GPS Location allowance included for survey and GPS location services. Survey and GPS location may be utilized to update valve locations in the GIS database. This Allowance shall only be utilized at the direction of the CITY, and shall require written authorization from CITY prior to initiation.
- Direct Costs Allowance included to reimburse for direct costs expenses with no markup. Anticipated direct costs/reimbursable expenses associated with this project are: Mileage, Printing, and Delivery costs.

- Owner's Allowance included for additional services as requested by the CITY. This allowance shall be utilized at the direction of the CITY, and shall require written authorization from CITY prior to initiation.
- Project includes large diameter water transmission main valves only. Additional valves, including distribution system interconnection valves and distribution isolation valves, are not included.
- The project Program includes development of Engineer's Opinions of Probable cost for valves identified in project definition documents in Task 6.2. The project Program does not include preparation of opinions of probable construction costs for other valve replacements. Individual valve project conditions are expected to vary significantly, limiting the effectiveness of generalized opinions of cost.
- It is assumed that CITY's MUD staff will provide existing CITY hardcopy records for valve Operation and Maintenance manuals, data sheets, maintenance records, and other existing technical data related to the existing valves.

**EXHIBIT B
FEE SCHEDULE**

Task No.	Task	Subtotal Cost
1	Existing Data Collection	\$11,830
2	Field Verification	\$3,890
3	GIS Database Verification and Update	\$19,140
4	Valve Record Database Integration	\$27,720
5	Valve Location/Criticality Analysis	\$27,680
6	Valve Maintenance and Improvement Program Development	\$49,440
6.1	Routine Valve Maintenance Program	\$13,600
6.2	Valve Rehabilitation/Improvement Program	\$35,840
7	Design Standard Development	\$24,360
8	Program Management and Meetings	\$11,040
	Total Direct Labor	\$175,100
	Allowances	
9	Survey/GPS Location Allowance	\$10,000
10	Direct Costs Allowance	\$10,000
11	Owner's Allowance	\$2,000
	Total Allowances	\$22,000
	Total Fee	\$197,100