



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP15-129**

1. Agenda Item Number:

32

2. Council Meeting Date:
November 20, 2014

TO: MAYOR & CITY COUNCIL

3. Date Prepared: November 3, 2014

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Dibble Engineering, for design services for Large Valve Replacement.

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Dibble Engineering, for design services for Large Valve Replacement, pursuant to On-Call Water and Wastewater Services Contract No. EN1520.101, Project No. WA1504.201, in an amount not to exceed \$95,290.

7. BACKGROUND/DISCUSSION: A large water valve assessment was recently completed that evaluated the condition of water valves with a diameter of 20-inches and larger. The assessment program has identified and prioritized a list of valves designated for replacement.

This project will provide design services for replacement of the two highest priority valve locations, near the intersection of McQueen and Pecos Roads. The project scope of work includes development of shutdown, dewatering, and valve replacement plans. In addition, an evaluation on the best methodology to perform a condition assessment of the existing 48-inch Prestressed Concrete Cylinder Pipe will be recommended. The actual conditions assessment will be performed during the installation of the new valves.

8. EVALUATION: This project is being performed under the On-Call Water and Wastewater Services Contract No. EN1520.101, to Dibble Engineering. The costs proposed for this project have been evaluated by Staff and are determined to be reasonable. The contract completion time is 150 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$95,290
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 Bonds	Main Replacements	Yes	\$95,290

10. PROPOSED MOTION: Move City Council award a Project Agreement to Dibble Engineering, for design services for Large Valve Replacement, pursuant to On-Call Water and Wastewater Services Contract No. EN1520.101, Project No. WA1504.201, in an amount not to exceed \$95,290.

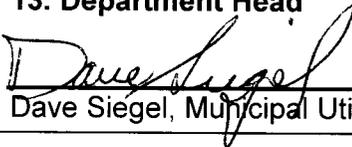
ATTACHMENTS: Project Agreement, Location Map

APPROVALS

11. Requesting Department


John Knudson, Utilities Engineering Manager

13. Department Head


Dave Siegel, Municipal Utilities Director

12. Transportation & Development


Bob Fortier, Capital Projects Manager

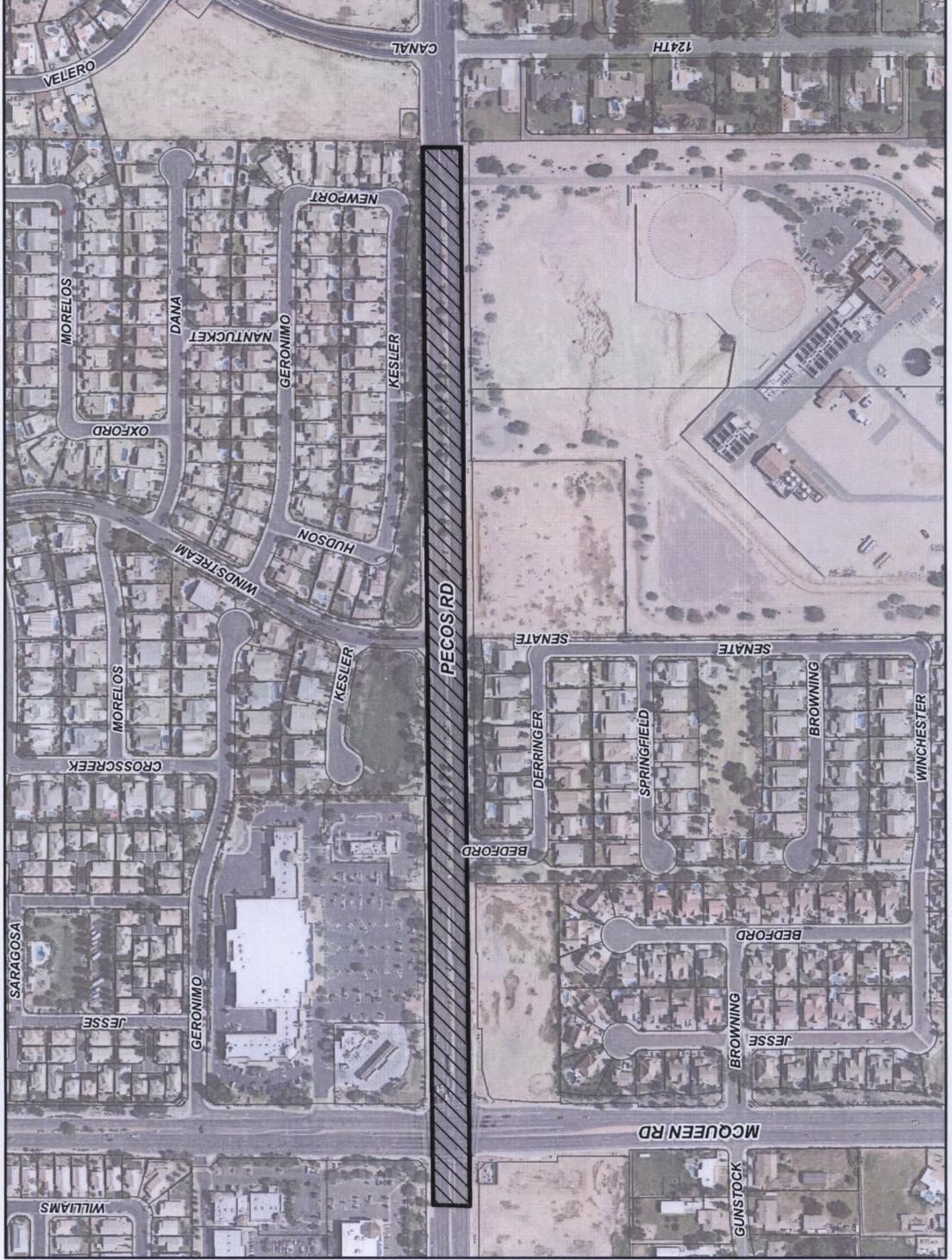
14. City Manager


Rich Dlugas



Chandler • Arizona

LARGE VALVE REPLACEMENT PROJECT PROJECT NO. WA1504.201



MEMO NO. CP15-129



PROJECT LOCATION



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1520.101**

PROJECT AGREEMENT NO: WA1504.201

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. EN1520.101.

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 Valve Replacement, Project Number WA1504.201. The scope of work consists of professional services to design replacement of large valves, 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 Ninety Five Thousand Two Hundred Ninety Dollars (\$95,290) determined and payable as set forth in Annual Contract EN1520.101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is One Hundred Fifty calendar days and Annual Consultant agrees to complete all work within One Hundred Fifty (150) 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. EN1520.101 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: Steve 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

City Attorney By: [Signature]

ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

ANNUAL CONSULTANT shall provide complete analysis, engineering design, and project management services as defined in following tasks. Design shall be in accordance with the following standards listed in order of precedence:

- City of Chandler, Water & Wastewater System Design - Technical Design Manuals 1 & 2, February 2012 (including revisions proposed during the Large Valve Assessment Study)
- City of Chandler Standard Specifications and Details, Revisions through 2013.
- City of Chandler Supplement to Maricopa Association of Governments Uniform Standard Details and Specifications, Revisions through February 2012.
- Maricopa Association of Governments, Uniform Standard Specifications for Public Works Construction, Revisions through 2014.
- Maricopa Association of Governments, Uniform Standard Details for Public Works Construction, Revisions through 2014.

For all standards, the version in effect at the time of project construction contract award shall be considered the current version and shall be applied to the contract documents.

1.0 Topographic and Control Surveys

ANNUAL CONSULTANT shall collect survey control data and topographic survey data including the following:

- 1.1 **Survey Control** - ANNUAL CONSULTANT shall perform ground survey to establish horizontal and vertical control throughout the project limits based on the datum specified by the CITY and in accordance with CITY requirements. The horizontal survey data used for the project shall be presented in State Plane Coordinates, North American Datum of 1983 (NAD 83) 1992 epoch, and Arizona Central Zone, International Foot. Vertical datum shall be referenced to the North American Vertical Datum of 1988 (NAVD 88), International Foot. Using Global Position System (GPS) methods, GPS control data is published and collected based on National Geodetic Survey (NGS) grid coordinates. Collected monument data shall be scaled from grid coordinates to ground coordinates using an agreed upon scale factor. ANNUAL CONSULTANT shall not set or reset any lost or obliterated section corners, quarter corners, City of Chandler Benchmarks or NGS monuments.
- 1.2 **Topographic Survey** - ANNUAL CONSULTANT shall perform topographic survey of all existing features including but not limited to curb and gutter, median curb, catch basins, scuppers, water meter boxes, water and gas valves, manholes, utility poles and guy wires, traffic signal poles, utility boxes, fences, trees, mailboxes, public and private irrigation, plants and shrubs. ANNUAL CONSULTANT shall provide detailed locations of visible utilities at the locations noted above. Visible utilities include overhead power, overhead communications, sanitary and storm manholes (rim and invert elevations), water valves (rim and top of nut elevations), water meter boxes, concrete irrigation structures (invert elevations), drainage pipes and structures (invert elevations), telephone and cable risers, electric boxes, and any existing blue stake markings. Utilizing GPS survey data collection procedures at the locations of the proposed improvements. Topographic survey data shall be used to generate a Dynamic Terrain Model (DTM) surface for use in base mapping and design.

2.0 Base Mapping

ANNUAL CONSULTANT shall create a comprehensive base map from the information gathered during the field survey and utility investigation (Task 1). Base mapping shall be created in AutoDesk Civil 3D (AutoCAD) 2013 format in conformance with CITY standards.

3.0 Utility Coordination

Following each progress submittal, ANNUAL CONSULTANT shall submit one set of plans to each utility along with a no conflict (clearance) letter utilizing the City's standard letter format. ANNUAL CONSULTANT shall provide copies of correspondence and transmittals to utilities that were sent with each submittal sets of plans. If needed, ANNUAL CONSULTANT shall participate in one (1) utility coordination meeting with affected utility companies. The City shall be responsible for organizing the utility coordination meeting and inviting utility companies, as necessary. Design shall be performed to avoid conflicts with existing utilities and minimize impacts to existing utilities in the event that they cannot be avoided. ANNUAL CONSULTANT shall review

utility plans from any new and separate utility improvement projects within the vicinity of this project for conflict resolution and avoidance.

4.0 Condition Assessment

ANNUAL CONSULTANT shall identify, evaluate and recommend appropriate condition assessment methods for the evaluation of the existing 48-inch PCCP water pipeline. Available methods shall include interior and exterior evaluation to estimate pipeline damage or deterioration. It is anticipated that non-destructive inspection methods shall include one or more of the following: interior visual assessment, video logging, sounding, and/or electromagnetic inspection. Exterior non-destructive testing may include soil corrosivity testing. Destructive testing may be recommended for removed sections of pipeline.

ANNUAL CONSULTANT shall evaluate and recommend assessment methods based on the following factors:

- Cost of assessment
- Accessibility/Access requirements
- Schedule and/or assessment duration requirements

In addition, qualitative consideration of the value of the assessment data for immediate and long-term decision-making regarding pipeline rehabilitation needs shall be made.

Methodology shall be discussed in up to two (2) meeting/workshops. ANNUAL CONSULTANT shall provide by an electronic PDF format Draft Memorandum and Final Memorandum summarizing assessment methodology.

5.0 Shutdown, Dewatering, and Startup Plan Development

ANNUAL CONSULTANT shall utilize the recommendations developed during the Condition Assessment to identify shutdown and dewatering requirements for the valve improvements and condition assessment. A Shutdown and dewatering plan shall identify the following:

- Shutdown locations, designated valves required for shutdown
- Identification of water customers with service interruptions caused by the shutdown
- Identification of dewatering locations and disposal options for water discharged during dewatering
- Identifying requirements for flushing, disinfection and bacteriological testing of the existing main and added infrastructure following construction.

CITY shall be responsible for any hydraulic modeling required to evaluate impacts to system delivery capacity and/or fire flow impacts. CITY and/or contractor shall be responsible for notification of affected customers.

One (1) meeting/workshop shall be held to discuss and develop the shutdown and dewatering plan. ANNUAL CONSULTANT shall provide by an electronic PDF format Draft Memorandum and Final Memorandum with Shutdown, Dewatering, and Startup Plan. Pertinent information shall be incorporated into technical specifications and plans as needed.

6.0 Construction Document Preparation

ANNUAL CONSULTANT shall prepare construction documents consisting of plans, technical specifications, and opinion of probable construction costs with a bid/fee schedule. The construction plans shall include plan view sheets (1" = 20' horizontal scale and 1"=2' vertical scale) and detail sheets as necessary to provide a complete, clear and concise set of construction plans. The following progress submittals shall be made:

6.1 Conceptual Engineering Submittal (30%) – ANNUAL CONSULTANT will prepare Conceptual Design Drawings, Technical Special Provisions Table of Contents, and an Engineer's Opinion of Probable Construction Costs. Drawings will depict existing topography and utilities as well as preliminary pipeline and appurtenance locations in both plan and profile. Planned utility pothole locations shall be coordinated with this Submittal.

6.2 Preliminary Engineering Submittal (90%) - ANNUAL CONSULTANT shall prepare Preliminary Design Drawings, Technical Specifications, and an Engineer's Opinion of Probable Construction Costs. Drawings shall depict horizontal and vertical alignment of proposed pipelines and appurtenances, details, and construction notes with cross references. Drawings shall address all previous plan review

comments and show the final horizontal alignment and vertical alignment of proposed pipelines and appurtenances, final standard and special details with cross references, and general and construction notes with cross references. Technical Specifications shall be prepared for items not adequately addressed by the standard specifications, referenced herein. Flushing, disinfection and bacteriological testing requirements shall be included in the technical specifications. Pothole locations and results data shall be shown on the Preliminary Submittal. Preliminary engineering submittal shall be sealed by a Professional Engineer licensed in the State of Arizona. Preliminary engineering submittal shall be suitable for plan review approval and permitting by Maricopa County Environmental Services Department (MCESD) and by City of Chandler Development Services Division. Applicable City of Chandler plan review fees and permits shall be paid directly by CITY. Submittal by ANNUAL CONSULTANT to the City of Chandler shall include four (4) full-size (24" X 36" bond) plan sets, four (4) half-size (11" X 17" bond) plan sets, four (4) copies of Engineer's Opinion of Probable Construction Costs, and Four (4) copies of Technical Special Provisions, one (1) (8 ½" X 11" bond) copy of plan review/permit applications, and electronic copy of AutoCAD and PDF of plans, Word and PDF technical specifications, excel and PDF cost estimate.

Following the preliminary engineering submittal, ANNUAL CONSULTANT shall review the City's comments and complete a comment resolution form. ANNUAL CONSULTANT shall incorporate all comments unless otherwise directed by the City.

- 6.3 Final Engineering Submittal (100%)** - ANNUAL CONSULTANT shall prepare Final Design Drawings, Technical Specifications, and an Engineer's Opinion of Probable Construction Costs. Final engineering submittal shall be suitable for competitive bidding and construction. The City shall be responsible for assembling integrated bid package including construction contract and general conditions and for public advertisement, plan reproduction for bidding, distribution of contract documents to potential bidders, distributing addenda to plan holders, and opening bids. Submittal to City of Chandler shall include four (4) full-size (24" X 36" bond) plan sets, four (4) half-size (11" X 17" bond) plan sets, four (4) copies of Engineer's Opinion of Probable Construction Costs, and Four (4) copies of Technical Special Provisions, one (1) (8 ½" X 11" bond) copy of plan review/permit applications, and electronic copy of AutoCAD and PDF of plans, Word and PDF technical specifications, excel and PDF cost estimate with bid/fee schedule. Upon City plan/permit approval, ANNUAL CONSULTANT shall provide full size (24" X 36") Mylar of cover sheet

7.0 Bidding Support Services

It is our understanding that this project may be constructed under a Design-Bid-Build Contract or a Construction Manager at Risk (CMAR) contract. It is assumed a Design-Bid-Build construction delivery method shall be used for this project. In the event that the CITY elects to utilize a CMAR construction delivery method, an allowance is provided for CMAR constructability review coordination during design and review/analysis of the CMAR's proposed Guaranteed Maximum Price (GMP) proposal.

During bidding ANNUAL CONSULTANT shall provide the following services:

- Attend the pre-bid meeting.
- Assist City in responding to bidder's questions and preparing up to one (1) addendum as necessary to clarify construction contract documents.

CLARIFICATIONS AND ASSUPTIONS

- ANNUAL CONSULTANT shall prepare and distribute meeting notes for Kickoff Meeting, Conditional Assessment Review (2) Meetings, Shutdown and Dewatering Coordination Meeting, Utility Coordination Meeting, and Submittal/Comment Resolution Meeting.
- ANNUAL CONSULTANT shall provide a detailed project schedule to the CITY's project manager prior to the project kickoff meeting. The schedule shall be monitored and updated periodically, with coordination with CITY staff.
- ANNUAL CONSULTANT shall receive written authorization from the CITY prior to utilizing any contract allowance, except the Direct Expense allowance. CITY shall utilize the Direct Expense allowance to reimburse ANNUAL CONSULTANT at cost, without markup, for direct costs and reimbursable expenses such as printing/plotting/reprographics, permit fees, and mileage.

- Utility Potholing allowance may be utilized during design to provide the CITY with a greater level of confidence regarding the location and configuration of existing utilities within the project corridor, but it does not guarantee utility clearance. Utility potholes, if authorized, shall be completed by a specialty sub-consultant and invoiced on a per-hole basis. Each pothole location shall be Bluestake located to minimize dry holes. Dry holes shall be invoiced at the unit price per pothole.
- Public Involvement allowance is provided for ANNUAL CONSULTANT's participation and support in public involvement activities. At the CITY's written request and direction, ANNUAL CONSULTANT shall prepare meeting boards and/or presentations and participate in public meetings.
- Owner's Allowance is additional services as directed by the CITY.

**EXHIBIT B
FEE SCHEDULE**

Task Description		Subtotal
1.0	Topographic and Control Surveys	\$ 5,170
2.0	Base Mapping	\$ 4,655
3.0	Utility Coordination	\$ 7,580
4.0	Condition Assessment Methodology Development	\$10,840
5.0	Shutdown, Dewatering and Startup Plan Development	\$13,040
6.1	Conceptual Engineering Submittal	\$10,500
6.2	Preliminary Engineering Submittal	\$15,130
6.3	Final Engineering Submittal	\$11,150
7.0	Bidding Support Services	\$ 2,225
Subtotal Direct Labor		\$80,290
8.0	Direct Expenses Allowance	\$ 1,600
9.0	CMAR Coordination Allowance	\$ 2,500
10.0	Utility Potholing Allowance	\$ 5,000
11.0	Public Involvement Allowance	\$ 2,500
12.0	Owner's Allowance	\$ 5,000
Subtotal Allowances		\$15,000
TOTAL FEE		\$95,290