



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP14-033**

1. Agenda Item Number: 39
2. Council Meeting Date: August 15, 2013

TO: MAYOR & COUNCIL
THROUGH: CITY MANAGER

3. Date Prepared: August 5, 2013
4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Dibble Engineers, Inc., for Lone Butte Wastewater Treatment Plant (WWTP) Chemical Distribution System Improvements Design.

6. RECOMMENDATION: Staff recommends City Council award a project agreement to Dibble Engineers, Inc., for the Lone Butte WWTP Chemical Distribution Improvements design, pursuant to Annual Contract EN1307-101, Project No. WW1315-201, in an amount not to exceed \$65,907.

7. BACKGROUND/DISCUSSION: The Lone Butte WWTP, located west of I-10 on the Gila River Indian Community, is the oldest of Chandler's three wastewater treatment facilities. The chlorine containment area piping is aging and needs to be re-routed to better accommodate process needs. Additionally, the chemical distribution system to the filters is antiquated and under-designed to meet the facility's current water treatment needs.

The scope of work includes redesign of chemical feed system, sand filter disinfection improvements, analysis of existing chemical storage capacities, and design of piping in the chlorine containment area.

8. EVALUATION: This project is being performed under the Annual Permitting, Study, Design, and Post-Design Services for Water and Wastewater facilities, Contract No. EN1307-101 to Dibble Engineers, Inc. The costs proposed for this project have been evaluated by staff and are determined to be reasonable. The contract completion time is 270 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$65,907
Savings: N/A
Long Term Costs: N/A

Fund Source:

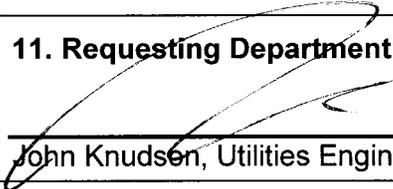
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP-Funded:</u>	<u>Amount:</u>
611.3910.6817.6WW621	Wastewater Bonds	Water Reclamation Facility Improvements	Yes	\$65,907

10. PROPOSED MOTION: Move City Council award a project agreement to Dibble Engineers, Inc., for the Lone Butte WWTP Chemical Distribution Improvements, pursuant to Annual Contract No. EN1307-101, Project No. WW1315-201, in an amount not to exceed \$65,907.

ATTACHMENTS: Project Agreement, Location Map

APPROVALS

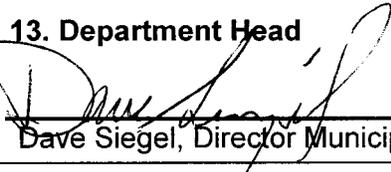
11. Requesting Department


John Knudsen, Utilities Engineering Manager

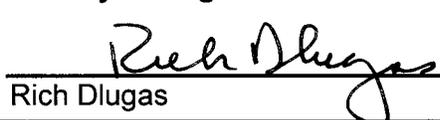
12. Transportation & Development


Bob Fortier, Capital Projects Manager

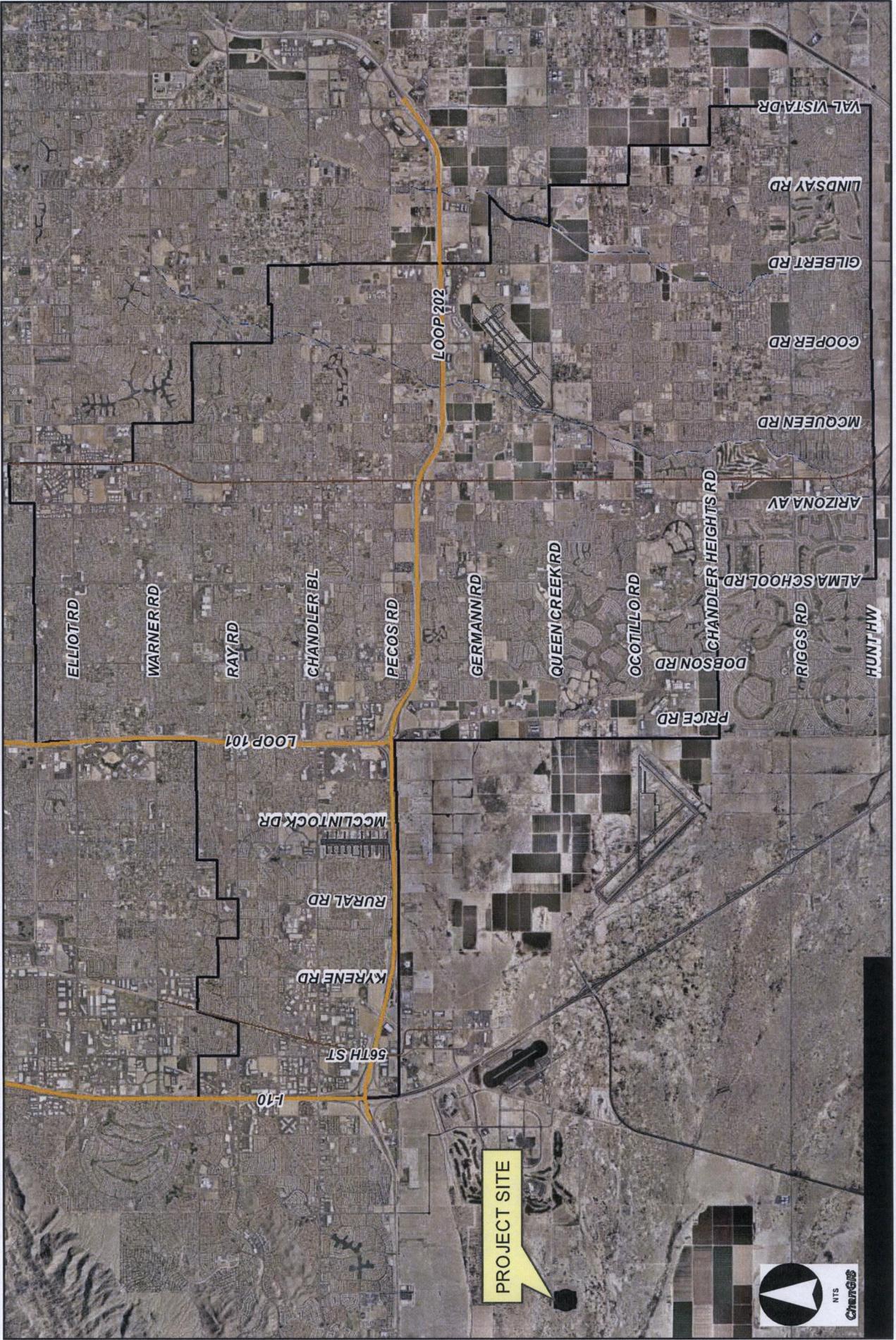
13. Department Head


Dave Siegel, Director Municipal Utilities

14. City Manager


Rich Dlugas

**LONE BUTTE CHEMICAL
DISTRIBUTION IMPROVEMENTS
PROJECT NO. WW1315-401
MEMO NO. CP14-033**



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

PROJECT AGREEMENT NO: WW1315-201

This PROJECT AGREEMENT is made this ____ day of _____, 2013, 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 Lone Butte Chemical Distribution Improvement, Project Number WW1315-201. The scope of work consists of provide design services for chemical distribution improvements at the Lone Butte Facility, 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 Sixty Five Thousand Nine Hundred Seven Dollars (\$65,907) 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 Two Hundred Seventy calendar days and Annual Consultant agrees to complete all work within Two Hundred Seventy (270) 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 _____, 2013.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: Keaf M. Dibble
Title: President

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mall 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

PROJECT DESCRIPTION

The City of Chandler (City) proposes to design and construct improvements to the chemical storage, dosing and piping systems at the Lone Butte Wastewater Treatment Facility. The proposed improvements are generally described as follows:

- Replace existing hypochlorite metering pump with a new diaphragm metering pump to match the pump recently installed by the City
- Add additional metering pump (higher capacity) to allow "shock" dosing of hypochlorite to traveling bridge or continuous backwash filters
- Replace existing hypochlorite pump discharge piping to accommodate new pumps and additional operator flexibility.
- Replace hypochlorite tank overflow piping in the immediate vicinity of observed leaks
- Replace existing hypochlorite delivery pipelines with four(4) new pipes (1-feed to dosing point at splitter structure, 1-feed to "shock" dose point at traveling bridge filter, 2-spare)
- Provide manual start/stop control switching for the "shock" dose pump at two remote locations, in the vicinity of the traveling bridge filter and in the vicinity of the injection point feeding the continuous backwash filter
- Repair concrete wall at hypochlorite containment structure
- Repair leveling grout at hypochlorite tank anchor bolts
- Repair wall/floor coating system localized failures
- Increase alum storage capacity from the current 6,000 gallons to approximately 10,000 gallons. This may be accomplished by implementing one of the following options:
 1. Replace the existing storage tank with a taller storage tank
 2. Replace the existing storage tank with a horizontally oriented storage tank
 3. Add a second tank
- Provide secondary containment storage for the total tank storage volume of 10,000 gallons.
- New automated, rolling access gate at the main access to the plant. Gate access will be controlled as follows:
 - o Exterior numeric key pad and callbox
 - o Remote control
 - o Knox box

Design Standards

This project will be designed 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
- 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 2013.
- Maricopa Association of Governments, Uniform Standard Details for Public Works Construction, Revisions through 2013.

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

ANNUAL CONSULTANT shall provide the following services:

Task 1: Data Collection and Research

Annual Consultant will collect and review readily available record data relevant to the project design. Relevant data may include but not be limited to the following: facility record drawings and process diagrams, master plans, studies, design reports, hydraulic model results, and infrastructure plans affecting the project design. Annual Consultant will conduct a site visit with appropriate members of the project team, including City representatives.

Task 2: Survey and Base Map Development

Annual Consultant will collect survey control data and topographic survey data in the vicinity of the proposed pump station and sediment collection structure. Survey work will include the following tasks:

1. **Survey Control** – Using Global Position System (GPS) methods, Annual Consultant will locate any existing local horizontal survey control within the Lone Butte WWTP. GPS control data is published and collected based on National Geodetic Survey (NGS) grid coordinates. Collected monument data will be scaled from grid coordinates to ground coordinates using an agreed upon scale factor. Annual Consultant will not set or reset any lost or obliterated section corners, quarter corners, City of Chandler Benchmarks or NGS monuments. Vertical control will locate and reference the plant benchmark, ensuring that the project remains on consistent vertical datum with the other improvements at the plant.

It is anticipated that this project will utilize existing local control on the plant site and previously located sectional control as the basis of control for this project.

2. **Topographic Survey** – Annual Consultant will provide topographic survey utilizing GPS survey data collection procedures at the location of the proposed improvements. Topographic survey data will be used to generate a Dynamic Terrain Model (DTM) surface for use in base mapping and design.
3. **Base Mapping** – Annual Consultant will create a comprehensive base map from the information gathered during the field survey and utility investigation (Task 3). Base mapping will be created in AutoDesk Civil 3D (AutoCAD) 2013 format in conformance with Annual Consultant's CAD standards.

It is anticipated that survey and base mapping data collected will be integrated with survey and base mapping data previously collected and verified by Annual Consultant.

Task 3: Utility Investigations

Annual Consultant will incorporate all existing utilities shown on plant as-built drawings and located during field survey (Task 2) into the project base map. Since all work will be completed on-site, plans will not be sent to outside utility companies for verification and/or clearance. An ALLOWANCE is provided for utility potholing and investigations.

Task 4: Construction Documents

Annual Consultant will prepare construction plans, technical specifications, bid schedule and opinions of probable construction costs for the proposed improvements. The City will provide electronic (AutoCAD) formats for desired standard plan sheet format and drafting standards. The construction plans will include plan view sheets (1" = 20' horizontal scale) plan and profile (1" = 20' horizontal scale, 1" = 4' vertical scale) and detail sheets as necessary to provide a complete, clear and concise set of construction plans (see Estimated Plan Sheet Index).

Annual Consultant will prepare technical special provisions for all proposed project improvements. Technical special provisions may reference standard specifications listed in this scope of work. Technical special provisions will be prepared using CSI format. The City will be responsible for preparing contract

general conditions, supplementary general conditions and contract documents and assembling the integrated bid package.

Annual Consultant will prepare Engineer's Opinions of Probable Construction Cost (EOPCC) for all proposed improvements. EOPCC will be prepared utilizing standardized proposed bid items for all construction work. EOPCC represents the Annual Consultant's best judgment of the cost of construction based on current equipment and material price quotes as well as historic bid results. It is not a guarantee of the cost of construction for the improvements.

The following progress submittals will be made:

Task 4.1 – Conceptual (15%) Annual Consultant Submittal: Annual Consultant will prepare Conceptual (15%) engineering documents, including conceptual site plan, equipment layout, and process flow diagram. Submittal will include designation of equipment for demolition.

Task 4.2 – Preliminary (60%) Annual Consultant Submittal: Annual Consultant will prepare Preliminary (60%) Engineering documents, including final site plan, final equipment layout, equipment sizing and pipeline plan and profile. Design will be a refinement of the Conceptual Annual Consultant Submittal (Task 4.1), incorporating City review comments. Preliminary construction details will be developed and included. Preliminary technical specifications will be prepared.

Task 4.3 – Prefinal (90%) Annual Consultant Submittal: Annual Consultant will prepare Prefinal (90%) engineering documents, including all design elements in the Preliminary Annual Consultant Submittal, incorporating City review comments. All design features will be fully developed and detailed as required to prepare a complete set of construction drawings. Pre-final technical specifications will be prepared. The Prefinal Annual Consultant Submittal will be sealed by a Registered Professional Annual Consultant and be suitable for permitting.

Task 4.4 – Construction Document Submittal: Annual Consultant will prepare Construction Documents incorporating all City and permit review comments to the Prefinal Annual Consultant Submittal. Construction documents will be sealed by a Registered Professional Annual Consultant and be suitable for bidding and construction.

Estimated Plan Sheet Index

Sheet Title	No. of Sheets
Cover Sheet	1
General Notes	1
Legend, Abbreviations	1
Key Map	1
Survey Control	1
Process Schematic	1
Site Plan	1
Demolition Plan	1
Chlorine Facility Plan and Sections	1
Alum Facility Plan	1
Chlorine Piping Plan	1
Structural General Notes	1
Structural Plan and Sections	1
Structural Details	1
Entrance Gate Plan	1
Entrance Gate Details	1
Civil Details	2
Electrical Legend, Notes & Abbreviations	1
Electrical Site Plan	1

Electrical Chlorination Facility Plan	1
Electrical Chlorination Facility Single Line Diagram	1
Electrical Gate Plan	1
Electrical Gate Single Line Diagram	1
Electrical Schematic Diagrams and Control Line Diagrams	1
Electrical Details and Equipment Elevation	1
Total	26

Annual Consultant will provide each progress submittal to the City's designated Project Manager. Following each submittal, Annual Consultant will review the City's comments and complete a comment resolution form. Annual Consultant will incorporate all comments unless otherwise directed by the City.

Task 5: Permitting

Annual Consultant will submit Preliminary (90%) construction plans to the following agencies for permit or courtesy review:

- City of Chandler Building and Civil permit (assumed no-fee permit)
- Gila River Indian Community (Courtesy review, assumed no permit approval or fee required)
- Maricopa County Environmental Services Department (Courtesy review, assumed non-expedited fee required)

Annual Consultant will meet with each identified permit review agency (Task 6) to review project and coordinate courtesy review. No permit applications, review comments or review fees are anticipated as part of courtesy reviews.

Task 6: Project Management & Meetings

Annual Consultant will attend project meetings noted in this Scope of Work and will prepare and distribute agenda and meeting minutes to all participants. After receipt of notice to proceed, Annual Consultant will contact the City's project manager to arrange a kick-off meeting to discuss project schedule and coordinate anticipated City participation efforts. Three (3) submittal review meetings will be held following progress design milestones. The City's project manager will be responsible for inviting City staff as required. Annual Consultant will coordinate and attend two (2) permit review meetings with courtesy review agencies identified in Task 5. Annual Consultant assumes two (2) additional coordination meetings and/or site visits with City staff will be required during design.

Annual Consultant will be responsible for comprehensive project management which will include: plans, bid documents, opinion of probable construction costs, utility coordination, correspondence management, schedule maintenance, and meeting minutes.

Task 7: Bidding Phase Services

This project will be constructed under a Design-Bid-Build Contract. The City will be responsible for preparing contract bidding documents, advertising for public bidding, plan reproduction for bidding, distribution of contract documents to potential bidders, distributing addenda to plan holders, and opening bids.

Annual Consultant shall provide the following bidding phase services:

- Attend the pre-bid meeting and site visit.
- Respond to bidder's questions as directed.
- Prepare one (1) addendum, if necessary, to clarify construction contract documents.

Estimated Design Schedule

The following schedule estimates project milestone submittal timeframes relative to the Notice to Proceed (NTP). Submittal schedule is contingent upon an anticipated four (4) week review time by the City. A final schedule will be provided for review and approval at the project kickoff meeting.

Conceptual (15%) Annual Consultant Submittal	NTP + 6 weeks
Preliminary (60%) Annual Consultant Submittal	NTP + 14 weeks
Prefinal (90%) Annual Consultant Submittal	NTP + 22 weeks
Final Annual Consultant Submittal	NTP + 28 weeks

Deliverables

Task No.	Description	Qty	Deliverable
4.1	Preliminary (60%) Annual Consultant Submittal	8	Full size (22x34 bond) plan sets
		4	Half size (11x17 bond) plan sets
		4	Technical Special Provisions Table of Contents
		2	Preliminary Geotechnical Annual Consultant's Report
		4	Annual Consultants Opinion of Probable Construction Cost
		1	Electronic Copy of all documents (PDF)
4.2	Preliminary (60%) Annual Consultant Submittal	1	Electronic Copy of all documents (PDF)
		4	Half size (11x17 bond) plan sets
		4	Technical Special Provisions Table of Contents
		2	Preliminary Geotechnical Annual Consultant's Report
		4	Annual Consultants Opinion of Probable Construction Cost
		1	Comment Resolution Form
4.3	Prefinal (90%) Annual Consultant Submittal	8	Full size (22x34 bond) plan sets
		4	Half size (11x17 bond) plan sets
		4	Technical Special Provisions (bound)
		2	Final Geotechnical Annual Consultant's Report
		4	Annual Consultants Opinion of Probable Construction Cost
		1	Comment Resolution Form
		1	Electronic Copy of all documents (PDF)
		1	Electronic Copy of all documents (PDF)
4.4	Construction Document Submittal	1	Full size (22x34 mylar, 3 mil double matte)
		10	Full size (22x34 bond) plan sets
		4	Technical Special Provisions (bound)
		4	Annual Consultants Opinion of Probable Construction Cost
		1	Comment Resolution Form
		1	Electronic Copy of all documents (PDF)

Allowances

The following ALLOWANCE items may utilized with written authorization from the City:

- Utility Field Investigations: An allowance is provided for additional utility locating and investigations. Allowance may be used for utility potholing and/or on-site private utility locating services. The scope and associated fee for this allowance will be determined based on written direction from the City's Project Manager.
- Owner's Allowance: An allowance is provided for additional services requested by the City. This allowance will be utilized at the City's discretion and based on written direction from the City's Project Manager.

Direct Cost Reimbursement

Reimbursements shall be made by the City for direct costs incurred for mileage, printing, document reproduction, plotting, mylars, and any additional work directed by the City not specifically included in this Scope of Work.

EXCLUSIONS

- Permitting: Annual Consultant assumes that construction within the Lone Butte Wastewater Treatment Facility is addressed in the existing agreement between the City and the Gila River Indian Community (GRIC) and is not subject to regulatory jurisdiction of the Arizona Department of Environmental Quality (ADEQ) or the Maricopa County Environmental Services Department (MCESD). Submittal, review, permitting and/or approval by the GRIC, ADEQ or MCESD is limited to the courtesy review described in this scope of work.
- Evaluation and/or modification to the existing wastewater treatment process or other infrastructure on the project site beyond the work specifically listed in this scope of work is excluded.
- Post Design Services: Services during construction are not included in this Scope of Work but may be negotiated separately if requested by the City.

