



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP15-165**

1. Agenda Item Number: 24
2. Council Meeting Date: January 22, 2015

TO: MAYOR & CITY COUNCIL

3. Date Prepared: January 7, 2015

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Carollo Engineers, Inc., for Sewer Assessment Project Management Services

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Carollo Engineers, Inc., for sewer assessment project management services, pursuant to On-call Water/Wastewater Services Contract No. EN1518.101, Project No. WW1508.101, in an amount not to exceed \$311,600.

7. BACKGROUND/DISCUSSION: The 2008 Wastewater Master Plan identified an on-going need to evaluate, prioritize, and repair sewer lines and manholes within the City's sewer collection system. This project will evaluate the structural condition of the sewer collection system. The result will be a prioritized program to rehabilitate, repair, or replace wastewater collection sewer lines and manholes. Inspections will be conducted through closed circuit television inspection of sewer pipelines and panorama camera inspections for sewer manholes. The project will also assess wastewater collection system odors. Wastewater facility rehabilitation projects will be brought forward for Council approval as they are identified.

The project scope of work consists of: project management services, development of priorities for inspecting sewer pipelines and manholes, sewer pipeline and manhole evaluation and recommendations for rehabilitation, integration of inspection files into the City-approved software platform, and conducting a sewer collection system odor study.

8. EVALUATION: This project is being performed under the On-call Water/Wastewater Services Contract No. EN1518.101, to Carollo Engineers, Inc. The costs proposed for this project have been evaluated by Staff and are determined to be reasonable. The contract completion time is 365 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$311,600
Savings: N/A
Long Term Costs: N/A

Fund Source:

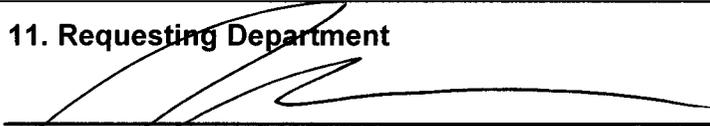
Account No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
611.3910.6812.0.6WW266	Wastewater Bond	Sewer Assessment & Rehab	Yes	\$311,600

10. PROPOSED MOTION: Move City Council award a Project Agreement to Carollo Engineers, Inc., for sewer assessment project management services, pursuant to On-call Water/Wastewater Services Contract No. EN1518.101, Project No. WW1508.101, in an amount not to exceed \$311,600.

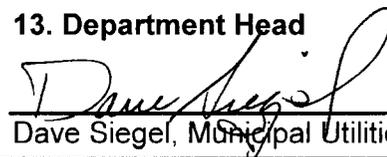
ATTACHMENTS: Agreement

APPROVALS

11. Requesting Department


John Knudson, Utilities Engineering Manager

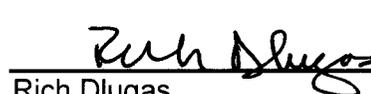
13. Department Head


Dave Siegel, Municipal Utilities Director

12. Transportation & Development


Bob Fortier, Capital Projects Manager

14. City Manager


Rich Dlugas

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1518.101**

PROJECT AGREEMENT NO: WW1508.101

This PROJECT AGREEMENT is made this ____ day of _____, 2015, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Carollo Engineers, Inc. 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. EN1518.101.

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

ARTICLE 1 - DESCRIPTION OF WORK:

1. This project is Sewer Assessment, Project Number WW1508.101. The scope of work consists of inspecting existing sewer infrastructure (manholes and pipelines) to prioritize repairs and other maintenance actions, 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 Three Hundred Eleven Thousand Six Hundred Dollars (\$311,600) determined and payable as set forth in Annual Contract EN1518.101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is 365 calendar days and Annual Consultant agrees to complete all work within Three Hundred Sixty Five (365) 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. EN1518.101 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 _____, 2015.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: David Sobeck David Sobeck
Title: SR. VICE PRESIDENT 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. David Sobeck
Carollo Engineers, Inc.
4600 E. Washington St., Ste. 500
Phoenix, AZ 85034

APPROVED AS TO FORM:

Phone: 602-263-9500

City Attorney By: CSH

ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

GENERAL PROJECT DESCRIPTION

The City of Chandler (City) proposes to continue with its program to inventory, evaluate, and rehabilitate their existing sewer collection system. The main purpose of this Phase of the program is to identify the structural condition of the sewer collection system manholes so that a prioritized program of rehabilitation, repair, and replacement can be enacted and structural failures can be prevented. This Phase will be accomplished through closed circuit television (CCTV) or IBAK Panoramo digital inspection of sewer pipelines. All manholes will be inspected using the IBAK Panoramo digital imaging procedures.

ANNUAL CONSULTANT will assist the City in integrating both the sewer pipeline and manhole inspection files developed under this Project into the City's Wincan V8 software for archiving and retrieval.

In addition to the pipelines and manholes inspection work, ANNUAL CONSULTANT will continue their work in assessing high odor areas of the City's collection system, identifying options to mitigating those odors, and producing a Technical Memorandum with conclusions and recommendations for next steps.

The work to be performed for the project consists of the following tasks:

- Task 1 - Project Management Services
- Task 2 - Development of Priorities for Re-inspecting Pipelines from previous Phases
- Task 3 – Development of Priorities for Re-inspecting Manholes from previous Phases
- Task 4 – Pipeline and Sewer Manholes Evaluation and Recommendations for Rehab
- Task 5 - Integration of Pipeline and Manhole Inspection Files into Wincan V8 (or VX)
- Task 6 – Collection System Odor Study

PROJECT ASSUMPTIONS

The following assumptions are considered inclusive to the Scope of Services:

1. ANNUAL CONSULTANT will utilize IBAK Panoramo digital inspection when inspecting sewer manholes. Carollo assumes that up to 400 manholes will be inspected.
2. ANNUAL CONSULTANT will utilize the City's existing GIS for project mapping and sewer information.
3. The Field Subcontractor(s) will arrange for all required traffic control. The ANNUAL CONSULTANT and the City will not provide assistance for traffic control.
4. Where manholes are located in easements or residential yards, City assistance may be necessary.

5. ANNUAL CONSULTANT will utilize the City's external hard drive and Wincan V8 software to organize and archive videos and data obtained under this project.

SCOPE OF SERVICES

TASK 1 - PROJECT MANAGEMENT SERVICES

ANNUAL CONSULTANT shall perform project management and monitoring activities throughout the Project duration, as delineated in the following tasks.

1.1 Project Management

ANNUAL CONSULTANT shall provide project management services to include directing the activities of the project team members (including Subcontractors), regularly monitoring progress of the work and the budget, preparing progress and activity reports, communicating with the City staff on technical issues and problems encountered, schedule updates, and monitoring and updating the project schedule as appropriate.

1.2 Project Progress Meetings

This task includes a total of twelve (12) project progress meetings to be held with City staff at the Municipal Utilities Department (MUD) Complex conference room. The progress meeting will review efforts completed to date, provide project progress updates, and gather continued direction and feedback from the City. ANNUAL CONSULTANT shall prepare and distribute agendas prior to and minutes following each meeting.

TASK 2 - DEVELOPMENT OF PRIORITIES FOR RE-INSPECTING PIPELINES FROM PREVIOUS PHASES

2.1 Development of Inspection Priority

ANNUAL CONSULTANT shall select sewer pipes and manholes for field inspection based on discussions with City staff and from a review of which manholes were inspected during previous study Phases. The goal of this task is to develop a prioritization for the physical inspection work plan, and to allocate the pipeline and manhole inspection budgets to the areas of highest priority. Specifically, pipeline recommendations for re-inspections developed under Phase 4 will be reviewed as well as the recommended manhole rehabilitation projects developed under Phase 5, but not implemented under Phases 6 and 7.

ANNUAL CONSULTANT shall also coordinate with the City's Streets department 5-year CIP program to check manholes related to those projects.

TASK 3 - DEVELOPMENT OF PRIORITIES FOR RE-INSPECTING MANHOLES FROM PREVIOUS PHASES

ANNUAL CONSULTANT shall provide coordination for the inspection program, making arrangements for meetings as necessary, and keep City staff informed of the work progress.

The Subcontractors will provide all traffic control required to inspect the sewer pipelines and manholes identified under this work.

3.1 Develop GIS Maps for Field Inspections

ANNUAL CONSULTANT shall develop GIS-based maps to show the manhole and pipeline configurations and intersection details for each proposed area of inspection. It is anticipated that the Subcontractors will use these maps to develop their site-specific inspection plans for their crews and will use these for developing the required traffic control plans (TCP).

3.2 Coordinate Field Inspection Activities

ANNUAL CONSULTANT shall identify the manholes to be inspected and will prepare information packets for the field crews (Subcontractors). Inspection data will be recorded on the forms using the defect condition codes identified in previous sewer system assessment work with the City. The Subcontractor(s) will provide all equipment required for the field inspections.

3.3 Conduct IBAK Panorama Digital Manhole Inspections

ANNUAL CONSULTANT shall conduct manhole inspection of identified manholes. ANNUAL CONSULTANT shall complete a Manhole Inspection Form for each inspected manhole or structure using procedures developed by ANNUAL CONSULTANT under previous field inspection projects with the City. ANNUAL CONSULTANT shall enter this information into the Wincan V8 database during Task 5.

TASK 4 - PIPELINE AND SEWER MANHOLES EVALUATION AND RECOMMENDATIONS FOR REHAB

ANNUAL CONSULTANT shall evaluate the manhole field inspections and identify which manholes need rehabilitation, replacement, or re-inspection. It is desired to group manholes into Project No.1 so that an entire segment of interceptor sewer has been rehabilitated. This might mean including manholes that are marginal, if by doing so that interceptor segment is brought into the same level of service with the adjacent manholes on that segment.

The Project No.1 manholes grouping will be based on the estimated construction cost of rehabilitation or replacement, and in collaboration with City staff recommendations.

TASK 5 - INTEGRATION OF PIPELINE AND MANHOLE INSPECTION FILES INTO WINCAN V8 (OR VX)

5.1 Evaluation of WINCAN VX software

WINCAN has developed their VX software containing features that are more robust and user friendly than the V8 software. ANNUAL CONSULTANT will coordinate a meeting with WINCAN and the City to evaluate whether or not the VX software adds value to the City in its stewardship role over the sewer collection system.

5.2 Organizing and Linking the field inspection files

After collecting the field inspection files from both the pipelines and manholes inspected in the field by the Subcontractors, ANNUAL CONSULTANT shall review for completeness, and after acceptance will organize by individual sewer system collection basin. All inspection videos will be placed in the City's external hard drive using either their existing V* software or the VX software.

TASK 6 - COLLECTION SYSTEM ODOR STUDY

6.1 Identify Areas for Conducting Field Odor Studies and Coordinate with City staff on Odalog installations

ANNUAL CONSULTANT shall meet with City staff and identify areas within the collection system having frequent odor complaints. Although many of these areas were identified under the Phase 7 project, their investigation was incomplete due to budget limitations. Task 6 will pick up where the Phase 7 work left off.

ANNUAL CONSULTANT shall develop work plans for the installation of Odalog devices by City crews. Up to three (3) separate work plans will be prepared under this Task. Calibration and cleaning of the Odalog devices will be by City staff.

6.2 Receive and evaluate field data from Odalogs

ANNUAL CONSULTANT will receive the data collected by City staff for each Odalog installed in the field during the tests conducted under Task 6.1 above, and shall evaluate the data. It is assumed that ANNUAL CONSULTANT does not need to purchase special software or hardware to read the collected data.

6.3 Collect and evaluate field data from wastewater samples

ANNUAL CONSULTANT shall take the lead in identifying where in the collection system wastewater grab samples will be taken for analysis. Up to three (3) samples will be taken. The purpose of obtaining grab samples is to understand the source of the odors within the collection system so that an effective mitigation solution can be determined. This data will also be collected for use by firms that manufacture and sell bacteria for odor control in collection systems. A minimum of two firms – Continental Research Corporation (Prime) and Biolyneus – will be sent the wastewater data to ascertain which products might be appropriate for odor mitigation in the City's collection system.

6.4 Visit other municipalities to ascertain odor mitigation strategies

ANNUAL CONSULTANT shall take the lead in coordinating site visits of up to three (3) local municipalities to discuss what collection system odor mitigation systems they employ and their effectiveness. These municipalities include City of Scottsdale, Town of Gilbert, and City of Mesa. The City may decide that other municipalities would be preferred and ANNUAL CONSULTANT will coordinate those site visits.

6.5 Meet with City to discuss findings and solicit input

ANNUAL CONSULTANT shall meet with the City staff to discuss findings, make recommendations, and solicit input as to "next steps". The goal of this effort is to develop odor mitigation plans for these odor-producing areas of the collection system.

6.6 Prepare and deliver draft Technical Memorandum

ANNUAL CONSULTANT shall prepare and deliver six (6) copies of the draft Technical Memorandum (TM) for review and comment. The TM will contain odor mitigation plans and associated cost estimates for implementation of each plan.

6.7 Prepare and deliver final Technical Memorandum

After review and comment by the City of the draft TM, ANNUAL CONSULTANT shall address all comments and deliver six (6) spiral bound copies and a PDF copy, on CD, of the final TM to the City.

PROJECT SCHEDULE

The duration of this Project is **365 calendar days** from the Notice to Proceed (NTP).

ESTIMATED MAN-HOURS AND COSTS

The Estimate of Man-hours and Costs associated with completion of the Scope of Services is provided in Exhibit B.

**EXHIBIT B
FEE SCHEDULE**

STUDY TASKS		Categories						SUBTOTALS	Task Sub Total
		Senior Professional	Lead Project Professional	Professional	Assistant Professional	Senior Technician	Clerical		
Task 1	Project Management Services								
1.1	Project Management (12 months)	6	72	0	0	0	12	90	
1.2	Project Progress Meetings (12 total)	0	48	48	24	0	0	120	
	Subtotal Task 1.0	6	120	48	24	0	12	210	\$37,410
Task 2	Development of Priorities for Re-inspecting Pipelines from previous Phases								
2.1	Development of inspection priority	0	8	24	18	40	0	90	
2.2	Conduct field pipeline inspections	0	8	36	48	0	0	92	
	Subtotal Task 2.0	0	16	60	66	40	0	182	\$28,290
Task 3	Development of Priorities for Re-inspecting Manholes from previous Phases								
3.1	Development of inspection priorities	0	16	24	32	54	0	126	
3.2	Conduct field manhole inspections	0	18	36	48	0	0	102	
	Subtotal Task 3.0	0	34	60	80	54	0	228	\$35,720
Task 4	Pipeline and Sewer Manholes Evaluation and Recommendations for Rehab								
4.1	Prioritize pipeline and / or manhole Rehab or Replacement	2	16	24	24	12	6	84	
	Subtotal Task 4.0	2	16	24	24	12	6	84	\$13,260
Task 5	Integration of field files and data into Wincan V8 or VX								
5.1	Evaluation of WINCAN VX software	0	8	16	24	0	0	48	
5.2	Organizing and linking the field inspection files	0	8	16	48	0	0	72	
	Subtotal Task 5.0	0	16	32	72	0	0	120	\$19,000
Task 6	Collection System Odor Study								

6.1	Identify Areas for Conducting Field Odor Studies and coordinate with City staff on Odalog installations	0	8	16	24	8	0	56	
6.2	Receive and evaluate field data from Odalogs	0	4	16	24	0	0	44	
6.3	Collect and evaluate field data from wastewater samples	0	2	12	16	24	0	54	
6.4	Visit other municipalities to ascertain odor mitigation strategies	0	16	24	0	0	6	46	
6.5	Meet with City to discuss findings and solicit input	0	6	12	12	6	0	36	
6.6	Prepare and deliver draft Technical Memorandum	2	4	10	36	16	12	80	
6.7	Prepare and deliver final Technical Memorandum	2	4	8	24	16	8	62	
	Subtotal Task 6.0	4	44	98	136	70	26	378	\$57,520
Total Labor Hours		12	246	322	402	176	44	1,202	
Total Labor Cost (Not to Exceed)		\$2,700	\$47,970	\$54,740	\$58,290	\$23,760	\$3,740	\$191,200	
DIRECT COST ALLOWANCES									
1) Mileage, printing, misc project expenses							\$2,400	
2) Pro Pipe pipeline Inspection subcontractor - inspection of approx. 12 miles sewer pipeline.							\$48,000	
3) Pro Pipe Manhole Inspection subcontractor - inspection of approx. 300 manholes using Panaramo.							\$60,000	
4) Wastewater grab samples - total of 3 locations							\$10,000	
Total Direct Cost Allowances								\$120,400	
TOTAL CONTRACT AMOUNT								\$311,600	