

RESOLUTION 22-46

**A RESOLUTION TO APPROVE CONTINUING SERVICE AGREEMENT
FOR OHM, INC. PROFESSIONAL SERVICES AGREEMENT FOR
INFLOW AND INFILTRATION REPAIRS**

WHEREAS, the City of Spring Hill Board of Mayor and Aldermen approved the professional services agreement with OHM, Inc. to assist with developing a program for Inflow and Infiltration ("I&I") reduction repairs, manhole rehabilitation and maintenance with Resolution 19-92 and Amendment No. I with Resolution 20-30 and Amendment No. 02 Resolution 20-68; and

WHEREAS, OHM, Inc. has submitted a Continuing Service agreement to their existing contract that provided for metering plan assistance and support, flow analysis, program development and various support services in the implementation of the I&I reduction program; and

WHEREAS, all responsibilities and contractual obligations remain within the existing contract with the addition of attachment C – compensation and payment for additional flow meter installation and analysis with the total project scope not to exceed cost of \$694,860.00; and

WHEREAS, the funding for this contact is budgeted in sewer collections I&I program funding FY 2021-2022 of \$619,000 and remaining \$75,860.00 in proposed FY 2022-2023 budget.

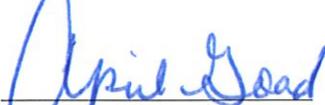
NOW, THEREFORE, BE IT RESOLVED, that the City of Spring Hill Board of Mayor and Aldermen:

1. Approve the continuing service agreement for OHM for I& I repairs, attached hereto
2. Authorize the mayor to sign the continuing services agreement

Passed and adopted by the Board of Mayor and Aldermen of the City of Spring Hill, Tennessee, on the 21st day of March, 2022.


Jim Hagaman, Mayor

ATTEST:


April Goad, City Recorder

LEGAL FORM APPROVED:


Patrick Carter, City Attorney



REQUEST: *Approval of Resolution 22-46*
SUBMITTED BY: Jessica Weaver, Utility Director
DATE: March 21, 2022
RE: To approve the contract extension with OHM for Inflow and Infiltration
ATTACHMENTS: Contract from OHM

PURPOSE:

The purpose of this memo is to request approval of continuing the contractual agreement between OHM and the City of Spring Hill, TN.

BACKGROUND:

The City entered into a contact with OHM to begin the process of developing an I&I reduction program for the sanitary sewer system with resolution 19-92 on June 17th 2019 with expanded services added through resolutions 20-30 and 20-68. Our current program is working with OHM providing the scope of work on an hourly basis per rates presented in the original proposal with a not to exceed amount of \$694,860 with a breakdown of tasks including:

1. Flow Meter Installation and Analysis
2. Sewer Inspection Guidance, Data Review and Rehabilitation Recommendations
3. Construction Administration
4. Field Services- SSES Inspection Assistance
5. GIS Development
6. AI CCTV Coding Software

OHM has submitted a contract for continuing services agreement with the addition of ten (10) additional flow monitors installed and data recording through our current H2O Metrics.

FINANCIAL IMPACT:

This item will be funded from Inflow and Infiltration budgeted funds FY 21/22 of \$619,000 (410-52330-974) and remaining \$75,860.00 in proposed FY 22/23 Inflow and Infiltration budgeted funds.

STAFF RECOMMENDATION:

Staff recommends approval of Resolution 22-46 to approve the contract with OHM for professional services assistance with the Inflow & Infiltration program.

Task Order No. 2
Sewer System Inflow and Infiltration Program
Dated _____
To
CONTINUING SERVICES AGREEMENT
Between
Orchard, Hiltz, & McCliment, Inc.
And
CITY of SPRING HILL
Dated June 20, 2019
For
PROFESSIONAL SERVICES

CLIENT: City of SPRING HILL

PROJECT: *SEWER SYSTEM INFLOW and INFILTRATION PROGRAM*

ATTACHMENT A - SCOPE OF SERVICES

At the request of the Client, this scope of services is presented as a continuation of the Sewer System Inflow & Infiltration (I&I) Program through 2022. Typical sewer system rehabilitation efforts are accomplished in a 10-15 year time frame for most utilities. The time required to meet the goals of the City, I&I reduction in this case, is a function of project goals, resources, and funding. Since the inception of this program, OHM has helped craft a program which incorporates the City's staff into the various stages and workflows of the program. Now that this foundation has been established, the speed of the program will begin to accelerate.

The City has recently engaged TDEC concerning the NPDES discharge permit and received a directive that the maximum average daily discharge from the Wastewater Treatment Plant (WWTP) will be limited to 5 million gallons per day (mgd). Based on current system demands, new homes permitted for construction, and continued growth, the ability of the WWTP to stay under this limit will be severely impacted with continued presence of I&I. Based on this new information, the goal of the program has shifted from removing 1 mgd form peak flows at the WWTP to eliminating I&I form the system in a sufficient volume to allow for growth and meet permit requirements.

Below are general descriptions of the various services currently being provide and or anticipated as a continuation of this I&I program.

Task 1 – Flow Meter Installation and Analysis

Task 1 continues flow meter analysis and flow meter prioritization support. The City's Flow meters are anticipated to be moved several times as data indicates to evaluate I&I levels in additional sewer basins/subbasins. In an effort to expedite flow meter coverage of the sewer system, OHM will provide, install, and manage 10 additional flow meters to complement the City's meters. These meters are anticipated to be deployed for a February -April time frame. Detailed I&I analysis for new flow meter data will be conducted as before and data analyzed as available. Basins/sub-basins with higher I&I volumes/linear foot will be targeted for smoke testing and MACP/LACP/PACP inspection efforts by City staff. Results from inspection data will then focus rehabilitation efforts on assets contributing to I&I. Breakdown of efforts are below:

1. Continue development of GIS map for new meter districts, acreages, and populations
2. Install 10 additional flow meters
3. H2Ometrics setup for new location data feeds (14 – 7 meters moved twice plus 10 OHM meters)
4. H2Ometrics subscription for twelve (18) months (July 2021-December 2022)
5. Flow monitor data integrity checks to identify data stream dropout once auto reporting to H2Ometrics resumes
6. I&I Analysis in H2Ometrics (DWF metrics, wet weather I&I metrics, rainfall IDF metrics, RDII metrics, map results)

7. Continue development of recommendations for I&I program (ranking of districts, methods of investigation, Capital level budget items, schedule).
8. Amend Report with new flow monitor data as available

Task 2 – Sewer Inspections Guidance, Data Review, and Rehabilitation Recommendations

Task 2 continues efforts related to Sanitary Sewer Evaluation Survey (SSES) prioritization, manhole gravity main, and lateral SSES inspection data review, rehabilitation plans development, as well as program management efforts.

The existing sewer manhole rehabilitation contract, funded by the City, is up for renewal on 1/24/2022. Based on recent direction from the City, the SRF construction loan will be put on hold. Sewer manhole lining construction activities will continue via an extension of the existing annual service contract. Additional construction contracts solicited once the work is identified and construction documents developed.

TASK 3 – Construction Administration Services

OHM will continue to provide Construction Administrative services for each the existing Manhole rehabilitation contract. Services will include:

1. Contractor Coordination
2. Process Contractors Pay Estimates
3. Contractors Annual Services Contract Renewal
4. Coordination with Contractors and City Staff on construction activities

Task 4 – Field Services - SSES Inspection Assistance

OHM will provide field staff to conduct manhole (MH) inspections during wet weather events and within the resulting “saturated” conditions thereafter. Inspections shall be conducted utilizing the City’s current ArcGIS Online (AGOL) Manhole Inspection Field Map. Locations of MH inspections being conducted will be based on the flow monitoring findings and SSES prioritization. The SRF construction loan was based on lining approximately 600 MH’s or 1.2-1.5 million dollars’ worth of construction. Based on the first 1,260 MH inspections, the defect rate is approximately 15%. It is therefore anticipated that an additional 2,500 MH inspections will need to be inspected to adequately identify enough meaningful repairs. The goal for completing these inspections is by the end of Spring.

City staff will assume primary execution of CCTV inspections. CCTV gravity main inspection priority will be coordinated as needed with sewer I&I department staff.

OHM Advisors intends to utilize artificial intelligence (AI) software to evaluate the digital video format CCTV data provided to OHM Advisors by the City. For this to work, the CCTV must be of adequate quality for the AI to work. The AI application is an intelligent system that has been trained with data from numerous municipalities across the country and Europe. The results of this AI based, National Association of Sewer Service Companies compliant software will identify and code CCTV observations. As a pilot test, an initial batch of CCTV inspection videos provided by the City will be run through the program to ensure compatibility of the video quality and program results. If deemed satisfactory, its use will continue for all footage collected by the City. Expected video format is .mp4.

The City anticipates completing 5,000 LF of CCTV inspection work on a weekly basis. It is anticipated that approximately 100,000 Linear Feet (LF) of gravity main will be inspected initially within the first half 2022

OHM proposes to integrate the inspections data with GIS, migrate to the City AGOL account. A link to the AI application will also be provided. The AI software licensing is based on the LF of CCTV processed. The anticipated expense is \$0.35 / LF of sewer pipe inspection coding, for a minimum of 50,000 LF of inspection data.

Phase 5 – GIS Development

OHM will continue to work with City staff to develop a more established GIS based operating workflow. Efforts will focus on the following general efforts but not limited to:

1. Organize, by department, ArcGIS Online (AGOL) users and relevant data.

2. Migrate data for each department into a geodatabase, assign asset Identification Numbers, correct, or direct Client staff on any major data integrity issues which need to be addressed.
3. Publish content to the Clients AGOL account.
4. Establish Field maps, inspection forms, dashboards as required for each department's needs.
5. Meet and collaborate with City staff on use of GIS based data collection.
6. Mentor City staff on all aspects of the process, data workflow, data collection, GPS training.
7. Identify data gaps or future GIS data integrity tasks to be performed in advance of any migration to an Enterprise based system.
8. Develop script to combine multi-County parcel data to be executed by the Client monthly.

City Departments and current state of development progress is identified below:

1. Sewer - data migrated, maps/forms established, active inspections in progress. Refinement going forward
2. Storm Water – data migrated, maps/forms established, field testing in progress. Refinement going forward
3. Streets – data migrated, maps/forms established, field testing in progress. Refinement going forward
4. Construction Inspection – not initiated
5. Engineering – not initiated
6. Planning and Zoning– preliminary data migrated (compiled parcel information)
7. Water – data migration and map development in progress
8. Parks and Rec. – initial development guidance and waiting for scheme establishment by Parks and Rec. staff
9. Citizen Reporter – development in progress
10. Vehicle Routing - development in progress

ATTACHMENT B –PERIOD OF SERVICE

| Task | Estimated Activity Period |
|--|----------------------------------|
| Task 1 – Flow Meter Installation and Analysis | Ongoing – Dec. 2022 |
| Task 2 – Sewer Inspections Guidance, Data Review, and Rehabilitation Recommendations | Ongoing – Dec. 2022 |
| Task 3 – Bid Phase/Construction Administration | Ongoing – Dec. 2022 |
| Task 4 – Field Services - SSES Inspection Assistance | Ongoing – Jun. 2022 |
| Task 5 – GIS Development | Ongoing – Dec. 2022 |

ATTACHMENT C - COMPENSATION AND PAYMENT

Fee:

OHM ADVISORS proposes to provide the Scope of Work included in this Proposal Amendment on an hourly basis per rates presented in the original proposal, and shall not exceed \$694,860 based on the task breakdown:

| Task | Estimated Compensation |
|---|------------------------|
| Task 1 – Flow Meter Installation and Analysis | |
| • Meter Installation/Removal | \$25,000 |
| • Meter maintenance | \$5,000 |
| • Analysis/report | \$75,000 |
| • Meter Rental (\$500/meter/month) | \$15,000 |
| Task 1 Subtotal | \$120,000 |
| Task 2 – Sewer Inspections Guidance, Data Review, and Rehabilitation Recommendations | \$182,000 |
| Task 3 – Construction Administration | \$60,000 |
| Task 4 – Field Services - SSES Inspection Assistance | \$190,000 |
| Task 5 – GIS Development | \$85,000 |
| Expenses | |
| H2OMetrics | |
| • Meter Adaptor Setup (17 meters @ \$300/each) | \$5,100 |
| • Monthly service (156 x \$85/Meter/Month) | \$13,260 |
| H20metrics Subtotal | \$18,360 |
| AI CCTV Coding Software (100,000 LF @ \$0.35/LF) | \$35,000 |
| Directs | \$4,500 |
| TOTAL | \$694,860 |

Budgets between tasks will be reallocated if necessary based on the needs and changes in scope. Should deviations in the Scope of Work cause additional work tasks or Additional Services be required, an amendment to this Proposal Amendment will be necessary. The conditions established herein will be the basis of such amendment.

City of Spring Hill

CLIENT

Jim Hagaman
Mayor

March 21, 2022
Date

Orchard, Hiltz, & McCliment, Inc.

CONSULTANT

Jason Griffin, P.E.
Principal

February 7, 2022
Date

Attachments: Exhibit 1 – 2022 Hourly Rate Schedule
Exhibit 2 – Standard Terms and Conditions