

**CITY OF MIRAMAR
PROPOSED CITY COMMISSION AGENDA ITEM**

Meeting Date: October 15, 2025

Presenter's Name and Title: Marcelin Denis, PMP, Senior Utility Administrator

Prepared By: Ronnie S. Navarro, PE, Assistant Director of Utilities

Temp. Reso. Number: R8510

Item Description: TEMP. RESO. #R8510 APPROVING AMENDMENT NO. 3 TO MCKIM & CREED, INC., TO EXTEND THE ORIGINAL AGREEMENT FOR THE EXPANSION OF WATER PIPELINE CONDITION ASSESSMENT & NON-REVENUE WATER MANAGEMENT PROGRAM WITHIN THE CITY'S WATER DISTRIBUTION SERVICE AREA IN AN AMOUNT NOT TO EXCEED \$249,958.48, AND ALLOCATING A CONTINGENCY ALLOWANCE OF \$50,000, FOR A TOTAL PROJECT COST OF \$299,958.48 IN ACCORDANCE WITH CITY CODE SECTION 2-412 (a)(1). *(Utilities Senior Utility Administrator Marcelin Denis, PMP, and Procurement Director Alicia Ayum)*

Consent ☒ Resolution ☐ Ordinance ☐ Quasi-Judicial ☐ Public Hearing ☐

Instructions for the Office of the City Clerk: N/A

Public Notice – As required by the Sec. ____ of the City Code and/or Sec. ____, Florida Statutes, public notice for this item was provided as follows: on _____ in a _____ ad in the _____; by the posting the property on _____ and/or by sending mailed notice to property owners within _____ feet of the property on _____
(fill in all that apply)

Special Voting Requirement – As required by Sec. _____, of the City Code and/or Sec. _____, Florida Statutes, approval of this item requires a _____ (unanimous, 4/5ths etc.) vote by the City Commission.

Fiscal Impact: Yes ☒ No ☐

REMARKS: Funding in the amount of \$299,958.48 is available in Utilities, GL- Account 410-55-818-533-000-606510-52104 (CIP-Construction, Water Distribution System Improvements)

Content:

- **Agenda Item Memo from the City Manager to City Commission**
- **Resolution TR8510**
 - **Exhibit A:** Amendment No. 3 – Proposed Agreement with McKim& Creed
- **Attachment(s)**
 - **Attachment 1:** McKim & Creed Cost Proposal



**CITY OF MIRAMAR
INTEROFFICE MEMORANDUM**

TO: Mayor, Vice Mayor, & City Commissioners

FROM: Dr. Roy L. Virgin, City Manager 

BY: Francois Domond, PE, Director of Utilities

DATE: October 9, 2025

RE: Temp. Reso. No. 8510 approving Amendment No. 3 for the Water Pipeline Condition Assessment & Non-Revenue Water Management Program

RECOMMENDATION: The City Manager recommends approval of Temp. Reso. No. 8510, approving Amendment No. 3 to McKim & Creed, Inc. to extend the original agreement for the expansion of water pipeline condition assessment and non-revenue water management program within the City's water distribution service area in an amount not to exceed \$249,958.48 and allocating a contingency allowance of \$50,000, for a total project cost of \$299,958.48 in accordance with city code section 2-412 (a)(1).

ISSUE: City Commission approval is required for any expenditure exceeding \$75,000 in accordance with City Code Section 2-412(a)(1).

BACKGROUND: On April 12, 2023, the City Commission approved Resolution No. 23-79, authorizing a professional services contract with McKim & Creed, Inc., for \$249,958.48, including an additional contingency of \$25,000, bringing the total project amount to \$274,958.48. The program aims to proactively identify and assess deteriorating water pipelines in high-leakage areas to prevent failures, reduce costly repairs, maintain continuous water service, and lower the risk of water quality emergencies.

On September 18, 2024, the City Commission approved Resolution No. 24-189, authorizing Amendment No. 1 to the original agreement for \$249,958.48. This amendment expanded the program's scope to include additional locations within the City's water service area and supported ongoing deployment of prioritized inline meters.

On June 25, 2025, Amendment No. 2 was approved under the City Manager's authority for an additional \$68,000 to expand acoustic leak detection at selected sites within the City.

The City's potable water network has been strategically divided into District-Metered Areas ("DMAs") to enable high-resolution tracking of water flow. This allows comparison with Sensus Advanced Metering Infrastructure (AMI) data to detect and quantify water losses throughout the water distribution system.

DISCUSSION: Since its launch in February 2023, the Water Loss Program has grown from a pilot initiative in the Silver Lakes DMA (initially with three sensors) into a comprehensive, system-wide effort. It now covers four DMAs and 13 strategically placed flow and pressure monitoring points across the distribution network.

The Utilities Department has identified 2.8 to 3.6 million gallons of non-revenue water losses daily in monitored areas, highlighting an opportunity to recover water and improve system capacity and efficiency. Water loss management is an ongoing challenge requiring continuous real-time monitoring, quick responses, and infrastructure protection. An additional \$299,958.48 is requested this fiscal year to expand the sensor network, enhance data analysis with McKim & Creed, and support leak detection efforts.

Proposed FY 2026 work includes installing 15 District Metered Areas with sensors, offering leak detection and operational strategies, and providing support such as Geographic information system (GIS), Supervisory Control and Data Acquisition (SCADA), and hydraulic modeling. These efforts aim to reduce non-revenue water, protect infrastructure, and improve efficiency and reliability. Additional funds will help identify and repair leaks, building on past successes and reinforcing the City's proactive water management.

ANALYSIS: The total cost of \$299,958.48 is justified by anticipated savings from reduced water loss, delayed capital repairs, and enhanced system efficiency. The platform also helps ensure regulatory compliance, operational transparency, and future capital planning. McKim & Creed has the experience, staff qualifications, and infrastructure to implement the program effectively. This expenditure aligns with the City's sustainability and utility modernization strategic aims.

To demonstrate the program's effectiveness for the Silver Lakes DMA, repair costs totaled \$1,793,500, and water savings reached \$1,285,749, resulting in a Return on Investment (ROI) of 1.4 years.

Funding in the amount of \$299,958.48 is available in Utilities, GL- Account 410-55-818-533-000-606510-52104 (CIP-Construction)

Temp. Reso. No. 8510

8/21/25

10/7/25

**CITY OF MIRAMAR
MIRAMAR, FLORIDA**

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF MIRAMAR, FLORIDA, APPROVING AMENDMENT NO. 3 TO MCKIM & CREED, INC., TO EXTEND THE ORIGINAL AGREEMENT FOR THE EXPANSION OF WATER PIPELINE CONDITION ASSESSMENT & NON-REVENUE WATER MANAGEMENT PROGRAM WITHIN THE CITY'S WATER DISTRIBUTION SERVICE AREA, IN AN AMOUNT NOT TO EXCEED \$249,958.48, AND ALLOCATING A CONTINGENCY ALLOWANCE OF \$50,000, FOR A TOTAL PROJECT COST OF \$299,958.48; AUTHORIZING THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH THE PROVIDER; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, on April 12, 2023, the City Commission approved Resolution No. 23-79, which authorized the City to enter into a professional services agreement with McKim & Creed, Inc., in the amount of \$249,958.48 with an additional contingency of \$25,000 for a cost of \$274,958.48, to perform a Water Pipeline Condition Assessment and Non-Revenue Water ("NRW") Management Program; and

WHEREAS, on September 18, 2024, the City Commission approved Resolution No. 24-189, authorizing Amendment No. 1 in the amount of \$250,000 to expand the program's scope to include additional areas within the City's water system and support further deployment of prioritized inline meters; and

WHEREAS, on June 25, 2025, Amendment No. 2 was approved under the City Manager's authority for an additional \$68,000 to expand acoustic leak detection at selected sites within the City.

Reso. No. _____

WHEREAS, the City's potable water network has been divided into District Metered Areas (“DMAs”) for real-time tracking of water flow and detection of non-revenue water through comparison with Sensus’ AMI (Advanced Metering Infrastructure) data; and

WHEREAS, the Utilities Department has identified substantial daily non-revenue water losses and proposes further expanding the DMA sensor network and leak detection program; and

WHEREAS, City Code Section 2-412(a)(1) requires City Commission approval for expenditures exceeding \$75,000; and

WHEREAS, the City Commission deems it to be in the best interest of the citizens and residents of the City of Miramar to enter into this Agreement with McKim & Creed, attached hereto as Exhibit “A,” in an amount not to exceed \$249,958.48 with a contingency allowance of \$50,000, for a total project cost of \$299,958.48.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF
MIRAMAR, FLORIDA AS FOLLOWS:**

Section 1. That the foregoing “**WHEREAS**” clauses are ratified and confirmed as being true and correct and are made a specific part of this Resolution.

Section 2. That the City Commission hereby approves Amendment No. 3 to the agreement with McKim & Creed, Inc., for the Water Pipeline Condition Assessment and Non-Revenue Water Management Program in an amount not to exceed \$249,958.48 and allocating a contingency allowance of \$50,000 for a total project cost of \$299,958.48.

Section 3: That the City Commission authorizes the City Manager to execute Amendment No. 3 for the Water Pipeline Condition Assessment & Non-Revenue Water Management Program in the form attached as Exhibit “A,” and approved as to form and legal sufficiency by the City Attorney.

Section 4: That the appropriate City officials are authorized to do all necessary and expedient actions to carry out this Resolution's aims.

Section 5: That this Resolution shall take effect immediately upon adoption.

Temp. Reso. No. 8510

8/21/25

10/7/25

PASSED AND ADOPTED this _____ day of _____, _____.

Mayor, Wayne M. Messam

Vice Mayor, Yvette Colbourne

ATTEST:

City Clerk, Denise A. Gibbs

I HEREBY CERTIFY that I have approved
this RESOLUTION as to form:

City Attorney,
Austin Pamies Norris Weeks Powell, PLLC

Requested by Administration

Commissioner Maxwell B. Chambers

Commissioner Avril Cherasard

Vice Mayor Yvette Colbourne

Commissioner Carson Edwards

Mayor Wayne M. Messam

Voted

MEMORANDUM

DATE: July 25, 2025
TO: City of Miramar, FL
FROM: Barry Hales – McKim & Creed, Inc.
DURATION: October 2025 - October 2026
SUBJECT: Renewal : WATER PIPELINE CONDITION ASSESSMENT & NON-REVENUE WATER MANAGEMENT

In reference to the Service Agreement for the subject project, McKim & Creed, Inc (CONSULTANT) will perform for the City of Miramar (CITY OF MIRAMAR) the scope of services as outlined below. CONSULTANT will perform a system wide Virtual Condition Assessment, District Metered Area (DMA) and Non-Revenue Water (NRW) Water Management Program. This renewal is intended for Fiscal Year 2026 and covers the continued population of the dataset and implementation of software required for the Virtual Condition Assessment, District Metered Area, and Non-Revenue Water Assessment and Reduction Program for the City of Miramar

I. Summary Scope of Services**Task 1 - Project Administration**

1. Schedule a kick-off meeting with CITY OF MIRAMAR staff to discuss the project and review information requests and timelines before proceeding with the implementation of the Virtual Condition Assessment, District Metered Area and Non-Revenue Water Management Program (VCA/DMA/NRW) Program.
2. Identify CITY OF MIRAMAR personnel to provide the necessary historical information to inform and populate the initial VCA/DMA/NRW Program.
3. Meet with CITY's staff to discuss data population and education of the Team on utility data review sessions. CONSULTANT has assumed three (3) virtual meetings and one (1) in-person meeting at designated meeting room at CITY's facility for the VCA/DMA/NRW Program preliminary design efforts.
4. Conduct plan review meetings to review data population and integrity status. Twelve (12) meetings will be scheduled as data review sessions with the appropriate CITY OF MIRAMAR and M&C Analytics Team.
5. Prepare and submit monthly invoices. An attachment will be provided with each invoice that breaks down associated costs related to the VCA/DMA/NRW Program. Breakdown of costs will be through a ratio based on monthly fees associated with the annual contract costs.
6. Conduct VCA meetings to review the analytics and assess failure prediction, planning, and further action required. Twelve (12) meetings will be scheduled as data review sessions with the appropriate CITY OF MIRAMAR and the CONSULTANT's Analytics Team.
7. Develop the DMA structure program in conjunction with the CITY OF MIRAMAR Team.



Task 2 – Virtual Condition Assessment Program (VCA)

1. Provide the Software and Analytics Programs to perform a Virtual Condition Assessment (VCA) Program for the Potable Water System at CITY OF MIRAMAR. Manage the request for, and development of, secure accessibility to original historical and continual population of the records itemized in Section II.
2. Processes and interfaces will be developed to continually populate and inform the platform with the following datasets:
 - GIS (Geographic Information System)
 - Valves
 - Mains
 - Pipe Age
 - Material
 - Diameter
 - Laterals
 - Customer Meters
 - Fire Hydrants
 - Pressure Zones
 - SCADA
 - AMI
 - Customer Billing
 - Work Order History
3. Additional data may be requested for the improvement of the deliverable.

Requirements:

- Software must be able to digest potable water, WW, SCADA, and customer metering data within its analytics.
- CONSULTANT must provide all data engineering services in conjunction with utility staff to transfer data to software platform.
- CONSULTANT must provide one platform to provide pipe risk assessment, flow and pressure monitoring, system zone water balances, and event management on both potable and wastewater systems.
- CONSULTANT must have the ability to repair equipment within the United States for the project.
- CONSULTANT must ensure that no data downtime/gaps longer than 147 days (about 5 months) occur within the data sets.
- PROVIDER must have the ability to calibrate, service, and certify the accuracy of all flow meters and data loggers being deployed throughout the project without international shipping to ensure a fastest turnaround and lower costs for any such services that are provided.
- CONSULTANT's Service Center must be located within the United States.
- CONSULTANT must have local (within 50 miles) a technician certified to install, operate, and maintain any equipment being deployed for the project.

- Pressure and Flow sensors must utilize a pulse output for the transmission of data.
- Insertion Flow Meters & Dataloggers must be battery operated and field serviceable (battery swaps).
- Collected field sensor data must be accessible via API
- All field operations for hardware installation and upkeep must be tracked and displayed utilizing ArcGIS Online applications

Task 3 - District Metered Areas (DMA) Design, Development, and Implementation

1. Use of CONSULTANTS Baseform software platform to analyze an efficient and effective method to break the system into DMAs for the purpose of monitoring system performance and mining operational intelligence to improve overall performance and establish best practices for the stewardship of water.
2. Prepare and present the locations of any hardware assets (pressure and flow sensors, etc.).
3. Coordinate with CITY OF MIRAMAR for the acquisition of chambers and taps necessary for the installation of the sensors.
4. Install and integrate the sensors into the utility infrastructure and ensure that the data is flowing into the DMA software platform.
5. Maintain the integrity of the sensors and data integrity into the software platform. Conduct monthly data review sessions with the CITY OF MIRAMAR Team.
 - These sessions will be for the purpose of:
 - a. Evaluating the performance of the potable water infrastructure.
 - b. Reviewing the impacts of various operational tactics on the system.
 - c. Determining the most effective and efficient methods to ensure system sustainability and reduce non-revenue water reduction.

Requirements:

- CONSULTANT must have the ability to repair equipment within the United States for the project.
- CONSULTANT's flow and pressure sensor must be battery powered and able to calculate forward and reverse flow.
- CONSULTANT must provide all data engineering services in conjunction with utility staff to transfer data to software platform.
- CONSULTANT must provide one platform to provide pipe risk assessment, flow and pressure monitoring, system zone water balances, and event management on both potable and wastewater systems.
- CONSULTANT must ensure that no data downtime/gaps longer than 15 business days occur within the data sets.
- PROVIDER must have the ability to calibrate, service, and certify the accuracy of all flow meters and data loggers being deployed throughout the project without international shipping to ensure a fastest turnaround and lower costs for any such services that are provided.
- CONSULTANT's Service Center must be located within the United States.
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Task 4 - System Sustainability and NRW Program Implementation and Execution

Data obtained and reviewed by the CITY OF MIRAMAR and McKim & Creed Team will be used to determine the viability of any tasks deemed effective and necessary for the benefit of the sustainability of CITY OF MIRAMAR infrastructure and stewardship of water/energy resources.

1. Acoustic leak detection investigation surveys
2. Acoustic correlation inspections and/or monitoring
3. Pressure monitoring and/or regulation planning activities
4. Pre-and post-leak repair ROI reporting
5. Other water loss reduction services, TBD

Requirements:

- CONSULTANT must provide all data engineering services in conjunction with utility staff to transfer data to software platform
- CONSULTANT must provide one platform to provide pipe risk assessment, flow and pressure monitoring, system zone water balances, and event management on both potable and wastewater systems.
- CONSULTANT must have a leak detection team (within 50 miles), ensuring the capability for emergency response.
- CONSULTANT must have a “staffed” office within 50 miles of the Client.
- CONSULTANT must have the ability to service, calibrate, and repair any leak detection equipment to be utilized on the Program.
- CONSULTANT must have performed, or have underway a minimum of 5 DMA, NRW Programs within the past 24 months.
- CONSULTANT must have a minimum of 3 Professional Engineers licensed in the State of Florida on staff and capable of supporting the DMA, NRW Management Program.
- CONSULTANT should have the capability, on staff, to perform Subsurface Utility engineering work, as needed, to support the DMA, NRW Management Program.
- CONSULTANT must have the ability to recommend, design, and deliver a Pipe Replacement Program should the utility decide to replace any underperforming



Task 5 - Ongoing Support Services for DMA Monitoring

To ensure continued refinement, operationalization, and sustainability of the District Metered Area (DMA) and Non-Revenue Water (NRW) Management Program, CONSULTANT shall make available a suite of on-demand professional services to support the CITY OF MIRAMAR's programmatic goals. These services shall be deployed upon CITY request and in alignment with the ongoing needs of the utility.



CITY OF MIRAMAR Responsibilities

The responsibilities of the CITY, in addition to those provided in the Agreement which are specific to this Project, are as follows:

1. CITY OF MIRAMAR will provide, in conjunction with this Agreement, the following:
 - a. All drawings, files, and other information CITY has available for the project design & implementation. CITY will assist in providing compatible digital transfer of data files and drawings.
 - b. Digital files of approved CITY construction details, contract documents, and technical specifications.
 - c. Review comments on all submittals within two (2) weeks.
 - d. Provide and install specified taps & chambers necessary for the CONSULTANTs equipment to access the infrastructure.
 - e. The items noted above in the detailed scope of work.

II. Schedule

1. The CONSULTANT shall begin work immediately after the Agreement is executed. The CONSULTANT will endeavor to follow the same schedule as will be followed for work described in this Exhibit A, associated with the Service Agreement; however, the schedule may vary based upon the actual execution date of the work described under this Exhibit A, actual conditions encountered, dependency upon the deliverables associated with this Exhibit A, and response times.
2. An approximate schedule for the items provided under this Exhibit A is shown in Table 1 below for reference.

Table 1. Estimated Project Schedule

Item	Expected Completion Date
Virtual Condition Assessment	60 calendar days to load & populate database Program term is 365 calendar days from Notice to Proceed (NTP)
DMA Program	Design/Development: 45 days from Notice to Proceed (NTP) Implementation: 90 days from Notice to Proceed (NTP)
System Sustainability and NRW	Design/Development: 60 days from Notice to Proceed. Tasks Timeline: TBD

MEMORANDUM

DATE: July 25, 2025
TO: City of Miramar, FL

FROM: Barry Hales – McKim & Creed, Inc.

DURATION: October 2025 - October 2026

SUBJECT: Virtual Conditional Assessment, District Metered Area and NonRevenue Water Management Program

In reference to the Service Agreement for the subject project, McKim & Creed, Inc (CONSULTANT) will perform for the City of Miramar (CITY OF MIRAMAR) the scope of services as outlined below. CONSULTANT will perform a system wide Virtual Condition Assessment, District Metered Area (DMA) and Non-Revenue Water (NRW) Water Management Program. This RFP is for conducting the original population of the dataset and software necessary for the Virtual Condition Assessment and to contract DMA and NRW Assessment and Reduction Program.

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Subtask 2A - Ongoing Support Services for DMA Monitoring

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CITY OF MIRAMAR Responsibilities

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 - c. Review comments on all submittals within two (2) weeks.
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 - e. The items noted above in the detailed scope of work.

II. Schedule

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System Sustainability and NRW	Design/Development: 60 days from Notice to Proceed. Tasks Timeline: TBD



III. Compensation for Services

1. Table 2 summarizes the basis of compensation.

Table 2. Basis of Compensation

Task	Description	Estimated Fee	Basis
1	Project Administration – Meetings, invoicing, DMA planning	\$39,120	Monthly (\$3,260)
2	Virtual Condition Assessment – Software, data integration, analytics	\$73,800	Lump Sum
2A	Support Services – GIS, SCADA, hydraulic modeling, surveying, etc. (optional services)	TBD	TBD
3	DMA Program – Design, install, monitor 15 sites	\$101,038.48	Monthly (\$8,419.87/month) Estimated 15 Sites: \$561.32/month/site
4	NRW Program – Leak detection and ROI analysis	\$36,000	Priced per Event (6 weeks at \$6,000/week)
	Total Estimated Annual Fee	\$249,958.48	Per Year