

EM SUBMISSION NO.: EMA 1572015

PRESENTED: 4-9-15

ADOPTED: 4-14-15

**RESOLUTION AUTHORIZING APPROPRIATE CITY OFFICIALS TO ENTER INTO**

**CHANGE ORDER #4 WITH LOCKWOOD, ANDREWS, & NEWNAM**

**BY THE EMERGENCY MANAGER:**

The City of Flint Department of Public Works & Utilities (DPW & Utilities) entered into a contract with Lockwood, Andrews, and Newnam to study the feasibility and develop cost estimates for the Water Plant as a primary drinking water source in a contract amount not to exceed \$1,378,700.00; and

The DPW & Utilities through recommendations of Veolia North America water consultants have identified additional services due to TTHM concerns. The additional services will provide a turn key system of new GAC media in the twelve (12) filters at the Flint Water Plant including MDEQ permitting. The focus will be to provide design, procurement, and construction implementation services for upgrading the filters to address TTHM. The additional cost for these services is not to exceed \$1,601,740.00. Funding for said services will come from the following account: 591-545.300-801.000; and

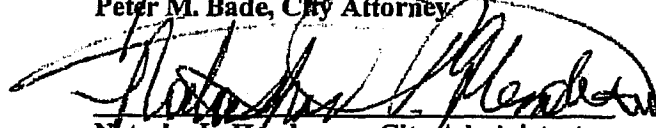
**IT IS RESOLVED**, that the appropriate City of Flint officials, upon the Emergency Manager's approval, is authorized to enter into change order #4 with Lockwood, Andrews and Newnam, for additional design, procurement, and construction services, not to exceed \$1,601,740.00, for a total revised contract price of \$2,980,440.00.

**APPROVED AS TO FORM:**

  
Peter M. Bade, City Attorney

**APPROVED AS TO FINANCE:**

  
Dawn Steele, Deputy Finance Director

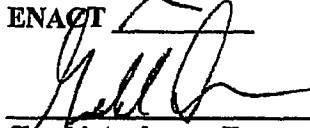
  
Natasha L. Henderson, City Administrator

**EM DISPOSITION:**

ENACT

REFER TO COUNCIL

FAIL

  
Gerald Ambrose, Emergency Manager

DATED: 4/14/15

ORDER N \_\_\_\_\_

DATE: \_\_\_\_\_

AGREEMENT DATE: \_\_\_\_\_

NAME OF PROJECT: Water Plant Operations C/O#4

OWNER: City of Flint Utilities Department

CONTRACTOR: Lockwood, Andrews, and Newnam

THE FOLLOWING CHANGES ARE HEREBY MADE TO THE CONTRACT DOCUMENT:

Modify the scope of the contract to include additional services to provide a turn- key system of new GAC media in the twelve (12) filters at the Water Plant not to exceed \$1,601,740.00 for a revised total of \$2,980,440.00

CHANGES TO CONTRACT PRICE

ORIGINAL CONTRACT PRICE:	<u>\$962,800.00</u>
CURRENT CONTRACT PRICE ADJUSTED BY PREVIOUS CHANGES	<u>\$1,378,700.00</u>
THE CONTRACT PRICE DUE TO THIS CHANGE WILL BE INCREASED BY	<u>\$1,601,740.00</u>
THE NEW CONTRACT PRICE DUE TO THIS CHANGE WILL BE	<u>\$2,980,440.00</u>

APPROVED:

ACCEPTED:

AS TO FORM:

FIRM: Lockwood, Andrews, & Newnam

  
Peter M. Bade  
CHIEF LEGAL OFFICER

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

ADDRESS: 1 Oakbrook Terrace Suite207  
Oakbrook Terrace, Illinois 60181

THE CITY OF FLINT,  
A MUNICIPAL CORPORATION

BY:   
Gerald Ambrose  
EMERGENCY MANAGER

**Client Additional Services Authorization**

Date: 4-7-15

<b>Project Name</b> Flint WTP Phase II Segment I Initial Watermain Cut-in Flint WTP Phase II Segment I Rehab Flint WTP Ph II-Seg II - Lime Residual Disposal	<b>Additional Services Authorization No.</b>
<b>Client Name</b> City of Flint	<b>To Project No.</b> 130-10701-001
<b>Subject of Additional Services</b>	<b>Original Contract Date</b>

**Description**

Deliver a new GAC media to replace current anthracite media in the 12 filters at the Flint Water Treatment Plant (FWTP) through design-construction management at agency services. The purpose of the project will to be replace the existing filter system with a new GAC media in order to assist the city in addressing TTHM concerns as detailed in the "Flint, Michigan Water Quality Report" dated March 12, 2015 by Veolia North America (Veolia Report). The services shall include:

- 1- Design the GAC Filter replacement for the FWTP, which will include assisting the City in obtaining the necessary MDEQ Permit(s) and providing construction oversight; (\$147,840.00)
- 2- Provide construction management at agency services for the removal of the existing media and the installation of the GAC filter at the FWTP. On behalf of the City, as City's CM Agent, engage a vendor that will procure new GAC Media, remove existing 18" anthracite and replace it with the new 18" GAC; (approximately \$1,300,000.00)
- 3- Set up, upgrade and calibrate the Flint Distribution Water System to include field Tesing Verification and Support in order to analyze system performance and water age mapping and assist the City with line flushing/and or Ice Pigging Program; (\$99,900.00)
- 4- Project Engineering Services to assist the City with monitoring and coordinating activities with city staff, MDEQ and vendors during the maintenance and implementation of improvements needed thru the August TTHM Sampling period. Services will be provided based on 60 hours/month for a total of five (5) months period; (\$54,000)

**Reason for Change**

- 1) Pursuant to the Veolia Report replacing the anthracite in the filters with new GAC Media will assist in lowering the levels of TTHM. The replacement of the existing filter requires the performance of CT Analyses, conducting an evaluation of Hydraulic Loading and Backwash Capacities of the new GAC cross section, and meeting and coordinating with MDEQ to obtain MDEQ's approval of changes to the current permit;
- 2) In addition to the design, the replacement requires managing, on behalf of the City, the construction services of a vendor to implement design improvements of the filter system upgrade to the GAC media.
- 3) Modificaions to the hydraulic model are needed to upgrade the model and calibrate actual system performance and operation to include valve operational performance based on Service Center Report.
- 4) Provide a project engineer to work with the City, MDEQ and the vendors will assist in implementing Veolia's recommendations to the extent accepted by the City. Such engineering services will provide weekly progress reports to the City allowing the City to monitor the progress of the Project.

**Compensation:**

Will be an amount equal to \_\_\_\_\_ times Salary Cost plus reimbursable expenses, both defined in the **PROFESSIONAL SERVICES AGREEMENT**, and In addition to the compensation for **BASIC SERVICES**. Total charges for these **ADDITIONAL SERVICES** are estimated to be approximately \$\_\_\_\_\_.

Will be the lump sum of \$\_\_\_\_\_ for these **ADDITIONAL SERVICES**.

Other Cost plus based on current rates for a Not-To Exceed amount of \$1,601,740.00 (use reverse if necessary)

<b>Completion:</b>	Current Date	6-15-14
	This Extension	3 months
	New Date	9-15-15

All terms and conditions of the original agreement remain in full force and effect.

**Proposed By:** Lockwood, Andrews & Newnam, Inc.

Warren Green, PE

4-7-15

Print Name/Title

Signature

Date

City of Flint

Client

**Approved By**

Print Name/Title

Signature

Date

Execute in duplicate - (1) copy to Client, (1) copy to Accounting

C-028-90

NAME OF PROJECT: Flint Water Treatment Plant Improvements – LAN Change Order #4.

OWNER: City of Flint Utilities- Water Plant

CONTRACTOR: Lockwood Andrews & Newnam, Inc. ("Engineer")

THE FOLLOWING CHANGES ARE HEREBY MADE TO THE CONTRACT DOCUMENT:

Modify the scope of the contract to include additional services related to the design, removal of the existing anthracite media in the 12 filters at the Flint Water Treatment Plant ("FWTP") and replacement with new GAC media ("Project") as described in more detail below under Section 1.0, Additional Services, subject to Section 2.0, Additional Terms and Conditions provided below for the Not-to Exceed amount of \$1,601,740.00 for a revised total of \$2,980,440.00 , as described in more detail below under Section 3.0, Changes to Contract Price.

1.0 ADDITIONAL SERVICES. To the extent provided below, Engineer shall (a) design the removal of anthracite media and replacement with a new GAC media in all the 12 filters at the FWTP; and (b) provide Construction management as an Agent not at risk services ("CMA Services") for the construction related to the removal of existing media and installation of the new GAC media in the 12 filters at the FWTP

1.1 Design Services.

- 1.1.1 Design the GAC Filter replacement for the FWTP, which will include assisting the City in obtaining the necessary MDEQ Permit(s) and providing construction oversight
  - 1.1.1.1 Evaluate and Provide design elements associated with implementing the filter change out to GAC.
  - 1.1.1.2 Coordinate with MDEQ design elements and get their approval to anticipated design changes.
  - 1.1.1.3 Review Veolia's information and develop CT analysis to verify design changes will meet MDEQ requirements.
  - 1.1.1.4 Meet with the City and MDEQ to assist in obtaining MDEQ's approval to proceed.
  - 1.1.1.5 Assist the City if overseeing the implementation of the system change out in the filters.
  - 1.1.1.6 Coordinate with the contractor to assist in contractor's understanding of design intent.
- 1.1.2 Set up, upgrade and calibrate the Flint Distribution Water System to include field Testing Verification and Support in order to analyze system performance and water age mapping and assist the City with line flushing/and or Ice Pigging Program.

- 1.1.2.1 Verify transmission and distribution piping system using City's GIS, including pipe diameters
  - 1.1.2.2 Verify pipe C-factors
  - 1.1.2.3 Verify transmission and distribution system connections
  - 1.1.2.4 Verify facilities' piping for Filter plant and pumping stations, including piping layout, diameters and C-factors (use record drawings for piping)
  - 1.1.2.5 Obtain existing pump curves and motor data to confirm information in the model
  - 1.1.2.6 Confirm storage facility data, including volume and tank levels
  - 1.1.2.7 Spot check elevations for distribution system and facilities
  - 1.1.2.8 Obtain utility billing data for use in re-allocation of demands (electronic format is expected with service addresses and customer type)
  - 1.1.2.9 Process utility billing data
  - 1.1.2.10 Confirm system water loss using billing and pumpage data
  - 1.1.2.11 Re-allocate demands within model, including water loss
  - 1.1.2.12 Confirm closed system valves
  - 1.1.2.13 Review Filter plant and pump station operations
  - 1.1.2.14 Obtain flow data for Filter plant and pump stations to verify demand usage and peaking patterns (electronic format, 15- minute or hourly data)
  - 1.1.2.15 Obtain historical SCADA data to verify model replicates system operations, data needed includes plant, pump station and system pressures; tank levels and booster pump run times (electronic format, hourly data)
  - 1.1.2.16 Perform model field verification, which shall not exceed 60 hours of LAN's time
  - 1.1.2.17 Document model update process and verification results
  - 1.1.2.18 Identify water lines to be flushed
  - 1.1.2.19 Perform model analyses to determine flushing requirements
  - 1.1.2.20 Identify discharge locations to be used during flushing
  - 1.1.2.21 Prepare system maps
  - 1.1.2.22 Outline flushing process / program
  - 1.1.2.23 Assist the City in executing flushing program
- 1.1.3 Project Engineering Services to assist the City with monitoring and coordinating activities with city staff, MDEQ and vendors during the maintenance and implementation of improvements needed thru the August TTHM Sampling period. Services will be provided based on 60 hours/month for a total of five (5) months period
- 1.1.3.1 Provide a project engineer to work with City staff on an average of 15 hours/week or 60 hours/month for a total of 300 hours.

- 1.1.3.2 Coordinate between City staff, vendors, contractors and design professionals to insure timely implementation of design improvements needed to address TTHM issues.
- 1.1.3.3 Work at the City Water Treatment Plant if the City desires.
- 1.1.3.4 Develop an implementation schedule to help the City secure contractors and vendors to supply needed improvements to address TTHM recommendations in the next 5 months.

**1.2 CMA Services.**

- 1.2.1 **Choosing Contractor.** Engineer shall coordinate with Owner to select a Contractor to provide all construction related services for the Project at a lump sum fee and within schedule as agreed to by Owner.
- 1.2.2 **Engaging Contractor on Behalf of Owner.** As an agent for Owner, Engineer shall negotiate a mutually acceptable contract between Engineer (as agent of Owner) and Contractor ("Construction Contract"). Due to the urgent need for the Project to proceed expeditiously, Owner acknowledges and agrees the Owner shall be solely responsible for any and all risks associated with the Construction Contract except to the extent arising from liability, losses, claims, or expenses caused by Engineer's negligence or willful misconduct, and subject to the limitations provided under this Amendment. It is expressly understood that all benefits under the Construction Contract shall benefit the Owner including, without limitation, Contractor's insurance and bonding requirements, and any guarantees or warranties from the Contractor or Contractor's subcontractor(s). For the purpose of clarity, Engineer shall not be responsible for obtaining or securing any bonds or construction related insurance. Engineer, in coordination with and for the benefit of the Owner, shall negotiate the terms and conditions of the Construction Contract, which shall include a scope of services and schedule that is acceptable to Owner.
- 1.2.3 **Engineer's Duties and Liabilities for CMA services** As the Owner's agent, Engineer shall:
  - 1.2.3.1 Act in the best interests of the Owner;
  - 1.2.3.2 Have the authority, on behalf of the Owner, to enter into the Construction Contract, amend the Construction Contract (upon receiving written approval from the Owner) including any changes in the scope of work, schedule or fee.
  - 1.2.3.3 Meet regularly with and oversee the Contractor as the Contractor provides its scope of services. Keep the Owner informed of any changes in the existing conditions, any discovery of unforeseeable conditions, and/or other circumstances that may materially impact the Contractor's scope of work.
  - 1.2.3.4 Meet regularly with and oversee the Contractor's schedule and keep the Owner informed of any delays in the Contractor's schedule.

- 1.2.3.5 If required, seek adjustments in the Contractor's fee for delays caused by Contractor.
- 1.2.3.6 If required, seek adjustment in the Contractor's fee for Contractor's failure to comply with the Project's design and specifications.
- 1.2.3.7 Direct Contractor, on Owner's behalf, as needed to complete the Project consistent with the Project's design and specifications and the Contractor's schedule.
- 1.2.3.8 Obtain evidence that Contract has secured the appropriate bonds and insurance required under the Construction Contract.
- 1.2.3.9 Review and approve, on behalf of Owner, any and all payment requests submitted by Contractor and/or Contractor's subcontractors under the Construction Contract. Obtain all conditional and final lien and claim waivers as required under the Construction Contract.
- 1.2.3.10 Notwithstanding anything under this Agreement, and to the extent allowable under applicable law, Owner acknowledges and agrees Engineer's liability to any party under the Construction Contract shall be limited to the extent Engineer is an agent of Owner.

1.2.4 Owner's Duties and Liability. Owner shall:

- 1.2.4.1 Timely respond and provide Engineer clear and concise direction upon receiving any requests from Engineer.
- 1.2.4.2 Timely pay any and all invoices or other costs approved by Engineer, as Owner's agent, under the Construction Contract.
- 1.2.4.3 Execute any document or instrument reasonably needed to complete the Project on time and within budget.
- 1.2.4.4 To the extent allowable under law and to the extent not caused by Engineer's gross negligence or willful misconduct, indemnify, defend and hold Engineer harmless from any claims, costs, damages and/or expenses (including reasonable attorneys' fees) arising from Owner's failure to perform its obligations hereunder or under the Construction Contract.

2.0 ADDITIONAL TERMS AND CONDITIONS. The following terms and conditions shall apply to the services provided under this Amendment. In the event there are any conflicts with any of the terms of the contract document and the terms of this Amendment, the terms of this Amendment, in all instances, shall control and prevail. It is acknowledged and agreed that any term directly or indirectly related to indemnification, liability, warranty, or any other term within the contract document and provided below is superseded and replaced by the respective term provided below.

2.1 Engineer Shall be Agent and Construction Manager not at Risk for Owner. On behalf of the Owner, as an agent of the Owner, Engineer shall manage the contractor's work to construct the Project consistent with the additional Services described in Section 1.0 above. Owner hereby authorizes Engineer to act on behalf of the Owner and



Engineer shall act, consistent with the standard of care described in Section 2.2 below, in the best interests of the Owner. Notwithstanding anything hereunder, except for Engineer's breach of its standard of care or Engineer's willful misconduct or gross negligence, Owner acknowledges and agrees that:

- 2.1.1 Engineer shall not be responsible for the means, methods, techniques, sequences, or procedures of construction of the Project (the "Construction") selected or used by any contractor, or the safety precautions and programs incident thereto, for security or safety at the Project site, or for any failure of a contractor to comply with laws and regulations applicable to such contractor's furnishing and performing its work.
- 2.1.2 Owner shall release Engineer from any and all claims, costs, damages and/or expenses (including reasonable attorneys' fees) arising from or related to the Construction by any contractor or subcontractor;
- 2.1.3 To the extent allowable under law, Owner shall indemnify and defend Engineer from any and all claims, costs, damages and/or expenses (including reasonable attorneys' fees) arising from Owner's breach, default, or Owner's alleged breach or default of the Construction Contract including, but not limited, Owner's failure to timely pay any sums due any contractor or subcontractor providing Construction services.

**2.2 Standard of Care and Disclaimer of Warranty.** The standard of care for all professional Engineering and related services performed or furnished by Engineer under this Amendment will be the care and skill ordinarily used by members of the Engineering profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Amendment or otherwise, in connection with Engineer's services. Engineer and its consultants may use or rely upon design elements and information supplied by Owner which are ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

**2.3 Indemnity by Engineer.** Engineer shall indemnify and hold harmless the Owner from and against losses, costs, and damages caused solely by the negligent acts, errors or omissions of Engineer, its officers, directors, partners, employees and Consultants in the performance of professional services under this Amendment.

**2.4 Limitation of Liability.** To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project, and (2) agree that Engineer's total liability to Owner under this Agreement, based upon Comparative Negligence principles, shall be limited to \$300,000.

**2.5 Hazardous Material.** Owner and Engineer acknowledge that Engineer's scope of services under this Amendment does not include any services related to a Hazardous Environmental Condition (the presence of asbestos, PCBs, petroleum, hazardous substances or waste as defined by the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq., or radioactive materials). If Engineer or any other party encounters a Hazardous Environmental Condition, Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Site or Project affected thereby until Owner: (1) retains appropriate specialist consultants or contractors to identify and, as appropriate, abate, remediate, or remove the Hazardous Environmental Condition; and (2) warrants that the Site or Project is in full compliance with applicable Laws and Regulations.

**2.6 Force Majeure.** Engineer shall not be responsible for and Owner hereby releases Engineer from any claim, damage or loss resulting from (i) fires, riots, labor disputes, war, terrorism, weather, acts of GOD, or other Force Majeure; (ii) governmental action or failure to act (including, without limitation, plan reviews, permits, and or approvals); (iii) unforeseeable circumstances or conditions (including, without limitation, unforeseeable site conditions); and (iv) circumstances or events outside the reasonable control or responsibility of Consultant.

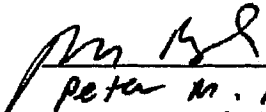
**3.0 CHANGES TO CONTRACT PRICE**

APPROVED:

ACCEPTED:

AS TO FORM:

FIRM: LOCKWOOD, ANDREWS & NEWNAM


  
\_\_\_\_\_  
Peter M. Bako  
City Attorney

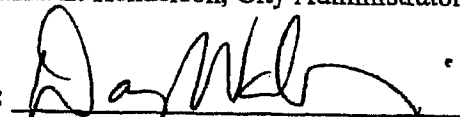
BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THE CITY OF FLINT,  
A MUNICIPAL CORPORATION**

BY:   
\_\_\_\_\_  
Natasha L. Henderson, City Administrator

BY:   
\_\_\_\_\_  
Dayne Walling, Mayor