# AMENDMENT NO. 1 TO AGREEMENT FOR ENGINEERING SERVICES

| <ol> <li>The times for the performance of ENGINEER's services of said Agreement are amended as set forth in Attachment A, attached hereto and incorporated by reference herein.</li> <li>The Scope of Services of ENGINEER of said Agreement are amended and supplemented as described in Attachment B, attached hereto and incorporated by reference herein.</li> <li>The method of payment for services rendered by ENGINEER shall be set forth in Attachment C, attached hereto and incorporated by reference herein.</li> <li>Acceptance of the terms of this Amendment is acknowledged by the following authorized signatures of the parties to the Agreement. All other particulars in the original Agreement, and not specifically referenced in this Amendment No. 1 remain in effect and unchanged.</li> <li>IN WITNESS WHEREOF, OWNER and ENGINEER have executed this AGREEMENT.</li> <li>DATED this OTH day of FERNALLY 2017.</li> </ol> |
|---|
| Attachment B, attached hereto and incorporated by reference herein.  3. The method of payment for services rendered by ENGINEER shall be set forth in Attachment C, attached hereto and incorporated by reference herein.  Acceptance of the terms of this Amendment is acknowledged by the following authorized signatures of the parties to the Agreement. All other particulars in the original Agreement, and not specifically referenced in this Amendment No. 1 remain in effect and unchanged.  IN WITNESS WHEREOF, OWNER and ENGINEER have executed this AGREEMENT.  DATED this   |
| hereto and incorporated by reference herein.  Acceptance of the terms of this Amendment is acknowledged by the following authorized signatures of the parties to the Agreement. All other particulars in the original Agreement, and not specifically referenced in this Amendment No. 1 remain in effect and unchanged.  IN WITNESS WHEREOF, OWNER and ENGINEER have executed this AGREEMENT.  DATED this  |
| parties to the Agreement. All other particulars in the original Agreement, and not specifically referenced in this Amendment No. 1 remain in effect and unchanged.  IN WITNESS WHEREOF, OWNER and ENGINEER have executed this AGREEMENT.  DATED this  |
| DATED this 10 TH day of FERAVARY 2017.  |
| DATED this 10 TH day of FERAVARY 2017.  |
|   |
|   |
| Alan Plummer Associates, Inc ENGINEER  ATTEST   |
| By: Hall Eller March  |
| Title: Assurate Principal   |
| Norman Utilities Authority- OWNER   |
| APPROVED as to form and legality this day of, 2017.   |
|   |
| City Attorne  |
| APPROVED by the Trustees of the Norman Utilities Authority this day of, 2017.   |
| ATTEST  |
| By: Title:  |

### ATTACHMENT A

## **SCHEDULE**

ENGINEER shall complete Tasks B-2 and B-3 (model building and calibration), related to Attachment B by March 1, 2017.

ENGINEER shall complete Tasks B-4 and B-5 (model analysis), related to Attachment B by May 1, 2017.

ENGINEER shall complete Tasks B-6 and B-7 (draft report), related to Attachment B by June 1, 2017.

ENGINEER shall complete Tasks B-7 (final report), related to Attachment by August 1, 2017.

Failure of ENGINEER to comply with above schedule for various tasks or subtasks may result in OWNER's termination of this AGREEMENT.

## ATTACHMENT B CITY OF NORMAN UPDATE WATER DISTRIBUTION SYSTEM MODEL AMENDMENT #1 – SCOPE OF SERVICES January, 2017

### 1.0 BACKGROUND

The Groundwater Well Field Development Project will provide the Norman Utilities Authority (OWNER) with additional water supply. To effectively incorporate that new supply, and to evaluate system performance and improvement needs, an update to the existing distribution system model is necessary. In general, the Update Water Distribution System Modeling Project (PROJECT) will consist of building a new model from the City's GIS utilizing Innovyze InfoWorks WS software, calibrating that model, and using the model to conduct system performance evaluations and identify system improvements needed to optimize distribution system pressures and minimize water age where economically feasible. The model will be used to select alternate well locations as part of the system performance evaluations.

Amendment No. 1 provides additional schedule and budget to complete the scope originally defined as part of this PROJECT. The scope for the PROJECT is not modified by this amendment. The model calibration process can serve a secondary role as a unique quality control for data and information about the water system. In going through the calibration process on this PROJECT, certain issues and anomalies were uncovered. After discussion of these issues with the OWNER's staff, the OWNER provided revised data to correct the issues and anomalies discovered. Unfortunately in this case, those issues and anomalies led to unintended delays and forced re-work by the ENGINEER to ultimately achieve model calibration. This Amendment provides additional time and compensation as a result of the unintended delays and re-work experienced to date.

#### ATTACHMENT C

## **COMPENSATION**

The OWNER will compensate ENGINEER on a lump sum basis for the SERVICES rendered shown below. The lump sum fee is broken down below by task as defined in the Scope of Services:

| Activity | Task Description                                  | Original<br>Amount | Increase<br>(Decrease) | Revised<br>Amount |
|----------|---|--------------------|------------------------|-------------------|
|          |   |                    |                        |                   |
| A-1      | Project Management, QC & Reimbursable<br>Expenses | \$44,000           | \$0                    | \$44,000          |
| A-2      | Design Coordination Kickoff and Progress Meetings | \$27,000           | \$0                    | \$27,000          |
| A-3      | Model Deliverable Training Workshop               | \$4,000            | \$0                    | \$4,000           |
| B-1      | Data Collection                                   | \$7,000            | \$0                    | \$7,000           |
| B-2      | Develop Hydraulic Model                           | \$21,000           | \$10,000               | \$31,000          |
| B-3      | Hydraulic Model Calibration                       | \$33,000           | \$23,000               | \$56,000          |
| B-4      | System Performance Evaluation – Existing System   | \$6,000            | \$0                    | \$6,000           |
| B-5      | System Improvements                               | \$22,000           | \$0                    | \$22,000          |
| B-6      | CIP Development                                   | \$11,000           | \$0                    | \$11,000          |
| B-7      | Final Technical Memorandum Preparation            | \$23,000           | \$0                    | \$23,000          |
|          | Total   | \$198,000          | \$33,000               | \$231,000         |

The OWNER will compensate ENGINEER on a time and material basis for the SERVICES rendered shown below. The time and material fee is broken down below by task as defined in the Scope of Services:

| Activity | Task Description                              | Original<br>Amount | Increase<br>(Decrease) | Revised<br>Amount |
|----------|---|--------------------|------------------------|-------------------|
| C-a      | Engineering Allowances (GIS Data Gap support) | \$9,000            | \$0                    | \$9,000           |
| C-b      | Engineering Allowances (Pressure Gauges)      | \$3,000            | \$0                    | \$3,000           |
| C-c      | Engineering Allowances (Pump Testing)         | \$5,000            | \$0                    | \$5,000           |
| C-d      | Engineering Allowances (Evaluate WQ Data)     | \$7,000            | \$0                    | \$7,000           |
|          | Total   | \$24,000           | \$0                    | \$24,000          |

The ENGINEER may submit interim statements, not to exceed one per month, for partial payment for SERVICES rendered. The statements to OWNER will be by task for the percentage of work actually completed. The OWNER shall make interim payments within 30 calendar days in response to ENGINEER's interim statements.

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No budgetary allowance has established for Additional Services. Additional services must be authorized by amendment of the agreement. Time and materials billing for ENGINEER'S labor will be at the hourly rates provided below. ENGINEER's direct expenses, including subcontractor expenses, will include a multiplier of 1.10.