

**AGREEMENT SUMMARY
BROKEN ARROW MUNICIPAL AUTHORITY
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP SUBBASIN LL34
PROFESSIONAL CONSULTANT AGREEMENT
PROJECT NO. 2154320**

1.0 Professional Consulting Firm:

- 1.1 Name: Holloway, Updike and Bellen, Inc.
- 1.2 Telephone No.: 918-251-0717
- 1.3 Address: 905-A South 9TH Street
Broken Arrow, OK 74012

2.0 Project Name/Location: Wastewater Collection System Rehabilitation – Lynn Lane WWTP Subbasin LL34

3.0 Statement of Purpose: CONSULTANT understands that the OWNER has retained their professional services in order to perform Infiltration and Inflow (I&I) reduction field investigations and prepare defects summary reports and rehabilitation recommendations for the future rehabilitation of wastewater collection system Lynn Lane WWTP Subbasin LL34 - Refer to attached Exhibit 1. These documents shall include, but not be limited to, the following: field investigation reports, private and public sector defects and rehabilitation recommendations report. Other Services including rehabilitation design services, bid documents, bidding and construction phase services may be negotiated at a later date.

4.0 Agreement Summary:

- | | | |
|-----|----------------------|----------------------|
| 4.1 | Project Management: | \$ 10,000.00 |
| | Field Investigations | <u>\$ 202,350.00</u> |
| | Reports | <u>\$ 35,500.00</u> |

TOTAL AGREEMENT AMOUNT \$ 247,850.00

- 4.2 Agreement Time: 425 calendar days
- 4.3 Estimated Construction Cost: N/A

5.0 Contract Documents and Priority: The Broken Arrow Municipal Authority (OWNER), represented by the Chairman, and the Professional Consulting firm, (CONSULTANT), identified in paragraph 1.0 agree to perform this AGREEMENT in strict accordance with the clauses, provisions, and the documents identified as below, all of which are made part of this Contract. In the event of conflict, these documents shall be interpreted in the following order:

- 5.1 AGREEMENT with corresponding Attachments;
- 5.2 Duly authorized Amendments to the AGREEMENT;
- 5.3 AGREEMENT Summary;

- 5.4 Specific project written correspondence mutually recognized; and
- 5.5 Specific project verbal instructions mutually recognized.

6.0 Agreement Approved by the Owner on: _____ 2020

**AGREEMENT
FOR
PROFESSIONAL CONSULTANT SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34

PROJECT NUMBER 2154320**

This AGREEMENT, including Attachment A through Attachment E, between the Broken Arrow Municipal Authority (OWNER) and Holloway, Updike and Bellen, Inc., (CONSULTANT);

W I T N E S S E T H:

WHEREAS, OWNER intends to perform Inflow and Infiltration (I&I) reduction field investigations for future collection system rehabilitation improvements for Lynn Lane WWTP Subbasin LL34 (PROJECT) for which, OWNER has requested that CONSULTANT provide certain professional services as required and,

WHEREAS, CONSULTANT is qualified and capable to provide the professional services required;

NOW, therefore, in consideration of the promises contained in this AGREEMENT, OWNER and CONSULTANT agree as follows:

ARTICLE 1 - EFFECTIVE DATE

This AGREEMENT shall be effective upon signature of both parties.

ARTICLE 2 - GOVERNING LAW

This AGREEMENT shall be governed by the laws of the State of Oklahoma and venue for any action concerning this Agreement shall be in the District Court of Tulsa County, Oklahoma.

ARTICLE 3 - SERVICES TO BE PERFORMED BY CONSULTANT

CONSULTANT shall perform the SERVICES described in Attachment A, Scope of Services. If construction phase services are included, the CONSULTANT shall be the OWNER'S agent and representative to observe, record and report with respect to all services that are required or authorized by the construction documents.

ARTICLE 4 – ORGANIZATION OF SUBMITAL DOCUMENTS

CONSULTANT shall prepare the documents as described in Attachment B as part of this Agreement.

ARTICLE 5 - COMPENSATION

OWNER shall pay CONSULTANT in accordance with Attachment C, Compensation.

ARTICLE 6 - OWNER'S RESPONSIBILITIES

OWNER shall be responsible for all matters described in Attachment D, OWNER'S Responsibilities and Special Conditions.

ARTICLE 7 - STANDARD OF CARE

CONSULTANT shall perform the SERVICES undertaken in a manner consistent with the prevailing accepted standard for similar services with respect to projects of comparable function and complexity, and with the applicable state laws, as well as the specific codes, regulations, design criteria and construction specifications adopted by the owner and other governing policies published and generally considered authoritative by CONSULTANT'S profession that are in effect at the time of performance of these SERVICES. CONSULTANT is obligated to perform professional services in accordance with the foregoing standard with respect to the laws, codes, regulations, design criteria and construction specifications that are applicable pursuant to this AGREEMENT.

ARTICLE 8 - LIABILITY

8.1 General. Having considered the potential liabilities that may exist during the performance of these SERVICES, the benefits of the PROJECT, and CONSULTANT'S fee for the SERVICES; and in consideration of the promises contained in this AGREEMENT, OWNER and CONSULTANT agree to allocate and limit such liabilities in accordance with Article 10.

8.2 Indemnification. CONSULTANT agrees to defend, indemnify, and hold harmless OWNER, and its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by the negligent or intentional acts, errors, or omissions of CONSULTANT, its agents or employees. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of OWNER and CONSULTANT, or their agents or employees, then they shall be borne by each party in proportion to each entity's own negligence.

8.3 Consequential Damages. OWNER shall not be liable to CONSULTANT for any special, indirect, or consequential damages resulting in any way from the performance of the SERVICES such as, but not limited to, loss of use, loss of revenue, or loss of anticipated profits.

8.4 Survival. Upon completion of all SERVICES, obligations, and duties provided for in this AGREEMENT, or if this AGREEMENT is terminated for any reason, the terms and conditions of this Article 8 shall survive.

ARTICLE 9 - INSURANCE

During the performance of the SERVICES under this AGREEMENT, CONSULTANT shall maintain the following insurance:

- (1) General Liability Insurance, with a combined single limit of \$1,000,000 for each occurrence and \$1,000,000 in the aggregate;
- (2) Automobile Liability Insurance, with a combined single limit of not less than \$1,000,000 for each person, not less than \$1,000,000 for each accident and not less than \$1,000,000 for property damage; and
- (3) Professional Liability Insurance, with a limit of \$1,000,000 annual aggregate.

CONSULTANT shall furnish OWNER certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days written notice to OWNER. All PROJECT sub-consultants shall be required to name OWNER and CONSULTANT as certificate holders on their certificate of insurance for the PROJECT, and shall be required to indemnify OWNER and CONSULTANT to the same extent. CONSULTANT shall be held responsible to submit certificates of insurance for sub-consultants to OWNER prior to the sub-consultant's release to commence work.

ARTICLE 10 - LIMITATIONS OF RESPONSIBILITY

CONSULTANT shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the construction of the PROJECT; or (2) procuring permits, certificates, and licenses required for any construction

unless such responsibilities are specifically assigned to CONSULTANT in Attachment A, Scope of Services.

ARTICLE 11 - LIMITATIONS OF RESPONSIBILITIES FOR ACTS OF OTHERS

CONSULTANT shall not at any time supervise, direct, control or have authority over any work performed by any employee, contractor or other agent of OWNER. CONSULTANT shall not be responsible for the acts or omissions of any employee, contractor or other agent associated with the PROJECT except for its own employees, subcontractors and other agents.

ARTICLE 12 - OPINIONS OF COST AND SCHEDULE

Since CONSULTANT has no control over the cost of labor, materials, or equipment furnished by others, or over the resources provided by others to meet PROJECT schedules, CONSULTANT'S opinion of probable costs and of PROJECT schedules shall be made on the basis of experience and qualifications as a professional. CONSULTANT does not guarantee that proposals, bids, or actual PROJECT costs will conform to OWNER'S cost estimates or that actual schedules will conform to OWNER'S projected schedules.

ARTICLE 13 - REUSE OF DOCUMENTS

All documents, including, but not limited to, drawings, specifications, and details, reports, etc. prepared by CONSULTANT pursuant to this AGREEMENT are instruments of service in respect to the PROJECT. They are not intended or represented to be suitable for reuse by CONSULTANT or others on extensions of the PROJECT or on any other project. Any reuse or adaptation without prior written verification by the OWNER for the specific purpose intended will be at CONSULTANT'S sole risk and without liability or legal exposure to the OWNER. CONSULTANT shall defend, indemnify, and hold harmless the OWNER against all claims, losses, damages, injuries, and expenses, including attorney's fees, arising out of or resulting from such reuse.

ARTICLE 14 - OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Except as otherwise provided herein, engineering documents, drawings, and specifications prepared by CONSULTANT as part of the SERVICES shall become the property of OWNER. CONSULTANT shall retain its rights in its standard drawing details, specifications, data bases, computer software, and other proprietary property. Rights to intellectual property developed, utilized, or modified in the performance of the SERVICES shall remain the property of CONSULTANT, but shall be provided to the OWNER, at no additional expense to the OWNER.

ARTICLE 15 - TERMINATION

This AGREEMENT may be terminated by either party upon written notice in the event of substantial failure by the either party to perform in accordance with the terms of this AGREEMENT. The non-performing party shall have fifteen (15) calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

OWNER may suspend performance of this AGREEMENT for OWNER'S convenience upon written notice to CONSULTANT. Upon restart, an equitable adjustment may be made to CONSULTANT'S compensation, if the period of suspension has created an economic hardship for the CONSULTANT.

ARTICLE 16 - DELAY IN PERFORMANCE

Neither OWNER nor CONSULTANT shall be considered in default of this AGREEMENT for delays in performance caused by circumstances beyond the reasonable control of the non-performing party. For purposes of this AGREEMENT, such circumstances include, but are not limited to, abnormal weather conditions such as floods, earthquakes, fire; civil disturbances such as war, riots, or other civil epidemic; power outages, strikes, lockouts, work slowdowns, or other labor disturbances; sabotage; judicial restraint, and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either OWNER or CONSULTANT under this AGREEMENT.

Should such circumstances occur, the non-performing party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of this AGREEMENT.

ARTICLE 17 - WAIVER

A waiver by either OWNER or CONSULTANT of any breach of this AGREEMENT shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

ARTICLE 18 - SEVERABILITY

The invalidity, illegality, or unenforceability of any provision of this AGREEMENT or the occurrence of any event rendering any portion or provision of this AGREEMENT void shall in no way affect the validity or enforceability of any other portion or provision of this AGREEMENT. Any void provision shall be deemed severed from this AGREEMENT, and the balance of this AGREEMENT shall be construed and enforced as if this AGREEMENT did not contain the particular portion or provision held to be void. The parties further agree to amend this AGREEMENT to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Article shall not prevent this entire AGREEMENT from being void should a provision which is of the essence of this AGREEMENT be determined void.

ARTICLE 19 - INTEGRATION

This AGREEMENT represents the entire and integrated AGREEMENT between OWNER and CONSULTANT. It supersedes all prior and contemporaneous communications, representations, and agreements, whether oral or written, relating to the subject matter of this AGREEMENT.

ARTICLE 20 - SUCCESSORS AND ASSIGNS

To the extent permitted by Article 22, OWNER and CONSULTANT each binds itself and its successors and assigns to the other party to this AGREEMENT.

ARTICLE 21 - ASSIGNMENT

Neither OWNER nor CONSULTANT shall assign its duties under this AGREEMENT without the prior written consent of the other party. Unless otherwise stated in the written consent to an assignment, no assignment will release or discharge the assignor from any obligation under this AGREEMENT. Nothing contained in this Article shall prevent CONSULTANT from employing independent sub-consultants, associates, and sub-contractors to assist in the performance of the SERVICES. However, third party entities must comply with Article 9.

ARTICLE 22 - THIRD PARTY RIGHTS

Nothing in this AGREEMENT shall be construed to give any rights or benefits to anyone other than OWNER and CONSULTANT.

ARTICLE 23 - COMPLETION

CONSULTANT shall complete the services within the time frame outlined on Attachment E, Schedule, subject to conditions which are beyond the control of the CONSULTANT.

ARTICLE 24 - IMMIGRATION COMPLIANCE

24.1 Consultant shall demonstrate that he:

24.1.1 Has complied, and shall at all times during the term of this Contract, comply in all respects with all immigration-related laws, statutes, ordinances and regulations including without limitation, the Immigration and Nationality Act, as amended, the Immigration Reform and

Control Act of 1986, as amended, and the Oklahoma Taxpayer and Citizen Protection Act of 2007 (Oklahoma HB 1804) and any successor laws, ordinances or regulations (collectively, the Immigration Laws"); and

24.1.2 Has properly maintained, and shall at all times during the term of this Contract, maintain any and all employee records required by the U.S. Department of Homeland Security ("DHS"), including, without limitation, properly completed and maintained Form I-9s for each of the Consultants employees; and

24.1.3 Has verified the employment eligibility for all employees hired on or after July 1, 2008 through DHS's E-Verify system, and shall at all times continue to verify the employment eligibility of all employees hired during the term of this Contract; and

24.1.4 Has required, and will at all times during the term of this Contract, require any sub-contractor utilized, hired or sub-contracted for by Consultant for the completion or undertaking of any duties, tasks or responsibilities under this Contract, to comply the requirements and obligations imposed by the Immigration Laws and set forth in Paragraph (I), parts (a), (b) and (c), above, with regards to each of the sub-contractor's employees.

24.2 Consultant will indemnify, defend and hold harmless BAMA against any loss, cost, liability, expense (including, without limitation, costs and expenses of litigation and reasonable attorney's fees) demands, claims, actions, causes of action, liabilities, suits, damages, including special and consequential damages that arise from or in connection with, directly or indirectly, Consultants failure, deliberate or negligent, to fulfill its obligations and representations regarding verifying the employment eligibility of its employees and the employees of any subcontractor utilized by Contractor as set forth more fully in Paragraph 24.1 above.

ARTICLE 25 - COMMUNICATIONS

Any communication required by this AGREEMENT shall be made in writing to the address specified below:

OWNER: Broken Arrow Municipal Authority
485 N. Poplar Street
Broken Arrow, OK 74012
Contact: Mr. Roger D. Hughes, P.E.
Engineering Division Manager

CONSULTANT: Holloway, Updike, and Bellen, Inc. (HUB)
905-A South 9th Street
Broken Arrow, OK 74012
Contact Name: Stephen Tolar, P.E.
Vice President

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of OWNER and CONSULTANT.

REMAINDER OF PAGE INTENTIONALLY BLANK

IN WITNESS WHEREOF, the Chairman of the Broken Arrow Municipal Authority in Oklahoma has hereunto set his hand, for and on behalf of the Broken Arrow Municipal Authority and the CONSULTANT has signed, or caused his name to be signed, and seal affixed by proper authority, the day and year first above written and these presents have been executed in triplicate counterparts.

OWNER:

Broken Arrow Municipal Authority

By: _____

Craig Thurmond, Chairman

Date: _____

Attest:

Secretary [Seal]

Date: _____

Approved as to form:

Tammy Ewing

9/25/2020

Assistant City Attorney

CONSULTANT:

Holloway, Updike and Bellen, Inc.

By: ST

Stephen Tolar, Vice President

Date: 9-24-2020

(CORPORATE SEAL IF APPLICABLE)

Attest:

Tiffany Hilton
Tiffany Hilton, Assistant-Secretary

Date: 9/24/2020

VERIFICATION

State of Oklahoma)

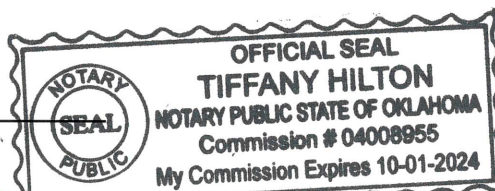
County of Juba)

Before me, a Notary Public, on this 24th day of September, 2020, personally appeared Stephen Tolar, known to be to be the (President, Vice-President, Corporate Officer, Member, or Other: Vice-President) of Holloway, Updike and Bellen, Inc., and to be the identical person who executed the within and foregoing instrument, and acknowledged to me that he/she executed the same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

My Commission Expires:

10/01/24

Tiffany Hilton
Notary Public



**ATTACHMENT A
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34
2154320**

SCOPE OF SERVICES

The following scope of services shall be made a part of the AGREEMENT dated the ____ST day of _____, 2020.

1.0 PROJECT UNDERSTANDING

- 1.1 CONSULTANT understands that the OWNER has retained their professional services in order to perform Infiltration and Inflow (I&I) reduction field investigations and prepare defects summary reports and rehabilitation recommendations for the future rehabilitation of wastewater collection system Lynn Lane WWTP Subbasin LL34 - Refer to attached Exhibit 1. These documents shall include, but not be limited to, the following: field investigation reports, private and public sector defects and rehabilitation recommendations report. Other Services including rehabilitation design services, bid documents, bidding and construction phase services may be negotiated at a later date.
- 1.2 The CONSULTANT is required to keep the OWNER apprised of the PROJECT costs and advise the OWNER of necessary cost reduction measures, if required, during the course of the PROJECT.
- 1.3 Furthermore, the CONSULTANT understands that the OWNER has (\$250,000.00) budgeted for the I&I Reduction Field Investigation portion of this PROJECT that includes all professional consultant fees. No project construction funding has been budgeted by the OWNER yet.

2.0 PROJECT SCOPE

- 2.1 FIELD INVESTIGATIONS: CONSULTANT shall perform through a sub-consultant the following I&I reduction field investigations in the estimated quantities shown:

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>
2.1.A	Manhole Inspections	EA	311
2.1.B	Manhole Dye Testing	EA	40
2.1.C	Smoke Testing	LF	60,003
2.1.D	Storm Cross-Connect Dye Tests	EA	10
2.1.E	Creek Crossing Inspection	EA	5
2.1.F	CCTV Inspection and Cleaning	LF	15,000
2.1.G	Line Segment Dye Tests	EA	12

- 2.2 DEFECTS ANALYSIS AND REPORTS: At the conclusion of the field inspections an engineering analysis of field investigation data shall be performed to develop recommendations for prioritizing Public Sector I&I source repairs. A description of field investigations, engineering analysis, and recommended action to reduce I&I will be included in the report. A separate Private Sector defects report will be prepared documenting defects identified on private property.
- 2.3 No services related to preliminary design, final design, bid documents, bid phase assistance, construction phase services, or record drawings are included in the scope at this time. These services may be negotiated with the CONSULTANT upon the request of the OWNER at a later date.

3.0 SCOPE OF SERVICES

- 3.1 PROJECT MANAGEMENT: CONSULTANT shall be responsible to perform the following tasks throughout the course of the PROJECT:
 - 3.1.1 Document all meetings, conferences, coordination, phone conversations, etc. and send documentation to OWNER within three (3) calendar days.
 - 3.1.2 Meet with the Owner in a Pre-Work Conference in order to determine design criteria, requirements and codes and other critical design features of the Project as well as project schedule and milestone dates.
 - 3.1.3 Provide Owner with a list of all proposed sub-consultants and tasks sub-consultants are responsible to perform.
 - 3.1.4 Meet with the Owner to discuss review comments on each phase of the project, and incorporate appropriate comments into following phase.
- 3.2 FIELD INVESTIGATION PHASE: Upon receiving the written Notice to Proceed, the Consultant shall perform the following Field Investigation tasks in accordance with the schedule provided in Attachment E.

Field investigations will consist of manhole and visual pipe inspections, storm cross connection testing, creek crossing inspections, smoke testing, main line cleaning and television inspections, line dye water testing, and manhole dye water testing conducted within the Study Area. Quantities have been estimated for this study area. Adjustments to the estimated quantities may be made as actual quantities are determined for the various inspections completed.

3.2.1 PUBLIC INFORMATION PROGRAM

The CONSULTANT shall conduct a public notification program prior to the field inspections in order to minimize potential alarm over the presence of field personnel in backyards and over the potential for entry of test smoke into the various premises.

The CONSULTANT will complete press releases to submit to the OWNER, hold informational meetings, and coordinate with OWNER staff.

Notification will be given to the OWNER, building owners, and residents by the distribution of door hangers at least 48 hours prior to commencing smoke testing activities. The local fire department, police department, emergency vehicle services (EMSA) and the OWNER staff will be notified

each day prior to tests through the use of facsimile machines and/or e-mail.

Special coordination with property managers will be necessary for hospitals, medical offices, banks, government buildings, and other large commercial facilities.

The CONSULTANT will respond to all telephone calls by building owners or occupants during all active phases of the project.

3.2.2 MANHOLE INSPECTIONS

Manhole inspections will comply with the Manhole Assessment and Certification Program (MACP) inspection protocol. Whenever possible, the CONSULTANT will conduct topside inspections of every accessible manhole in the prioritized areas. Where entry is required confined space entry procedures will be followed. The following manhole components will all be inspected for signs of I&I and for structural soundness: the manhole cover, cover to frame fit, the manhole frame, the frame-to-chimney seal, the chimney condition, the corbel condition, the wall condition, the step condition, the bench, the invert, and each of the pipe seals. Other information will also be obtained relative to the manhole location, grade elevation, ponding potential, manhole diameter and depth, construction materials, active I&I, evidence of I&I, and evidence of surcharge. Rim to invert measurements and the general orientation of all connecting lines will be recorded and photographed. Manholes which are surcharged during average flow conditions will be identified and turned over to the OWNER for cleaning prior to smoke testing. Photographs will be taken of all severe or unusual manhole defects or configurations and will be loaded as digital photos into the project database.

While inside the manhole, each of the incoming pipes will be inspected for signs of cracking, collapse, root intrusion, deposition, grease, offset joints, active infiltration, or other defects. Other information such as pipe diameter and material will also be collected. Lines with observable structural defects will be earmarked as candidates for future television inspections. Pipe diameter measurements shall be rounded to the nearest industry standard pipe size.

Manholes which present inconclusive evidence of I&I shall be earmarked as candidates for dye water testing in order to substantiate whether or not the suspect component is an I&I source. A prioritized list of manholes with suspect components shall be developed and presented to the OWNER for review.

Diligent search shall be made for each manhole in Subbasin LL34. Metal detecting and probing equipment shall be used as needed to locate buried manholes. Should the search prove unsuccessful, the manhole number shall be noted and turned over to the OWNER for assistance in locating it. Manholes subsequently located shall be inspected at no additional charge to the OWNER.

3.2.3 SMOKE TESTING

Smoke testing will be conducted using dual axial blowers. Smoke testing lengths shall be limited to three line segments between the upstream and

downstream blower locations. Each segment shall be isolated by sandbagging. Smoke bombs shall be used to generate smoke for the smoke testing. "Liquid smoke" will not be allowed. Segments totaling less than 900 feet may include straight through manholes. Smoke testing will be performed only during dry periods.

All defects identified by smoke testing shall be flagged and digital images shall be captured. Smoke defect locations shall be recorded on digital field forms. All smoke defects will be correlated to the appropriate address, manhole, or line segment in the field inspection database.

Main line defects and service lateral defects shall be carefully scrutinized to ensure that a conservative determination of public vs. private side defects is made. If necessary the line shall be earmarked for television inspection.

3.2.4 CLEANING AND TELEVISION INSPECTION

Television inspections shall be performed on line segments which show evidence of deterioration, either through visual pipe inspections or through smoke testing. Evidences of deterioration include active I&I, roots, offset joints, cracked or collapsed pipe, blockages, surcharging, or deterioration and damage as evidenced by smoke emission during smoke testing. Upon completion of the visual pipe inspections and smoke testing, defective line segments will be prioritized and a recommendation for television inspection will be developed. Lines recommended for television inspection will be listed by priority along with justification for the recommendation, and presented to the OWNER for review and discussion. Lines for which acceptable television data is on hand will be excluded from the list and will not be re-televised. Line segments that exhibit defects from smoke testing, and the existing TV file or tape does not reveal defects, will be recommended to be re-televised. Upon approval, the television inspection work will be scheduled and initiated. Television inspection will be performed using high quality color equipment and coded using the NASSCO PACP standards. Where appropriate, concurrent dye testing will be conducted to pinpoint I&I sources.

Perform cleaning and internal TV inspection of selected sewer lines and record findings. Sanitary sewer lines will be cleaned in order to facilitate the televised inspection activities. Standard cleaning rates are based on three passes with a jet cleaner. In the event that additional cleaning or root cutting is necessary, the CONSULTANT shall notify the OWNER. OWNER shall coordinate and provide additional cleaning as necessary.

During cleaning operations, all sludge, debris, etc. shall be removed from the sewer and disposed of at a location provided by the OWNER. The OWNER shall provide water for the cleaning operations at no charge to the CONSULTANT. CONSULTANT will follow OWNER'S established procedures to obtain a temporary water meter and acknowledges that a deposit is required. Concurrent dyed water flooding will be performed with TV inspection to verify locations of inflow defects. All data shall be provided in digital format on CD-ROM or USB Flashdrive.

3.2.5 CREEK CROSSING INSPECTIONS

The CONSULTANT will inspect the locations at which the sanitary sewer crosses a defined creek or water course. Observations will identify any exposed pipe or signs of leakage into or out of the sanitary sewer.

On unlined erodible channels, surveying will be performed to obtain upstream and downstream manhole rim and flow line elevations and stationing, the channel bottom elevation and the left and right stationing. Data will be used to identify the amount of cover remaining and, by comparing the data to record drawings, determine the type of pipe under the current channel. A table will be developed for the final report that will present pipe material, crossing elevations, and amount of remaining cover, maintenance area, line ID, line length, and distance from U/S manhole.

3.2.6 LINE SEGMENT DYE WATER TESTING

Line segments requiring dye water testing will be identified on the basis of smoke test results. Prior to initiating dye water testing, a list of line segments recommended for dye water testing will be provided to the OWNER for review and approval. The line segments on the list will be annotated as to the priority and reason for recommendation. Upon approval by the OWNER the dye testing will be scheduled and initiated.

Dyed water flooding shall be conducted at selected locations prior to televised inspection to verify the existence of I&I sources. Dye testing will also be conducted concurrently with television inspections on those line segments approved by the OWNER for dye testing.

The dye water will be induced into the line by use of a dye water injection probe at the location of the defect. Sufficient time will be allowed for the source to activate, at which time the television inspection equipment will be introduced into the line segment.

3.2.7 MANHOLE DYE WATER TESTING

Testing of defective manholes will be conducted on those manholes approved by the OWNER for water testing. Prior to initiating testing, a list of manholes recommended for testing will be provided to the OWNER for review and approval. The manholes on the list will be annotated as to the priority and reason for recommendation. Upon approval by the OWNER the testing will be scheduled and initiated.

The testing will be conducted by injecting water into the surrounding soil using one or more injection probes. Sufficient time will be allowed for the source to activate, at which time the defective components shall be noted and the manhole component ratings adjusted. Due to the ease of observation and at the CONSULTANT's discretion, dye may not be used for manhole water testing.

3.2.8 STORM CROSS-CONNECT TESTING

Storm Cross-Connect Testing will be conducted at potential cross connections between the sanitary and storm sewer systems. Prior to initiating Storm Cross-Connect Tests, the CONSULTANT will submit a list of potential cross connections to the OWNER for review and approval. Upon approval by the OWNER, the testing will be scheduled and initiated.

Storm sewers up to 30-inches in diameter shall be tested by plugging the storm sewer and filling it with dyed water, and observing the sanitary system at a downstream manhole for signs of dyed water. Storm sewers larger than 30-inches will be tested by high pressure smoke testing of the sanitary system with upstream and downstream manholes plugged.

3.2.9 DATA ENTRY/QUALITY ASSURANCE

Each field inspection form will be reviewed to ensure that the field data is complete and free from obvious errors or inaccuracies. Smoke test photos will be reviewed to ensure that background reference features appear in the photo. The CONSULTANT will conduct random inspections to double check the accuracy and consistency of the work completed by the field crews. Manhole, visual pipe, and smoke test forms will be reviewed to ensure that they correlate with the OWNER's atlas. Data entry will be performed concurrently with the field inspections to ensure that errors are identified, addressed, and corrected as soon after the inspection was performed as possible.

All manhole, visual pipe, smoke testing and any other observed defects shall be captured with a digital camera and loaded on to a CD or USB Flashdrive for delivery to the OWNER.

3.3 DEFECT ANALYSIS AND REPORTS PHASE: At the conclusion of the field inspections for the study area identified, an engineering analysis of field inspection data shall be performed to develop recommendations for prioritizing I&I source repairs. A description of field investigations, engineering analysis, and recommended action to reduce I&I will be included in the report. The evaluation shall consider all sources of data provided by the OWNER as well as data collected during the Field Investigation Phase of the project. CONSULTANT shall deliver a comprehensive rehabilitation and improvement strategy as coordinated with the OWNER.

- 3.3.1 Develop rehabilitation and improvement costs for manhole and line repairs for Subbasin LL34.
- 3.3.2 Perform priority analysis for infiltration rehabilitation plan based on applicable rehabilitation method, material, and costs.
- 3.3.3 Perform priority analysis for inflow rehabilitation plan based on applicable rehabilitation method, material and costs.
- 3.3.4 Develop recommendations for rehabilitation of public I&I sources in priority order and cost estimates by individual rehabilitation type.
- 3.3.5 Develop a separate document, entitled Private Sector Defects Report. The Private Sector Defects Report will be provided to the OWNER in hard copy as well on a CD or USB Flashdrive that provides residential address, and pictures of the defect(s). Additional picture(s) will include a reference shot of the area to clearly identify the residence. Each defect will be presented on a map showing the location.

Prepare and submit six (6) copies of Defects Analysis and Report which includes results of the I&I investigations, findings, cost estimates,

recommended plan to reduce I&I and a preliminary schedule for implementation of sewer rehabilitation.

- 3.4 PRELIMINARY DESIGN PHASE: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 3.5 FINAL DESIGN PHASE: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 3.6 BID DOCUMENTS: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 3.7 BID ASSISTANCE PHASE: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 3.8 CONSTRUCTION SERVICES PHASE: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 3.9 RECORD DRAWINGS: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.

**ATTACHMENT B
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34

PROJECT NUMBER 2154320**

ORGANIZATION OF SUBMITTAL DOCUMENTS

The CONSULTANT shall prepare the following documents as described as a part of the AGREEMENT dated the _____ day of _____, 2020.

- 1.0 PRIVATE SECTOR DEFECTS REPORT:** The CONSULTANT shall submit a Private Sector Defects Report that lists all defects identified through the field investigations on private property.
- 2.0 PUBLIC SECTOR DEFECTS ANALYSIS REPORT:** The CONSULTANT shall submit a Public Sector Defects Report that lists all defects identified through the field investigations found in OWNER's collection system. The report shall include rehabilitation recommendations, prioritization and preliminary cost estimates.
- 3.0 REHABILITATION CONSTRUCTION PLANS:** These deliverables may be negotiated with the CONSULTANT upon the request of the OWNER.
- 4.0 REHABILITATION TECHNICAL SPECIFICATIONS:** These deliverables may be negotiated with the CONSULTANT upon the request of the OWNER.
- 5.0 REHABILITATION CONTRACT DOCUMENTS:** These deliverables may be negotiated with the CONSULTANT upon the request of the OWNER.

**ATTACHMENT C
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34
PROJECT NUMBER 2154320**

COMPENSATION AND ADDITIONAL SERVICES

The following compensation and hourly rates shall apply as described in Attachment D and shall be made a part of the AGREEMENT dated the _____ day of _____, 2020.

1.0 BASIC COMPENSATION

The basic compensation for the Professional Consultant to perform all duties and responsibilities associated with the Scope of Services as described in Attachment A shall be in accordance with the following payment breakdown:

- 1.1 Project Management Payment: The OWNER shall pay the CONSULTANT a lump sum amount of \$10,000.00 for the ongoing project management activities throughout the project. This amount includes all labor, material, overhead and profit associated with the Scope of Services.
- 1.2 Field Investigations Phase Payment: The OWNER shall pay the CONSULTANT the following unit prices for the completion of the Field Investigations Phase. These unit price amounts include all labor, material, overhead and profit associated with the field investigations as described in the Scope of Services.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
2.1.A	Manhole Inspections	EA	311	\$180.00	\$55,980.00
2.1.B	Manhole Dye Testing	EA	40	\$195.00	\$7,800.00
2.1.C	Smoke Testing	LF	60,003	\$0.76	\$45,600.00
2.1.D	Storm Cross-Connect Dye Tests	EA	10	\$725.00	\$7,250.00
2.1.E	Creek Crossing Inspection	EA	5	\$500.00	\$2,500.00
2.1.F	CCTV Inspection and Cleaning	LF	15,000	\$5.30	\$79,500.00
2.1.G	Line Segment Dye Tests	EA	12	\$310.00	\$3,720.00

- 1.3 Defects Analysis and Reports Phase Payment: The OWNER shall pay the CONSULTANT a lump sum amount of \$35,500.00 for the completion of the Defects Analysis and Reports Phase. This amount includes all labor, material, overhead and

profit associated with the Scope of Services.

- 1.4 Preliminary Phase Payment: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 1.5 Final Phase Payment: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 1.6 Construction Services Phase: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 1.7 Project Closeout Phase Payment: This phase may be negotiated with the CONSULTANT upon the request of the OWNER.
- 1.8 The OWNER may negotiate other professional services fees with the CONSULTANT at the OWNER'S discretion.

2.0 ADDITIONAL SERVICES BASED ON TIME

The hourly rates set forth in Appendix 1 include all salaries, benefits, overhead and other indirect costs including federal, state, and local taxes, plus profit and effective as of January 1, 2020 for architectural / engineering services.

3.0 REPRODUCTION

All charges for reproduction shall be included in Basic Compensation Fee of the Professional Consultant. No separate payment will be made for these expenses.

4.0 MILEAGE

All direct costs shall be included in the Basic Compensation of the Professional Consultant. No separate payment will be made for these expenses.

5.0 DIRECT COSTS

All direct costs shall be included in the Basic Compensation of the Professional Consultant. No separate payment will be made for these expenses.

6.0 ADJUSTMENT CLAUSE

The rates and costs described in this AGREEMENT shall not be revised annually, unless mutually agreed upon by both parties.

**ATTACHMENT D
TO
AGREEMENT FOR CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY (OWNER)
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34
PROJECT NUMBER 2154320**

OWNER'S RESPONSIBILITIES AND SPECIAL CONDITIONS

The following list of special OWNER'S responsibilities and contract special conditions shall be made a part of this AGREEMENT dated the ____ day of _____, 2020.

1.0 OWNER'S RESPONSIBILITIES

- 1.1 OWNER shall furnish to CONSULTANT all available information pertinent to the PROJECT including previous reports and any other data relative to design and construction of the PROJECT;
- 1.2 OWNER shall furnish to CONSULTANT all public utility information available relative to the design and construction of the PROJECT. Consultant topographical survey shall locate all utilities above and below ground for exact location;
- 1.3 OWNER shall furnish to CONSULTANT list of codes adopted by the municipality as well as subdivision regulations, design criteria and construction standards and specifications that may be pertinent to the design and construction of the PROJECT;
- 1.4 OWNER shall be responsible for all permit fees and for all reproduction costs associated with the bidding of the final approved construction documents required for the construction of this PROJECT;
- 1.5 OWNER shall be responsible for all land/easement acquisition costs and filing of the required legal documents, if necessary; and
- 1.6 OWNER shall examine all studies, reports, sketches, estimates, specifications, plan drawings, proposals, and other documents presented by the CONSULTANT and render in writing decisions pertaining thereto within a reasonable time so as not to delay the SERVICES of the CONSULTANT.

2.0 SPECIAL CONDITIONS

None.

**ATTACHMENT E
TO
AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES
BETWEEN
BROKEN ARROW MUNICIPAL AUTHORITY
AND
HOLLOWAY, UPDIKE AND BELLEN, INC.
FOR
WASTEWATER COLLECTION SYSTEM REHABILITATION – LYNN LANE WWTP
SUBBASIN LL34
PROJECT NUMBER 2154320**

PROJECT SCHEDULE

The following schedule shall be made a part of the AGREEMENT dated the__day of _____ 2020.

1.0 FIELD INVESTIGATION PHASE:

- 1.1 Notice to Proceed: Upon written notice to proceed CONSULTANT shall begin field investigations within fifteen (15) calendar days.
- 1.2 Field Investigations: Consultant agrees to diligently pursue completion of all Field Investigations within three hundred thirty-five (335) calendar days. OWNER acknowledges that smoke testing and other I&I Reduction Field Investigations are weather dependent and that abnormal weather may delay completion of the Field investigation portion of this work.

2.0 DEFECT ANALYSIS AND REPORTS PHASE:

- 2.1 Private Sector Defects Report and Public Sector Defects Analysis and Report will be submitted for review by OWNER within sixty (60) calendar days after completing all Field Investigations.