

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION AUTHORIZING THE ADMINISTRATOR OF THE DEPARTMENT OF PUBLIC WORKS TO ENTER INTO AN AGREEMENT WITH LITTLEJOHN ENGINEERING ASSOCIATES, INC. FOR PROFESSIONAL SERVICES RELATIVE TO CONTRACT NO. W-12-022-101, FOCUSED SANITARY SEWER EVALUATION STUDY (SSES) AND REHABILITATION OF SOUTH CHICKAMAUGA CREEK SUB-BASIN 1, FOR AN AMOUNT NOT TO EXCEED EIGHT HUNDRED SIXTY-THREE THOUSAND SEVEN HUNDRED FIFTY DOLLARS (\$863,750.00).

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BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, it is hereby authorizing the Administrator of the Department of Public Works to enter into an agreement with Littlejohn Engineering Associates, Inc. for professional services relative to Contract No. W-12-022-101, Focused Sanitary Sewer Evaluation Study (SSES) and Rehabilitation of South Chickamauga Creek Sub-Basin 1, for an amount not to exceed \$863,750.00.

ADOPTED: \_\_\_\_\_, 2013.

/ss

# City of Chattanooga



## Resolution/Ordinance Request Form

Date Prepared: 3/15/13

Preparer: Dennis Malone

Department: Public Works

Brief Description of Purpose for Resolution/Ordinance:

Res./Ord. # \_\_\_\_\_ Council District # 5

A Council Action is requested for the Administrator of the Department of Public Works to enter into an agreement with Littlejohn Engineering Associates, Inc., for professional services, relative to Contract No. W-12-022-101, Focused Sanitary Sewer Evaluation Study (SSES) and Rehabilitation of South Chickamauga Creek Sub-basin 1, in an amount not to exceed \$863,750.00

Name of Vendor/Contractor/Grant, etc.	<u>Littlejohn Engineering Associates, Inc.</u>	New Contract/Project? (Yes or No)	<u>No</u>
Total project cost \$	<u>863,750.00</u>	Funds Budgeted? (YES or NO)	<u>Yes</u>
Total City of Chattanooga Portion \$	<u>863,750.00</u>	Provide Fund	<u>6011</u>
City Amount Funded \$	<u>863,750.00</u>	Provide Cost Center	_____
New City Funding Required \$	<u>0</u>	Proposed Funding Source if not budgeted	<u>ISS - CD</u>
City's Match Percentage %	_____	Grant Period (if applicable)	_____

### List all other funding sources and amount for each contributor.

Amount(s)	Grantor(s)
\$ _____	_____
_____	_____
_____	_____

Agency Grant Number \_\_\_\_\_

CFDA Number if known \_\_\_\_\_

Other comments: (Include contingency amount, contractor, and other information useful in preparing resolution)

Consent Decree Project - ISS

Approved by: \_\_\_\_\_

DESIGNATED OFFICIAL/ADMINISTRATOR

Reviewed by: FINANCE OFFICE

Please submit completed form to @budget, City Attorney and City Finance Officer

Revised: 1/26/09



**CITY OF CHATTANOOGA**  
**STANDARD AGREEMENT FOR ENGINEERING SERVICES**

SOP 2003-9  
Date of Issue 10-16-03  
Rev. 11-13-12

**THIS AGREEMENT**, is between the City of Chattanooga, Tennessee, a municipal corporation in the state of Tennessee, hereinafter called Owner, and

Littlejohn Engineering Associates, Inc.,

Hereinafter called Engineer.

The Owner wishes to employ the Engineer to perform professional engineering services for

W-12-022-101 Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek Sub-basin 1,

hereinafter called Project.

In consideration of the provisions contained in this Agreement, the Owner and Engineer agree to the following:

1. **EFFECTIVE DATE**

The effective date of this Agreement shall be \_\_\_\_\_, 20\_\_\_\_\_.

2. **GOVERNING LAW**

This Agreement shall be governed by the laws of the State of Tennessee and the codes of the City of Chattanooga.

3. **SERVICES TO BE PERFORMED BY ENGINEER**

Engineer shall perform the Services described in Attachment A, Scope of Services, in accordance with applicable sections of the City of Chattanooga Design and Construction Standards in effect on the date of this agreement.

4. **COMPENSATION**

Owner shall pay Engineer in accordance with the Attachment B, Compensation.

5. **OWNER'S RESPONSIBILITIES**

Owner shall be responsible for all matters described in Attachment C, Owner's Responsibilities.

6. **SUPPLEMENTAL AGREEMENTS**

The provisions set forth in Attachment D, Supplemental Agreements, shall be incorporated into this Agreement

7. **PROJECT SCHEDULE**

The provisions set forth in the Attachment E, Project Schedule, shall be incorporated into this Agreement.

8. **RATE SCHEDULE**

The Engineer shall provide a schedule of standard hourly rates for all employees to be used in the performance of all contracts with a cost-not-to-exceed basis. This schedule shall be incorporated into the agreement as Attachment F.

9. **INVOICING**

The Engineer will use the format established in Attachment G, Standard Invoice, for all invoices submitted for services on the Project.



10. STANDARD OF CARE

Engineer shall exercise the same degree of care, skill, and diligence in the performance of Services as is ordinarily possessed and exercised by a professional engineer under similar circumstances in the same area of practice. Engineer makes no warranty or guarantee, either expressed or implied, as part of this agreement.

11. INDEMNIFICATION

Engineer hereby agrees to fully indemnify and hold harmless Owner and any of its departments, divisions, agencies, officers, employees and elected officials from all loss, damage, cost, or expenses specifically including attorneys' fees and other expenses of litigation incurred by or on behalf of the Owner and any of its officers, employees or elected officials arising out of Engineer's actual negligent performance of Services under this Agreement, including errors or omissions.

Owner hereby agrees to fully indemnify and hold harmless Engineer and any of its officers, employees, or designated agents from all loss, damage, cost, or expenses specifically including attorneys' fees and other expenses of litigation incurred by or on behalf of the Engineer and any of its officers, employees or designated agents arising out of Owner's negligence to the extent provided by the Tennessee Governmental Tort Liability Act, T.C.A. 29-20-201 et seq.

12. INSURANCE

Engineer shall purchase and maintain during the life of this Agreement, insurance coverage which will satisfactorily insure him against claims and liabilities which arise because of the execution of this Agreement, with the minimum insurance coverages as follows:

- a. Commercial General Liability Insurance, with a limit of \$1,000,000 for each occurrence and \$2,000,000 in the general aggregate.
- b. Automobile Liability Insurance, with a limit of \$1,000,000 for each accident, combined single limit for bodily injury and property damage.
- c.
- d. Worker's Compensation Insurance and Employer's Liability Insurance, in accordance with statutory requirements, with a limit of \$500,000 for each accident.
- e. Professional Liability Insurance, with a limit of \$1,000,000 for each claim and aggregate.

Prior to issuance of the Notice to Proceed by Owner, Engineer shall have on file with Owner certificates of insurance acceptable to Owner. Said certificates of insurance shall be filed with Owner in January of each year or may be submitted with each agreement. 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 section shall survive.

Notwithstanding any other provision of the Agreement, Owner waives any claim against Engineer and, to the maximum extent permitted by law, agrees to defend, indemnify, and hold Engineer harmless from any claim, liability, and/or defense costs for injury or loss arising from Engineer's discovery of unanticipated hazardous materials or suspected hazardous materials, including, but not limited to, any costs created by delay of the project and any cost associated with possible reduction of the property value.

13. LIMITATIONS OF RESPONSIBILITY

Engineer shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project, (2) the failure of



any contractor, subcontractor, vendor, or other Project participant, not under contract to Engineer, to fulfill contractual responsibilities to the Owner or to comply with federal, state or local laws, regulations, and codes; or (3) procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Attachment A, Scope of Services.

14. OPINIONS OF COST AND SCHEDULE

Since Engineer has no control over the cost of labor, materials, or equipment furnished by others, or over the resources provided by others to meet Project construction schedules, Engineer's opinion of probable construction costs and of construction schedules shall be made on the basis of experience and qualifications as a professional engineer. Engineer does not guarantee that costs will not vary from Engineer's cost estimates or that actual construction schedules will not vary from Engineer's projected schedules.

15. REUSE OF DOCUMENTS

All documents, including, but not limited to calculations, drawings, specifications, and computer software prepared by Engineer pursuant to the Agreement are instruments of service in respect to the Project. They are not intended or represented to be suitable for reuse by Owner or others on extensions of the Project or on any other project. Any reuse without prior written verification or adaptation by Engineer for the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to Engineer. Any verification or adaptation requested by Owner shall entitle Engineer to compensation at rates to be agreed upon by Owner and Engineer.

16. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Except as otherwise provided herein, engineering documents, calculations, drawings, specifications, and other documents prepared by Engineer as part of the Services shall become and be the sole property of Owner. However, both Owner and Engineer shall have the unrestricted right to their use. Engineer shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property protected under the copyright laws of the United States. Rights to intellectual property developed, utilized, or modified in the performance of services shall remain the property of Engineer.

17. RECORDS RETENTION AND AUDIT PROVISION

The term "Engineer" is used interchangeably to describe signatories to contracts, grants, and agreements with the City and applies to reflect the relationship with the City (Engineer, Contractor, Licensee, Supplier, Vendor, Consultant, Grant Recipient, etc.).

- a. All records relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the Engineer or the Engineer's consultants, shall be made available for inspection and copying upon written request to the Owner. Additionally, said records shall be made available, upon request by the Owner, to any state, federal or other regulatory authorities and any such authority may review, inspect and copy such records. Said records include, but are not limited to, all plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos, or other writings or things which document the Project, its design and its construction. Said records expressly include those documents reflecting the time expended by the Engineer and its personnel to perform the obligations of this Agreement and the records of expenses incurred by the Engineer in its performance under said Agreement. The Engineer shall maintain and protect these records for no less than seven (7) years after the completion of the Project, or for any longer period of time as may be required by applicable law, good engineering practice, and upon notice during the pendency of any claims or litigation arising from the Project.



- b. The Owner or its assign may audit all financial and related records (including digital) associated with the terms of the contract or agreement including timesheets, reimbursable out of pocket expenses, materials, goods, and equipment claimed by the Engineer. The Owner may further audit any of Engineer's records to conduct performance audits (to identify waste and abuse or to determine efficiency and effectiveness of the contract or agreement) or to identify conflicts of interest.
- c. The Engineer shall at all times during the term of the contract or agreement and for a period of seven years after the end of the contract, keep and maintain records of the work performed pursuant to this Contract or Agreement. This shall include proper records of quotations, contracts, correspondence, invoices, vouchers, timesheets, and other documents that support actions taken by the Engineer. Documents shall be maintained by the Engineer, which are necessary to clearly reflect all work and actions taken. All such records shall be maintained in accordance with generally accepted accounting principles. The Engineer shall at its own expense make such records available for inspection and audit (including copies and extracts of records as required) by the Owner at all reasonable times and without prior notice.
- d. The obligations of this Section shall be explicitly included in any subcontracts or agreements formed between the Engineer and any subcontractors or suppliers of goods or services to the extent that those subcontracts or agreements relate to fulfillment of the Engineer's obligations to the Owner.
- e. Costs of any audits conducted under the authority of this section and not addressed elsewhere will be borne by the Owner unless the audit identifies significant findings that would benefit the Owner. The Engineer shall reimburse the Owner for the total costs of an audit that identifies significant findings that would benefit the Owner.
- f. This Section shall not be construed to limit, revoke, or abridge any other rights, powers, or obligations relating to audit which the Owner may have by Federal, State, or Municipal law, whether those rights, powers, or obligations are express or implied.

#### 18. TERMINATION

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen 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 terminate or suspend performance of this Agreement for Owner's convenience upon written notice to Engineer. If termination or suspension is for Owner's convenience, Owner shall pay Engineer for all Services performed prior to the date of the termination notice. Upon restart, an adjustment acceptable to Owner and Engineer shall be made to Engineer's compensation.

#### 19. DELAY IN PERFORMANCE

Neither Owner nor Engineer shall be considered in default of the Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonconforming party. For purposes of this Agreement, such circumstances include abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, or other civil disturbances; sabotage; judicial restraint; discovery of unanticipated hazardous wastes; 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 Engineer under this Agreement. Should such circumstances occur, the nonconforming 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 the



Agreement. If the Engineer is delayed in the performance of the services for more than 365 calendar days, either by the Owner or circumstances beyond his control, an equitable adjustment to the contract amount can be made to compensate for additional costs incurred.

For delays in performance by Engineer, as set forth in Attachment E, Project Schedule, caused by circumstances which are within its control, such delays shall be documented on the Engineer's Project Performance Evaluation form. Said form shall be completed at the conclusion of Project and acknowledged by both Owner and Engineer. Completed form shall be retained by Owner for a period of seven years and reviewed prior to consultant selection for City projects. In the event Engineer is delayed in the performance of Services because of delays caused by Owner, Engineer shall have no claim against Owner for damages or contract adjustment other than an extension of time.

**20. HAZARDOUS MATERIALS**

Hazardous materials may exist at a site where there is no reason to believe they could or should be present. The Owner and Engineer agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. Owner and Engineer also agree that the discovery of unanticipated hazardous materials may make it necessary for the Engineer to take immediate measures to protect health and safety. Owner agrees to compensate Engineer for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials.

Engineer agrees to notify Owner when unanticipated hazardous materials or suspected hazardous materials are encountered. Owner agrees to make any disclosures required by law to the appropriate governing agencies, and agrees to hold Engineer harmless for any and all consequences of disclosures made by Engineer which are required by governing law. In the event the project site is not owned by Owner, the Owner agrees to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.

**21. COMMUNICATIONS**

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

Engineer: Littlejohn Engineering Associates, Inc.  
W. Scott McDonald, P.E. – Office Manager  
210 Hamm Road  
Suite B  
Chattanooga, TN 37405  
O: 423-954-1055, F: 423-424-0899  
Email: smcdonald@leainc.com

Owner: City of Chattanooga  
Department of Public Works  
Engineering Division  
Suite 2100, Development Resource Center  
1250 Market Street  
Chattanooga, TN 37402  
(423) 643- 6033

Nothing contained in the Article shall be construed to restrict the transmission of routine communications between representatives of Engineer and Owner.



**CITY OF CHATTANOOGA**  
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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SOP 2003-9  
Date of Issue 10-16-03  
Rev. 11-13-12

22. **WAIVER**

A waiver by either Owner or Engineer 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.



23. DISPUTE RESOLUTION

Claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be subject to mediation in Chattanooga, Tennessee, in accordance with the following provisions:

- a. The mediation shall be conducted by a mediator mutually acceptable to both parties.
- b. The parties agree to share equally in the expenses of mediations.
- c. Such mediation may include the Engineer or any other person or entity who may be affected by the subject matter of the dispute.
- d. Unless the parties agree otherwise, mediation shall be a condition precedent to the exercise of any legal remedy other than a proceeding seeking an immediate injunction or restraining order to protect the rights of a party pending litigation. Notwithstanding the issuance of an injunction or restraining order or the refusal of a court to issue such an order, the dispute shall continue to be subject to mediation.

24. 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.

25. INTEGRATION

This Agreement represents the entire and integrated agreement between Owner and Engineer. All prior and contemporaneous communications, representations, and agreements by Engineer, whether oral or written, relating to the subject matter of this Agreement, as set forth in Attachment D, Supplemental Agreements, are hereby incorporated into and shall become a part of this Agreement.

26. SUCCESSORS AND ASSIGNS

Owner and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns, and legal representatives to the other party of this Agreement and to the directors, officers, partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all provisions of this Agreement.

27. ASSIGNMENT

Neither Owner nor Engineer shall assign any rights or 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 Engineer from employing independent consultants, associates, and subcontractors to assist in the performance of the Services; however, other agreements to the contrary notwithstanding, in the event Engineer employs independent consultants, associates, and subcontractors to assist in performance of the Services, Engineer shall be solely responsible for the negligent performance of the independent consultants, associates, and subcontractors so employed.



**CITY OF CHATTANOOGA**  
STANDARD AGREEMENT FOR ENGINEERING SERVICES

SOP 2003-9  
Date of Issue 10-16-03  
Rev. 11-13-12

28. **THIRD PARTY RIGHTS**

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than Owner and Engineer.

29. **RELATIONSHIP OF PARTIES**

Nothing contained herein shall be construed to hold or to make the Owner a partner, joint venturer, or associate of Engineer, nor shall either party be deemed the agent of the other, it being expressly understood and agreed that the relationship between the parties is and shall at all times remain contractual as provided by the terms and conditions of this Agreement.

30. **NON-DISCLOSURE**

Engineer agrees not to disclose or to permit disclosure of any information designated by the Owner as confidential, except to the engineer's employees and subcontractors who require such information to perform the services specified in this agreement.

31. **NON-DISCRIMINATION**

Engineer agrees to comply with all federal, state, and local non-discrimination laws and regulations. Engineer agrees not to discriminate against any participant in this Agreement on the basis of race, color, religion, sex, age or national origin. Engineer further agrees to comply with all federal, state and local laws regarding treatment and accommodations for individuals with disabilities.

32. **DRUG FREE WORKFORCE**

Engineer certifies that it will provide a drug-free workplace and agrees to comply with the applicable requirements of the Drug-Free Workplace Act of 1988.

33. **FEDERAL OR STATE FUNDING**

In the event that the Project is funded in whole or in part by Federal or State grants, Engineer agrees to abide by all applicable Federal and State laws, regulations, grant conditions and procedures.

IN WITNESS WHEREOF, Owner and Engineer have executed this Agreement.

W. Scott McDonald 3/14/13  
W. Scott McDonald – Office Manager  
Littlejohn Engineering Associates, Inc Date

\_\_\_\_\_  
Administrator of Public Works Date

Travis Wilson 3/14/13  
[Consultant Name & Title] Date

\_\_\_\_\_  
Director of Purchasing Date

Reviewed by City Attorney Office \_\_\_\_\_  
Initial Date



**ATTACHMENT A**

Owner: City of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.

Project Number & Name: W-12-022-101

Focused Sanitary Sewer Evaluation Study and Rehabilitation of South

Chickamauga Creek Sub-basin 1

**SCOPE OF SERVICES**

**1. BASIC SERVICES**

The project is specifically defined as: In order to locate and identify sources of I/I, the City of Chattanooga, Tennessee is requesting for a Sanitary Sewer Evaluation Study (SSES) to be conducted on all parts of the sanitary sewer system located within South Chickamauga Creek 1, a sub-basin of the sanitary sewer system. South Chickamauga Creek 1 consists of approximately 81,000 LF of sanitary sewer piping, ranging from 4-inch to 84-inch diameter. The SSES shall include the inspection of pipelines and manholes.

The data from the SSES will be analyzed and prioritized by the City and the PM to develop rehabilitation recommendations for the Sub-basin. The design and construction services of the rehabilitation recommendations shall be completed under this project. Rehabilitation is estimated to be 50% of the entire sub-basin, and shall include approved trenchless technologies, such as cured in place pipeline rehabilitation and pipe bursting, (where possible) and open cut construction. The following table provides a breakdown of the estimated footages by pipe diameter as currently shown in the City’s geographic information system (GIS)

Diameter	Pipe Segments	Pipe Length
4	22	896
6	4	455
8	245	44,657
10	9	2,194
12	46	9,495
15	36	7,771
18	15	3,962
24	5	1,016
30	2	0
42	7	2,320
48	2	894
84	18	6,906
<b>Total =</b>	<b>409</b>	<b>80,566</b>

Based on a preliminary review by the Engineer of the GIS information provided by the PM, the above table indicates the segments, lengths and diameters that were used to prepare this agreement and subsequent unit prices. This review also indicated a total of 413 manholes in the project area. The Engineer also assumed that 58 of these manholes were “elevated” manholes that extend five feet (5 ft) or more above the ground surface or had an internal diameter greater than six feet (6 ft). The remaining 383 manholes were assumed to be “standard” manholes with diameters less than six



feet (6 ft) and/or elevations less than five feet (5 ft) above grade, allowing them to be inspected with typical equipment and effort.

The Engineer agrees to provide the following services:

**Task 1 – Data Gathering and Project Management**

- a. Prepare project management plan – The Engineer will prepare a project management plan indicating the procedures that will be followed, document planning assumptions, the key project milestones and the flow of information from the Engineer's project team to the PM. Included in the Project Management Plan will be a Safety Plan and a Quality Control/Assurance Plan detailing how all work in all tasks will be performed
- b. Prepare detailed project schedule – The Engineer will prepare a project schedule in Microsoft Project (version 2007) and submit this for review and approval to the PM. The project schedule will show key milestones and planning dates. This schedule will be kept up to date and a hard copy shall be submitted to the PM with each invoice.
- c. As this project is currently anticipated to be funded through the Tennessee Clean-water State Revolving Fund (CWSRF) Program, it is anticipated that the planning and design portion of this project will be required to be completed within 360 days after the notice to proceed (NTP) by the City and PM.
- d. It is anticipated that several meetings will be required for the duration of this project. These include an initial kick-off meeting between the Engineer, the PM and the City at the beginning of the project, a kick-off meeting prior between the parties prior to initiating SSES activities, a thirty percent (30%) project completion meeting and milestone meetings at 90% design and prior to bidding of the project. It is also anticipated that some meetings may be required for invoicing and coordinating and scheduling the SSES activities in Task 2.
- e. The Engineer will gather relevant project information including but not limited to: GIS data, record drawings, USGS maps, and flow data. Additionally, the Engineer will meet with the PM and City to discuss specific procedures for data flow to and from the Engineer to the PM including specific operating procedures for data delivery of the SSES information.
- f. The Engineer will prepare invoices and progress reports as required by the City and PM. It is anticipated that progress reports will show the work completed during the billing period, the work planned for the next billing period, the project schedule and identify any projects issues encountered during the billing period.

**Task 2 – Sanitary Sewer Evaluation Study (SSES)**

- a. For this project it is anticipated that manhole inspections, smoke testing, dye water testing, CCTV and Sonar/CCTV investigations will be performed. The Engineer will utilize a subcontractor (Compliance Enrvirosystems, LLC) for the manholes inspections, dye water testing, CCTV and TISCIT investigations. The Engineer will self perform the smoke testing investigations for this project area. The Engineer has broken these tasks out in the following table from the unit quantity assumptions shown above:



SSES TASK	Units	Units
MACP Manhole Inspection (NASSCO Level 2) - Standard Manhole	Ea.	355
MACP Manhole Inspection (NASSCO Level 2) - Raised Manhole	Ea.	58
Dyed Water Flooding of Storm Sewers	Ea.	5
Smoke Testing (4 " to 12" pipelines only)	L.F.	57,697
Smoke Testing ( 15" to 18" pipelines only)	L.F.	10,968
CCTV Inspection (up to 8 inch diameter)	L.F.	27,605
Rough Easement -CCTV Inspection (up to 8 inch diameter)	L.F.	18,403
CCTV Inspection (> 8 inch up to 15 inch diameter)	L.F.	11,946
Rough Easement -CCTV Inspection (> 8 inch up to 15 inch diameter)	L.F.	7,514
CCTV Inspection (> 15 inch up to 18 inch diameter)	L.F.	436
Rough Easement -CCTV Inspection (> 15 inch up to 18 inch diameter)	L.F.	3,526
CCTV & TISCIT Reverse Set-Up	Ea.	20
Cleaning (< 8 inch diameter)	L.F.	46,008
Cleaning (> 8 inch up to 15 inch diameter)	L.F.	19,460
Cleaning (> 15 inch up to 18 inch diameter)	L.F.	4,978
Heavy Cleaning (< 8 inch diameter)	L. F.	11,502
Heavy Cleaning (> 8 inch up to 15 inch diameter)	L. F.	4,865
Heavy Cleaning (> 15 inch up to 18 inch diameter)	L. F.	991
Intruding Tap Removal	Ea.	10
Sonar/CCTV Combined (TISCIT) Inspection 24" to 84" Diameter Pipe	L. F.	11,136

- b. Some assumptions that were inferred during the analysis of the project area include:
- Approximately 40% (18,403 LF of 46,008 LF) of the pipelines 8-inch in diameter or smaller were located in "Rough Easement" areas
  - Approximately 7,514 LF of the 19,460 LF of the pipeline greater than 8-inch and up to 15-inch diameter pipelines are located in "Rough Easement" areas.
  - Approximately 3,526 LF of the 3,962 LF of the 18-inch are located in "Rough Easement" areas.
  - As a result of the above assumptions approximately 436 LF of 18-inch pipeline would require CCTV inspection.
  - Approximately 25% of the 8-inch and smaller lines (11,502 LF of 46,008 LF) may require heavy cleaning in addition to normal precondition cleaning.
  - Approximately 25% of the 10-inch to 15-inch pipelines (4,865 LF of 19,460 LF) may require heavy cleaning in addition to normal precondition cleaning.
  - Approximately 25% of the 18-inch pipelines (991 LF of 3,962 LF) may require heavy cleaning in addition to normal precondition cleaning.
  - No pipelines greater than 18-inch in diameter will be cleaned.
  - Pipelines greater than 18-inch in diameter will be investigated using Totally Integrated



Sonar and CCTV Inspection Techniques (TISCIT).

- It is also anticipated that approximately 30 reverse set-ups may be required between CCTV and TISCIT activities in order to inspect the pipelines in the project area.
  - It is also assumed that no more than 10 protruding service lateral taps will be encountered in the project area that will have to be removed by robotic means in order to complete surveys of the entire pipe lengths.
  - All SSES work will be completed in accordance with the requirements of the specification sections in "Appendix V SSES Standard Specifications" provided via email on February 15, 2013 from Jacobs Engineering (PM) and specifically conforming to the following sections:
    - 33 01 30.14 – Precondition and Cleaning of Sewers of Underground Sewer Pipelines
    - 33 01 30.16 – Close Circuit TV Inspection of Existing Underground Sewer Pipelines
    - 33 01 30.24 – Smoke Testing of Underground Sewer Pipelines
    - 33 01 30.26 – Dye Water Testing of Underground Sewer Pipelines
    - 33 01 30.27 – Sonar Inspection of Existing Underground Sewer Pipelines
    - 33 01 30.29 – Inspection of Sanitary Sewer Manholes
  - It is also understood that prior to initiating SSES activities, the PM and City will provide a personal or file geodatabase in ESRI ArcGIS format (v. 10.0 or higher) of the sanitary sewer structures and manholes within the project area to the Engineer. The Engineer will utilize this information to populate their MACP software package, as well as produce initial field maps for use during the investigations.
  - It is anticipated that this geodatabase will clearly show which manhole structures have been previously surveyed under previous contracts by the City. It is assumed that approximately 263 of the 413 manhole structures have been previously surveyed by the City's third party contractor as shown in the preliminary information provided to the Engineer.
  - It is also anticipated that the PM and City will provide the Engineer with updated orthophotography (aerial imagery) of the project area, as well as additional GIS base information such as parcels, pavement edges, hydrographic features, storm water features, digital elevation models and contour information (two foot contours), buildings, zoning and any other additional GIS information available for the project area.
- c. At the complete of all SSES inspection activities, the Engineer will deliver inspections data via a National Association of Sewer Service Companies (NASSCO) PACP or MACP Standard Exchange Database(s) (version 6.0.2 or greater) on an external hard drive along with all encoded videos and observation photos to the PM and City for analysis and prioritization.
- d. The SSES activities will be performed in the following sequence:
- Manhole inspections will be the first SSES activity. Any new manholes discovered in the project area will be marked and flagged and reported to the PM. Any manholes shown on the GIS that cannot be located will be marked and a detailed list of these prepared for additional follow up by CCTV/Sonar inspection crews. If manholes are located via metal detector, but determined to be inaccessible due to being buried under soil (> 1 foot of depth) or asphalt or located under a structure (car or building), the Engineer shall annotate these and provide a list weekly to the PM and City of these structures. It is understood that the City will provide personnel or a third party contractor to uncover or make these structures accessible for the Engineer's subcontractor. It is understood that surveying of any previously un-surveyed or newly discovered manholes will performed by a third party contracted directly by the City. The PM and City will provide guidance concerning how unmapped manhole structures will be assigned "Facility ID" information. The Engineer will ensure that field crews follow these established procedures. During the course of



- performing the MACP Level 2 inspections, the Engineer will ensure that accurate depth measurements are recorded to the nearest 0.10 foot. It is understood that survey grade coordinates (northing, easting and elevation) for each manhole rim and surrounding grade will be provided by the City. This survey information will be provided to the Engineer for incorporation into the inspection results prior to submission of the final MACP Standard Exchange Database. It is anticipated that manhole inspections will require approximately 45 days to complete. The Engineer will provide a representative to oversee and coordinate these inspection activities for the duration of the project. As part of ensuring the quality of the data submitted to the City, the Engineer will review all inspection reports and data to ensure consistency and quality prior to submission of the final deliverables.
- Depending on weather conditions and soil conditions, smoke testing activities will be completed once the manhole inspections are completed, however they may begin and run concurrently weather permitting. The Engineer will provide sample reports per the specifications Section 33 01 30.24 for the PM's and City's review and approval. It is anticipated that smoke testing SSES activities will require approximately 30 to 45 days to complete. As part of ensuring the quality of the data submitted to the City, the Engineer will review all smoke testing inspection reports and data to ensure consistency and quality prior to submission of the final deliverables. All positive smoke testing observations will be captured utilizing a mapping grade global positioning survey unit (sub-meter horizontal accuracy).
  - Once manhole inspections have been completed, the Engineer will prepare updated maps of the project area and will begin CCTV and Sonar inspections. The Engineer will provide a representative to oversee and coordinate these inspection activities for the duration of the project. It is anticipated that cleaning and CCTV and Sonar inspection activities will require approximately 60 days to complete. As part of ensuring the quality of the data submitted to the City, the Engineer will conduct quality control reviews of the inspection reports and data periodically to ensure consistency and quality prior to submission of the final deliverables.
  - The Engineer will provide MACP and PACP Standard Exchange Files containing the manhole and CCTV/Sonar inspection data respectively. The Engineer will also provide a Microsoft Access database of smoke testing inspection results containing the information required in specification Section 33 01 30.24. In addition to each of the databases, the Engineer will provide all supporting photos, reports and videos for each respective SSES inspection in the formats required in the specifications.
- e. The Engineer will prepare a summary of findings report of the SSES inspection activities, to include the type and quantity of inspections performed and total number of observations discovered for each SSES inspection activity (manhole inspections, smoke testing, and CCTV/Sonar inspections).

### **Task 3 – Preliminary Engineering Report / SRF Facility Plan**

Once all SSES inspection activities are completed and all data has been submitted to the PM in the formats described above, it is understood that the PM and City will review this information and provide prioritized rehabilitation recommendations to the Engineer for review. It is understood that the PM will integrate this information into the City's GIS and provide for the rehabilitation selection for each defect and a prioritization of these defects to achieve the City's desired I/I and/or sanitary sewer overflow (SSO) reduction goals. It understood that the PM and City will provide the Engineer the final integrated GIS information showing the location of all defects and inspection results, as well as the prioritized rehabilitation recommendation results. This information will be provided in the form of an ESRI ArcGIS personal or file geodatabase (v. 10.0 or higher) and contain feature classes for each SSES inspection activity (Manhole Inspections, Smoke Testing Inspections, CCTV or Sonar Inspections). The PM will provide all layer symbology that will be



used to display the defects and rehabilitation recommendations. It is assumed that the intent of the rehabilitation recommendations and prioritization will focus on trenchless rehabilitation methods such as cured-in-place pipe (CIPP) rehabilitation, pipe bursting, manhole rehabilitation using epoxy or polymer methods, open cut service lateral reinstatement to the utility right-of-way or via CIPP rehabilitation of service laterals and subsurface manhole rehabilitation such as installation of water tight rings and covers and inflow dishes and point repairs to sections of pipelines. It is also anticipated that any open cut replacement recommendations will be limited to several manhole to manhole pipeline segments. Not included in this scope will be the design and permitting of wholesale multiple contiguous segments of new pipelines. Once the recommendation and prioritization information is received, the Engineer shall:

- a. Review the integrated inspection results and prioritized recommended rehabilitation methods and check for feasibility and constructability. It is anticipated that up to 40% of the project area features (manholes, pipelines and service laterals) will require rehabilitation. It is anticipated that over 32,000 LF of pipeline rehabilitation spread over 165 pipeline segments will have to be reviewed. Additionally it is anticipated that over 150 service laterals may require rehabilitation and therefore the smoke testing inspection information for these segments will have to be reviewed. Additionally it is anticipated that over 177 manholes may be selected for rehabilitation, therefore all of these reports will be reviewed.
- b. Review of any non prioritized reports, inspection data, videos or other information is not included in this scope of work.
- c. Once the Engineer has completed the review of the recommendations, a 30% conceptual plan for the rehabilitation recommendations will be prepared. The information from the ArcGIS feature classes will be utilized and shown on provided aerial imagery to create the plan views of the pipeline section and manholes to be rehabilitated. It is anticipated that these may be shown at a 1-inch to 400-foot scaled tabloid sized (11-inch x 17-inch) maps and presented to the PM and City for review and comment.
- d. From these conceptual plans, the Engineer will prepare conceptual level cost estimates.
- e. The Engineer will conduct a rehabilitation workshop to review the rehabilitation plan with City and PM, it is anticipated that this workshop may require up to 4 hours.
- f. The Engineer will prepare a CWSRF Facilities Plan/ Preliminary Engineering Report (PER) as part of this task. Specific items to be included in this plan are as follow:

#### 1. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

- 1.1 Statement of the Problem
- 1.2 Summary of the Alternative Solutions Considered
- 1.3 Recommended Solution

#### 2. PURPOSE AND NEED

- 2.1 Study Purpose
- 2.2 Need for the Project

#### 3. GENERAL INFORMATION

- 3.1 Existing Facilities and Geographic Area/Population Served
- 3.2 Optimum Performance Available with the Existing Facilities/Operational Problems
- 3.3 Existing Collection System (indicate collectors, pumping stations, force mains, and WWTPs)
- 3.4 Potential for Serving Additional Areas

#### 4. INFILTRATION AND INFLOW

- 4.1 Analysis of Infiltration and Inflow



- 4.2 Steps Being Taken to Reduce Excessive Infiltration and Inflow
  5. FUTURE CONDITIONS
    - 5.1 Planning Period (20 years)
    - 5.2 Land Use Projections
    - 5.3 Population Forecast
  6. DEVELOPMENT OF ALTERNATIVES
    - 6.1 Minimum of Three Alternatives in Addition to the "No Action" Alternative Compared For Cost- effectiveness, Environmental Impacts, and Feasibility
    - 6.2 "No Action" Alternative
    - 6.3 Chosen Alternative
  7. SELECTED PLAN DESCRIPTION
    - 7.1 Detailed Description of Chosen Alternative
    - 7.2 Public Involvement/Public Meeting
  8. PROJECT COSTS
    - 8.1 Estimated Construction Costs and Overall Project Costs
    - 8.2 Proposed Financing
    - 8.3 Projected Operating Costs and User Charge Structure
  9. ENVIRONMENTAL IMPACTS
    - 9.1 Planning Area and Project Area (indicated on USGS quad map) and a Brief Project Description
    - 9.2 Project Specific Impacts
  10. ENVIRONMENTAL JUSTICE
    - 10.1 Identification of Minority and Low Income Populations in Project Area
    - 10.2 Evaluation of Disproportionate Risks to Identified EJ Populations
    - 10.3 Identification of Public Participation Opportunities for Identified EJ Populations
    - 10.4 Evaluation of Environmental /Health Risks among Identified EJ Populations that may be Exacerbated by Proper Construction and Operation of the Selected Alternative
- g. It is anticipated that the PM and the City will provide information for items 4, 5 and 10 above.
- h. It is anticipated that eight (8) bound hard copies of the CWSRF facilities plan will be required. It is further anticipated that these hard copies will be provided to the PM who will deliver these to the SRF program.

**Task 4 – Finalize Design Drawings and Specifications**

- a. The Engineer will coordinate design and conduct design meetings with City and PM. It is anticipated that a 90% and final bid set review meeting will occur to review the drawings prior to advertising for bid.
- b. The Engineer will prepare design drawings necessary to convey to prospective contractors the extent and scope of work to be performed. The Engineer shall utilize the contour and digital elevation model data provided by the PM and City to develop ground profiles of the topography above the selected sewer segments that will be rehabilitated. Elevations from the MACP inspections and rim and ground elevation survey information provided by the City's third part contractor will be utilized to develop the pipe and manhole profiles. These profiles



will be developed in AutoCAD map and overlaid on the aerial imagery provided by the PM and City so that up to three segments may be shown per D-size sheet (24-inch x 36-inch). The Engineer estimates that approximately sixty (60) D-size sheets will be required to display the proposed rehabilitation pipelines and manholes. Drawings shall include plans and profiles for all rehabilitated pipe segments as shown in the example drawing in Appendix VI Example Plan and Profile Drawing provided via email on February 15, 2013 from Jacobs Engineering (PM). The final drawings will also include detail sheets for specific rehabilitation items such as service lateral replacement, manhole ring and covers and inflow dishes.

- c. The Engineer will prepare 90% and final design submittals to City and PM for review.
- d. The Engineer will incorporate City and PM comments and prepare final plans.
- e. The Engineer will prepare Technical Specifications, utilizing standard and guide specifications in CSI MasterFormat 2004 format as provided by City and PM.
- f. The Engineer will prepare Bid Documents and Bid Schedule utilizing standardized Division 00 and 01 specifications in CSI MasterFormat 2004 format as provided by City and PM
- g. The Engineer will prepare Final Takeoff and Opinion of Probable Cost.
- h. The Engineer will submit Final Bid Documents to PM and City for submittal to SRF for review, comment and approval.
- i. The Engineer will incorporate SRF final comments and prepare plans and specifications for bid.

#### **Task 5 - Bid Phase Services**

- a. The Engineer will prepare Advertisement for Bids and submit to City and PM for advertisement.
- b. It is anticipated that up to twelve sets of the bid documents and plans will be required to be submitted by the Engineer to the PM and City. It is further anticipated that the advertisement and issuing plans and maintaining the Plans Holder list will be performed by the PM or City. All questions and requests for information (RFI's) will be made to the PM or City and forwarded to the Engineer for response back to the PM or City.
- c. The Engineer will answer Contractor questions and issue Addendums as required.
- d. The Engineer will participate in Bid Opening and prepare certified Bid Tabulation.
- e. The Engineer will evaluate Bids and make Recommendation of Award.
- f. The Engineer will assist in submitting MBE/WBE documentation to SRF and get Approval to Award.
- g. The Engineer will conform and prepare Contract Documents for execution, it is anticipated that 10 bound hard copies will be required for this project.

#### **Task 6 – Construction Phase Services**

The Engineer will provide the following services for a maximum of nine (9) months from the date of the Notice to Proceed (NTP) for the Contractor awarded the rehabilitation work for this project.

- a. Provide Construction administration and coordination.
- b. Pre-Construction and monthly progress meetings
- c. Shop drawings review
- d. Conduct Site visits during construction for engineering interpretations and clarifications.
- e. Respond to requests for information and process Change Orders as required.
- f. Process monthly pay requests and final pay request.
- g. Substantial Completion inspection and Project Closeout documentation.
- f. Prepare Record Drawings.



## 2. SUPPLEMENTAL SERVICES

Any work requested by the Owner that is not included in the Basic Services will be classified as Supplemental Services. Supplemental Services shall include, but are not limited to the following:

### **Task 7 – Easements and Permitting as Required**

If it is determined during the Tasks 1 thru 3 portions of this project of this project that easements are required, the ENGINEER will perform the following actions during this task:

- a. Identify easements and property owners as required. It is anticipated that no more than 4 sections of sanitary sewer pipeline or a total linear footage of 1,000 LF will require rehabilitation and therefore easement preparation.
- b. Prepare written easement agreements from a standard template provided by the OWNER.
- c. Prepare easement legal exhibits.
- d. Obtain necessary permits including Stormwater Pollution Prevention Plans (SWPP), Aquatic Resource Alteration Permits (ARAP) or U.S. Army Corps of Engineers Wetlands Permit,

### **Task 8 – Surveying & Mapping as Required**

If it is determined during the Tasks 1 thru 3 portions of this project that additional surveying and mapping services are required, the ENGINEER will perform the following actions during this task in areas to be determined under a separate supplemental services agreement:

- a. It is anticipated that no more than 4 sections of sanitary sewer pipeline or a total linear footage of 1,000 LF will require rehabilitation and therefore easement preparation. The Engineer will conduct a topographic survey along the proposed pipeline route, capturing available utility information and structures as required to prepare plans and specifications for up to four (4) separate pipeline segments, not to exceed 1,000 LF in aggregate.
- b. Conduct boundary and topographic survey of proposed properties requiring easements.
- c. Conduct property/easement surveys as required to prepare legal descriptions of the easement areas suitable for recording.

### **Task 9 – Resident Project Representative (RPR) as Required**

The Engineer will provide the following services for a maximum of nine (9) months from the date of the Notice to Proceed (NTP) for the Contractor awarded the rehabilitation work for this project:

- a. Provide one (1) resident project representative to observe performance of the work.
- b. Review and submit all contractor payment requests.
- c. Evaluate and recommend to the Owner the disposition of all field related change order requests from the contractor during the project.
- d. Assist Owner in coordinating with property owners potentially affected by the rehabilitation work.
- e. Attend and participate in monthly coordination and progress meetings.



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- f. In performing construction observation, the ENGINEER shall have the right to recommend to the Owner to reject any portion of the Contractor's Work that is not, in the professional judgment of the ENGINEER, in accordance with the construction documents.

**3. REIMBURSABLE EXPENSES:**

Project specific reimbursable expenses and charges shall include the following:

- a. Subcontractor and sub-consultant fees times a markup of 10%, except for SSES activities where a markup of 5% for subcontractor or sub-consultant unit prices will be allowed.
- b. Travel and subsistence costs for employees not assigned to the local office of the Engineer
- c. Printing and binding services for reports, plans, bid documents and contract documents not performed with the Engineer's in-house equipment



**ATTACHMENT B**

Owner: City of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.  
 Project Number & Name: W-12-022-101  
 Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek Sub-basin 1

**COMPENSATION**

For the services covered by this Agreement, the Owner agrees to pay the Engineer as follows:

- For the Basic Services described in Attachment A, the cost plus maximum fee will be \$696,012.00. Payments shall be made monthly in amounts which are consistent with the amount of engineering services provided, as determined by the Engineer.

Task 1 - Data Gathering and Project Management	\$32,270.00
Task 2 - Sanitary Sewer Evaluation Study (SSES)	\$361,337.00
Task 3 - Preliminary Engineering Report / SRF Facility Plan	\$70,840.00
Task 4 - Finalize Design Drawings & Specifications	\$97,380.00
Task 5 - Bid Phase Services	\$31,540.00
Task 6 - Construction Phase Services	\$102,645.00

Subtotal \$696,012.00

- Compensation for Supplemental Services shall be made as defined below, when authorized in writing by the Owner. The maximum limit for each item of additional service shall be established individually and specifically agreed to by the Owner as stated below, unless the service is included in a subsequent agreement.

Task 7 – Easements and Permitting as Required	\$11,140.00
Task 8 – Surveying & Mapping as Required	\$7,590.00
Task 9 – Resident Project Representative (RPR) as Required	\$149,008.00

Subtotal \$167,738.00

Grand Total \$863,750.00

- Hourly rates for each classification as defined by the Engineer's rate schedule, see Attachment F. Overtime, when authorized by the Owner, will be billed at 1.5 times the rates listed (non-engineer time only).



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4. Reimbursable charges will be considered the amount of actual costs of project related expenses or charges times a markup of 10%, except for SSES Subcontractor fees which will be marked up 5%. Charges for use of computer equipment or software, local travel, local telephone, project photographs, miscellaneous supplies, and reproduction are not considered reimbursable charges. Allowable project-specific reimbursable expenses shall be outlined in Attachment A.
5. The entire amount of each statement shall be due and payable 30 days after receipt by the Owner.
6. The Engineer shall keep records on the basis of generally accepted accounting practice of costs and expenses which records shall be available for inspection at all reasonable times.
7. Invoices shall be submitted using the Standard Invoice form, Attachment G.



## ATTACHMENT C

Owner: City of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.  
Project Number & Name: W-12-022-101  
Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek Sub-basin 1

### OWNER'S RESPONSIBILITIES

The Owner will furnish, as required by the work and not at the expense of the Engineer, the following:

1. The Owner will provide the Engineer copies of all current and necessary permits and approvals from all federal, state and local regulatory agencies. These include air quality, water quality, storm water quality, solid waste, special wastes, and other regulatory permits that may be required.
2. The Owner will provide Engineer access to all of available NPDES reports as required.
3. The Owner will coordinate and facilitate meetings or the exchange of information between any other interested parties that may also prospectively participate in the project as required.
4. The Owner will coordinate for the Engineer the acquisition of future population and employment figures from regional planning institutions as required for the project as required.
5. The Owner will provide the Engineer copies of all available sewer reports related to sewer facility planning as required.
6. The Owner will provide access to the system wide hydraulic model outputs as required.
7. The Owner will provide the Engineer the most up-to-date GIS data available for all sewer system components as required.
8. The Owner will provide the Engineer access to all its pump station and CSOTF sites as required.
9. The Owner will provide Engineer access to all available plans and specifications for the facilities as required.
10. The Owner will provide the Engineer with documentation of existing O&M procedures related to the operation of the treatment works that may be relative to the project as required.
11. The Owner will provide the Engineer with documentation of existing standards and procedures related to the sewer system development and expansion as required.
12. The Owner will provide the Engineer with documentation of existing standards and procedures related to the treatment works as required.
13. The Owner will arrange for facilities for the Engineer and attend public information meetings as required. The Owner will prepare and mail invitations for public information meetings as



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required. The Owner and the Engineer will conduct monthly project progress meetings as required.

14. The Owner will designate a project representative to be the liaison between the Engineer and the Owner on the project.
15. Owner will make a reasonable effort to evaluate if hazardous materials are on or near the project site, and will inform Engineer of findings relative to the possible presence of such materials.



**ATTACHMENT D**

Owner: Owner of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.

Project Number & Name: W-12-022-101

Chickamauga Creek Sub-basin 1 Focused Sanitary Sewer Evaluation Study and Rehabilitation of South

**SUPPLEMENTAL AGREEMENTS**

**A. Engineers Responsibilities:**

1. During Contract negotiation, the Engineer shall describe in detail its overall approach that will be used by its Engineer's Project Team to perform the scope of work described herein for the development of the project for the Owner.
2. The Engineer shall provide all labor, benefits, equipment, materials, fuel, utilities, insurance, out-of-pocket expenses, and other related services required in connection with development of the project.
3. The Engineer shall obtain all necessary permits and approvals from all federal, state, and local regulatory agencies related to development of the project as required. Furnish copies of all required permits and approvals to the Owner.
4. The Engineer shall provide and submit reports and certifications as required by all applicable EPA and/or State regulations of development of the project as required. Furnish a copy of all required reports to the Owner in a timely manner.
5. The Engineer shall coordinate its work with the operating schedule of the Owner as required.
6. The Engineer shall conduct the work for the development of the project in compliance with all applicable federal, state, and local laws, regulations, permits, and approvals.
7. The Engineer shall provide adequate supervision and technical and managerial oversight of the Engineer's employees, subcontractors, and agents
8. The Engineer shall support and utilize the Owner's Standard Operating Procedures developed for the Consent Decree (CD) Program. Specifically, the design of each project shall comply with CADD standards, standardized specifications, or approved design guidelines, cost estimating guidelines, and materials and functional layout and operation of equipment and systems as required.
9. The Engineer shall administer the project to comply with the scheduling goals established by the Program Manager (PM) to ensure that the CD milestones are being met. The Engineer shall timely report project information as prescribed by the PM.
10. The Engineer shall prepare an initial and minimum monthly update to its project schedule; updates can be more frequent or as significant activities change.



11. The Engineer shall prepare, implement and execute a project quality management plan which complies with quality program guidelines and requirements and goals to be established by the PM, and the Engineer's own internal quality procedures/program requirements. The Engineer shall be fully responsible for the quality of their work products and associated quality assurance and quality control activities.
12. The Engineer shall prepare, implement and execute a written project safety management plan which following the Engineer's own internal safety procedures/program requirements and which will also reflect the goals of the safety program to be established by the PM for the CD program project.
13. The Engineer shall provide all documents in a timely manner and format prescribed by the PM to support a document management/imaging repository. All documents shall be maintained in this manner for general and financial record keeping, contract compliance, claims and litigation, warranty issues, and related purposes.
14. The Engineer may assist the PM in reviewing the preliminary project budget and provide recommendations relative to project updates for design, construction contract administration and inspection, contracting costs, and industry appropriate level of contingency as required. The Engineer shall assist the PM in coordinating the program budget with the plan schedule in order to ensure compliance with the CD needs and constraints regarding the overall budget as required. Engineer shall maintain and input pertinent information to account for all costs of the project in a form and manner prescribed by the PM as required.
15. The Engineer shall assist the PM with the preparation of project progress reports as required. Reports shall include, but not be limited to, all reports required to satisfy requirements of the CD.
16. The Engineer may be asked to provide technical support to the CD Public Relations Plan.
17. The Engineer shall utilize the Owner's standardized Division 00 and 01 specifications as in developing project specific specifications- In addition the PM will provide to the Engineer certain technical specifications, details and minimum design guidelines intended to provide consistency across the design deliverables from various Engineers on similar types of work as required.
18. The Engineer shall submit all Requests for Information (RFIs) and change order for their professional services agreement to the PM first for approval.
19. The Engineer shall submit all pay requests/invoices to PM first for approval.
20. Engineer shall identify any and all permits during the first month of project activity from Notice to Proceed (NTP). Likely easements and permanent real estate acquisitions shall be identified with special purpose survey exhibits depicting areas needed based on a schedule to be developed by the Engineer within the first month of project activity from NTP.
21. The PM may conduct monthly progress meetings, value engineering (VE) reviews and constructability review as required and include Owner and PM staff as needed.



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B. Owner and Engineer agree that the following communications, representations, and agreements by Engineer relating to the subject matter of the Agreement are hereby incorporated into and shall become a part of the Agreement.



**ATTACHMENT E**

Owner: Owner of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.  
Project Number & Name: W-12-022-101  
Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek Sub-basin 1

**PROJECT SCHEDULE**

Owner and Engineer recognize that time is of the essence of the Agreement and that Owner may suffer financial loss if the work is not completed within the times stipulated herein, plus any extensions thereof. Accordingly, Engineer will develop for this Agreement a preliminary schedule based on the schedule requirements specified in the Specific Scope of Work for this project and either provide it below or as Attachment E1.

A detailed schedule (project schedule) will be required as one of the Project Management deliverables as specified in the Specific Scope of Work for this project once the Agreement is executed. The Engineer will produce the project schedule using industry accepted scheduling software approved by the Owner.

It is understood and agreed that the Engineer shall start the performance of Services within 10 days of receipt of a written Notice to Proceed and shall complete the work in accordance with the contract times set forth herein.

Task	Duration (days)	Start Date	End Date	Preceded by
Task 1 - Data Gathering & PM	30	10 days after NTP	NTP + 30	NTP
Task 2 - SSES	120	NTP + 30	150	1
Task 3 - PER/SRF Plan	60	10 days after PM submits recommendations	NTP + 250	2
Task 4 - Finalize Design & Specs	45	5 days after 30% concept approval by PM	NTP + 315	3, 7, 8
Task 5 - Bid Phase	45	10 days after SRF Authority to bid	NTP + 360	4
Task 6 - Construction Phase	270	10 days after ATA by SRF	NTP + 690	4
Task 7 - Easements & Permitting	60	As needed after Task 3	NTP + 250	1,2,3
Task 8 - Surveying & Mapping	30	As needed after Task 3	NTP + 250	1,2,3
Task 9 - RPR Services	270	10 days after ATA by SRF	NTP + 690	4



**ATTACHMENT F**

Owner: Owner of Chattanooga, Tennessee

Engineer: Littlejohn Engineering Associates, Inc.  
Project Number & Name: W-12-022-101  
Focused Sanitary Sewer Evaluation Study and Rehabilitation of South  
Chickamauga Creek Sub-basin 1

**RATE SCHEDULE**

Staff Type	Abbrev.	6/1/12 thru 5/30/13 Bill Rates	6/1/13 thru 5/30/14 Bill Rates
Engineer 8	E8	\$210/Hr	\$215/Hr
Engineer 7	E7	\$190/Hr	\$195/Hr
Engineer 6	E6	\$180/Hr	\$185/Hr
Engineer 5	E5	\$170/Hr	\$175/Hr
Engineer 4	E4	\$160/Hr	\$165/Hr
Engineer 3	E3	\$130/Hr	\$135/Hr
Engineer 2	E2	\$110/Hr	\$115/Hr
Engineer 1	E1	\$90/Hr	\$95/Hr
Landscape Architect 5	LA5	\$190/Hr	\$195/Hr
Landscape Architect 4	LA4	\$180/Hr	\$185/Hr
Landscape Architect 3	LA3	\$115/Hr	\$120/Hr
Landscape Architect 2	LA2	\$90/Hr	\$95/Hr
Landscape Architect 1	LA1	\$75/Hr	\$80/Hr
Resident Project Representative 4	RPR4	\$120/Hr	\$125/Hr
Resident Project Representative 3	RPR3	\$105/Hr	\$110/Hr
Resident Project Representative 2	RPR2	\$95/Hr	\$95/Hr
Resident Project Representative 1	RPR1	\$80/Hr	\$85/Hr
Designer 4	D4	\$135/Hr	\$135/Hr
Designer 3	D3	\$120/Hr	\$125/Hr
Designer 2	D2	\$105/Hr	\$110/Hr
Designer 1	D1	\$70/Hr	\$75/Hr
Surveyor 3	Sur3	\$145/Hr	\$150/Hr
Surveyor 2	Sur2	\$135/Hr	\$140/Hr
Surveyor 1	Sur1	\$90/Hr	\$95/Hr
Technician 3	T3	\$105/Hr	\$105/Hr
Technician 2	T2	\$80/Hr	\$85/Hr
Technician 1	T1	\$70/Hr	\$75/Hr
Administrative Assistant	Adm Asst	\$80/Hr	\$85/Hr



**ATTACHMENT G**

**STANDARD INVOICE**

Indicates MANDATORY item

**CONSULTANT LETTERHEAD**

ATTN: City Project Manager  
REF:  Project Name  
CODE:  Consultant Project Number  
PO:  City Project Number in format S-02-001-101

Provided by City

\*\*\*\*\*  
INVOICE  
\*\*\*\*\*

TERMS: Net 25 days  
DUE: 08/01/03

Must be Sequential Number

City Project Manager  
 City Project Manager Title  
 City of Chattanooga  
 Engineering Division/DRC  
 1250 Market Street, Suite 2100  
 Chattanooga TN 37402

Invoice Number 5  
Dated 07/07/03

Invoice Must show Billing Period.

For Professional Services from May 31 to June 27, 2003

This Breakdown must list each item of the Contract.

Consultant Project No.	Description	Fee	Fee Basis	Percent Work to Date	Amount Billed	Previous Billed	This Invoice Billed
C03009-01	01 - Design	\$51,500.00	LS	55%	\$28,325.00	\$18,540.00	\$9,785.00
	02 - Survey	\$15,700.00	LS	0%	\$0.00	\$0.00	\$0.00
C03009-02	Barton Avenue and Brown Acres Golf Course Design	\$20,000.00	CP	12%	\$2,391.02	\$2,033.00	\$358.02
C03009-03	Permitting/Easement Assistance	\$5,000.00	CP	6%	\$291.08	\$0.00	\$291.08
C03009-04	Bidding/Construction Assistance	\$10,000.00	CP	0%	\$0.00	\$0.00	\$0.00
C03009-05	Misc. As-Requested Services	\$5,000.00	CP	7%	\$363.85	\$0.00	\$363.85
	Total Contract Amount	\$107,200.00			\$31,370.95	\$20,573.00	
	<b>TOTAL THIS INVOICE</b>						<b>\$10,797.95</b>

Must Match Contract Amount

Prior invoices	\$20,573.00
This invoice	\$10,797.95
Payments	-\$20,573.00
Balance on Account	\$10,797.95

**NOTE**

- There shall be only one invoice per contract per billing period.
- Any necessary details should be attached as backup.