

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE ADMINISTRATOR OF THE DEPARTMENT OF PUBLIC WORKS TO ENTER INTO AN AGREEMENT WITH CONSOLIDATED TECHNOLOGIES, INC. FOR PROFESSIONAL SERVICES RELATIVE TO CONTRACT NO. W-12-026-101, DUPONT PARKWAY PUMP STATION AND COLLECTION SYSTEM IMPROVEMENTS PHASE 1, FOR AN AMOUNT NOT TO EXCEED ONE MILLION NINE HUNDRED NINETEEN THOUSAND DOLLARS (\$1,919,000.00).

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 Consolidated Technologies, Inc. for professional services relative to Contract No. W-12-026-101, DuPont Parkway Pump Station and Collection System Improvements Phase 1, for an amount not to exceed \$1,919,000.00.

ADOPTED: _____, 2013.

/mms

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 #

3

A Council Action is requested for the Administrator of the Department of Public Works to enter into an agreement with Consolidated Technologies, Inc., for professional services, relative to Contract No. W-12-026-101, DuPont Parkway Pump Station and Collection System Improvements Phase 1, in an amount not to exceed \$1,919,000.00.

Name of Vendor/Contractor/Grant, etc.	<u>Consolidated Technologies, Inc.</u>	New Contract/Project? (Yes or No)	<u>No</u>
Total project cost \$	<u>1,919,000.00</u>	Funds Budgeted? (YES or NO)	<u>Yes</u>
Total City of Chattanooga Portion \$	<u>1,919,000.00</u>	Provide Fund	<u>6011</u>
City Amount Funded \$	<u>1,919,000.00</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 %	<u></u>	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:

Reviewed by: FINANCE OFFICE

DESIGNATED OFFICIAL/ADMINISTRATOR

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

Consolidated Technologies, Inc., dba CTI Engineers, Inc.,

Hereinafter called Engineer.

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

W-12-026-101-DuPont Parkway Pump Station and Collection System Improvements for Waste Resources Division Phase 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: Allen D. Stephens, P.E.
Consolidated Technologies, Inc., dba CTI Engineers, Inc.
1122 Riverfront Parkway
Chattanooga, TN 37402
Phone: (423) 267-7613/Fax: (423) 267-0603/Email: astephens@ctiengr.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.



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



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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

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.

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.

Gary M. Cosby, P.E. 3/14/13
President
Consolidated Technologies, Inc. dba
CTI Engineers, Inc.

Steve Leach Date
Administrator of Public Works

Director of Purchasing Date

Reviewed by City Attorney Office Initial Date



ATTACHMENT A

Owner: City of Chattanooga, Tennessee

Engineer: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
Project Number & Name: W-12-026-101
DuPont Parkway Pump Station and Collection System Improvements for
Waste Resources Division

SCOPE OF SERVICES

1. BASIC SERVICES

The project is specifically defined as: Phase 1 evaluation of a 2 Phase approach to improvements of wet weather flow storage and conveyance for the DuPont Parkway Pump Station located at 1610 Elm Street, Chattanooga, TN. Design and construction services are provided for Phase 1 of the evaluated improvements.

In addition, SSES will be conducted within the DuPont Parkway Pump Station service area within three selected sub-basins (North Chickamauga Creek 1, North Chickamauga Creek 3, and Tennessee River 10). The selected SSES will consist of all of the Tennessee River 10 sub-basin, all of North Chickamauga Creek 1 sub-basin, and selected portions of the North Chickamauga Creek 3 sub-basin. The total amount of SSES consists of approximately 239,010 LF of sanitary sewer piping, ranging from 8" to 48" diameter. SSES shall include the inspection of all gravity pipelines and manholes.

The data from the SSES will be submitted to the City and the PM who shall analyze, prioritize, and develop rehabilitation recommendations for the Sub-basins. The design and construction services of the rehabilitation recommendations shall be provided by the Engineer under this project. Rehabilitation has been estimated to be 50 percent of the entire sub-basin (119,500 LF), and shall include approved trenchless technologies (where possible) and open cut construction for the purpose of preparing proposed level of work and fee. It is assumed at least 80 percent of the rehabilitation can be accomplished through trenchless methods and that only 5 percent will require full ground profile surveys.

In addition to the rehabilitation, the Phase 1 improvements also include a 3-million-gallon lined earthen addition to the wet weather storage facility at INVISTA. Design and construction services are being provided for this as well. Relocation of the access road around the expanded storage basin is also included, but not a new access road entrance.

An SRF alternative analysis and preliminary engineering report will be prepared for the proposed rehabilitation work and storage facility. The alternative analysis and preliminary engineering report will cover both the Phase 1 and Phase 2 improvements even though the Phase 2 improvements are not being implemented at this time.

The Engineer agrees to provide the following services:

Task 1 – Data Gathering and Project Management

- a. Prepare project management plan.
- b. Prepare detailed project schedule.
- c. The SSES planning and design portion of this project is required to be completed within **360 days** after NTP or 150 days after return of the prioritized rehabilitation recommendations from the City, whichever occurs last, assuming the SSES data is submitted to the City within 180 days after NTP.



- d. This bidding portion of this project is required to be completed in **90 days** from obtaining site certificate from the State Revolving Fund Loan Program (SRFLP).
- e. The Construction Administration and Resident Project Representative portion of the project is estimated to be completed in less than **360 days** from NTP of Construction contract.
- f. Hold regularly scheduled meetings with City staff and PM to discuss progress and schedule, generally limited to kickoff, milestone completion (30, 60, and 90 percent), preconstruction, and construction progress.
- g. Provide necessary information and data to City staff and PM.
- h. Obtain relevant project information from City download site, including but not limited to: GIS data, record drawings, USGS maps, and flow data.
- i. Prepare invoicing and status reports as required by the City staff and PM.

Task 2 – Sanitary Sewer Evaluation Study (SSES)

- a. Conduct sanitary sewer pipeline investigations pursuant to City Standards.
- b. Conduct sanitary sewer manhole investigations pursuant to City Standards.
- c. Conduct quality control measures on inspection media.
- d. Prepare SSES Report, detailing findings of SSES inspections in hard copy and electronic format.
- e. All SSES work to be completed in accordance with the requirements of the following specification sections included as Appendix V:

- 33 01 30.14 - Precondition and Cleaning of Sewers
- 33 01 30.16 - Close Circuit TV Inspection of Sewers
- 33 01 30.22 - Flow Isolation Inspection of 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 Sewers
- 33 01 30.28 - Laser Profile Inspection of Sewers
- 33 01 30.29 - Inspection of Sanitary Sewer Manholes

The City will be responsible for making accessible any manholes that are covered and for providing surveys of manholes that are not in the GIS database.

- f. Deliver inspection data to City and PM for analysis and prioritization.

Task 3 – Preliminary Engineering Report / SRFLP Facility Plan for Collection System Rehabilitation and Wet-Weather Storage

- a. Obtain prioritized rehabilitation recommendations with planning level cost estimates and estimates of I/I removed from the City and the PM, in database format (assumed to take no more than one month following submittal of SSES data to City).
- b. Review pipes, manholes, and the associated rehabilitation methods recommended for rehabilitation by the PM and check for constructability.
- c. Prepare 30% conceptual plans (at 1,000-foot scale) based on pipes and manholes selected for rehabilitation by the City and PM. Prepare 30% conceptual plans for INVISTA wet-weather storage.
- d. Prepare conceptual level cost estimates for both rehabilitation and wet weather storage.
- e. Conduct Rehabilitation Workshop to review rehabilitation plan with City and PM.
- f. Perform SRFLP present worth analysis and alternatives comparison. SRFLP Facility Plan template will be provided by the PM. SRFLP alternatives will be limited to all rehabilitation/no storage-pumping, all storage-pumping/no rehabilitation, a combination of PM-recommended rehabilitation and storage-pumping, and “do nothing.”



- g. Perform SRFLP environmental review.
- h. Address SRFLP Environmental Justice issues (information to be supplied by PM).
- i. Prepare final preliminary engineering report and submit to City and PM for review and approval. Provide 10 copies of the final report.
- j. Assist in conducting public meeting to present alternatives.

Task 4 – Finalize Design Drawings and Specifications for Collection System Rehabilitation

- a. Coordinate design and conduct design meetings with City and PM.
- b. Prepare design drawings necessary to convey to prospective contractors the extent and scope of work to be performed. Drawings shall include plans and profiles for all rehabilitated pipe runs as shown in the example drawing in Appendix VI.
- c. Prepare 90% design submittals to City and PM for review.
- d. Incorporate City and PM comments and prepare final plans, utilizing standard details provided by the City and PM. Sheet count is estimated at 135 drawings assuming 885 ft per sheet
- e. Prepare Technical Specifications, utilizing standard and guide specifications provided by City and PM.
- f. Prepare Bid Documents and Bid Schedule utilizing standardized Division 00 and 01 specifications provided by City and PM
- g. Prepare Final Takeoff and Opinion of Probably Cost.
- h. Submit Final Bid Documents to SRFLP for review, comment and approval.
- i. Incorporate SRFLP final comments and prepare plans and specifications for bid. Provide reproducible set of drawings and 20 sets of bound contract documents and specifications.

Task 5 - Bid Phase Services for Collection System Rehabilitation

- a. Prepare Advertisement for Bids.
- b. Answer Contractor questions and issue Addendums as required.
- c. Participate in Bid Opening and prepare certified Bid Tabulation.
- d. Evaluate Bids and make Recommendation of Award.
- e. Assist in submitting MBE/WBE documentation to SRFLP and get Approval to Award.
- f. Prepared Contract Documents for execution.

Task 6 – Construction Phase Services for Collection System Rehabilitation (one contract with 12-month contract time)

- a. Provide Construction administration and coordination.
- b. Pre-Construction and monthly progress meetings
- c. Shop drawings review
- d. Site visits during Construction for engineering interpretations and clarifications.
- e. Respond to a reasonable number of RFIs and process change orders as required.
- f. Process monthly pay requests and final pay request.
- g. Substantial Completion inspection and Project Closeout documentation.
- h. Prepare Record Drawings.

Task 7 – Preliminary Engineering Report / SRFLP Facility Plan for INVISTA Wet-Weather Storage Improvements (Included in Task 3)

Task 8 – Finalize Design Drawings and Specifications for INVISTA Wet-Weather Storage Improvements (3-mg lined earthen basin adjacent to existing basin at INVISTA)

- a. Coordinate design and conduct design meetings with City and PM.



- b. Prepare design drawings necessary to convey to prospective contractors the extent and scope of work to be performed.
- c. Prepare 60% and 90% design submittals to City and PM for review.
- d. Incorporate City and PM comments and prepare final plans. Estimated sheet count is 30 drawings.
- e. Prepare Technical Specifications, utilizing standard and guide specifications provided by City and PM.
- f. Prepare Bid Documents and Bid Schedule utilizing standardized Division 00 and 01 specifications provided by City and PM
- g. Prepare Final Takeoff and Opinion of Probably Cost.
- h. Submit Final Bid Documents to SRF for review, comment and approval.
- i. Incorporate SRF final comments and prepare plans and specifications for bid. Provide reproducible set of plans and 20 sets of bound contract documents and specifications.

Task 9 - Bid Phase Services for INVISTA Wet-Weather Storage Improvements

- a. Prepare Advertisement for Bids.
- b. Answer Contractor questions and issue Addendums as required.
- c. Participate in Bid Opening and prepare certified Bid Tabulation.
- d. Evaluate Bids and make Recommendation of Award.
- e. Assist in submitting MBE/WBE documentation to SRFLP and get Approval to Award.
- f. Prepared Contract Documents for execution.

Task 10 – Construction Phase Services for INVISTA Wet-Weather Storage Improvements (one contract with 6-month contract time)

- a. Provide construction administration and coordination.
- b. Pre-construction and monthly progress meetings
- c. Shop drawings review
- d. Site visits during construction for engineering interpretations and clarifications.
- e. Respond to a reasonable number of RFIs and process change orders as required.
- f. Process monthly pay requests and final pay request.
- g. Substantial Completion inspection and Project Closeout documentation.
- h. 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 11 – Easements and Permitting as Required for Collection System Rehabilitation

- a. Identify easements and property owners as required.
- b. Prepare easement documents – assumed not to exceed 40 temporary construction/access easements and 10 permanent easements. Easements will be obtained by the City.
- c. Obtain necessary permits including, but not limited to, Land Disturbance, Railroad Crossing, ARAP, TDEC. Wetland mitigation, if required, will be an additional service.

Task 12 – Surveying & Mapping as Required for Collection System Rehabilitation

- a. Site topographic map (obtained from City GIS)
- b. Routing surveys (not to exceed 7,500 LF)
- c. Property/easement surveys (not to exceed 7,500 LF)



Task 13 – Resident Project Representative (RPR) as Required for Collection System Rehabilitation (one RPR for 12-month contract time)

- a. RPR services prior to start-date (one week)
- b. RPR services during construction (12 months)
- c. RPR services during Substantial Completion, post-contract, and follow-up inspections (one month)

Task 14 – Easements and Permitting as Required for INVISTA Wet-Weather Storage Improvements

- a. Identify easements and property owners as required.
- b. Prepare easement documents – assumed to be no more than two easements. Easements will be obtained by the City.
- c. Obtain necessary permits including, but not limited to, Land Disturbance, Railroad Crossing, ARAP, TDEC – assumed to involve only City land disturbance permit and TDEC construction storm water permit.

Task 15 – Surveying & Mapping as Required for INVISTA Wet-Weather Storage Improvements

- a. Site topographic survey
- b. Routing surveys (not required)
- c. Property/easement survey for relocation of access roadway around detention basin expansion

Task 16 – Resident Project Representative (RPR) as Required for INVISTA Wet-Weather Storage Improvements (one RPR for 6-month construction time)

- a. RPR services prior to start-date (2 days)
- b. RPR services during construction (6 months)
- c. RPR services during Substantial Completion, post-contract, and follow-up inspections (two weeks)

Task 17 – Geotechnical Investigation for INVISTA Wet-Weather Storage Improvements

- a. Provide soil borings and testing at site of new basin.
- b. Provide geotechnical report with foundation recommendations.
- c. Materials testing during construction (soil compaction, concrete, and asphalt) will be paid for by City.

3. REIMBURSABLE EXPENSES:

Project specific reimbursable expenses and charges shall include the following:

- Out-of-town travel expenses (by O'Brien & Gere)
- Report reproduction expenses
- Plans and specification reproduction expenses
- Permit application fees
- TDEC plans review fees
- Newspaper advertisement costs (if not handled by City)
- Public meeting transcription fees (if required)
- Special environmental surveys – archaeological, wetlands, endangered species, etc. (if required)



ATTACHMENT B

Owner: City of Chattanooga, Tennessee

Engineer: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
Project Number & Name: W-12-026-101
DuPont Parkway Pump Station and Collection System Improvements for
Waste Resources Division, Phase I

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. Compensation shall be made based on billing rates and expenses with a not to exceed limit of \$1,592,000. 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	\$74,000
Task 2 – Sanitary Sewer Evaluation Study (SSES) (See Appendix II)	895,000
Task 3 – Preliminary Engineering Report / SRFLP Facility Plan for Collection System Rehabilitation and Wet Weather Storage	98,000
Task 4 – Finalize Design Drawings and Specifications for Collection System Rehabilitation	321,000
Task 5 – Bid Phase Services for Collection System Rehabilitation	19,500
Task 6 – Construction Phase Services for Collection System Rehabilitation	92,000
Task 7 – Preliminary Engineering Report / SRFLP Facility Plan for Wet Weather Storage Improvements (Included in Task 3)	---
Task 8 – Finalize Design Drawings and Specifications for Wet Weather Storage Improvements	58,000
Task 9 - Bid Phase Services for Wet Weather Storage Improvements	7,000
Task 10 – Construction Phase Services for Wet Weather Storage Improvements	<u>28,000</u>

Subtotal \$1,592,000

- 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 11 – Easements and Permitting as Required for Collection System Rehabilitation	\$45,000
Task 12 – Surveying & Mapping as Required for Collection System Rehabilitation	24,000
Task 13 – Resident Project Representative (RPR) as Required for Collection System Rehabilitation	155,000
Task 14 – Easements and Permitting as Required for Wet Weather Storage Improvements	8,000
Task 15 – Surveying & Mapping as Required for Wet Weather Storage Improvements	7,000
Task 16 – Resident Project Representative (RPR) as Required for Wet Weather Storage Improvements	78,000
Task 17 – Geotechnical Investigation for Wet Weather Storage Improvements	<u>10,000</u>

Subtotal \$ 327,000

Grand Total \$1,919,000



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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

3. 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).
4. Reimbursable charges will be considered the amount of actual costs of project related expenses or charges plus a markup of 10% (except for SSES subcontractor which shall be 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: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
Project Number & Name: W-12-026-101
DuPont Parkway Pump Station and Collection System Improvements for
Waste Resources Division, Phase I

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



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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

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: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
Project Number & Name: W-12-026-101
DuPont Parkway Pump Station and Collection System Improvements for
Waste Resources Division, Phase 1

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.



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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

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.

[All necessary items as Supplemental]



ATTACHMENT E

Owner: Owner of Chattanooga, Tennessee

Engineer: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
 Project Number & Name: W-12-026-101
 DuPont Parkway Pump Station and Collection System Improvements for
 Waste Resources Division, Phase 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.

Notice to Proceed (NTP)	April 1, 2013
SSES Completed (180 days from NTP)	September 1, 2013
Return of Prioritized Rehabilitation Recommendations by City (30 days from SSES report submitted)	October 1, 2013
Planning and Design Complete (Concurrent Tasks) (150 days from Return of Prioritized Rehabilitation Recommendations)	April 1, 2014
Submit to State for Review and SRF Loan Approval (assume 2 months) Receive Approval	June 1, 2014
Bidding Process (90 days)	September 1, 2014
Award Contracts and Start Construction (90 days)	December 1, 2014
Construction Complete (360 days)	December 1, 2015



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

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

ATTACHMENT F

Owner: Owner of Chattanooga, Tennessee

Engineer: Consolidated Technologies, Inc., dba CTI Engineers, Inc.
 Project Number & Name: W-12-026-101
 DuPont Parkway Pump Station and Collection System Improvements for
 Waste Resources Division, Phase I

RATE SCHEDULE

CTI Personnel Classification	Hourly Rates through December 31 of		
	2013	2014	2015
Executive Engineer/Manager	\$192.00	\$197.75	\$203.70
Senior Project Engineer/Manager	165.75	170.75	175.90
Project Engineer/Manager	150.00	154.50	159.15
Senior Geologist	142.65	147.00	151.50
Architect	114.35	117.80	121.35
Engineer	121.70	125.35	129.10
Engineer Intern	90.20	92.90	95.70
Senior Drafter/Technician	88.10	90.75	93.50
Drafter/Technician	77.60	80.00	82.50
Senior Project Representative	83.90	86.50	89.10
Project Representative	60.85	62.75	64.65
Senior Administrative	82.85	85.35	87.90
Senior Clerical/Secretarial Support	66.00	68.00	70.00
Clerical/Secretarial Support	50.35	51.90	53.50



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	Percent		Amount Billed	Previous Billed	This Invoice Billed
		Fee Basis	Work to Date			
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	
TOTAL THIS INVOICE			Must Match Contract Amount			\$10,797.95

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.

APPENDIX II - SSES ACTIVITIES UNIT RATE COST SCHEDULE(Rev2/ 3-13-13)

Subcontractor Name: Compliance EnviroSystems, LLC

** Quantities Revised by CTI 3-13-13

Consultant Name: CTI Engineers, Inc.

Project Name: DuPont Parkway Pump Station Drainage Basin

Item No.	TASK	Units	Quantity**	Unit Rate	Total	Remarks
1	MACP Manhole Inspection (NASSCO Level 2)	Ea.	1,300	\$90.00	\$117,000.00	
2	Smoke Testing	L.F.	239,010	\$0.39	\$93,213.90	Assume 100%
3	Flow Isolations	Ea.	10	\$350.00	\$3,500.00	Assumed
4	Dyed Water Tracing	Ea.	10	\$300.00	\$3,000.00	Assumed
5	Dyed Water Flooding of Storm Sewers	Ea.	10	\$600.00	\$6,000.00	Assumed
6	CCTV Inspection (8 inch or smaller diameter)	L.F.	155,387	\$0.95	\$147,617.65	Assumed 80% of total
7	CCTV Inspection (Greater than 8 inch less than or equal to 15 inch diameter)	L.F.	17,568	\$1.00	\$17,568.00	Assumed 80% of total
8	CCTV Inspection (Greater than 15 inch less than or equal to 24 inch)	L.F.	1,432	\$1.15	\$1,646.80	Assumed 10% of total
9	CCTV Inspection (Greater than 24 inch less than or equal to 30 inch)	L.F.	100	\$1.15	\$115.00	Pricing purposes only
10	CCTV Inspection (Greater than 30 inch less than or equal to 36 inch)	L.F.	100	\$1.25	\$125.00	Pricing purposes only
11	CCTV Inspection (Greater than 36 inch less than or equal to 42 inch)	L.F.	100	\$1.25	\$125.00	Pricing purposes only
12	CCTV Inspection (Greater than 42 inch less than or equal to 48 inch)	L.F.	10	\$2.00	\$20.00	Pricing purposes only - Assume 48" Sonar/CCTV
13	Rough Easement - CCTV Inspection (8 inch or smaller diameter)	L.F.	38,847	\$1.15	\$44,674.05	Assumed 20% of total
14	Rough Easement -CCTV Inspection (Greater than 8 inch less than or equal to 15 inch diameter)	L.F.	4,392	\$1.15	\$5,050.80	Assumed 20% of total
15	Rough Easement -CCTV Inspection (Greater than 15 inch less than or equal to 24 inch)	L.F.	2,900	\$1.30	\$3,770.00	Assume all PVC in NCC1
16	Rough Easement -CCTV Inspection (Greater than 24 inch less than or equal to 30 inch)	L.F.	100	\$1.30	\$130.00	Pricing purposes only
17	Rough Easement -CCTV Inspection (Greater than 30 inch less than or equal to 36 inch)	L.F.	100	\$1.40	\$140.00	Pricing purposes only
18	Rough Easement -CCTV Inspection (Greater than 36 inch less than or equal to 42 inch)	L.F.	100	\$1.40	\$140.00	Pricing purposes only
19	Rough Easement -CCTV Inspection (Greater than 42 inch less than or equal to 48 inch)	L.F.	425	\$2.00	\$850.00	Assumed 5% of total
20	CCTV Reverse Set-Up	Ea.	10	\$100.00	\$1,000.00	Assumed
21	Cleaning (8 inch or smaller diameter)	L.F.	194,234	\$0.90	\$174,810.60	100% of 8"
22	Cleaning (Greater than 8 inch less than or equal to 15 inch diameter)	L.F.	21,960	\$1.25	\$27,450.00	100% of 10", 12" & 15"
23	Cleaning (Greater than 15 inch less than or equal to 24 inch)	L.F.	8,587	\$2.75	\$23,614.25	100% of 24" PVC in NCC1 & 50% of 24" in NCC3
24	Cleaning (Greater than 24 inch less than or equal to 30 inch)	L. F.	200	\$4.00	\$800.00	100% of 30"
25	Cleaning (Greater than 30 inch less than or equal to 36 inch)	L. F.	200	\$5.00	\$1,000.00	100% of 36"
26	Cleaning (Greater than 36 inch less than or equal to 42 inch)	L. F.	200	\$6.00	\$1,200.00	100% of 42"
27	Cleaning (Greater than 42 inch less than or equal to 48 inch)	L. F.	850	\$7.00	\$5,950.00	10% of total
28	Heavy Cleaning (8 inch or smaller diameter)	L. F.	19,423	\$0.35	\$6,798.05	10% of total
29	Heavy Cleaning (Greater than 8 inch less than or equal to 15 inch diameter)	L. F.	2,196	\$0.75	\$1,647.00	10% of total
30	Heavy Cleaning (Greater than 15 inch less than or equal to 24 inch)	L. F.	1,400	\$1.25	\$1,750.00	10% of total
31	Heavy Cleaning (Greater than 24 inch less than or equal to 30 inch)	L. F.	20	\$2.25	\$45.00	Pricing purposes only
32	Heavy Cleaning (Greater than 30 inch less than or equal to 36 inch)	L. F.	20	\$2.25	\$45.00	Pricing purposes only
33	Heavy Cleaning (Greater than 36 inch less than or equal to 42 inch)	L. F.	20	\$5.00	\$100.00	Pricing purposes only
34	Heavy Cleaning (Greater than 42 inch less than or equal to 48 inch)	L. F.	850	\$7.00	\$5,950.00	10% of total
35	Intruding Tap Removal	Ea.	20	\$150.00	\$3,000.00	Estimated
36	Sonar Pipeline Inspection	L. F.	-	\$4.25	\$0.00	
37	Rough Easement - Sonar Pipeline Inspection	L. F.	-	\$4.50	\$0.00	
38	Sonar/CCTV Combined Inspection	L. F.	19,000	\$4.25	\$80,750.00	8492' of 48" & 10508' of 24"
39	Rough Easement - Sonar/CCTV Combined Inspection	L. F.	1,000	\$4.50	\$4,500.00	1000' of 24"
40	By-Pass Pumping	LS			\$10,000.00	Allowance
41	TOTAL SUBCONTRACTOR PRICE				\$795,096.10	
42	ENGINEERING FEE	Hourly			\$ 60,150.00	Using Hourly Rates
43	ENGINEERING MARKUP	Rate		5.00%	\$39,754.81	Applied to SSES Sub Only
44	TOTAL ENGINEERING PRICE				\$895,000.91	Budget \$895,000

*Revised Budget
3-13-13
A. Stephens*