

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

A RESOLUTION AUTHORIZING THE ADMINISTRATOR OF THE DEPARTMENT OF PUBLIC WORKS TO ENTER INTO AN AGREEMENT WITH THOMPSON ENGINEERING, PROJECT NO. W-12-020, FOR PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS, DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES, FOR AN AMOUNT NOT TO EXCEED ONE HUNDRED EIGHTEEN THOUSAND FOUR HUNDRED DOLLARS (\$118,400.00).

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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 Thompson Engineering, Project No. W-12-020, for professional services for structural analysis, design, and construction of repairs for Waste Resources Division sites, for an amount not to exceed \$118,400.00.

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

/mms

# City of Chattanooga



## Resolution/Ordinance Request Form

Date Prepared: 12-21-2012

Preparer: Jerry W. Stewart, P.E.

Department: Public Works

Brief Description of Purpose for Resolution/Ordinance:

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

A City Council resolution is requested authorizing the Administrator of Public Works to enter into an agreement with Thompson Engineering for professional services for structural analysis, design, and construction of repairs for Waste Resources Division sites in the City of Chattanooga. Project number W-12-020. This agreement will not exceed the maximum sum of one hundred eighteen thousand four hundred dollars (\$118,400.00).

Name of Vendor/Contractor/Grant, etc.	<u>Thompson Engineering</u>	New Contract/Project? (Yes or No)	<u>Yes</u>
Total project cost \$	<u>\$118,400.00</u>	Funds Budgeted? (YES or NO)	<u>Yes</u>
Total City of Chattanooga Portion \$	_____	Provide Fund	<u>6011</u>
City Amount Funded \$	<u>118,400.00</u>	Provide Cost Center	<u>/</u>
New City Funding Required \$	_____	Proposed Funding Source if not budgeted	_____
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)

*Jerry W. Stewart 12/21/12*

*Janelle M. [Signature] 12/26/2012*

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 2003-8  
 Date of Issue 10-16-03  
 Rev. 12-14-10

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

Thompson Engineering,

hereinafter called Engineer.

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

~~PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS, DESIGN, AND CONSTRUCTION~~  
~~OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN THE CITY OF CHATTANOOGA~~  
 Project Number W-12-020,

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 alleged or 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. Worker's Compensation Insurance and Employer's Liability Insurance, in accordance with statutory requirements, with a limit of \$500,000 for each accident.
- d. 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.



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- 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: Richard M. Gibbs, PE, Thompson Engineering  
232 E. 11<sup>th</sup> Street, Suite 100, Chattanooga, TN 37402  
423-756-7970 fax 423-756-7950 email: rgibbs@thompsonengineering.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 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.



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STANDARD AGREEMENT FOR ENGINEERING SERVICES

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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.

Richard M. Gibbs, PE  
Senior Engineer

12/19/2012  
Date

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

Mack B. McCarley, PE  
Director of Tennessee Operations

12.30.12  
Date

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

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



**ATTACHMENT A**

Owner: City of Chattanooga, Tennessee

Engineer: Thompson Engineering  
Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
THE CITY OF CHATTANOOGA  
**SCOPE OF SERVICES**

**1. BASIC SERVICES**

The project is specifically defined as: Professional services to perform assessment, design, construction administration, quality assurance, and other additional services as required for the Administration/Laboratory Building and O2 Control Building. Also, to perform structural assessment of the Filter Press Building precast concrete wall panels.

The Engineer agrees to provide the following services: See Attachment A-1 Scope of Services, Professional Services for Structural Analysis, Design, and Construction of Repairs for Waste Resources Division Sites in the City of Chattanooga, dated December 19, 2012.

**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: Geotechnical engineering, surveying, and other engineering services.

**3. REIMBURSABLE EXPENSES:**

Project specific reimbursable expenses and charges shall include the following:  
Subconsultants and subcontractors; equipment rental; trip charges; vehicle mileage; per diem; reproduction and other direct expenses.



**ATTACHMENT B**

Owner: City of Chattanooga, Tennessee

Engineer: Thompson Engineering  
Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
THE CITY OF CHATTANOOGA

**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, payment on a time and materials basis. Payments shall be made monthly in amounts which are consistent with the amount of engineering services provided, as determined by the Engineer.

Structural Analysis - Administration/Laboratory Building	\$ 9,680.00
Structural Analysis - O2 Control Building	\$ 5,880.00
Structural Analysis - Filter Press Building	\$ 14,220.00
Design Drawings and Specifications - Administration/Lab Building	\$ 9,050.00
Design Drawings and Specifications - O2 Control Building	\$ 5,550.00
Bid & Award - Administration/Laboratory Building	\$ 2,370.00
Bid & Award - O2 Control Building	\$ 2,370.00
Construction Phase Services - Administration/Laboratory Building	\$ 36,460.00
Construction Phase Services - O2 Control Building	\$ 13,120.00
<b>Subtotal</b>	<b>\$ <u>98,700.00</u></b>

- 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.

Payment on a time and material basis, with a not-to-exceed limit

Geotechnical Engineering	\$ 13,500.00
Surveying	\$ 2,500.00
Additional Engineering Services (if needed)	\$ 3,700.00
<b>Subtotal</b>	<b>\$ <u>19,700.00</u></b>
<b>Grand Total</b>	<b>\$ <u>118,400.00</u></b>

- 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).
- Reimbursable charges will be considered the amount of actual costs of project related expenses or



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charges times a markup of 15%. 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: Thompson Engineering  
Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
THE CITY OF CHATTANOOGA

### OWNER'S RESPONSIBILITIES

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

1. Make available to the Engineer the current City of Chattanooga Design and Construction Standards, all records, reports, maps, and other data pertinent to provision of the services required under this contract.
2. Examine all plans, specifications and other documents submitted by the Engineer and render decisions promptly to prevent delay to the Engineer.
3. Designate one City of Chattanooga employee as the Owner representative with respect to all services to be rendered under this agreement. This individual shall have the authority to transmit instructions, receive information and to interpret and define the Owner's policies and decisions pertinent to the Engineer's services.
4. Issue Notice(s) to Proceed to the Engineer for each phase of the design services.
5. Owner will grant or obtain free access to the project site for all equipment and personnel necessary for the Engineer to perform the work set forth in this Agreement. Owner will notify any and all possessors of the project site that Engineer has been granted free access to the site. Engineer will take reasonable precautions to minimize damage to the site.
6. Owner will acquire all lands, rights-of-way, and easements necessary for the construction of the project.
7. 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.



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

SOP 2003-8  
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**ATTACHMENT D**

Owner: City of Chattanooga, Tennessee

Engineer: Thompson Engineering

Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
THE CITY OF CHATTANOOGA

**SUPPLEMENTAL AGREEMENTS**

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 A-1 Scope of Services, Professional Services for Structural Analysis, Design, and Construction of Repairs for Waste Resources Division Sites in the City of Chattanooga, December 19, 2012

Attachment E-1 Schedule, Repairs for Waste Resources Division Sites, December 19, 2012



**ATTACHMENT E**

Owner: City of Chattanooga, Tennessee

Engineer: Thompson Engineering

Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
THE CITY OF CHATTANOOGA

**PROJECT SCHEDULE**

Owner and Engineer recognize that time is of the essence of the Agreement and that Owner will suffer financial loss if the work is not completed within the times stipulated herein, plus any extensions thereof. Accordingly, Engineer has established time intervals, in calendar days, for submittals at various stages of the project as detailed below. As each actual submittal date occurs, Engineer shall meet with Owner to discuss the progress of the work and the actual submittal date shall be documented. If project is behind schedule, the reason shall be recorded. Engineer shall not be responsible for the time required by Owner's representative to review Engineer's submittal. When review is complete, Owner shall, in writing, authorize Engineer to proceed to the next submittal date. After final submittal date, Engineer and Owner shall meet to evaluate Engineer's performance with regard to design schedule. An Engineer's Project Performance Evaluation form shall be completed 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. Past performance shall be accounted for on the evaluation sheet used to rank consultants during the interview process.

Schedule: Engineer will make plan submittals to Owner based on the following schedule:

1. Concept Drawings - Engineer will submit concept drawings within N/A calendar days after Notice to Proceed by Owner.
2. Field Check - Engineer will submit field check drawings within N/A calendar days after Notice to Proceed by Owner.
3. Right-of-Way Drawings - Engineer will submit right-of-way drawings within N/A calendar days after the Notice to Resume Work is given by Owner following Field Check.
4. Office Check - Engineer will submit office check drawings and specifications within N/A calendar days after the Notice to Resume Work is given by Owner following Field Check.
5. Bid Documents - Engineer will submit bid documents within N/A calendar days after the Notice to Resume Work is given by Owner following Office Check.
6. Bid / Award Services – 60 calendar days.
7. Construction Administration Services and/or CEI – N/A calendar days.
8. 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.



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

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**ATTACHMENT F**

Owner: City of Chattanooga, Tennessee

Engineer: Thompson Engineering  
 Project Number & Name: W-12-020

PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS,  
 DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN  
 THE CITY OF CHATTANOOGA

**RATE SCHEDULE**

Senior Principal Engineer	\$185.00 /hr
Senior Engineer	\$140.00 /hr
Design Engineer	\$115.00 /hr
Chief Surveyor	\$ 70.00 /hr
Survey Crew	\$120.00 /hr
Technical Administrator	\$ 55.00 /hr
CAD Operator	\$ 70.00 /hr
Engineering Technician	\$ 70/00 /hr
Mileage	\$0.51 / mi
Trip Charge (local travel)	\$15.00 /trip
Reimbursable Expenses	Cost plus 15%
Subcontractor Expenses	Cost plus 15%



**ATTACHMENT G**

## STANDARD INVOICE

Indicates MANDATORY Item

**CONSULTANT LETTERHEAD**

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

\*\*\*\*\*  
 INVOICE  
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TERMS: Net 25 days  
 DUE: 08/01/03

Must be Sequential Number

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	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		<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">\$107,200.00</span>		\$31,370.95	\$20,573.00	
<b>TOTAL THIS INVOICE</b>						<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">\$10,797.95</span>

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

## Attachment A-1

### SCOPE OF SERVICES PROFESSIONAL SERVICES FOR STRUCTURAL ANALYSIS, DESIGN, AND CONSTRUCTION OF REPAIRS FOR WASTE RESOURCES DIVISION SITES IN THE CITY OF CHATTANOOGA

#### BASIC SERVICES

1. Administration/Laboratory Building and O2 Control Building – this facility is a masonry building with exterior brick walls. The problems reported in this facility include cracking and separating of interior and exterior walls and floors due to settlement.

a. Structural Analysis (SA) - Thompson Engineering will complete the following tasks to meet the specific needs of this project. The structural analysis will focus on subsurface conditions to determine the cause of the reported settlement. When exploring settlement, we typically prepare a detailed map of crack locations, type, width, length, and orientation. In addition, we perform a level survey of floor surfaces. That information helps with planning the location of subsurface explorations.

1. Document Reviews – Our professionals will gather available information about the facilities. This may include construction plans and specifications, maintenance history, renovation history, and other reports or documents related to the facility. Documents relating to reported problems are especially valuable.

2. Interviews – Our professionals will interview personnel familiar with the facility. Usually, personnel involved in building maintenance and operations have the best insight. However, other facility occupants may have information that could be valuable in our assessment.

3. Visual Assessment – Our professionals perform a detailed visual assessment of the facilities. We not only look at the reported problem areas, but also areas with no reported problems. This is important to provide a comparison between areas with visible distresses and areas with no apparent distresses. The visual assessment often uncovers other problems that may not have been noticed. To supplement the visual observations, we will check damaged walls and floors for level. We will document our findings and take representative photographs.

4. Physical Assessment – Based on the data gathered from document reviews, interviews, and the visual assessment, we will develop a physical assessment plan to address specific components of the facilities. The physical assessment may include conducting test pit excavations at the exterior walls; hand auger borings to evaluate shallow subsurface soil conditions; and coring of floor slabs to provide access to the subgrade. These techniques are typically limited to the top 4 to 5 feet from the ground surface. If the results of our physical assessment do not provide evidence of the cause of the distress, we will perform soil borings around the building perimeter using drill rigs. Soil borings will be included in supplemental services.

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The physical assessment will cause damage to building finishes and landscaping. We will attempt to minimize the damage, or limit the damage to less visible portions of the facility whenever possible. We will obtain City approval before causing damage. Restoration of damaged finishes and landscaping is the responsibility of the City.

5. Laboratory Assessment – In some cases, representative material samples are obtained during the physical assessment. Those samples will be tested to determine their physical properties in our local materials laboratory, our corporate materials laboratory, or specialty laboratories, as necessary. This work will be included in supplemental services.

6. Engineering Evaluation – Our professional engineers will review the data gathered during our assessment. First, we will determine the probable cause of the reported distresses or problems. Then, we will develop options for corrective actions, including opinions of probable cost. We will document our findings and present our recommendations in a written report.

7. Final Design Alternative – After the City has reviewed the report, we will meet to answer questions and mutually agree upon the repair approach to be implemented in the design.

b. Design Drawings and Specifications - Thompson Engineering will perform the tasks outlined in the RFP, incorporating our general project approach to meet the specific needs of this project. In addition to preparing the necessary bid documents, we will prepare quantity take-offs and our opinion of probable costs.

1. Schematic Design – We will prepare schematics of the selected repair method, including a plan view and typical details. Review with the City's project coordinator.

2. Design Development – We will complete the design, including complete plans and specifications. This will be submitted to the City as the 90% design submittal.

3. Finalize Design – We will incorporate the City's comments into the final design. We will then prepare bid documents and a bid schedule.

4. Opinion of Probable Costs – We will update our opinion of probable costs and provide to the City for budgeting and allocation of funds.

c. Bid and Award - Thompson Engineering will support the City by performing the following tasks.

1. Pre-Bid Support – We will prepare the advertisement for bids, hold a pre-bid meeting, and answer bidder questions, working with the City Purchasing Department.

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2. Bid Opening – We will attend the bid opening and review the bids with the City. We will prepare a bid tabulation and provide a recommendation of award letter.
  3. Contract Documents – We will prepare the final contract documents for execution.
- d. Construction Phase Services - Thompson Engineering will provide construction management and construction administration services. In addition, Thompson Engineering will provide on-site construction observations and construction materials testing services to verify compliance with the contract documents.
1. Pre-Construction and Progress Meetings – We will organize a pre-construction conference with the contractor and City. We will schedule periodic progress meetings as the complexity of the project requires, but no less than once every two weeks. We will prepare meeting minutes for each meeting and distribute them electronically.
  2. Construction Administration – We will review submittals and shop drawings as required by the contract documents. We will respond to contractor Requests for Information, prepare change orders (if necessary), review pay requests and process for payment, and project close-out documents.
  3. Construction Management – We will review the contractor’s schedule and monitor construction progress. We will perform periodic site visits to observe construction quality and verify compliance with the contract documents.
  4. Construction Observation and Testing – We will provide a field technician to observe construction activities and verify compliance with the project plans and specifications. The field technician will perform the necessary materials testing, such as density tests and concrete sampling and testing. Observations and test results will be documented in periodic reports.
2. Filter Press Building – this facility is a combination of concrete frame with pre-cast concrete exterior wall panels. The problem reported in this facility includes a panel failure about 15 years ago due to fastener corrosion. Due to the age of this facility, a thorough structural assessment is warranted.
- a. Structural Assessment - Thompson Engineering will complete a structural assessment to meet the specific needs of this project. The structural analysis will focus on connections of the pre-cast concrete wall panels to the structural frame. An understanding of the operational environment inside the building will be important in assessing conditions that could result in accelerated corrosion or fatigue of fasteners. In addition, we will review the building envelope to assess possible avenues of moisture intrusion that also could contribute to structural damage.
1. Document Reviews – Our professionals will gather available information about the facility. This may include construction plans and specifications,

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maintenance history, renovation history, and other reports or documents related to the facility. Documents relating to reported problems are especially valuable.

2. Interviews – Our professionals will interview personnel familiar with the facility. Usually, personnel involved in building maintenance and operations have the best insight. However, other facility occupants may have information that could be valuable in our assessment.

3. Visual Assessment – Our professionals perform a detailed visual assessment of the facilities. We not only look at the reported problem areas, but also areas with no reported problems. This is important to provide a comparison between areas with visible distresses and areas with no apparent distresses. The visual assessment often uncovers other problems that may not have been noticed. A man-lift will be rented to provide access to the upper levels of the exterior walls. The upper levels of the interior walls will be accessed from the overhead crane. We will document our findings and take representative photographs.

4. Physical Assessment – Based on the data gathered from document reviews, interviews, and the visual assessment, we will develop a physical assessment plan to address specific components of the facilities. We typically use a combination of non-destructive techniques with destructive testing. The specific approach will depend on the results of our visual assessment and the methods will be tailored to the individual facility component being evaluated. This work will be completed as a supplemental service.

5. Laboratory Assessment – In some cases, representative material samples are obtained during the physical assessment. Those samples will be tested to determine their physical properties in our local materials laboratory, our corporate materials laboratory, or specialty laboratories, as necessary. This work will be completed as a supplemental service.

6. Engineering Evaluation – Our professional engineers will review the data gathered during our assessment. First, we will determine the probable cause of the reported distresses or problems. Then, we will develop options for corrective actions, including opinions of probable cost. We will document our findings and present our recommendations in a written report.

7. Final Design Alternative – After the City has reviewed the report, we will meet to answer questions and mutually agree upon the repair approach to be implemented in the design.

## **SUPPLEMENTAL SERVICES**

The nature of the investigation is such that we cannot know the extent of some physical examinations until the visual examinations and document reviews are complete. Therefore, we have included these services as supplemental services. These include:

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1. Geotechnical Exploration – If the results of our shallow subsurface exploration does not provide evidence of the probable cause of the distress, we will perform a geotechnical exploration to evaluate subsurface conditions. For budgeting purposes, we have assumed the following:

- One mobilization of a track-mounted drill rig.
- 200 feet of auger borings with Standard Penetration Tests
- Five undisturbed samples
- Five piezometers
- Associated laboratory testing
- Engineering Analysis

2. Surveying Services – If the visual assessment indicates areas of potential floor settlement, we will perform a level survey of the floor. Elevation measurements will be taken on a 10-foot grid in the selected areas. For budgeting purposes, we have assumed the surveying can be completed in two working days.

3. Additional Engineering Evaluation – When performing this type of assessment and design, there are many unknown conditions that will become apparent during our work. While we have tried to be conservative in our estimates, we have included a contingency for any additional work that may be necessary. We will provide a scope of work and cost estimate for your approval before proceeding with any work not included in our basic services.