

**AMENDMENT NO. 1 TO
PROFESSIONAL SERVICES AGREEMENT FOR
FLOOD STUDY AND BANK STABILIZATION FOR RALSTON CREEK AT LIBERTY HILLS
COF Contract No. 2015-0356**

THIS AMENDMENT is made and entered into on this the ____ day of _____, 2017, by and between the **City of Franklin, Tennessee** ("City") and **Civil & Environmental Consultants, Inc.** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") entitled Feasibility Study for Ralston Creek at Liberty Hills ("Project"), dated the 19th day of November 2015; and

WHEREAS, said Agreement stipulated that the Consultant would be paid a not-to-exceed fee of **SIXTY-EIGHT THOUSAND SEVEN HUNDRED AND 00/100 DOLLARS (\$68,700.00)**, as authorized by the City Engineer and as detailed in the Fee Schedule; and

WHEREAS, additional work outside the original scope is required to move forward with a final design to stabilize the banks along Ralston Creek; and

WHEREAS, the Consultant has provided a proposal, dated August 7, 2017, for an increase in services, as described in Attachment A, in the amount not-to-exceed **SEVENTY-NINE THOUSAND SEVEN HUNDRED AND 00/100 DOLLARS (\$79,700.00)**; and

WHEREAS, the City has reviewed the proposal and desires to enter into an amendment to the Agreement for the Project as proposed.

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.
2. Consultant's Responsibilities and Duties. Consultant agrees to perform the work as proposed in their letter of proposal ("Attachment A") which includes the Scope of Services for this Amendment, all of which shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. City shall pay Consultant for the cost of the work as described in Attachment A an amount not-to-exceed **SEVENTY-NINE THOUSAND SEVEN HUNDRED AND 00/100 DOLLARS (\$79,700.00)**.

The City reserves the right to issue any payments jointly to the Consultant and Sub-Consultant when the City receives information that the Consultant has not paid its Sub-Consultant.

4. Waiver. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An

effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

5. Severability. If any term or provision of the Amendment is held to be illegal or unenforceable, the validity or enforceability of the remainder of the Amendment will not be affected.

6. Precedence. In the event of conflict between this Amendment and the provisions of the previous Agreement(s), or any other contract, agreement or other document to which this Amendment may accompany or incorporate by reference, the provisions of this Amendment will, to the extent of such conflict (or to the extent the Agreement is silent), take precedence unless such document expressly states that it is amending this Amendment.

7. Entire Agreement. The Amendment between the parties supersedes any prior or contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding the subject matter of the entire Amendment. The terms and conditions of this Amendment may not be changed except by an amendment expressly referencing this Amendment by section number and signed by an authorized representative of each party.

8. Additions/Modifications. If seeking any addition or modification to the Amendment, the parties agree to reference the specific paragraph number sought to be changed on any future document or purchase order issued in furtherance of the Amendment, however, an omission of the reference to same shall not affect its applicability. In no event shall either party be bound by any terms contained in any purchase order, acknowledgement, or other writings unless: (a) such purchase order, acknowledgement, or other writings specifically refer to the Amendment or to the specific clause they are intended to modify; (b) clearly indicate the intention of both parties to override and modify the Amendment; and (c) such purchase order, acknowledgement, or other writings are signed, with specific material clauses separately initialed, by authorized representatives of both parties.

9. Breach. Upon deliberate breach of the Amendment by either party, the non-breaching party shall be entitled to terminate the Amendment without notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

10. Survival. This Amendment shall survive the completion of or any termination of the original contract, revised contract, or agreement or other document to which it may accompany or incorporate by reference.

All other provisions of the Agreement dated November 19, 2015, are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

CITY OF FRANKLIN, TENNESSEE

**CIVIL & ENVIRONMENTAL
CONSULTANTS, INC.**

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Approved as to form:

Eric S. Stuckey
City Administrator
Date: _____

Kristen L. Corn
Assistant City Attorney
Date: _____



August 7, 2017

Mr. Jeff Willoughby
Stormwater Coordinator
City of Franklin
109 3rd Avenue South
Franklin, TN 37064

Delivered via electronic mail to jeff.willoughby@franklintn.gov

Dear Mr. Willoughby:

Subject: Proposal for Additional Professional Engineering Services
Flood Study and Bank Stabilization for Ralston Creek at Liberty Hills
City of Franklin, Williamson County, Tennessee
CEC Project 153-050

Civil & Environmental Consultants, Inc. (CEC) is pleased to provide this proposal for additional services to the City of Franklin (City). The previously submitted scope of work proposed completing a feasibility study, while picking up additional survey information that would be required for the future design phase. The City has indicated that it would like to move forward with final design of spot improvements to reduce/minimize bank erosion downstream of the Liberty Hills subdivision pond, as well as complete the flood study of Ralston Creek. The flood study limits will be from the end of the FEMA mapped area, near Victoria Court through the Liberty Hills pond ending upstream of Liberty Pike to the north and downstream of North Royal Oaks Boulevard to the east.

1.0 BACKGROUND

CEC understands that the City has received a number of recent complaints from residents in the Royal Oaks Subdivision regarding flooding due to stormwater from Ralston Creek overtopping the stream banks. There are also certain areas along Ralston Creek that are experiencing bank failure, some of which the City has attempted to temporarily address until a permanent solution can be determined and installed. The stream originates between Huffines Ridge Drive and I-65 near Centennial High School and flows in a southwesterly direction before entering into the Liberty Hills Subdivision pond. It also receives flow from an eastern channel along Liberty Pike which is listed as the headwater area for Ralston Creek. After leaving the pond through its outlet structure, the stream flows through the Royal Oaks Subdivision, where the previously mentioned flooding and bank failures have occurred.

Access to the stream in the Royal Oaks Subdivision is limited. Additionally, under the previous scope, CEC performed a preliminary flood study of Ralston Creek between the end of the FEMA mapped area, near Victoria Court to Liberty Hills Drive. The preliminary flood study indicated

that the majority of the houses adjacent to the right descending bank of Ralston Creek downstream of the Liberty Hills pond are in the base flood (100-year flood) floodplain.

2.0 PURPOSE

The purpose of this additional work is to finalize the flood study along Ralston Creek in accordance to FEMA guidance and to prepare construction plans and specifications to mitigate the eroding stream channel downstream of the Liberty Hills pond. Several stakeholders will need to be involved in the process of determining a solution including, but not limited to: the City of Franklin, the Royal Oaks subdivision Home Owner's Association, the Liberty Hills subdivision Home Owner's Association, the stream's adjacent property owners, TDEC, and the Corps of Engineers.

3.0 SCOPE OF SERVICES

CEC proposes the following scope of services:

3.1 Task 0008 - Flood Study

Under the previous scope, CEC performed a preliminary flood study for extending the effective FEMA flood study which ends upstream of Victoria Court. This task includes the additional surveying, hydraulic modeling, and reporting necessary to finalize the extended flood study in accordance to FEMA guidance.

- Additional field survey will be conducted, as depicted in Figure 1, to extend the previously field surveyed cross-sections of Ralston Creek beyond the base flood floodplain as established in the preliminary flood study. Additional cross-sections will be surveyed upstream of the Liberty Hills pond. Other topographical information such as fences, structures, utilities and back of house corners that fall in the cross-sections will be collected to ascertain the impact of flooding. The field survey will also collect the finished floor elevation of structures located within and adjacent to the base floodplain as established in the preliminary flood study.
- A field run topographic survey of the Ralston Creek base flood floodplain is not included in this scope. Floodplain mapping will be based on the City of Franklin's GIS topography.
- CEC will perform the field survey for the project using Tennessee state plane coordinates, NAD 83, NAVD 88, zone 4100/5301 for incorporation into the Franklin GIS database. CEC understands that GIS data of this area from the City's database will be made available for use on this project. This additional field survey is a prerequisite for all of the following tasks.

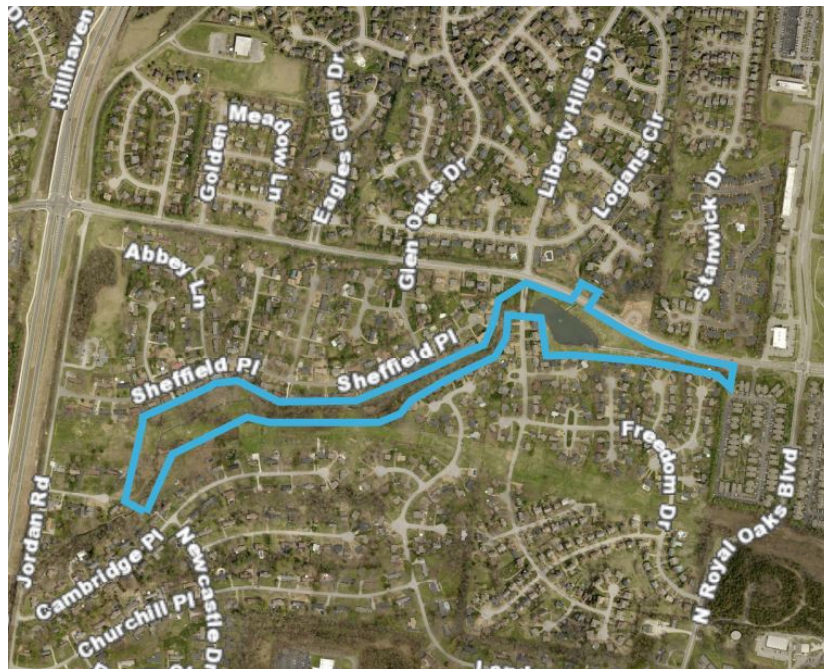


Figure 1. Site Map

- The additional survey, the field survey completed under a previous scope, and the City's GIS topography will be utilized to finalize the extended flood study in accordance to FEMA guidance.
 - The extended flood study will begin at FEMA cross-section F as shown on the effective FIRM 47187C0212F and extend through the Liberty Hills pond upstream of Liberty Pike to the north and downstream of North Royal Oaks Boulevard to the east.
 - CEC will utilize the available data from the effective FEMA Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) for Williamson County, Tennessee and Incorporated Areas dated December 22, 2016 as it relates to Unnamed Tributary 2 to Harpeth River for the downstream boundary conditions of the extended flood study. Ralston Creek is identified by FEMA as Unnamed Tributary 2 to Harpeth River.
 - No new hydrologic flows will be determined for the flood study (i.e., the flood study will use the same flows from the effective FEMA FIS and FIRM for Williamson County, Tennessee and Incorporated Areas dated December 22, 2016).
 - The extended flood study does not include a restudy of the previously FEMA studied portion of Unnamed Tributary 2 to Harpeth River downstream of FEMA Cross-section F as shown on the effective FIRM 47187C0212F.
 - The extended flood study does not include the determination of a floodway for Ralston Creek.
 - The extended flood study will include the bridges over Ralston Creek within the study area.

- The extended flood study will include an existing conditions model, which will reflect the conditions of the study area as of the date the field survey is conducted.
- CEC will prepare a written report and inundation mapping of the base flood to document the flood study.
- This task does not included submittal of the extended flood study to FEMA for a map revision.

3.2 Task 0009 - Bank Stabilization Design

CEC reviewed a section of Ralston Creek from the pond outlet at Liberty Hills Drive to approximately 700 feet downstream of Liberty Hills Drive. There were three reaches identified for bank stabilization measures. Representative photographs of these reaches numbered from downstream to upstream are presented below.

CEC will perform the following tasks based on our site visit on June 30, 2017:



Photo 1: Reach 1 where right descending bank is eroding adjacent to a concrete swale draining water from the street.



Photo 2: Eroding right descending bank in Reach 2.



Photo 3: Failing toe of left descending bank in Reach 3.



Photo 4: Failing toe of right descending bank in Reach 3.

- CEC will perform the field topographic survey for the three reaches using Tennessee state plane coordinates, NAD 83, NAVD 88, zone 4100/5301 for incorporation into the Franklin GIS database. This additional field survey is required at the three reach locations to produce detailed topographic information on which to base the proposed design. The three reaches are located within the first 700 feet downstream of Liberty Hills Drive; therefore, the detailed topographical and boundary survey will be focused on this area to supplement previously collected cross-sections. By comparison, the reach of Ralston Creek for which the flood study is being done measures approximately 3,200 feet. The area to be surveyed for the 700-foot segment will include a portion of the floodplain. Survey information for items such as building corners, FFE's, and other structures will also be collected.
- Develop Initial Design(s).
- Meet with City Staff to go over initial project findings, so the design approach can be approved.
- Consultant to submit One Set of Preliminary Plans for City Review and Approval (Electronic Submittal acceptable).
- Consultant to submit One Half-Size Set and an Electronic Copy (PDF and CADD) of Finalized Preliminary Plans.

- Identify ROW/Easement Acquisition Needs.
- Preliminary Hydraulic Design – including analysis of the flow from the upstream Liberty Hills pond in which Ralston Creek is located. The upper reaches of the restored stream will need to withstand the shear stresses and turbulence associated with the elevation difference leaving the pond outlet.
- Preliminary Landscaping Design.
- Preliminary ROW Plan Review/Utility Coordination – One Full-Size Set of ROW Plans for Each Utility's Use (Electronic Copies May be Accepted based on the Utility) and One Full-Size Set, One Half-Size Set, and an Electronic Copy of ROW Plans for City Review.
- ROW Plan Sets may include, but are not limited to: Title Sheet, Typical Sections, Property Map with Acquisition Table, Present Layout, Proposed Layout, Proposed Profile, Utility Layout, X-Sections (Every 50').
- Hold/Attend Preliminary Utility Coordination Meeting.
- Prepare exhibits for Public Hearing.
 - Two Sets of ROW Plans, Display Boards, and Presentation.
- Hold/Attend Public Hearing (CEC understands that the City will advertise and hold the meeting and that CEC will provide the exhibits and attend to answer questions posed by the public).
- Incorporate Comments and Changes into ROW Plans and Finalize ROW Plans.
- Consultant to submit One Full-Size Set, One Half-Size Set and an Electronic Copy (PDF and CADD) of Finalized ROW Plans.
- Legal Descriptions and Exhibits.
 - Descriptions and Exhibits to be printed on 8 ½" x 11" paper.
 - Exhibits to show existing and proposed features, property lines, proposed ROW and easements (CEC has assumed 10 easements for temporary construction access will be required).
- Stake Right of Way and Easements.
- Prepare Preliminary Quantities and Cost Estimate.

- Prepare Permit Applications (this task will include the Aquatic Resource Alteration Permit application which will also be sent to the Corps of Engineers, and preparation of a Notice of Intent and Stormwater Pollution Prevention Plan (EPSC Plan referenced below will be a component of this plan) to apply for coverage under the Construction General Permit).
- Finalize all Design and Prepare Plan Specifications.
 - Incorporate Special Conditions from ROW/Easement Acquisition.
 - Calculate Final Quantities and Cost Estimate.
 - Prepare Erosion Prevention and Sediment Control Plans.
 - Prepare General Notes.
- Construction Plan Review – One Full-Size Set of Construction Plans for Each Utility’s Use (Electronic Copies May be Accepted based on the Utility) and One Full-Size Set, Two Half-Size Sets, and an Electronic Copy of Construction Plans for City Review.
- Construction Plan Sets may include, but are not limited to: Title Sheet, Typical Sections, Quantities, Property Map with Acquisition Table, Present Layout, Proposed Layout, Proposed Profile, Utility Layout, Erosion Control, General Notes, X-Sections (Every 50’).
- Final Utility coordination meetings (If Necessary).
- Finalize the City of Franklin grading permit application and a Notice of Intent (NOI) and SWPPP for coverage under the Tennessee Construction General Permit for Storm Water associated with Construction (applicable permit application fees are assumed to be waived for the City grading permit; State permit fees are assumed to be paid by the City of Franklin and have not been included in the costs for this proposal).
- Submit Permit Applications (CEC assumes that the City will pay permit fees).
- Consultant to submit One Full-Size Set, One Half-Size Set and an Electronic Copy (PDF and CADD) of Finalized Construction Plans and Specifications.
- CEC will make necessary copies and sell bid documents and maintain a list of bidders (CEC assumes that the City will pay any costs associated with advertising the bid in the newspaper).

~~3.3 Task 0010 - Construction Administration~~

~~CEC will perform the following tasks:~~

- ~~• CEC will conduct a Pre-bid Meeting.~~
- ~~• CEC will conduct the Bid Opening at the City of Franklin offices.~~

- ~~CEC will certify the Bid tabulation and make a recommendation to the City of Franklin.~~
- ~~Conduct Pre Construction Meeting.~~
- ~~CEC will conduct a Project Walk Through.~~
- ~~Review and Approve Shop Drawings.~~
- ~~Coordinate Utility Location and Relocation (If Necessary).~~
- ~~Coordination with Testing companies (If Necessary).~~
- ~~Conduct Site Visits Two Times per Week (CEC has assumed a 12 week construction period for purposes of providing a cost estimate).~~
- ~~Conduct/Attend Bi Weekly Progress Meeting.~~
- ~~Review Pay Requests and Make Recommendation to City.~~
- ~~Coordinate with City Inspector and Contractor.~~
- ~~Review and Make Recommendation on Change Orders.~~
- ~~Interpret/Clarify Plan or Specification Questions or Conflicts.~~
- ~~Conduct Substantial Completion Walk Through.~~
- ~~Prepare Punchlist.~~
- ~~Conduct Final Walk Through.~~
- ~~Prepare Final Punchlist.~~
- ~~Prepare Final Change Order.~~

~~3.4 Task 0011 - Warranty Documentation Assistance~~

~~CEC will perform the following tasks:~~

- ~~Supply information to the City as to when materials are placed into service.~~
- ~~Conduct Warranty Walk Through near the end of the warranty period to identify products or materials that may not be working properly.~~

- ~~• Supply the City with written documentation of the findings of the walk through and recommendations, if necessary, for replacement.~~

3.5 Task 0012 - Initial Benthic sampling

CEC will perform the following tasks:

- Prior to construction, collect, process and analyze samples following TDEC's Standard Operating Procedures for Macroinvertebrate Surveys (2011).
- Provide the City with a report of the survey, which will include a detailed description of the locations, methods, analyses, results and discussion.

4.0 SCHEDULE

CEC can begin work immediately upon receiving your authorization to proceed. On-going progress meetings CEC currently has with the City each month will include updates on the progress of the project.

5.0 COST

Our estimated costs are based on the scope of services described above and will be billed on a Time & Materials (T&M) basis and include reimbursable expenses. If CEC encounters conditions that require additional services and costs beyond what is presented in the proposal, CEC will provide a written revised scope of services and revised costs for the City of Franklin's approval prior to proceeding. The estimated cost to perform the scope of services outlined in this letter is provided below:

Task	Not-to-Exceed Cost
0008 Flood Study	\$28,500
0009 Bank Stabilization Design	\$47,000
0010 Construction Administration	\$37,700
0011 Warranty Documentation Assistance	\$1,600
0012 Initial Benthic Sampling	\$4,200
Total	\$79,700 \$119,000

Invoicing of professional services will be in accordance with the attached fee schedule. CEC will maintain the 2017 rates through the end of the 2018 calendar year. Reimbursable expenses, including subcontracted services, are included in our estimated costs and will be invoiced according to the attached fee schedule.

Your oral or written authorization to proceed will form a binding contract and indicates your acceptance of our proposed scope and fee. CEC will perform the proposed work under an agreed upon City's Standard Professional Services Agreement.

6.0 CLOSING

CEC appreciates the opportunity to provide this proposal to you. We believe the scope of services outlined will address the City of Franklin's needs in a cost effective manner. Should you have any questions or comments, please call us at (615) 979-4382.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Eric J. Gardner, P.E., CPESC
Project Manager



Jeffrey B. Shaver, P.E., CFM, CPESC
Project Manager



Steven E. Casey, P.E., CPESC
Principal

Cc: Paul Holzen, Director of Engineering paul.holzen@franklintn.gov

Enclosures

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
325 SEABOARD LANE • SUITE 170
FRANKLIN, TENNESSEE 37067
PHONE: 615-333-7797 • FAX: 615-333-7751
E-MAIL: nashville@cecinc.com

Municipal Services Fee Schedule

January 1, 2017 through December 31, 2017

PROFESSIONAL SERVICES

Classification	Rate/Hour
Senior Principal.....	\$220
Principal.....	\$185
Senior Project Manager	\$170
Project Manager III	\$155
Project Manager II	\$145
Project Manager I	\$135
Assistant Project Manager	\$110
Project Consultant / Geologist / Hydrogeologist / Biologist / Scientist	\$100
Staff Consultant / Geologist / Hydrogeologist / Environmental Specialist	\$95
CAD Designer.....	\$95
Draftsperson / CADD Operator.....	\$65
Senior Field Technician.....	\$80
Construction Observer / Environmental Technician.....	\$78
Senior Land Surveyor	\$140
Project Land Surveyor / GPS Specialist.....	\$100
Survey Technician IV	\$88
Survey Technician III.....	\$80
Survey Technician II.....	\$70
Survey Technician I.....	\$63
Administrative Assistant.....	\$65
Administrative Manager	\$73

DIRECT EXPENSES

Direct expenses are included in the cost estimates.

Company or Personal Automobile Mileage	\$0.575/mile*
Computer / CADD Usage	\$15/hour
Other Travel Related Expenses	Cost plus 10%
Printing and Reproduction	Cost plus 10%
Telephone and Shipping.....	Cost plus 10%
Miscellaneous Services.....	Cost plus 10%

SUBCONTRACT SERVICES

Services @ Cost Plus 12%

* Will be modified to current IRS Rate