

**CITY OF FRANKLIN, TENNESSEE  
PROFESSIONAL SERVICES AGREEMENT  
COF Contract No. 2018-0143**

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is by and between the City of Franklin, Tennessee, hereinafter referenced as (“City”), and **CDM SMITH** hereinafter referenced as (“Consultant”), who mutually agree as follows:

**DECLARATIONS.** City desires to retain Consultant to provide engineering, related technical, and other services in connection with City’s project hereinafter referenced as Project. The Project is described as follows:

**WATER RECLAMATION FACILITY UPGRADES PROJECT  
CONSTRUCTION SERVICES**

1. **SCOPE OF SERVICES.** Consultant shall provide construction engineering and inspection services for the Project in accordance with the Scope of Services (Services) as found in Attachment A which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a Not-to-Exceed basis for work performed based on the Fee Schedule as contained in Attachment A in the Amount of **ELEVEN MILLION SIX HUNDRED SEVENTY-SEVEN THOUSAND THREE HUNDRED NINETY-SIX AND NO/100 DOLLARS (\$11,677,396.00).**

The Board of Mayor and Aldermen Approved this Agreement on the \_\_\_\_\_ Day of \_\_\_\_\_ 201\_\_.

## TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

### ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

### ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

### ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.

- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 **ALLOCATION OF RISK AND LIABILITY; GENERAL.** Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.
- 3.5 **INDEMNIFICATION.** Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 **SURVIVAL.** The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 **LIMITATIONS OF RESPONSIBILITY.** Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

**ARTICLE 4. TERMINATION BY THE CITY.** The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 **Termination for Convenience.** The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes

effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:

- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
- (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
- (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
  - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;
  - (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

**ARTICLE 5. SCOPE OF SERVICES.** Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 **ENVIRONMENTAL RESPONSIBILITY.**

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

**ARTICLE 6. SCHEDULE.**

6.1 **TIME OF THE ESSENCE.** The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 **FORCE MAJEURE.** Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to

machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

- 6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

## **ARTICLE 7. USE OF DOCUMENTS, DATA.**

- 7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. Consultant shall retain an ownership and property interest therein (including the right of reuse at the discretion of the Consultant) whether or not the Project is completed.

7.1.1 **USE OF DATA SYSTEMS:** Ownership, property interests and proprietary rights in data systems used by Consultant do not extend to the data created by or supplied to Consultant by the City; all rights to that data (including derivative or hidden data such as metadata) shall vest solely in City at the moment of creation.

7.1.2 **DISCLOSURE OF DOCUMENTS/DATA.** City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.

- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the

- Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer hardware differing from that as required of, and used by, Consultant at the beginning of this Project.
- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.



**ARTICLE 8. INSURANCE.**

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
- a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
  - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
  - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
  - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

**ARTICLE 9. PAYMENT.**

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.
- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 **TRAVEL; EXPENSES**  
City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed

in the per diem reimbursement rates on the “CONUS” website developed by the United States General Services Administration, located at [www.gsa.gov](http://www.gsa.gov) [click on ‘per diem rates’ under the ‘etools’ category].

## **ARTICLE 10. MISCELLANEOUS PROVISIONS**

- 10.1 **EQUAL EMPLOYMENT OPPORTUNITY.** In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 **TITLE VI – CIVIL RIGHTS ACT OF 1964.** City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 **NO THIRD PARTY RIGHTS CREATED.** City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 **WARRANTIES/LIMITATION OF LIABILITY/WAIVER.** City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

**ARTICLE 11. EXTENT OF AGREEMENT:**

- 11.1 **APPLICABLE LAW/CHOICE OF FORUM AND VENUE.** This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.
- 11.2 **ENTIRE AGREEMENT.** This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

**ARTICLE 12. DISPUTE RESOLUTION, BREACH.**

- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 **BREACH.** Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with 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.

**ARTICLE 13. SURVIVAL.**

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

(See page 12 for signatures)

BY: \_\_\_\_\_  
Consultant's Signature  
TITLE: \_\_\_\_\_  
Date: \_\_\_\_\_

BY: \_\_\_\_\_  
Dr. Ken Moore  
Mayor  
Date: \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
Tiffani M. Pope, Staff Attorney



Parkview Towers  
210 25<sup>th</sup> Avenue North, Suite 1102  
Nashville, Tennessee 37203  
tel: 615-771-2466  
fax: 615-778-9733

June 21, 2018

Ms. Michelle Hatcher, P.E.  
City of Franklin  
Director, Water Management Department  
124 Lumber Drive  
Franklin, Tennessee 37064

Subject: Final Construction Services Proposal  
Franklin WRF Expansion Project

Dear Michelle:

CDM Smith's proposal for the Franklin WRF construction services is attached. All of the modification that we discussed on Monday and yesterday have been incorporated. Please let Zack or me know if you have any other questions or if you need anything else from us to facilitate the presentation of this to Mark, Eric or BOMA.

We sincerely appreciate this opportunity to continue our work with the City of Franklin.

Very truly yours,

A handwritten signature in blue ink that reads 'R. P. Huguenard'.

Robert P. Huguenard  
Senior Project Manager  
CDM Smith

Enclosure

cc: Brian Goodwin, City of Franklin  
Zack Daniel, CDM Smith  
Jennifer Osgood, CDM Smith



# **ATTACHMENT A**

## **City of Franklin, Tennessee**

### **Proposal for Construction Management Services for the Franklin WRF**

CDM Smith proposes to provide construction management and inspection related services as described in the attached scope of work with the goal of safeguarding the delivery of a quality constructed project that meets the intent of the construction documents while minimizing and addressing the issues and conflicts arising during the construction of the Franklin Wastewater Reclamation Facility (WRF) Expansion Project. CDM Smith will provide the Scope of Services detailed herein and broken into three distinct phases; General Construction Services, Resident Inspection Services and Special Services. The scope of work is based on construction support activities throughout the total construction period of 45 months from Notice of Award (NOA); 3-month allowance between NOA and Notice to Proceed (NTP) and 42 months from NTP to final completion of the Project. The background for the project and the detailed scope of work, including budget by major task, are included herein.

#### **Project Background and Description**

On May 8, 2012, the Board of Mayor and Aldermen (BOMA) approved Resolution 2012-18 adopting the Integrated Water Resources Plan (IWRP) priority projects and associated funding plan for the City's water and wastewater systems. As a result of this IWRP approval, the City of Franklin moved forward with the design services for the expansion of the City's existing Water Reclamation Facility and selected and contracted with CDM Smith to provide the development of construction documents, permitting and bidding services in order to provided planning, design and bidding services to expand the existing 12-mgd annual average daily flow (AADF) facility to a treatment capacity of 16-mgd. This expansion includes addition of wet-weather flow equalization, new upgraded headworks facility, addition of a fermentation tank/unit process for biological treatment improvements, modifications to the denitrification filters, replacement of the UV disinfection system, various hydraulic improvements throughout the plant (new splitter boxes, pipe upsizing/replacement, raising of structure walls, raising of weirs, etc.), new central electrical building and plant-wide electrical improvements, improvements to the Supervisory Control and Data Acquisition (SCADA) system and other miscellaneous construction and associated operational improvements.

In addition to the biological and hydraulic improvements to the liquid process at the WRF, this project includes the replacement of the existing biosolids treatment processes (thickening, dewatering, and hauling/disposal of solids in a landfill) with an entirely new process to produce a class A biosolids. The process includes waste activated sludge (WAS) storage, pre-digestion dewatering, thermal hydrolysis, anaerobic digestion, post digestion dewatering, a combined heat

and power system, and a sludge loading station for trucks to load and transport the dried sludge to final disposal and beneficial use locations.

The construction project was advertised on April 8, 2018 and bids were received by the City of Franklin on June 18, 2018. CDM Smith will complete the review and recommendation of the bids such that the City can obtain Board of Mayor and Aldermen (BOMA) approval at the first BOMA meeting in July and provide preliminary Notice of Award (NOA) to the selected contractor in mid-July. The preliminary NOA will be qualified as contingent upon approval by the State Revolving Fund (SRF) as part of the process for funding of the project. As implied in the previous sentence, preliminary Notice of Award will be issued at the same time that the award recommendations are forwarded to the Tennessee Department of Environment and Conservation (TDEC) SRF for review and final approval. The final NOA will be issued to the contractor once TDEC SRF approval is received and the Notice to Proceed will follow signifying the commencement date for the project.

## **General Services**

For this project, General Services during Construction (i.e., project and construction management and engineering services) will include the following subtasks: G1) project management, G2) project meetings, G3) engineering reviews, clarifications, and interpretations, G4) site visits by office staff for technical review of the construction activities and G5) witnessing of factory testing. Each of these subtasks is discussed in detail below.

### **Task G1, Project Management**

This task includes all management activities and coordination of the project team, establishing and monitoring consulting schedules and budgets, invoicing, reporting and documentation, and general coordination of the project. The following subtasks further define the work under this task. Each of these subtasks was budgeted assuming a total project timeframe of 197 weeks (3.5-year construction duration plus 13 weeks of time between the notice of award to the notice to proceed time and 2 weeks of close out time following final completion).

#### ***Subtask G1A – CDM Smith Project Kickoff Meeting/Project Quality Management Meeting***

CDM Smith will hold a project kickoff meeting, including project quality management planning, with the CDM staff for initial planning and coordination with the team. This meeting will establish roles, responsibilities, expectations, communication protocol, processes and procedures, scope, schedule, budgets, and other required coordination and construction activities.

#### ***Subtask G1B – General Administration of the Construction Contract***

This task will include coordinating of project technical staff, monitoring the progress and cost of each task, budget control, preparing monthly progress reports for submission to the City of Franklin (COF) and preparing monthly invoices for submission to COF.

#### ***Subtask G1C – Final Documentation Filing and File Review***

At the completion of the project, the CDM Smith team will complete all required final close-out documentation, review the files and complete final file maintenance and turnover of a complete final set of documents to the City of Franklin.

## **Task G2, Project Meetings**

We anticipate that five types of meetings requiring CDM Smith participation will occur during construction: G2A) Preconstruction meeting, G2B) Monthly progress meetings, G2C) Special meetings, G2D) Periodic CDM Smith project team meetings, G2E) Bi-weekly conference calls between the CDM Smith construction project manager and the COF project manager and G2F) Weekly meetings with the Contractor. The anticipated scope and budget for the special meetings are based on those special meetings identified in the specifications, plus an allowance for unplanned special meetings. The cost for on-site personnel who are anticipated to be coordinating or in attendance at these meetings is covered under Task R1, Construction Observation (Resident Services).

### ***Subtask G2A – Preconstruction Meeting***

CDM Smith will prepare a preconstruction meeting agenda and conduct a preconstruction meeting in Franklin, Tennessee with the Contractor, City staff, TDEC SRF representatives and all other appropriate parties to explain construction administration procedures and delineate project requirements and constraints. CDM Smith will prepare and distribute minutes of the meeting within one week following completion. We assume that this meeting will be no more than 4 hours long and will be attended in person by the CDM Smith construction project manager, the CDM Smith design project manager, the CDM Smith assistant project manager, the CDM Smith Client Service Leader, four CDM Smith subconsultants, and the CDM Smith on-site personnel. Additional required CDM Smith staff will attend by conference call.

### ***Subtask G2B - Monthly Progress Meetings***

CDM Smith will conduct monthly progress meetings with the Contractor, COF staff, and others as necessary to review submittal status, completed and on-going activities, planned work schedules, and any open issues. CDM Smith will prepare an agenda for each meeting and will prepare meeting minutes after each meeting and distribute to all attendees. Meeting minutes will be distributed to all parties within five business days following the meeting. CDM Smith has budgeted for a total of 42 monthly progress meetings. These will be attended by the CDM Smith construction project manager and the on-site CDM Smith personnel. In addition, we have assumed that the CDM Smith design project manager, the CDM Smith client manager, and a technical specialist will attend 50% of the meetings and four of the CDM Smith subconsultants will attend 25% of the meetings based on the particular needs of the meeting. We have also included an allocation for up to 60 hours of technical specialist time to be included by phone/conference call on an as needed basis.

### ***Task G2C – Special Meetings***

The specifications identify several special meetings (see the list below); and in some cases, additional special meetings will be required in between the monthly progress meetings to resolve time sensitive issues and problems. Our assumptions for the number of meetings are outlined in the list below. We have assumed a total of 16 special meetings with one person in attendance and 8 special meetings with two persons in attendance.

1. Maintenance of Plant Operations Special Meetings (8 meetings)



2. Two pre-construction meetings to address all specified structurally related special meetings (2 meeting)
3. Painting Pre-construction Meeting (1 meeting)
4. THP system pre-installation meeting (1 meeting)
5. Instrumentation and Control (I&C) Kickoff Meeting (1 meeting)
6. I&C Submittal Review Coordination Meeting (1 meeting)
7. I&C Standards and Conventions Workshop (1 meeting)
8. I&C Draft Graphics Review Meeting (1 meeting)
9. Second I&C Graphics Review Meeting (1 meeting)
10. I&C Historical Data Management and Reports Workshop (1 meeting)
11. I&C Factory Testing Pre- Coordination Meeting (1 meeting)
12. I&C Field Testing Pre- Coordination Meeting (1 meeting)
13. Other unplanned special meetings (4 meetings)

***Subtask G2D – Periodic CDM Smith Team Coordination Meetings***

We have budgeted for an anticipated 50 total 1-hour conference calls to coordinate with the project team to identify and address potential ‘roadblocks’ to project progress. These will occur as the need arises and will be internal, with some including City staff participation.

***Subtask G2E – Bi-Weekly Coordination Call with COF***

The CDM Smith construction project manager will hold 97 one-hour, bi-weekly coordination calls with the COF team. The CDM Smith Client Service Leader and the CDM Smith design project manager will also attend half of these calls. These meetings will include; but not be limited to, project schedule and work progress updates including anticipated work over the coming period, submittal and shop drawing updates, general project coordination, specific issues that require City staff input and other appropriate project updates and discussions. Meeting notes will be prepared for each coordination call and distributed out to the attendees.

***Subtask G2F – Weekly Meetings with Contractor***

The CDM Smith RPRs will hold coordination meetings with the Contractor on a weekly basis during the busiest portion of the project (once work ramps up and after work ramps down). We assume that up to 100 one-hour meetings will be held. The meetings will be attended by phone by either Bob Huguenard or Carrie Carden and some meetings will be attended by phone by CDM Smith’s schedule reviewer and technical discipline leads as necessary. We allowed for up to 40 schedule reviewer hours and up to 100 technical discipline lead hours.

**Task G3, Engineering Reviews, Clarifications and Interpretations**

This task includes G3A) review of shop drawings and other construction submittals, G3B) review of contractor payment applications, G3C) review of schedule submittals, G3D) review and response to RFIs, and G3E) review and acceptance of final/closeout submittals. CDM Smith’s office services

team, in coordination with the field services team, will be responsible for providing the Contractor with responses on these items. CDM Smith office technical staff will be responsible for providing the primary input on most of these submittal items; however, the lead resident project representative (RPR) will provide the primary input for the pay requests and certain other items with support from the office technical staff. The costs for the Resident Services associated with these services are included under task R1.

### ***Subtask G3A - Review Shop Drawings and Other Submittals***

CDM Smith will process and track the Contractor's shop drawing and product data submittals on equipment and methods. Each submittal will be reviewed to determine conformance with the design concept and compliance with the contract documents. CDM Smith will maintain an electronic document-management system for processing all submittals to indicate material received, dates of receipt and return to the Contractor, and action taken on the submittal. Average submittal review time is expected to be twenty business days after receipt from the Contractor.

A comprehensive list of submittals and deliverables required from the Contractor will be prepared, based on the provisions of the Contract Documents. The list will include shop drawings, product data, samples, operation and maintenance manuals, start-up and testing reports, record documents, and other submittals as required, with reference to the related specification references. The submittal schedule will be distributed at the Preconstruction Meeting and maintained similar to a checklist throughout the construction period. The budget for this task assumes review of up to 1,000 total submittals and resubmittals. The budget also assumes that any third submittals will be considered additional services that will be paid for by the Contractor per the Contract Documents.

### ***Subtask G3B - Review of Schedule of Values and Applications for Payment***

CDM Smith will review and assist COF with negotiation of the schedule of values. In addition, CDM Smith will review 42 monthly applications for payment from the Contractor for compliance with the established procedure for their submission, noting particularly the relationship of the payment requested to the schedule of values, work completed, and materials and equipment delivered at the site but not incorporated in the Work. The reviewed and approved payment application will be forwarded to the COF with recommendation for action. Accurate project cost records will be maintained, including monthly payments and proposed, pending, or approved changes in the work.

### ***Subtask G3C - Schedule Reviews***

CDM Smith will review the Contractor's initial construction schedule to ensure that the activities are comprehensive, the workflow is logical, the relationships between tasks is logical, and the schedule appropriately considers maintenance of plant operation constraints. Once the initial project schedule is agreed upon, CDM Smith will continuously monitor the Contractor's actual progress and compare it to the approved schedule. CDM Smith will interface with the COF staff on issues involving scheduled shut-downs, tie-ins, start-ups, commissioning, and other required operational coordination to ensure adequate lead time is provided for proper coordination and preparation for these activities. We have budgeted for review of a total of 42 schedule submittals, as an updated schedule is required with each monthly pay request; however, the CDM Smith RPR team will monitor and track the overall and task schedules on a regular basis. Updates and feedback will be provided to both the City staff and contractor at regular meetings.

### ***Subtask G3D - Response to RFIs***

CDM Smith will accept, review and respond to Requests for Information (RFIs) and any required interpretation or clarification of the drawings and specifications. When required, sketches or other documentation will be prepared to accompany responses. CDM Smith will maintain a log of Requests for Information, indicating subject of request, date of request, originator of request, person responsible for response and date of response. The budget for this task assumes that responses will be prepared for up to a total of 400 RFIs.

### ***Subtask G3E – Document Management System***

CDM Smith proposes to utilize a document management system called Unifier or one called eBuilder, for all document management and coordination between all parties during construction. These software tools come with a per person license fee that will be applicable to all users (COF, CDM Smith, contractor) throughout the construction. To minimize the cost per license, CDM Smith has purchased licenses on a company-wide basis and is able to obtain licenses for \$800 per user per year. Between all parties, (COF, the Contractor, CDM Smith and CDM Smith subconsultants) we estimate that a total of 38 licenses will be required for the project. The cost of 38 licenses for 3.75 years is \$114,000; however, due to overlapping project responsibilities for some CDM Smith staff, we are anticipating a total license fee of \$100,000 for the project. In addition, we anticipate that set up and administration of the system over the life of the project will require up to 750 hours.

### **Task G4, Site Visits by Office Staff**

This task includes technical and management staff site visits during construction. Four categories of site visits are outlined below. They include: G4A) Design project manager and design lead engineer site visits, G4B) interim site visits by technical discipline members, G4C) substantial completion inspection, and G4D) final completion inspection. Visits for startup and commissioning services are not included in this task. Instead, those scope items are included in Task S4, Startup and Commissioning Services.

### ***Subtask G4A – Design Project Manager and Design Lead Engineer Site Visits***

CDM Smith's Design Project Manager and Design Lead Engineer will perform periodic site visits for coordination with staff and to review the overall progress of the work. For the purpose of this proposal, we have assumed that the Design Project Manager and the Design Lead Engineer will each make a total of 8 two-day site visits and 8 one-day site visits over the course of the 42-month construction period.

### ***Subtask G4B - Technical Discipline Site Visits for Interim Inspections***

Since the proposed modifications to the Franklin WRF are occurring to an operating facility, maintenance of plant operation will be particularly challenging for this project. Satisfactorily managing outages in individual areas will require bringing the new improvements on line for "partial utilization" as they are completed throughout the duration of the project. That means that rather than having minimal site visits by each discipline followed by a single substantial completion inspection, testing and startup, site visits by select disciplines will be required as the individual components are brought on line for partial utilization. The assumptions for technical discipline site visits provided in the table below were developed with this approach in mind. Some interim inspections by the disciplines will also be required to provide support to the RPRs during

construction. These specific visits are included in the row labeled “miscellaneous”.

Table G-1, Technical Discipline Site Visits for Interim Inspections

Interim Inspection Event	Structural	Architectural	Process Mechanical	HVAC and Plumbing	Electrical	Instrumentation and Control	Odor Control	Combined Heat and Power
Headworks, EQ, Odor Control and BNR Dist. Box	1	1	2	1	1	1	1	0
Plant Water System	0	0	1	0	1	1	0	0
BNR System 1 and Blowers	1	0	1	0	1	1	0	0
BNR System 2	1	0	1	0	1	1	0	0
BNR System 3	1	0	1	0	1	1	0	0
Clarifier Distribution Box	1	0	2	0	1	1	0	0
Alum Storage and Feed	0	0	1	1	1	1	0	0
ABW Filter 1	1	0	0	0	0	0	0	0
UV System	1	0	1	0	1	1	0	0
Solids Treatment Systems	4	3	6	4	6	6	1	2
Miscellaneous	2	1	3	1	2	2	0	0
Total Estimated Visits	13	5	19	7	16	16	2	2
Estimated Average Hours Per Visit	20	20	20	16	20	20	24	24
Total Estimated Hours	260	100	380	112	320	320	48	48

**Subtask G4C - Substantial Completion**

Following notice from the Contractor that all Work (i.e., the entire project) is ready for its intended use, CDM Smith and COF, accompanied by the Contractor, will conduct an inspection to determine if the Work is Substantially Complete. If COF and CDM Smith consider the work Substantially Complete, CDM Smith will deliver a Certificate of Substantial Completion to the Contractor along with a checklist of items that must be complete for the work to be considered fully complete. CDM Smith will have one staff member from each technical discipline represented at the two-day substantial completion inspection process. We have assumed a total of 9 disciplines (see the columns in the table above) with a total of 24 hours per discipline for visit preparation, travel, inspection, and preparation of notes. In addition, we have assumed a total of 32 hours to prepare the certificate of substantial completion and the associated punch list for final completion. We have

assumed that the inspection will show that the work is substantially complete; and therefore, only one substantial completion inspection will be required.

### ***Subtask G4D - Final Completion***

CDM Smith will conduct one project wide final inspection to determine if the Contractor's work is acceptable in order that CDM Smith may recommend acceptance and final payment to the Contractors. Accompanying the recommendation for final payment, CDM Smith will indicate that the Work is acceptable to the best of CDM Smith's knowledge, information and belief and based on the extent of the services performed and furnished by CDM Smith under this Agreement. We have assumed that the inspection will be performed by four CDM Smith office staff and the CDM Smith field staff team over a two-day period with a total of 24 hours per office staff for visit preparation, travel, inspection, and preparation of notes. In addition, we have assumed a total of 32 hours to prepare the final completion documentation. We have assumed that the inspection will show that the work is fully complete; and therefore, only one final completion inspection will be required.

### **Task G5, Witnessing of Factory Testing**

According to the requirements of the specifications, multiple products and process equipment require the witnessing of factory testing prior to acceptance, shipment to the project site and installation. The proposed cost for the associated services is based on 14 separate trips at 16 hours per trip, which includes preparation time, travel, witness and inspection time and memorandum preparation time. Due to the anticipated mix of process equipment, 13 of the trips are anticipated to be within the domestic United States, while one of the tests is anticipated to require international travel due to the location of manufacturer. It is assumed that the international trip will require two additional days of labor and travel costs.

### **Resident Services**

Resident services include provisions for all on-site resident project representatives and daily inspection staffing and tasks. Those services are described in Task R1 below and are inclusive of all tasks performed by our on-site inspection team.

### **Task R1, Construction Observation (Resident Services)**

The following assumptions are made with respect to staffing on resident services:

- The Contractor will be allowed to work 55 hours per week (five 11-hour days).
- A lead Resident Project Representative (RPR) will be provided for the duration of the construction contract (182 weeks). The lead RPR is budgeted for 40 hours per week.
- A senior RPR will be provided for the liquid process portion of the work for the duration of the construction contract (182 weeks). This RPR is budgeted for 55 hours per week for 40 weeks and 40 hours per week for the other 142 weeks (i.e., the weeks that the junior RPR is employed).
- A senior RPR will be provided for the biosolids side of the work for the duration of the construction contract (182 weeks). This RPR is budgeted for 55 hours per week for 40

weeks and 40 hours per week for the other 142 weeks (i.e., the weeks that the junior RPR is employed).

- One junior RPR will be provided under each of the senior RPRs. It is assumed that each of these junior RPRs will be provided for 142 weeks of the project. The junior RPRs are budgeted for 40 hours per week.
- One electrical RPR will be provided. The electrical RPR will be a CDM Smith RPR and will be used as work is ready for inspection. It is assumed that up to 800 hours of this RPRs time will be required and that up to 20 trips to the site will be necessary.
- 125 eight-hour days of on-call civil RPR services will be provided.
- 50 eight-hour days of on-call structural special inspection services will be provided.

The lead RPR will be the primary CDM Smith's representative to the Contractor, thus all communications between CDM Smith and the Contractors shall be issued and received through the lead RPR. The lead RPR will also be the project manager for the project and the primary contact with COF.

The RPR will have the following Duties and Responsibilities

- Schedules - Coordinate the review of progress schedules, schedules of Shop Drawing submissions, and schedules of values prepared by the Contractor and return comments to the Contractor regarding acceptability.
- Conferences and Meetings - Attend meetings with the Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings and circulate copies of minutes thereof.
- Liaison - Serve as CDM Smith's liaison with the Contractor, working principally through the Contractor's superintendents and assist in understanding the intent of Contract Documents; and assist CDM Smith in serving as the COF's liaison with the Contractor when Contractor's operations affect COF on-site operations.
- Observation of Work - Conduct on-site observations of the Work in progress to assist CDM Smith in determining if the Work is generally in accordance with the Contract Documents.
- Report to the Engineer whenever the RPR believes that any part of the Work is defective under the terms and standards set forth in the Contract Documents as to whether such work should be corrected, removed and replaced or accepted as provided in the Construction Contract Documents.
- Verify that test, equipment and systems start-ups and operation and maintenance training are conducted in the presence of appropriate personnel, and report to CDM Smith design team appropriate details relative to the test procedures and start-ups.
- Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project and record and document the results of these inspections.

- Interpretation of Contract Documents - Report to the CDM Smith design team and COF when clarifications and interpretations of the Contract Documents are needed and transmit to the Contractor clarifications and interpretations as issued by CDM Smith.
- Modifications - Consider and evaluate the Contractor's suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to CDM Smith. Transmit to the Contractor in writing decisions as issued by CDM Smith and the COF. Note that preparation and negotiation of cost change orders are not included in the general and resident services.
- Records - Maintain orderly files at the job site for correspondence, reports of job conferences, Shop Drawings and Samples, reproductions of original Contract Documents including all Work Change, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, CDM Smith's clarifications and interpretations of the Contract Documents, progress reports, and Shop Drawing submittals received from and delivered to the Contractor and all other applicable Project related documents. Note – All files will be electronic, except as required by the State Revolving Fund representative.
- Prepare a daily report, recording the Contractor's hours on the job site, weather conditions, data relative to questions of Work Change Directives, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures. RPR shall produce and upload all daily reports to the document management system.
- Record names, addresses and telephone numbers of all the Contractor's subcontractors and major suppliers of materials and equipment.
- Reports - Furnish to CDM Smith periodic reports as required of progress of the Work and of the Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittal.
- Coordinate with the COF and CDM Smith in advance of scheduled major tests, inspections or start of important phases/processes of the Work.
- Report immediately to CDM Smith and the City the occurrence of any accident.
- Payment Request - Review Applications for Payment with the Contractor for compliance with the established procedure for their submission and discuss recommendation with CDM Smith's Technical Leads as appropriate; noting particularly the relationship of the payment requested to the Schedule of Values, work completed, and materials and equipment delivered at the site but not incorporated in the Work.
- Completion - Before CDM Smith issues a Certificate of Substantial Completion, submit to the Contractor a list of observed items requiring completion or correction.
- Observe whether the Contractor has performed inspections required by laws, rules, regulations, ordinances, codes, or orders applicable to the work; including but not limited, to those to be performed by public agencies having jurisdiction over the work.

- Conduct a final inspection in the company of the CDM Smith Technical Leads, COF and the Contractor and prepare a final list of items to be completed or corrected.
- Observe whether all items on final list have been completed or corrected and make recommendations to the COF concerning acceptance and issuance of the Notice of Acceptability of the Work.

CDM Smith and CDM Smith's RPR authority shall be limited such that the RPR shall not:

- Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items), unless authorized by the COF.
- Exceed limitations of CDM Smith's authority as set forth in the Work Order or the Contract Documents.
- Undertake any of the responsibilities of the Contractor, Subcontractors, Suppliers, or the Contractor's superintendent.
- Advise or issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
- Advise or issue directions regarding or assume control over safety precautions and programs in connection with the Work.
- Accept shop drawing or sample submittals or request for information from anyone other than the General Contractor.
- Authorize the COF to occupy the Project in whole or in part.
- Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by the Engineer.

## **Special Services**

Special services are a mix of required and recommended services provided in addition to those defined under General and Resident Services. Special Services include: S1) project change management, S2) SRF related services required per the loan requirements, S3) preparation of record drawings upon completion of the project, S4) startup and commissioning services, and S5) Allowance for CMMS development guidance. These tasks are defined in detail below.

### **Task S1, Change Management**

This task includes review of Contractor claims and proposals, preparation of requests for proposal, assistance to the COF in negotiating change order scope, schedule and cost, work change directives, and preparation of change orders, including an overall project final reconciliation change order. RPR staff effort associated with change management are covered under the resident services task costs. Office support cost associated with change management is included under this task. As the level of effort for this item cannot be predicted, we propose to establish an allowance of \$450,000 for this item.



## **Task S2, SRF Related Services**

This task provides services required under the SRF program rules and includes contract labor compliance, disbursement preparation guidance and review, closeout document preparation, and miscellaneous meetings and tasks. Contract labor compliance is monitoring that is required to verify that Davis-Bacon Act labor practices and requirements are being followed. The budgets for this task were developed assuming a 182-week construction period.

### ***Subtask S2A, Contract Labor Compliance and American Iron and Steel Compliance***

This task includes providing labor compliance services for administering, monitoring and enforcing labor standards as required under the Davis-Bacon Act which is required by the State Revolving Fund. It is assumed that the work under this task will include:

- Participation at the Pre-bid meeting and Pre-construction meeting in order to review Contractor wage rate and reporting obligations for the project
- Verification that the correct project specific Davis-Bacon wage rates and wage classifications are posted at the project job site at all times
- Comprehensive field interviews within two weeks of the start of the project
- Comprehensive field interviews within two weeks of the end of the project
- Creation and maintenance of project labor standards administration files
- Review of weekly certified payroll reports from prime Contractor and subcontractors working on the project
- Investigation of complaints of alleged violations of wage underpayment to employees and preparation of notice of labor standards violation report and enforcement reports, as necessary
- Administration of on-site employee interviews with randomly selected employees of the prime Contractor and all subcontractors
- Labor compliance investigations
- Reconciliation of on-site employee interviews with certified payrolls
- Notification of Contractor and subcontractors of noncompliance and discussion of possible solutions
- Preparation of various reports for contract and labor compliance; including but not limited to, the Contract and Subcontract Monthly Activity Report, and Semi-Annual Labor Standards Enforcement Report
- Review the monthly payment applications to verify that they include the Contractor's certification stating that workers have been paid the current prevailing wage rates for each classification according to the Davis-Bacon wage rate schedule for this project

- The American Iron and Steel (AIS) provision requires using steel and iron products that are produced in accordance with the United States Consolidated Appropriations Act of 2014 (P.L. 113-76). To ensure compliance with the AIS requirements, audits will be performed of documentation demonstrating proof of compliance including:
  - Auditing the Contractor's AIS records, reporting and documentation including verifying the location of the manufacturing process
  - Verifying each handler (supplier, fabricator, manufacturer, processor, etc.) of the iron and steel products certifies their step in the AIS process was domestically performed
  - Informal site visits during project field deliveries reviewing bill of lading, information on the shipper and carrier and verification the iron and steel products are in conformance with the approved project submittals
  - Verify, receive and file AIS project specific certification letters from the manufacturers for the project records
- Records: Interview forms, certified payrolls, attestation forms and certification letters will be kept together with the project records for three years after the contract is completed

The actual level of effort required for this task is dependent on a number of factors; including but not limited to the number of subcontractors, the number of employees the Contractor and each subcontractor employs on-site, the level of sophistication and experience with the requirements of the Contractor and each subcontractor and how adept they are at complying with the laws and regulations. It has been assumed that the Contractor will perform a minimum of 30 percent of the work and subcontractor no more than 70 percent of the work. It has also been assumed that no additional iron and steel products will be added to the project beyond those in the original contract documents. Due to the variability, it isn't possible to know the exact level of effort for this task; therefore, for the purpose of this proposal we have assumed that an average of 26 hours per week will be necessary over the 182-week contract period for review and compliance activities.

#### ***Subtask S2B, Disbursement Preparation Guidance and Review***

This task includes reviewing of the Contractor's pay applications to confirm compliance with the SRF requirements and providing guidance on disbursement request preparation as necessary. This task also includes filling out SRF checklists and forms, performing budget adjustment assistance, coordinating with SRF after disbursement requests have been submitted and assisting with revisions if necessary. We assume that a total of 42 disbursement requests will occur.

#### ***Subtask S2C, Closeout Documents Preparation***

This task includes compilation and review of documents associated with closing out the SRF loan. The CDM Smith project team will conduct coordination with the SRF staff and coordinate with the City staff as appropriate.

### ***Subtask S2D, Miscellaneous Meetings/Tasks***

This task includes assistance with numerous miscellaneous tasks and meetings. Examples include:

- Assistance with assembly of Authority to Award,
- Attendance of SRF coordination staff at preconstruction meeting,
- Assistance with response to state audits, EPA audits and internal audits,
- Files review during the project (files will be reviewed during SRF periodic inspections),
- *Fiscal Sustainability Plan* coordination and completion,
- Change Order review and assistance with submittal to SRF,
- Plans and specifications addendum review and assistance with submittal to SRF, and
- Other liaison services with SRF.

We propose establishing an allowance of \$25,000 for this task and monitoring the expenditures on a monthly basis.

### **Task S3, Preparation of Record Drawings**

CDM Smith will review the final Record Drawing information submitted by the Contractor and will revise the construction drawings to reflect the actual final conditions based on the Contractor's Record Drawing information, supplemented with any additional information gathered by our RPR team during inspection activities. It is assumed that 564 drawings will be included in the final record drawing set. Final Record Drawings will be provided to COF in the following format: electronic drawing and specification files on CDs (AutoCAD and PDF), and one set each of full-size and half-size drawing prints. In addition, we have assumed that an electronic and a full-size paper set of documents will be delivered to the SRF.

### **Task S4, Startup and Commissioning Services**

During the construction phase, CDM Smith will provide pre-startup O&M assistance on operational issues relative to the completion of construction and plant startup. The Startup and Commissioning subtasks are as follows and are described in more detail below:

- *Subtask S4A, Equipment and Process Testing and Startup Related Services*
- *Subtask S4B, Review of Equipment Service Manuals*
- *Subtask S4C, Vendor Training Quality Monitoring*

#### ***Subtask S4A Equipment and Process Testing and Startup Related Services***

It is assumed that there will be up to 40 testing and startup events for either individual equipment or plant processes. This task will include 1) Testing plan review, 2) Testing plan development assistance, 3) Tracking and monitoring to verify testing readiness, 4) Pre-testing and startup coordination meetings, and 5) Witnessing of testing. Each of these subtasks is described in detail below.

### Startup and Testing Plan Review

Prior to proceeding with testing and startup of equipment and processes, the contractor will be required to develop and submit testing and startup plans for review. This subtask includes review of up to 80 testing and startup plan submittals and resubmittals (i.e., review of each plan twice). The testing and startup documents will also be electronically transmitted to City personnel for review concurrent with the CDM Smith review. CDM Smith will then consolidate the comments into a single response. If necessary, CDM Smith will host a coordination call with the City to resolve any discrepancies in the two sets of comments.

### Testing Plan Development Assistance

In the case of more complicated testing and startup plans, especially those involving startup of whole treatment processes, like the biosolids facility, the contractor is not likely to have the expertise required to produce a complete and acceptable plan. The goal of this task is to collaborate with the contractor to guide them to an acceptable plan (i.e., one that achieves the goals but still remains under their direct ownership). It is assumed that three of the testing plans identified above will require testing plan development assistance. CDM Smith will coordinate with the City to facilitate City participation in all coordination sessions. It is assumed that a total of six testing plan coordination meetings will be held, (three by phone and three in person) and three CDM Smith staff will attend and participate in each meeting. A total of 42 hours has been budgeted for meetings held by phone and a total of 108 hours have been budgeted for in person meetings.

### Tracking and Monitoring to Verify Readiness

CDM Smith will maintain a checklist to track and monitor the readiness of equipment and processes for testing. The checklist will include specified pre-testing submittals and actions, physical readiness, and submittal of the manufacturers certificate of proper installation.

### Pre-Testing and Startup Coordination Meetings

CDM Smith will attend up to 40 start-up coordination meetings with the Contractor and plant staff. We assume that these meetings will either be by phone or will occur on the morning that testing will begin (i.e., any travel is accounted for under the actual testing). A total of 40 hours has been allotted for this task.

### Witnessing of Testing and Startup for Liquid Process

During start-up of the liquid process, CDM Smith will provide on-site assistance of a full-time Operations and Maintenance Specialist who will assist operating staff through the various facility start-up phases. For the purposes of this scope of work, it is assumed that a total of 60 man-days (at 8 hours/day) of O&M specialist assistance will be provided during equipment and process functional and acceptance testing, start-up and systems optimization. It is assumed that a total of 20 trips to the site will be required for this work. The O&M specialist's responsibilities will include:

- Observation of functional and acceptance testing of the work
- Assist plant staff in process preparation for testing and initial operation

- Providing input and guidance in the commissioning of new work.
- Recommending process analysis, monitoring and control adjustments
- Monitoring and recommend process optimization adjustments
- Prepare sample process equipment status log sheets
- Provide informal hands-on instruction to plant staff
- Coordinate construction warranty-related issues

Note that provision of any recommendations or advice to the Contractor will be dependent on Contractor agreeing to take all risk for either acceptance or non-acceptance of CDM Smith input.

Engineer will keep written logs of the pre-startup and startup activities. The logs will include operating and testing parameters, test observations, feed rates, and chemical consumption, where applicable. The Specialist logs will be utilized during plant start-up and to update the O&M manual. The O&M Specialist will participate in the Contractor meetings associated with the testing and startup work during the testing and startup.

#### *Witnessing of Testing and Startup for the Biosolids Processes*

The commissioning requirements for the biosolids process are quite involved and lengthy as described in Specification Section 01666. Overall, the commissioning services for the entire biosolids process train are estimated to require 200 days (assume 30 weeks). We have assumed the following staffing for this task:

- One full-time CDM Smith Operations and Maintenance (O&M) Specialist who will act as the Owner's Commissioning Manager (OCM). It is assumed that this person would work an average of 8 hours per day, six days per week during the 30-week period.
- A second CDM Smith O&M Specialist who will be on-site but will spend an average of 16 hours per week on this task. This person's function will be to fill in for the OCM on the seventh day of the week, when necessary, and to provide hands on guidance and assistance to the City Operators on equipment that has been deemed substantially complete and turned over to the City. Note that the commissioning of the biosolids system is likely to require seven day a week attention for a portion of the commissioning period, especially after the system has been commissioned through the pre-dewatering system. It is intended that this second O&M Specialist will be at the site through the entire biosolids commissioning period but will perform work on tasks S5 through S8 when he/she is not working on this specific subtask.
- Technical Expert Visits– Assumed total of 30 days of onsite support over eight different trips.
- Technical Expert Office and Telephone Assistance – Assumed total of 240 hours of remote support to the project team and Franklin operations staff.

- Technical experts will include those with expertise in dewatering, digestion, thermal hydrolysis, and combined heat and power, as well as all other needs that may arise during start-up and commissioning.

#### ***Subtask S4B Review of Equipment Service Manuals***

Engineer will review the Contractor submitted vendor and manufacturers' operation and maintenance manuals. The review will verify that proper operations, preventive maintenance, repair procedures and applicable service information are provided for all specified equipment. The submitted manuals will be compared to the specification section "Operations and Maintenance Data" to verify that the submittals are sufficient in content, quantity and provided in a timely manner that enable staff training and consultation prior to start-up. It is assumed that 140 submittals and resubmittals will be reviewed and that a total of up to 840 hours will be required for reviews.

#### ***Subtask S4C Vendor Training Quality Monitoring***

This task will include review of Contractor submitted training plans and monitoring of select training sessions. These are described in more detail below.

##### *Review of Training Plans*

Prior to proceeding with training on equipment and processes, the contractor will be required to develop and submit training plans for review. It is assumed that 40 training plans will be produced and that each plan will be reviewed twice.

##### *Monitoring of Select Training Sessions*

CDM Smith will monitor select vendors and manufacturers' training to ensure that they comply with the intent of the specifications and that the material is covered adequately and professionally. CDM Smith will take attendance and provide feedback on design intent during the training session to augment the students learning experience. Vendor courses will not be accredited by CDM Smith. The O&M specialist will attend up to fifteen (15) training days by the vendors. It is assumed that 10 trips to the site will be necessary for this task.

#### **Task S5, Allowance for CMMS Development Guidance**

The City wishes to develop a CMMS system for the Franklin WRF using their existing CMMS software platform (INFOR). The City would like to do this with their own forces but would like guidance from CDM Smith. The level of effort or exact scope required of CDM Smith is not established at this time, so we propose to establish an allowance of \$30,000 to allow initiation of the guidance work.

#### **Schedule**

The schedules for general services, resident project representative and inspection services, change management, SRF related services, startup and commissioning services will be driven by the contractor's schedule. For the purpose of this proposal, these services shall be completed within the 45-month construction time period from Notice of Award through final completion. Record drawings will be completed within two months of the completion of construction.

## **Budget**

CDM Smith proposes to perform the above work on a billing rate basis for a not to exceed price of \$11,677,396. A breakdown of cost is provided on Table 1 herein.

**Table 1**  
Summary of Budget by Task  
Franklin WRF Construction Services Proposal

	Task No.	G1	G2	G3	G4	G5	R1	S1	S2	S3	S4	S8	Totals
	Rate	Project Management	Project Meetings	Reviews, Clarifications and Interpretations	Office Staff Visits	Witnessing Factory Tests	Construction Observation	Change Management	SRF Related Services	Record Drawings	Startup & Commissioning Services	O&M Services Allowance for CMMS Development Guidance	
<b>LABOR</b>							Resident Services	Construction Special Services				O&M Services	
Officer	\$225	404	210	0	0	0	0	26	0	0	0	0	640
Project Manager/Lead RPR	\$190	0	0	0	0	0	7280	0	0	0	0	0	7280
Project Controls Specialist	\$110	200	0	0	0	0	0	0	0	0	0	0	200
Senior Technical Specialist	\$210	2024	747	866	376	128	0	325	0	28	710	33	5237
Technical Specialist	\$190	74	836	908	1996	112	0	325	0	55	48	33	4387
Senior Engineer/Scientist	\$165	50	166	1300	72	0	0	325	0	56	4274	33	6276
Engineer/Scientist	\$145	3192	510	3558	0	0	0	325	0	113	156	33	7887
Junior Engineer/Scientist	\$120	0	0	2450	0	0	0	325	0	0	0	0	2775
Senior Designer	\$140	0	0	0	0	0	0	260	0	733	0	0	993
Contract Administrator	\$110	398	0	0	0	0	0	0	0	0	0	0	398
Construction Coordinator	\$210	10	50	344	0	0	0	270	0	0	0	0	674
Designer/Drafter/Technician	\$95	0	0	200	0	0	0	260	0	451	0	0	911
Administrative Staff	\$90	1604	73	0	0	0	0	0	0	34	150	0	1861
Electrical RPR	\$165	0	0	0	0	0	800	0	0	56	0	0	856
Senior RPR	\$140	0	0	0	0	0	7880	0	0	0	0	0	7880
RPR	\$110	0	0	0	0	0	11360	0	0	0	0	0	11360
Construction Cost Estimator	\$160	0	0	0	0	0	0	260	0	0	0	0	260
<b>TOTAL HOURS</b>		7956	2591	9626	2444	240	27320	2701	0	1527	5338	132	59875
<b>TOTAL DOLLARS</b>		\$1,213,330	\$481,153	\$1,470,030	\$470,080	\$48,160	\$3,868,000	\$435,000	\$0	\$199,898	\$899,550	\$23,430	\$9,108,630
<b>OTHER DIRECT COSTS</b>													
Car Mileage	\$0.570	\$171	\$17,844	\$0	\$11,223	\$399	\$23,598	\$3,420	\$0	\$0	\$2,913	\$114	\$59,682
Rental Car	\$70	\$420	\$3,430	\$0	\$15,540	\$2,100	\$7,000	\$0	\$0	\$0	\$11,970	\$840	\$41,300
Air Fare	\$700	\$4,200	\$33,600	\$0	\$65,100	\$11,600	\$23,100	\$0	\$0	\$0	\$51,800	\$2,800	\$192,200
Meals	\$63	\$0	\$8,411	\$0	\$14,742	\$1,890	\$6,300	\$1,890	\$0	\$0	\$10,962	\$756	\$44,951
Hotel	\$157	\$942	\$15,936	\$0	\$17,113	\$2,512	\$15,700	\$4,710	\$0	\$0	\$28,260	\$1,884	\$87,057
Apartment Rental	\$1,300	\$0	\$0	\$0	\$0	\$0	\$10,200	\$0	\$0	\$0	\$0	\$0	\$10,200
Telephone		\$0	\$0	\$0	\$0	\$0	\$11,520	\$0	\$0	\$0	\$0	\$0	\$11,520
Document Reproduction		\$1,405	\$2,085	\$12,420	\$890	\$140	\$0	\$4,000	\$0	\$5,500	\$2,132	\$176	\$28,748
Shipping		\$1,185	\$330	\$8,050	\$0	\$0	\$0	\$980	\$0	\$0	\$0	\$0	\$10,545
Miscellaneous Equipment/Supplies		\$0	\$0	\$100,000	\$0	\$0	\$4,500	\$0	\$0	\$0	\$0	\$0	\$104,500
<b>TOTAL ODCs Plus 0% Markup</b>		\$8,323	\$81,635	\$120,470	\$124,608	\$18,641	\$101,918	\$15,000	\$0	\$5,500	\$108,037	\$6,570	\$590,702
<b>OUTSIDE PROFESSIONALS</b>													
Structural - Special Inspection		\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$0	\$30,000
Civil Infrastructure Associates		\$44,640	\$0	\$37,200	\$0	\$0	\$135,000	\$0	\$0	\$11,200	\$0	\$0	\$228,040
LDA Eng (SRF Admin & Svcs)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130,000	\$0	\$0	\$0	\$130,000
Tom Lamb (RPR and AI&S Support)		\$0	\$0	\$0	\$0	\$0	\$906,200	\$0	\$504,000	\$0	\$0	\$0	\$1,410,200
Subtotal OPs		\$44,640	\$0	\$37,200	\$0	\$0	\$1,071,200	\$0	\$634,000	\$11,200	\$0	\$0	\$1,798,240
Total OPs Plus 10% Markup	10%	\$49,104	\$0	\$40,920	\$0	\$0	\$1,178,320	\$0	\$697,400	\$12,320	\$0	\$0	\$1,978,064
<b>TOTALS</b>		<b>\$1,270,757</b>	<b>\$562,787</b>	<b>\$1,631,420</b>	<b>\$594,688</b>	<b>\$66,801</b>	<b>\$5,148,238</b>	<b>\$450,000</b>	<b>\$697,400</b>	<b>\$217,718</b>	<b>\$1,007,587</b>	<b>\$30,000</b>	<b>\$11,677,396</b>

General Services Subtotal **\$4,126,454** Field Services **\$5,148,238** Construction Spec. Services **\$2,372,704** O&M **\$30,000**