



City of Franklin

109 3rd Ave S
Franklin, TN 37064
(615)791-3217

Meeting Agenda Capital Investment Committee

Thursday, June 28, 2018

4:00 PM

Board Room

CANCELLED DUE TO LACK OF QUORUM

Call To Order

1. [18-0667](#) Consideration of Approval of Minutes from May 23, 2018.
2. [18-0515](#) *Consideration of Amendment No. 6 to the Professional Services Agreement (COF Contract No. 2012-0183) with Smith Seckman Reid, Inc. (SSR) for the Water Treatment Plant (WTP) Modifications Project in an Amount Not-to-Exceed \$21,900. (Deferred from 6/28/18 CIC)

Sponsors: Michelle Hatcher and Patricia McNeese
Attachments: [COF 2012-0183 Amnd 6 SSR WTP_with attachment.Law Approved](#)
3. [18-0599](#) Consideration of COF Contract No. 2018-0087, An Agreement with The Jones Company of Tennessee, LLC for Reimbursement of Cost in the Amount of \$11,640.00 for Sanitary Sewer Collection System Improvements in the area of Ladd Park between Sections 32 - 34 and Section 37. (Deferred from 6/28/18 CIC)

Sponsors: Michelle Hatcher and Mark Hilty
Attachments: [COF 2018-0087 Moss Property PUD Subdivision Offset Agreement_with Map.L](#)
4. [18-0606](#) *Consideration of a Professional Services Agreement with Bowker & Associates, Incorporated, Consulting Engineers (COF Contract No. 2018-0140), for a Comprehensive Assessment of Odor Emissions and Their Control in the Franklin, TN Wastewater Collection and Treatment System in an Amount Not-to-Exceed \$40,740.00. (Deferred from 6/28/18 CIC)

Sponsors: Michelle Hatcher
Attachments: [Bowker Associates](#)
[Law approved Bowker and Assoc. Inc. Consulting Eng_with Attachment A.Law](#)

5. [18-0632](#) *Consideration of Amendment No. 1 to the Professional Services Agreement (COF Contract No. 2017-0276) with C&T Engineering and Inspection, LLC for the Goose Creek Inn Sanitary Sewer Extension Project in an Amount Not-to-Exceed \$33,810.00 (Deferred from 6/28/18 CIC)
- Sponsors:** Michelle Hatcher and Patricia McNeese
- Attachments:** [COF 2017-0276 C and T Amnd 1 with attachment.Law Approved](#)
6. [18-0665](#) *Consideration of DRAFT Resolution 2018-57, A Resolution Awarding the Construction Contract (COF Contract No. 2017-0186) to Adams Contracting, LLC. In the Amount of \$256,225.10 for the Carnton Lane Culvert Replacement Project. (Deferred from 6/28/18 CIC)
- Sponsors:** Paul Holzen and Jonathan Marston
- Attachments:** [Res 2018-57 - Carton Lane Culvert Replacement](#)
[Signed Bid Tabulation](#)
7. [18-0664](#) *Consideration of DRAFT Resolution 2018-56, A Resolution to Finalize the Property Acquisition Associated with Fire Station Number 7. (Deferred from 6/28/18 CIC)
- Sponsors:** Paul Holzen and Jonathan Marston
- Attachments:** [Res 2018-56 - Agreement of Sale Exhibit A](#)
[Res 2018-56 - Appraisal](#)
[Res 2018-56 - Fire Station Property Aquisition Resolution](#)
8. [18-0666](#) Consideration of DRAFT Resolution 2018-55, "A Resolution Awarding the Construction Contract (COF Contract No. 2018-0052) to Renascent, Inc. in the Amount of \$30,829.16 for the Demolition of Structures Located at 403 & 405 Hillsboro Road" (Deferred from 6/28/18 CIC).
- Sponsors:** Brad Wilson and Paul Holzen
- Attachments:** [RES 2018-55 DRAFT.pdf](#)
9. [18-0607](#) *Consideration of a Resolution No. 2018-01 Awarding the Construction Contract (COF Contract No. 2017-0264) to Kiewit Infrastructure South Co. in the Amount of \$132,380,000.00 With the Addition of the Alternate of A Jet Mixing System in the Equalization Basin in the Amount of \$510,000.00 for the Water Reclamation Facility Modifications and Expansion Project for a Total Recommended Project Amount of \$132,890,000 (6/26/18 WS).
- Sponsors:** Eric Stuckey, Mark Hilty and Michelle Hatcher
- Attachments:** [2018-01 RES Kiewit Award WRF with bid award letter](#)
[20180625_PPT_Re-Bid Contingent Award Presentation \(CLEAN\)_V5](#)
- Legislative History**
- 6/26/18 Work Session referred to the Work Session

10. [18-0661](#) Capital Projects Status Report

Sponsors: Engineering

Attachments: [Capital Projects Status Memo.pdf](#)

11. [18-0636](#) Water and Sewer Projects Status Report

Sponsors: Michelle Hatcher and Patricia McNeese

Other Business

Adjournment

ANYONE REQUESTING ACCOMMODATIONS DUE TO DISABILITIES SHOULD CONTACT A.D.A. COORDINATOR, AT 791-3277 AT LEAST 10 DAYS PRIOR TO THE MEETING, IF POSSIBLE.

**AMENDMENT NO. 6 TO
PROFESSIONAL SERVICES AGREEMENT
FOR THE WATER TREATMENT PLANT MODIFICATIONS
COF Contract No. 2012-0183**

THIS AMENDMENT is made and entered into on this the ____ day of _____, 201_, by and between the **City of Franklin, Tennessee** ("City") and **Smith Seckman Reid, Inc. (SSR)** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") (COF Contract No. 2012-0183) entitled City of Franklin, Tennessee Professional Services Agreement, Water Treatment Plant Modifications ("Project"), dated the 27th day of November, 2012; and

WHEREAS, the City approved Amendment No. 1 to the Consultant's Professional Services Agreement (COF Contract No 2012-0183) on June 25, 2013, for the engineering design services for an upgrade to the Raw Water Intake and Pump Station for the Water Treatment Plant; and

WHEREAS, the City approved Amendment No. 2 to the Consultant's Professional Services Agreement (COF Contract 2012-0183) on January 14, 2014, for the design, bid and installation of the interim Ultraviolet (UV) disinfection treatment upgrade to meet Environmental Protections Agency's (EPA) imposed deadline of September 30, 2014, for adherence EPA's Long-Term Surface Treatment Rule (LT2 Rule); and

WHEREAS, the City approved Amendment No. 3 to the Consultant's Professional Services Agreement (COF Contract 2012-0183) on May 4, 2015, for the preselection process of the hollow fiber membrane filtration system (Membrane) and the design efforts needed for the inclusion of other alternative treatment solutions, such as the Advanced Oxidation Process (AOP), selected by staff to better enhance the capabilities upgrade of the Water Treatment Plant; and

WHEREAS, the City approved Amendment No. 4 to the Consultant's Professional Services Agreement (COF Contract 2012-0183) on October 27, 2015, for the Consultant's Construction Administration (CA) and Resident Project Representative (RPR) Services during construction of the Water Treatment Plant; and

WHEREAS, the City approved Amendment No. 5 to the Consultant's Professional Services Agreement (COF Contract 2012-0183) on December 12, 2017, for the Consultant's Construction Administration (CA) and Resident Project Representative (RPR) Services during construction of the Water Treatment Plant; and

WHEREAS, the City and Consultant realize the need for additional engineering services related to construction services support to fully complete the Project's final construction; and

WHEREAS, the Consultant has provided a Proposal for an increase in engineering services for the Water Treatment Modifications Project, as described in Attachment A dated May 7,

2018, in the amount of **TWENTY-ONE THOUSAND NINE HUNDRED AND NO/100 DOLLARS (\$21,900.00)**; and

WHEREAS, the City has reviewed the Proposal and desires to enter into an Amendment to the Agreement to include the final design as stated above for the Project as proposed by the Consultant.

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. The Consultant shall perform the work as proposed in the Scope as found in the May 7, 2018, letter of proposal (**Attachment A**) which includes the Scope of Services for this Amendment. Attachment A shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. The City shall pay the Consultant in an amount not to exceed **TWENTYONE THOUSAND NINE HUNDRED AND NO/100 DOLLARS (\$21,900.00)** for the additional services as described in Attachment A.

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 27, 2012, and its subsequent Amendments, are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

CITY OF FRANKLIN, TENNESSEE

SMITH SECKMAN REID, INC.

By: _____
Dr. Ken Moore
Mayor
Date: _____

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

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Tiffani M. Pope, Staff Attorney

May 7, 2018

Mrs. Michelle Hatcher – Director
Franklin Water Management Department
124 Lumber Drive
Franklin, Tennessee 37064

**Re: Franklin Water Treatment Plant Modifications
COF Contract Number: 2012-0183
CA Additional Services Request**

Dear Michelle,

As you are aware, the work at the Water Treatment Plant is nearing completion. The plant has been producing water for 8 weeks, and effort on site has turned to the completion of work list items associated with walk through activities across the design team, along with additional work that is being completed from contingency funds.

The time extension associated with Change Order No. 3 dictated a 78 day increase in contract time. Based upon a tentative Substantial Completion (SC) Date of April 24, 2018, the project must reach final completion by June 23, 2018 (60 days after SC), which is roughly 2 weeks earlier than the time identified in the change.

The extension of the project has placed us near our Construction Administration fee ceiling. Our letter dated October 31, 2017 indicated that we would exhaust our fee in April, 2018. At the time of the letter, this date coordinated with project close-out. The extension of the project an additional two months will require us to extend our timeline of CA services. Following our April invoice, we will have \$9,866.00 in CA Labor Budget remaining. We have projected effort of \$31,800.00 necessary to close out the project over the next 7 weeks.

We are respectfully requesting an increase to our fee ceiling of \$21,900.00 for the extension of construction services through the close out period. Please note that we have expense budget of just under \$23,000.00 remaining in our contract. Our initial inquiry was to repurpose this funding to labor budget, but we understand an internal shift is not allowed, and therefore are providing this request a formal amendment. We believe the amendment would ultimately result near a net zero change in funding based upon the surplus expense budget. The construction contract is also expected to close out well beneath the initial budget.

We appreciate the opportunity to continue to serve to the City of Franklin and look forward to celebrating the project with you next month. The fee ceiling will not be exceeded without prior approval by the City. If you have any questions or concerns regarding this request, please do not hesitate to call me at (615) 460-0522.

Sincerely,

SMITH SECKMAN REID, INC.



Andrew Johnson, P.E.

cc: Brian Goodwin, Patricia McNeese - FWMD
JAG, KDM – SSR
File (7)

**AGREEMENT FOR REIMBURSEMENT OF COSTS
FOR SANITARY SEWER COLLECTION SYSTEM IMPROVEMENTS
COF CONTRACT NO. 2018-0087**

This Agreement between THE CITY OF FRANKLIN, TENNESSEE ("**City**") and **THE JONES COMPANY of TENNESSEE, LLC, ("Developer")**, entered into on this the _____ day of _____, 2018, subject to the following premises, terms and conditions.

WHEREAS, the Developer has previously submitted to the Board of Mayor and Aldermen, Moss Property PUD Subdivision (Foxglove Farm), site plan, Project #6631 for approval ("**Development**"); and

WHEREAS, the Developer has been required as a condition of this approval to upsize sanitary sewer infrastructure planned for their site to coincide with the City's master basin plan ("**Sewer Improvements**"), which will become a part of the Franklin sanitary sewer collection system and will be available for the use and benefit not only of businesses and residents within the Development, but other present and future customers of the Franklin sanitary sewer collection system outside the Development; and

WHEREAS, the Developer is therefore entitled, pursuant to Section 18-208 of the Franklin Municipal Code, to be reimbursed for a portion of the costs of construction of the said Improvements as described herein; and

WHEREAS, the Developer has incurred, or based upon reasonable estimates of the City Engineer, will incur an additional cost of ELEVEN THOUSAND SIX HUNDRED FORTY DOLLARS AND NO/100 DOLLARS (\$11,640.00) for the materials related to upsizing the sanitary sewer infrastructure; and

WHEREAS, the determination as to eligible cost reimbursement is based generally upon the difference in sizing and capacity of the lines and other facilities needed for the Development and that needed or required by the City for the sanitary sewer collection system as a whole, i.e. the "cost of upsizing," although the City may, in its discretion, consider other factors necessary for an equitable sharing of costs.

NOW THEREFORE, the City and the Developer, their successors and assigns, do hereby agree as follows:

1. The foregoing recitals are incorporated into this Agreement and made a part thereof.
2. The Developer and the City agree that the Developer shall be eligible for reimbursed as hereafter set forth for the Sanitary Sewer Improvements shown on **Exhibit A**, as may be further revised.
3. The total eligible cost associated with the Sewer Improvements for which Developer is eligible for reimbursement are **ELEVEN THOUSAND SIX HUNDRED FORTY DOLLARS AND NO/100 DOLLARS (\$11,640.00)**, subject to the provisions of section 6.
4. Reimbursement for the Sewer Improvements shall be made until such time as the eligible cost has been fully reimbursed by providing a payment to the Developer of Sewer Access Fees paid by the Developer.

5. Prior to reimbursement of the total eligible cost and acceptance of the Sewer Improvements, the Developer must submit to the City a detailed statement of the actual eligible costs and the Board may, in its discretion, adjust the eligible costs to reflect the actual project costs.

6. The parties agree that the terms and conditions contained herein shall be binding on and shall inure to their heirs, representatives, successors and assigns and that there are no understandings or agreements between them except as contained in this instrument.

7. The parties agree that, except as recited in this Agreement, the Developer has no further right of reimbursement with respect to the Sewer Improvements and the Developer expressly releases the City from any further claim therefor. The Developer further acknowledges and agrees that the reimbursement rights provided herein do not constitute a debt of the City but only a right of offset against fees otherwise due from the Developer.

Approved by the Board of Mayor and Aldermen on _____, 2018.

(Signatures on following pages)

WITNESS our hands on the dates as indicated.

Developer

The Jones Company of Tennessee, LLC

By: _____

Print Name: _____

Title: _____

Date: _____

STATE OF _____)

)

COUNTY OF _____)

Before me, _____, a Notary Public of said County and State, personally appeared _____, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged _____ self to be _____ (or other officer authorized to execute the instrument) of DOMINION PARTNERS, the within named bargainor, a general partnership, and that _____ as such _____ executed the foregoing instrument for the purposes therein contained, by personally signing the name of the general partnership by _____ self as _____.

Witness my hand and seal, at Office in _____, Tennessee, this _____ day of _____, 20____.

Notary Public

My Commission Expires: _____

CITY

CITY OF FRANKLIN, TENNESSEE

By: _____

Dr. KEN MOORE

Mayor

Date: _____

By: _____

ERIC S. STUCKEY

City Administrator/Recorder

Date: _____

STATE OF TENNESSEE)

)

COUNTY OF WILLIAMSON)

Before me, the undersigned Notary Public of said County and State, personally appeared Dr. Ken Moore , with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be the Mayor, respectively, of the City of Franklin, Tennessee, the within named bargainor, a municipality, and that as such Mayor executed the foregoing instrument for the purposes therein contained, by signing the name of the municipality by himself as Mayor.

WITNESS, my hand and seal on this the ____ day of _____, 2018.

Notary Public

My Commission expires: _____

STATE OF TENNESSEE)
)
COUNTY OF WILLIAMSON)

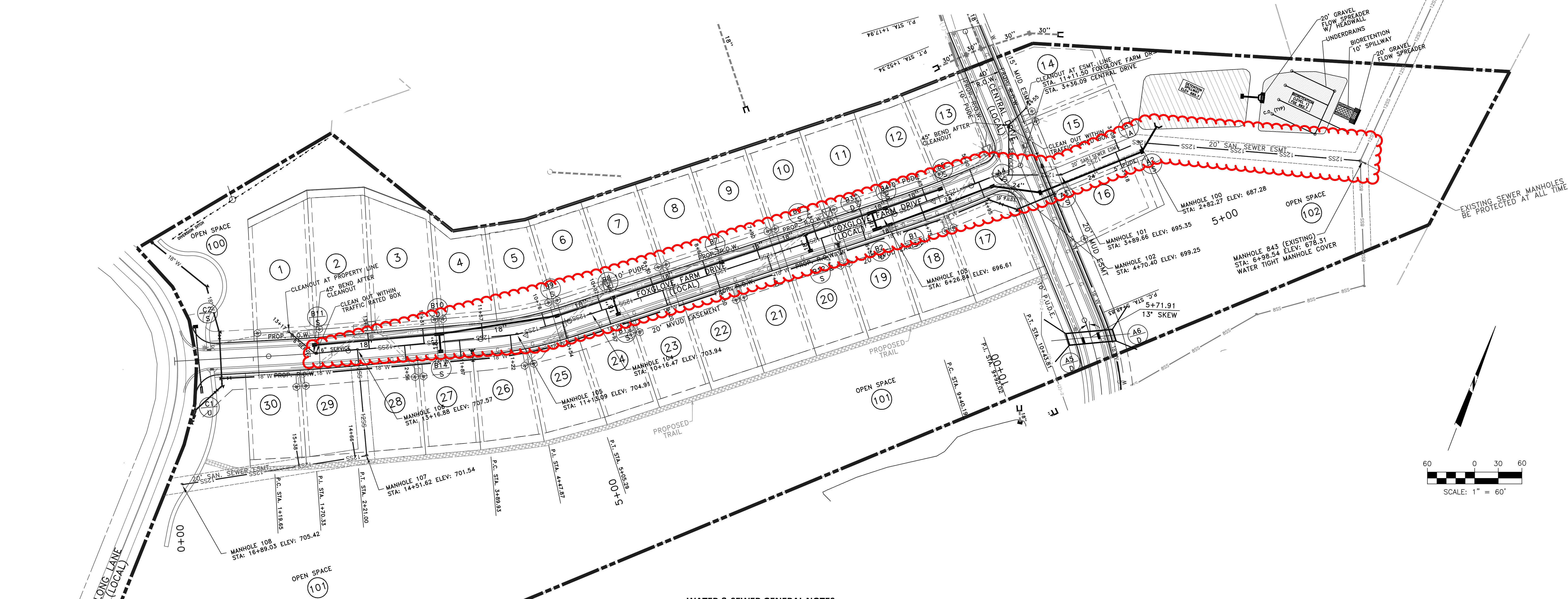
Before me, the undersigned Notary Public of said County and State, personally appeared **Eric S. Stuckey**, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be the City Administrator, respectively, of the City of Franklin, Tennessee, the within named bargainor, a municipality, and that as such City Administrator executed the foregoing instrument for the purposes therein contained, by signing the name of the municipality by himself as City Administrator.

WITNESS, my hand and seal on this the ____ day of _____, 2018.

Notary Public
My Commission expires: _____

Approved as to form by:

Tiffani M. Pope, Staff Attorney



WATER & SEWER GENERAL NOTES

1. ALL PERSONS WHO UNDERTAKE THE CONSTRUCTION OF WATER, SEWER AND/OR RECLAIMED WATER LINES LOCATED IN, OR AFFECTING SERVICES PROVIDED BY THE CITY OF FRANKLIN SHALL COMPLY WITH THE REQUIREMENTS AND REGULATIONS SET FORTH IN THE "GENERAL REQUIREMENTS & TECHNICAL SPECIFICATIONS, WATER MANAGEMENT DEPARTMENT, CITY OF FRANKLIN, TENNESSEE" LATEST EDITION, ALONG WITH ANY AMENDMENTS, ADDITIONS, OR ALTERATION THAT MAY THEREAFTER BE ADOPTED BY THE BOARD OF MAYOR AND ALDERMEN BY RESOLUTION.
2. CONTRACTOR SHALL OBTAIN WATER & SEWER INFRASTRUCTURE INSTALLATION PERMIT PRIOR TO SCHEDULING REQUIRED PRE-CONSTRUCTION SITE MEETING. CONTRACTOR SHALL COMPLETE THE PRECONSTRUCTION SITE MEETING PRIOR TO COMMENCING WITH CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN AND KEEP ALL OF THE FOLLOWING ITEMS ON THE JOBSITE AT ALL TIMES DURING CONSTRUCTION: A. APPROVED, STAMPED AND SIGNED WATER AND/OR SEWER PLANS B. WATER & SEWER INFRASTRUCTURE INSTALLATION PERMIT, WITH ALL STEPS COMPLETED AND SIGNED BY APPROPRIATE CITY EMPLOYEES. C. COPY OF APPROVED AVAILABILITY REQUEST RESPONSE LETTER. D. A COPY OF ALL APPROVED CUT SHEETS.
4. ACCEPTANCE OF CITY OF FRANKLIN PUBLIC WATER INFRASTRUCTURE, SANITARY SEWER INFRASTRUCTURE AND/OR RECLAIMED WATER INFRASTRUCTURE SHALL BECOME THE RESPONSIBILITY OF THE CITY OF FRANKLIN, TN FOLLOWING APPROVAL FROM THE CITY OF FRANKLIN INSPECTORS AND ACCEPTANCE BY THE FRANKLIN MUNICIPAL PLANNING COMMISSION. THE ACCEPTANCE DATE SHALL BE BASED ON THE DAY MAINTENANCE SURETIES ARE ESTABLISHED BY THE FRANKLIN MUNICIPAL PLANNING COMMISSION.

5. PRIOR TO THE ACCEPTANCE OF CITY OF FRANKLIN PUBLIC WATER INFRASTRUCTURE, SANITARY SEWER INFRASTRUCTURE AND/OR RECLAIMED WATER INFRASTRUCTURE THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT AS-BUILT DRAWINGS TO THE PLANNING AND SUSTAINABILITY DEPARTMENT.
6. ALL OFF-SITE WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WHICH COMPLIES WITH THE MUTCD. NO OFF-SITE EXCAVATION MAY BE UNDERTAKEN IN ANY STREET, ROAD, ALLEY OR RIGHT-OF-WAY OF ANY UTILITY OR TEMPORARY CONSTRUCTION EASEMENT OF THE CITY OF FRANKLIN BY ANY ENTITY UNLESS 72-HOUR NOTICE HAS BEEN GIVEN TO THE CITY OF FRANKLIN TRAFFIC OPERATIONS CENTER. THE CONTRACTOR SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN ONSITE DURING CONSTRUCTION.
7. ANY DAMAGES CAUSED TO EXISTING UTILITIES DURING CONSTRUCTION SHALL, AT HIS OWN EXPENSE, BE REPLACED OR REPAIRED TO ORIGINAL CONDITION AND QUALITY, AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY, BY THE CONTRACTOR.

WATER & SEWER DATA CHART
FACILITY TYPE: MILCROFTON UTILITY DISTRICT
UNIT FLOW IN GPD: 350 GPD (PER UNIT)
NUMBER OF UNITS: 30
TOTAL FLOW IN GPD: 10,500 GPD

CITY OF FRANKLIN - ENGINEERING DEPT.
THIS PLAN HAS BEEN REVIEWED FOR CONFORMITY TO POLICIES AND SPECIFICATIONS OF THE CITY OF FRANKLIN AND IS HEREBY APPROVED FOR CONSTRUCTION. THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRENTING BY THE CITY THAT THE APPROVED FACILITIES WILL REACH THE DESIGNED GOALS.

☐ WATER ☒ SEWER ☐ RECLAIM WATER

[Signature]
ENGINEERING

[Signature]
STATE APPROVAL

APPROVAL EXPIRES
ONE YEAR FROM
DATE OF APPROVAL: 04/11/18

HISTORIC FRANKLIN
TENNESSEE

CITY OF FRANKLIN
ENGINEERING DEPT
04/11/18
This sheet is part of the
APPROVED Site Plan Set.



REVISIONS :	The Moss Property P.U.D. Subdivision (Foxglove Farm)			SEI JOB # 16.009
	WILLIAMSON COUNTY, TN.			SECTION 1
	OVERALL UTILITY PLAN			SHEET NO.
	 THE JONES COMPANY 1221 LIBERTY PIKE FRANKLIN, TN 37067 (615) 771-8006 of Tennessee, LLC	FIRST SUBMITTAL: 2.5.18		C5.0
		RE-SUBMITTAL:		
DRAWN BY : W.P.W.		DATE : 2.5.18	APPROVED BY : R.D.S.	

PROPOSAL

COMPREHENSIVE ASSESSMENT OF ODOR EMISSIONS AND THEIR CONTROL IN THE FRANKLIN, TN WASTEWATER COLLECTION AND TREATMENT SYSTEM

Prepared for:

CITY OF FRANKLIN WATER MANAGEMENT DEPT.
124 Lumber Drive
Franklin, TN 37064

Prepared by:

BOWKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
21 Summerfield Lane
Scarborough, ME 04074

January, 2018

1. INTRODUCTION

The City of Franklin operates a wastewater treatment plant that is scheduled for an upgrade. Encroaching development around the plant has raised concerns for odor, and there have been some complaints attributed to either the wastewater treatment plant or the sewer system that collects and transmits wastewater to the plant.

The collection system includes multiple pump stations and force mains. Force mains generate more hydrogen sulfide and odor than gravity sewers because the sewage is retained in a full pipe with no opportunity for aeration. As a result, the sewage quickly becomes septic or anaerobic, favoring the generation of odorous hydrogen sulfide gas. This hydrogen sulfide gas can be released downstream of the force main discharge, or at the headworks of the plant.

The wastewater treatment plant that serves the City of Franklin uses the oxidation ditch process with no primary clarifiers. Such plants tend to have fewer odor issues than plants with primary clarifiers. However, odors can still be released from the headworks or sludge handling processes.

The following proposal is to conduct a comprehensive assessment of the wastewater collection and treatment system to provide:

1. An evaluation of the contribution of odors and hydrogen sulfide from upstream force mains and interceptors.
2. An “odor emissions inventory” of the wastewater treatment plant to provide a ranking of odor sources by their odor emission rate.
3. Odor dispersion modeling to assess the existing “odor footprint” of the treatment plant and to evaluate the effect of recommended odor control alternatives.
4. Evaluation of various odor control strategies as necessary to meet downwind objectives.
5. A report that summarizes all sampling data, presents results of dispersion modeling, and provides recommendations and cost estimate for the most cost-effective odor control strategy.

A proposed Scope of Services and Fee Estimate follow, along with a proposed Schedule and Summary of Qualifications.

2. SCOPE OF SERVICES

Task 1. Review background information and develop sampling plan

Bowker & Associates will review background information on the facilities and develop a plan to collect samples from both the wastewater collection system and treatment plant. This will include collection and field analysis of wastewater samples in the collection system, deployment of Odalogs to measure H₂S concentrations, and collection and analysis of air samples at the treatment plant to measure odor strength. The written sampling plan will be submitted to the City of Franklin for review and comment.

Task 2. Implement sampling program

The sampling plan envisioned will consist of 3 days of wastewater sampling in the collection system and 7 days of continuous H₂S measurements at multiple locations in the sewer system. We will conduct field analysis of the wastewater for sulfide, pH, oxidation-reduction potential (ORP), and temperature. A total of 8 sampling locations have been assumed for this proposal.

For the wastewater treatment plant, air samples will be collected from processes including, but not limited to:

1. Headworks
2. Screen/grit handling systems
3. Oxidation ditch surface
4. Sludge thickening exhaust
5. Sludge dewatering exhaust
6. Other sources as necessary

Air samples will be sent by overnight carrier to St. Croix Sensory in Stillwater, MN to measure the odor “concentration” in dilutions to threshold. This ASTM laboratory procedure measures the number of times the odorous sample must be diluted with odor-free air until the odor can no longer be detected. In addition, selected samples will be sent to Mayfly Laboratory in Mystic, CT to measure the concentration of reduced sulfur compounds that are responsible for the odor. This will help in determining the best technology to treat the odor, should that become necessary.

Task 3. Conduct odor dispersion modeling

Bowker & Associates will first calculate the “odor emission rate” for each process. This is simply the odor concentration multiplied by the air flow rate to estimate how many “pounds of

odor” are being released from each process. This will provide a ranking of the odor sources by how much odor they are generating.

The odor emission rates are then input into the dispersion model, along with terrain data, actual weather data, building dimensions, etc. We will use the EPA-approved AERMOD dispersion model that predicts the level of odor surrounding the plant under worst-case meteorological conditions. We also use the model to estimate how often a “target” level of odor is exceeded. The dispersion model is valuable to determine the effects of implementing various odor control strategies on odor levels around the plant. Figure 1 is an example of the output of the dispersion model.

Task 4. Evaluate odor control options

We will evaluate various odor control options for those processes deemed to have the potential to generate odors that travel off-site. The selection of the proper technology is dependent on the characteristics of the air, the air flow rate, available space, required performance, and other factors. The focus will be on technologies that are well-demonstrated, reliable, and have low O&M requirements. Alternatives such as biofiltration, carbon adsorption, and bio-scrubbing are proven technologies that are frequently used to treat wastewater odors.

Addition of chemicals to the wastewater can also provide odor reduction, and will be evaluated on a case-by-case basis. While effective and easy to implement, the recurring cost of chemical addition can become prohibitive.

For the recommended odor mitigation strategy, we will prepare estimates of the capital and operating costs.

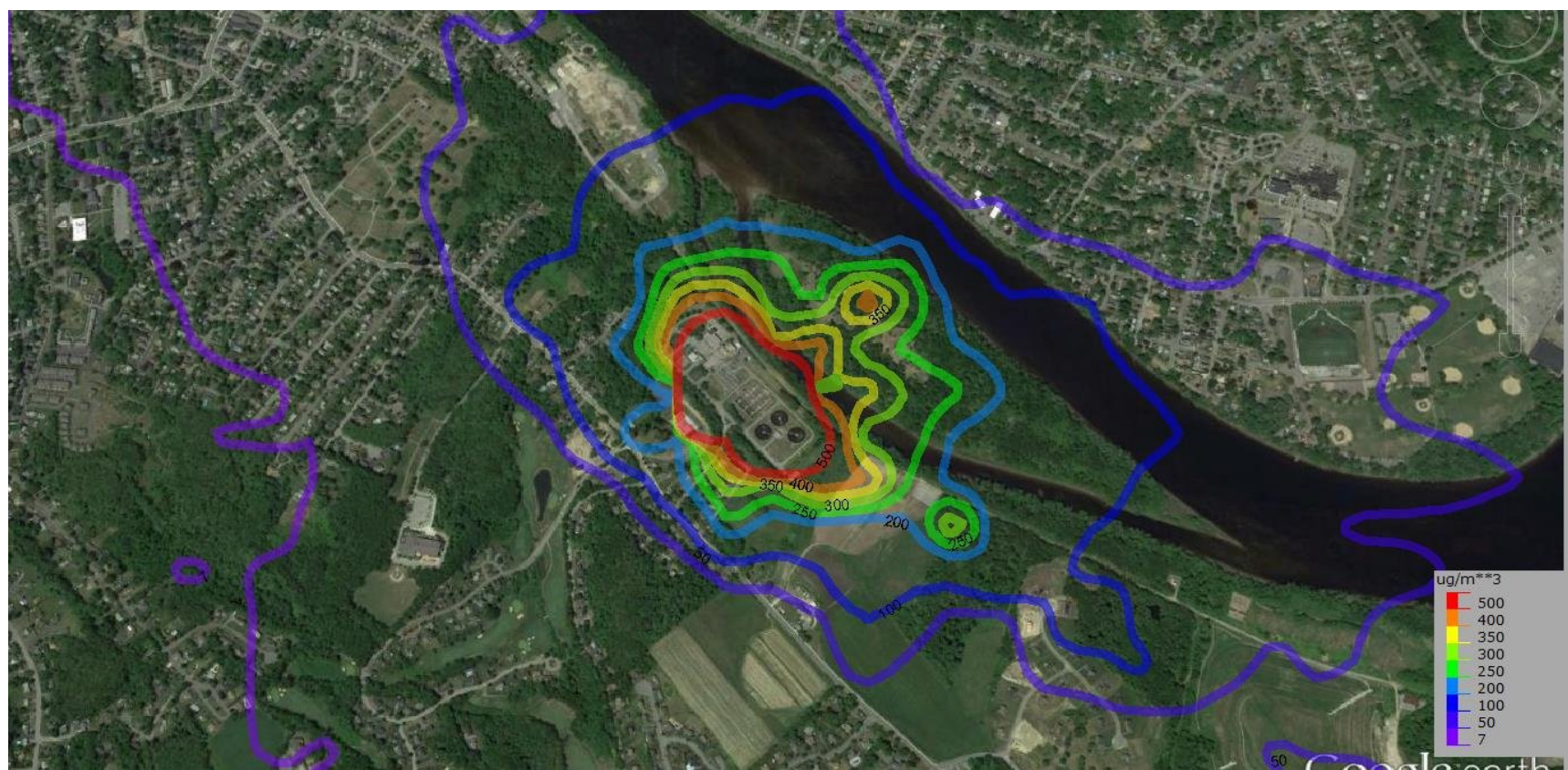
Task 5. Prepare report

Bowker & Associates will prepare a draft report for review and comment by the City of Franklin. The report will include:

1. Introduction
2. Description of facilities
3. Sampling program
4. Odor dispersion modeling
5. Evaluation of alternatives
6. Conclusions and recommendations

Upon receipt of comments, a final report will be transmitted.

FIGURE 1. EXAMPLE OF OUTPUT FROM ODOR DISPERSION MODEL SHOWING “ODOR FOOTPRINT” OF WWTP.



3. FEE ESTIMATE

Table 1 provides a breakdown of estimated fee for the tasks described above. The total cost of \$40,740 includes all labor, travel, and analytical expenses.

4. SCHEDULE

The major factor driving the schedule of this project is the need to conduct the sampling during peak, warm-weather conditions. Typically these conditions occur during the months of July through September. Assuming a July sampling schedule, it is anticipated that a draft report would be submitted by September 30. The project could start at any time, say March 1, 2018.

5. SUMMARY OF QUALIFICATIONS

Bowker & Associates has specialized in the control of odors from waste handling systems for 25 years, and has completed over 200 projects at wastewater pump stations, treatment plants, collection systems, and landfills. Robert Bowker is a professional engineer with over 40 years of experience in the wastewater industry, and has co-authored several EPA and WEF manuals on the subject of odors and corrosion in wastewater systems. Mr. Bowker's resume is attached. Our full Statement of Qualifications and Experience is available upon request.

TABLE 1

FEE ESTIMATE

FRANKLIN, TN ODOR STUDY

Bowker & Associates, Inc.

January, 2018

<u>Task</u>		<u>Estimated fee, \$</u>
<u>1. Review background information and develop sampling plan</u>		
<i>Labor:</i>		
R. Bowker:	12 hrs @ \$175/hr	\$ 2,100
Clerical:	2 hrs @ \$50/hr	<u>100</u>
	Subtotal Task 1	\$ 2,200
<u>2. Implement sampling plan for collection system and treatment plant</u>		
<i>Labor:</i>		
R. Bowker:	56 hrs @ \$175/hr	\$ 9,800
Clerical:	4 hrs @ \$50/hr	<u>200</u>
<i>Travel:</i>		
Airfare:		600
Rental car:	7 days @ \$80/day	560
Hotels:	7 nights @ \$150/night	850
Meals:	7 days @ \$50/day	<u>350</u>
<i>Analytical:</i>		
Odalogs:	8 units @ \$160/wk	1,280
Odor panel:	12 samples @ \$350 each	4,200
Reduced sulfurs:	4 samples @ \$250 each	1,000
Supplies:		500
Shipping:		<u>600</u>
	Subtotal Task 2	\$19,940

3. Odor dispersion modeling

Labor:

R. Bowker:	32 hrs @ \$175/hr	\$5,600
Clerical:	4 hrs @ \$50/hr	200

Weather & terrain data		<u>1,000</u>
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Subtotal Task 3	\$ 6,800
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4. Evaluate odor control options

Labor:

R. Bowker:	24 hrs @ \$175/hr	<u>\$ 4,200</u>
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Subtotal Task 4	\$ 4,200
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5. Prepare draft & final reports

Labor:

R. Bowker:	40 hrs @ \$175/hr	\$ 7,000
Clerical:	12 hrs @ \$50/hr	<u>600</u>

Subtotal Task 1	\$ 7,600
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TOTAL	\$40,740
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RESUME OF ROBERT BOWKER

ROBERT P. G. BOWKER, P.E.
President

TECHNICAL EXPERTISE

- Odor and corrosion control technology
- Odor emissions inventories
- Sewer corrosion assessments
- Corrosion protection systems
- Sewer rehabilitation
- Innovative technology

YEARS OF EXPERIENCE: 35

EDUCATION:

B.S. Civil Engineering, University of New Hampshire, 1973
M.S. Environmental Engineering, Cornell University, 1976

PROFESSIONAL REGISTRATION:

P.E. Sanitary Engineering - Maine, New Hampshire, Ohio

ORGANIZATIONS:

- Water Environment Federation
 - New England Water Environment Association
- Maine Wastewater Control Association
- Air and Waste Management Association
 - WEF Air Quality and Odor Control Committee

PROFESSIONAL PROFILE

Robert P.G. Bowker has over 35 years' experience in the planning, design, and operation of wastewater facilities. His career includes nine years with the U.S. Environmental Protection Agency Office of Research and Development and over 25 years as a consulting engineer. Since 1985, Mr. Bowker has specialized in the control of odors and corrosion in wastewater collection and treatment systems, solid waste processing and landfill operations, and industrial processes and waste management facilities. Mr. Bowker is considered an international expert in odor and corrosion control in waste handling systems.

HIGHLIGHTS

- Preparing, as principal author, the EPA Design Manual on Odor and Corrosion Control in Sanitary Sewers and Treatment Plants and the EPA Report to Congress on Sulfide Corrosion in Wastewater Collection and Treatment Systems.
- Contributing author of EPA Handbook on Sewer System Infrastructure Analysis and Rehabilitation.
- Conducting odor emission surveys and evaluating odor control alternatives for wastewater treatment facilities from 0.5 to 300 mgd in over 50 cities throughout the U.S., Canada, and abroad.
- Directing or participating in comprehensive sulfide monitoring and corrosion control projects in St. Petersburg, FL, Tempe, AZ, Framingham, MA, Syracuse, NY, Edmonton, Alberta, Collier County, FL, Henrico County, VA, and Woodbridge, NJ.
- Designing and providing design assistance for odor control systems in Keene, NH, Hartford, CT, Cromwell, CT, Portland, ME, Concord, NH, Fitchburg, MA, Lexington, KY, Singapore, Perth, Australia, Toronto, ON, and elsewhere.
- Contributing author of 1995 WEF MOP 22 "Odor Control in Wastewater Treatment Plants," 2001 IWA "Odours in Wastewater Treatment," and 2003 WEF "Control of Odors and Emissions from Wastewater Treatment Plants."
- Serving as independent peer reviewer for major odor/corrosion control projects in Los Angeles, CA, Washington, DC, Oakland, CA, Toronto, ON, and Santa Cruz, CA.

REPRESENTATIVE PROJECTS

Township of Woodbridge, NJ Biological Odor Control. Bowker & Associates worked with a local firm to evaluate odor emissions and their control at a large wastewater pumping station. An innovative odor containment and treatment system was conceived and designed. A biological scrubber eliminated odor complaints, and the new odor containment system greatly improved working conditions.

Oakland and Macomb Counties Odor and Corrosion Control. Bowker & Associates was a key player in the assessment of corrosion and odors in a large deep-tunnel collection system serving suburban Detroit. A variety of recommendations were developed to mitigate odor releases and control corrosion in the tunnel system, including upstream chemical addition, improved ventilation with odor treatment, and protection of the concrete with an inert lining system.

Humber WWTP Odor Control Improvements. Bowker & Associates participated in the Value Engineering Program for the proposed Humber WWTP odor control improvements in Toronto. New recommendations developed by the VE Team resulted in significant projected savings in both capital and O&M costs. Bowker & Associates was subsequently part of the design team for the improvements, which consisted largely of containment of the odors followed by treatment in organic media biofilters.

City of Los Angeles Independent Odor Control Review. Bowker & Associates, Inc. was selected by the City of Los Angeles, the State of California, and U.S. EPA to provide an independent review of the City of LA Sewer Odor Control Program as required by a Court settlement regarding sewer odor emissions. The program included extraction and treatment of sewer air with 2-stage odor control systems at seven locations.

Collier County, FL Odor/Corrosion Control Project. Bowker & Associates worked with a major national engineering firm to assess and control odors and corrosion in a large, complex wastewater collection system in Collier County, Florida. Recommendations included turbulence reduction, biological treatment of odorous air, and rehabilitation of corroded pump stations.

Lexington, KY Town Branch WWTP Odor Control Project. Bowker & Associates assisted a local engineering firm in the evaluation and design of innovative odor control improvements that included odor treatment by activated sludge diffusion and oxygen ionization.

Washington, DC Odor Control Peer Review. Bowker & Associates was selected to provide expert peer review for a comprehensive assessment of odor

emissions and their control for the 350 mgd Blue Plains WWTP in Washington, DC.

Salem, MA and New Bedford, MA Odor Control Optimization Studies. Bowker & Associates conducted odor control optimization studies and fugitive odor emissions surveys at two 30 mgd wastewater treatment plants in eastern Massachusetts.

Onondaga County Odor/Corrosion Control Projects. Bowker & Associates conducted comprehensive odor and corrosion assessment and control projects for the 80 mgd Syracuse Metro WWTP as well as the Baldwinsville and Oak Orchard WWTPs operated by the County of Onondaga.

City of Edmonton Odor/Corrosion Control Projects. Bowker & Associates has worked with a large Canadian engineering firm on multiple projects involving odors and corrosion in the sewer system, treatment plant, and off-site sludge treatment/storage facility serving the City of Edmonton, Alberta.

Henrico County, VA Odor and Corrosion Control Assessment. Bowker & Associates worked with a national engineering firm to conduct a comprehensive assessment of odors and corrosion in a large wastewater collection system. Recommendations included an innovative iron-peroxide chemical addition process, a cost-saving biological scrubber system, and rehabilitation of corroded sewer lines.

City of Mamaroneck, NY Odor and Noise Control at a Solid Waste Transfer Station. Bowker & Associates worked with Webster Environmental Associates to quantify the odor and noise emissions from the waste transfer station, and assess their impact via dispersion modeling. Recommendations included use of high-velocity dispersion fans, collection and treatment of odorous air, and multiple noise control systems.

PARTIAL LIST OF PUBLICATIONS

Bowker, R.P.G., P.H. Albert, A. Dalmazzi, J. Pratt, D. Bowen, "Control of Odor Emissions from a CSO Storage Tunnel in Providence, RI", in Proceedings of WEF Odor Specialty Conference, Louisville, KY, 2012.

Bowker, R.P.G., D.J. Skibicki, J.T. Kotowski, "Innovative Odor Containment and Treatment at a Large Wastewater Pumping Station," in Proceedings of WEF Odor Specialty Conference, Charlotte, NC, 2010.

Bowker, R.P.G., et al, "Collection System Ventilation Research Report," Water Environment Research Foundation, Alexandria, VA, 2009.

Bowker, R.P.G., S. Sibold, A. Rupprecht, and J. Reish, "Magnesium Hydroxide Controls Sulfide Corrosion in Rural Pennsylvania Sewer System," in Proceedings of WEF Odor and Air Emissions Specialty Conference, Phoenix, AZ, April 2008

Bowker, R.P.G., D.A. Apgar, J. Witherspoon et al, "Minimization of Odors and Corrosion in Collection Systems," Water Environment Research Foundation, Alexandria, VA 2007.

Bowker, R.P.G., Michael A. McGinley, and James Schubert, "Analysis of Ambient Odor Data from an Industrial Area with Multiple Odor Sources," in Proceedings of WEF/A&WMA Odors and Air Emissions Specialty Conference, Bellevue, WA, April, 2004.

Bowker, R.P.G. and Robert Trueblood, "Control of ATAD Odors at the Eagle River Water and Sanitation District," in Proceedings of WEF Conference on Control of Odors and VOC Emissions, Albuquerque, NM, April, 2002.

Bowker, R.P.G. (contributing author), "Odours in Wastewater Treatment. Measurement, Modeling and Control," International Water Association, London, 2001.

Bowker, R.P.G. and B. Blades, "Optimization of Packed Bed Scrubbers to Control Odors from Solids Handling Processes," in Proceedings of WEF Specialty Conference on Odors and VOC Emissions, Cincinnati, OH, April, 2000.

Bowker, R.P.G. (contributing author), "Odor and VOC Control Handbook," McGraw-Hill, New York, 1998.

Bowker, R.P.G., "Biological Odor Control by Diffusion into Activated Sludge Basins," in Proceedings of WEF Conference on Control of Odors and VOC Emissions, Houston, TX, April, 1997.

Bowker, R.P.G. (contributing author), Manual of Practice No. 22, "Odor Control at Wastewater Treatment Facilities," Water Environment Federation, Alexandria, VA, 1995.

Bowker, R.P.G., A.A. King, and G.W. Holcomb, "U-Tube Oxygen Dissolver Controls Odors," Water Environment & Technology, 7(1):20-21, January, 1995.

Bowker, R.P.G., "Containment of Odors at Wastewater Treatment Facilities," Journal of the New England Water Environment Association, 28(2):211-220, November, 1994.

Bowker, R.P.G., "Guide to Septage Treatment and Disposal," EPA/625/R-94/002, U.S. EPA Office of Research and Development, Washington, DC, September, 1994.

Bowker, R.P.G., C.M. McGinley, N.A. Webster, "Estimating Odor Emission Rates from Wastewater Treatment Facilities," in Proceedings of WEF Conference on Odor and Volatile Organic Compound Emission Control for Municipal and Industrial Treatment Facilities, Jacksonville, FL, April, 1994.

Bowker, R.P.G., G.A. Audibert, H.J. Shah, and N.A. Webster, "Detection, Control, and Correction of Hydrogen Sulfide Corrosion in Existing Wastewater Systems," EPA 832-R-92-001, U.S. EPA Office of Water, Washington, DC, 1992.

Smith, J.M., R.P.G. Bowker, and H.J. Shah, "Handbook: Sewer System Infrastructure Analysis and Rehabilitation," EPA/625/6-91/030, U.S. EPA Office of Research and Development, Cincinnati, OH, October, 1991.

Bowker, R.P.G., J.M. Smith, and H.J. Shah, "Hydrogen Sulfide Corrosion in Wastewater Collection and Treatment Systems - Report to Congress," EPA 430/09-91-009, U.S. EPA Office of Water, Washington, DC, September, 1991

Bowker, R.P.G., Stensel, H.D., "U.S. EPA Design Manual for Phosphorus Removal," EPA/625/1-87/001, Cincinnati, Ohio, September, 1987.

Bowker, R.P.G., Smith, J.M., Webster, N.A., "U.S. EPA Design Manual for Odor and Corrosion Control in Sanitary Sewerage Systems and Treatment Plants," EPA/625/1-85/018, Cincinnati, Ohio, October, 1985.

**CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2018-0140**

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is by and between the City of Franklin, Tennessee, hereinafter referenced as (“City”), and **BOWKER & ASSOCIATES, INC. CONSULTING ENGINEERS** 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:

**Comprehensive Assessment of Odor Emissions and Their Control in the Franklin,
TN Wastewater Collection and Treatment System**

1. SCOPE OF SERVICES. Consultant shall provide odor control services to include field data collection, laboratory testing, review and interpretation of data, and recommendations for improvement, if required, 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 monthly basis for work performed based on the Fee Schedule as contained in Attachment A in the Amount Not-to-Exceed **FORTY THOUSAND SEVEN HUNDRED FORTY and 00/100 DOLLARS (\$40,740.00).**

**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 [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.

BY: _____
Consultant's Signature
TITLE: _____
Date: _____

BY: _____
Dr. Ken Moore
Mayor
Date: _____

Approved as to Form:

Tiffani M. Pope, Staff Attorney

PROPOSAL

COMPREHENSIVE ASSESSMENT OF ODOR EMISSIONS AND THEIR CONTROL IN THE FRANKLIN, TN WASTEWATER COLLECTION AND TREATMENT SYSTEM

Prepared for:

CITY OF FRANKLIN WATER MANAGEMENT DEPT.
124 Lumber Drive
Franklin, TN 37064

Prepared by:

BOWKER & ASSOCIATES, INC.
CONSULTING ENGINEERS
21 Summerfield Lane
Scarborough, ME 04074

January 2018

1. INTRODUCTION

The City of Franklin operates a wastewater treatment plant that is scheduled for an upgrade. Encroaching development around the plant has raised concerns for odor, and there have been some complaints attributed to either the wastewater treatment plant or the sewer system that collects and transmits wastewater to the plant.

The collection system includes multiple pump stations and force mains. Force mains generate more hydrogen sulfide and odor than gravity sewers because the sewage is retained in a full pipe with no opportunity for aeration. As a result, the sewage quickly becomes septic or anaerobic, favoring the generation of odorous hydrogen sulfide gas. This hydrogen sulfide gas can be released downstream of the force main discharge, or at the headworks of the plant.

The wastewater treatment plant that serves the City of Franklin uses the oxidation ditch process with no primary clarifiers. Such plants tend to have fewer odor issues than plants with primary clarifiers. However, odors can still be released from the headworks or sludge handling processes.

The following proposal is to conduct a comprehensive assessment of the wastewater collection and treatment system to provide:

1. An evaluation of the contribution of odors and hydrogen sulfide from upstream force mains and interceptors.
2. An “odor emissions inventory” of the wastewater treatment plant to provide a ranking of odor sources by their odor emission rate.
3. Odor dispersion modeling to assess the existing “odor footprint” of the treatment plant and to evaluate the effect of recommended odor control alternatives.
4. Evaluation of various odor control strategies as necessary to meet downwind objectives.
5. A report that summarizes all sampling data, presents results of dispersion modeling, and provides recommendations and cost estimate for the most cost-effective odor control strategy.

A proposed Scope of Services and Fee Estimate follow, along with a proposed Schedule and Summary of Qualifications.

2. SCOPE OF SERVICES

Task 1. Review background information and develop sampling plan

Bowker & Associates will review background information on the facilities and develop a plan to collect samples from both the wastewater collection system and treatment plant. This will include collection and field analysis of wastewater samples in the collection system, deployment of Odalogs to measure H₂S concentrations, and collection and analysis of air samples at the treatment plant to measure odor strength. The written sampling plan will be submitted to the City of Franklin for review and comment.

Task 2. Implement sampling program

The sampling plan envisioned will consist of 3 days of wastewater sampling in the collection system and 7 days of continuous H₂S measurements at multiple locations in the sewer system. We will conduct field analysis of the wastewater for sulfide, pH, oxidation-reduction potential (ORP), and temperature. A total of 8 sampling locations have been assumed for this proposal.

For the wastewater treatment plant, air samples will be collected from processes including, but not limited to:

1. Headworks
2. Screen/grit handling systems
3. Oxidation ditch surface
4. Sludge thickening exhaust
5. Sludge dewatering exhaust
6. Other sources as necessary

Air samples will be sent by overnight carrier to St. Croix Sensory in Stillwater, MN to measure the odor “concentration” in dilutions to threshold. This ASTM laboratory procedure measures the number of times the odorous sample must be diluted with odor-free air until the odor can no longer be detected. In addition, selected samples will be sent to Mayfly Laboratory in Mystic, CT to measure the concentration of reduced sulfur compounds that are responsible for the odor. This will help in determining the best technology to treat the odor, should that become necessary.

Task 3. Conduct odor dispersion modeling

Bowker & Associates will first calculate the “odor emission rate” for each process. This is simply the odor concentration multiplied by the air flow rate to estimate how many “pounds of odor” are

being released from each process. This will provide a ranking of the odor sources by how much odor they are generating.

The odor emission rates are then input into the dispersion model, along with terrain data, actual weather data, building dimensions, etc. We will use the EPA-approved AERMOD dispersion model that predicts the level of odor surrounding the plant under worst-case meteorological conditions. We also use the model to estimate how often a “target” level of odor is exceeded. The dispersion model is valuable to determine the effects of implementing various odor control strategies on odor levels around the plant. Figure 1 is an example of the output of the dispersion model.

Task 4. Evaluate odor control options

We will evaluate various odor control options for those processes deemed to have the potential to generate odors that travel off-site. The selection of the proper technology is dependent on the characteristics of the air, the air flow rate, available space, required performance, and other factors. The focus will be on technologies that are well-demonstrated, reliable, and have low O&M requirements. Alternatives such as biofiltration, carbon adsorption, and bio-scrubbing are proven technologies that are frequently used to treat wastewater odors.

Addition of chemicals to the wastewater can also provide odor reduction, and will be evaluated on a case-by-case basis. While effective and easy to implement, the recurring cost of chemical addition can become prohibitive.

For the recommended odor mitigation strategy, we will prepare estimates of the capital and operating costs.

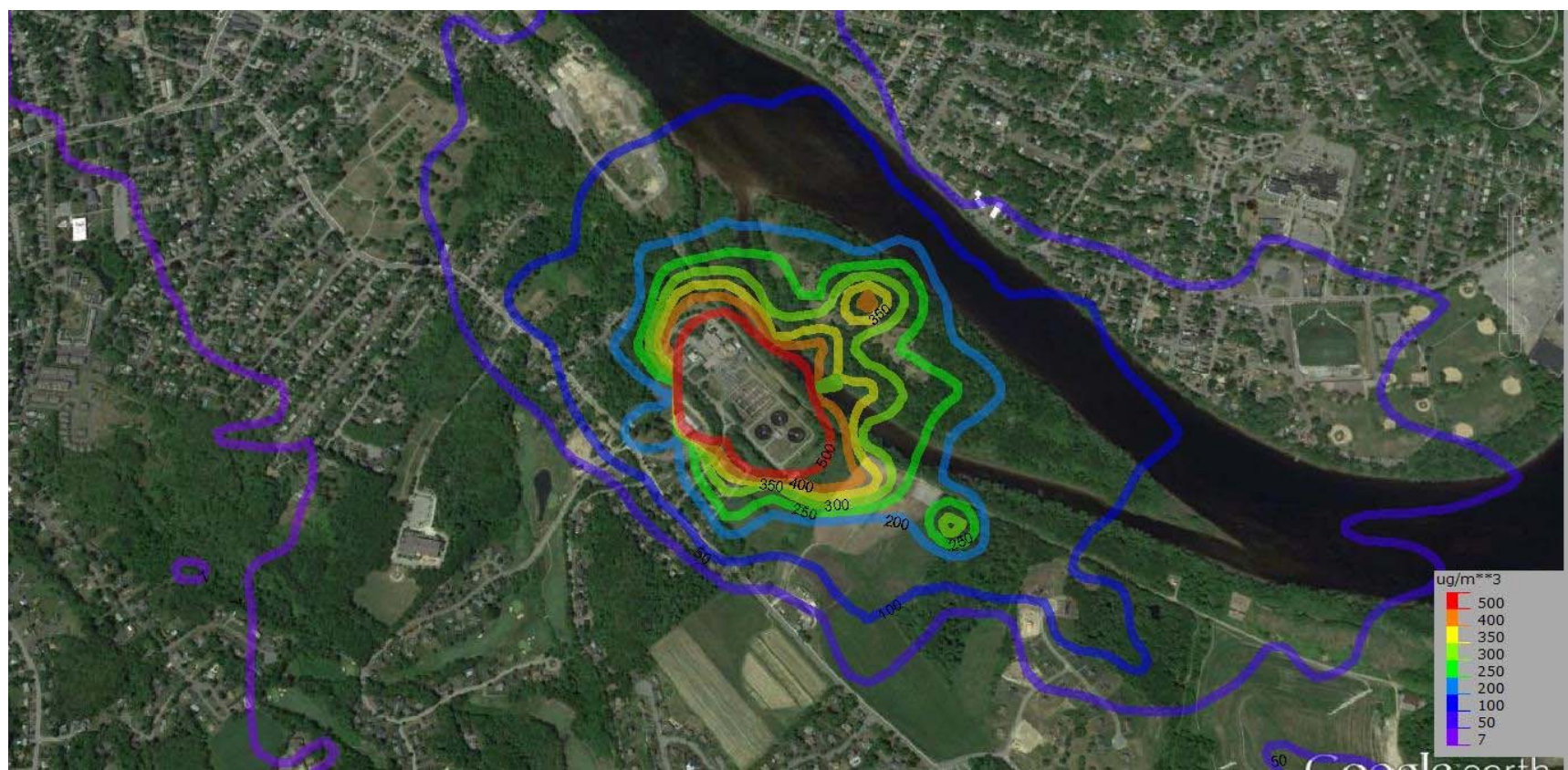
Task 5. Prepare report

Bowker & Associates will prepare a draft report for review and comment by the City of Franklin. The report will include:

1. Introduction
2. Description of facilities
3. Sampling program
4. Odor dispersion modeling
5. Evaluation of alternatives
6. Conclusions and recommendations

Upon receipt of comments, a final report will be transmitted.

FIGURE 1. EXAMPLE OF OUTPUT FROM ODOR DISPERSION MODEL SHOWING “ODOR FOOTPRINT” OF WWTP.



3. FEE ESTIMATE

Table 1 provides a breakdown of estimated fee for the tasks described above. The total cost of \$40,740.00 includes all labor, travel, and analytical expenses.

4. SCHEDULE

The major factor driving the schedule of this project is the need to conduct the sampling during peak, warm-weather conditions. Typically these conditions occur during the months of July through September. Assuming a July sampling schedule, it is anticipated that a draft report would be submitted by September 30. The project could start at any time, say March 1, 2018.

5. SUMMARY OF QUALIFICATIONS

Bowker & Associates has specialized in the control of odors from waste handling systems for 25 years, and has completed over 200 projects at wastewater pump stations, treatment plants, collection systems, and landfills. Robert Bowker is a professional engineer with over 40 years of experience in the wastewater industry, and has co-authored several EPA and WEF manuals on the subject of odors and corrosion in wastewater systems. Mr. Bowker's resume is attached.

Our full Statement of Qualifications and Experience is available upon request.

TABLE 1

FEE ESTIMATE

FRANKLIN, TN ODOR STUDY

Bowker & Associates, Inc.

January 2018

<u>Task</u>		<u>Estimated fee, \$</u>
<u>1. Review background information and develop sampling plan</u>		
<i>Labor:</i>		
R. Bowker:	12 hrs @ \$175/hr	\$ 2,100
Clerical:	2 hrs @ \$50/hr	<u>100</u>
	Subtotal Task 1	\$ 2,200.00
<u>2. Implement sampling plan for collection system and treatment plant</u>		
<i>Labor:</i>		
R. Bowker:	56 hrs @ \$175/hr	\$ 9,800
Clerical:	4 hrs @ \$50/hr	<u>200</u>
<i>Travel:</i>		
Airfare:		600
Rental car:	7 days @ \$80/day	560
Hotels:	7 nights @ \$150/night	850
Meals:	7 days @ \$50/day	<u>350</u>
<i>Analytical:</i>		
Odalogs:	8 units @ \$160/wk	1,280
Odor panel:	12 samples @ \$350 each	4,200
Reduced sulfurs:	4 samples @ \$250 each	1,000
Supplies:		500
Shipping:		<u>600</u>
	Subtotal Task 2	\$19,940.00

3. Odor dispersion modeling

Labor:

R. Bowker:	32 hrs @ \$175/hr	\$5,600
Clerical:	4 hrs @ \$50/hr	200

Weather & terrain data		<u>1,000</u>
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Subtotal Task 3	\$ 6,800.00
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4. Evaluate odor control options

Labor:

R. Bowker:	24 hrs @ \$175/hr	<u>\$ 4,200</u>
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Subtotal Task 4	\$ 4,200.00
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5. Prepare draft & final reports

Labor:

R. Bowker:	40 hrs @ \$175/hr	\$ 7,000
Clerical:	12 hrs @ \$50/hr	<u>600</u>

Subtotal Task 1	\$ 7,600
------------------------	-----------------

TOTAL	\$40,740.00
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RESUME OF ROBERT BOWKER

ROBERT P. G. BOWKER, P.E.
President

TECHNICAL EXPERTISE

- Odor and corrosion control technology
- Odor emissions inventories
- Sewer corrosion assessments
- Corrosion protection systems
- Sewer rehabilitation
- Innovative technology

YEARS OF EXPERIENCE: 35

EDUCATION:

B.S. Civil Engineering, University of New Hampshire, 1973
M.S. Environmental Engineering, Cornell University, 1976

PROFESSIONAL REGISTRATION:

P.E. Sanitary Engineering - Maine, New Hampshire, Ohio

ORGANIZATIONS:

- Water Environment Federation
 - New England Water Environment Association
- Maine Wastewater Control Association
- Air and Waste Management Association
 - WEF Air Quality and Odor Control Committee

PROFESSIONAL PROFILE

Robert P.G. Bowker has over 35 years' experience in the planning, design, and operation of wastewater facilities. His career includes nine years with the U.S. Environmental Protection Agency Office of Research and Development and over 25 years as a consulting engineer. Since 1985, Mr. Bowker has specialized in the control of odors and corrosion in wastewater collection and treatment systems, solid waste processing and landfill operations, and industrial processes and waste management facilities. Mr. Bowker is considered an international expert in odor and corrosion control in waste handling systems.

HIGHLIGHTS

- Preparing, as principal author, the EPA Design Manual on Odor and Corrosion Control in Sanitary Sewers and Treatment Plants and the EPA Report to Congress on Sulfide Corrosion in Wastewater Collection and Treatment Systems.
- Contributing author of EPA Handbook on Sewer System Infrastructure Analysis and Rehabilitation.
- Conducting odor emission surveys and evaluating odor control alternatives for wastewater treatment facilities from 0.5 to 300 mgd in over 50 cities throughout the U.S., Canada, and abroad.
- Directing or participating in comprehensive sulfide monitoring and corrosion control projects in St. Petersburg, FL, Tempe, AZ, Framingham, MA, Syracuse, NY, Edmonton, Alberta, Collier County, FL, Henrico County, VA, and Woodbridge, NJ.
- Designing and providing design assistance for odor control systems in Keene, NH, Hartford, CT, Cromwell, CT, Portland, ME, Concord, NH, Fitchburg, MA, Lexington, KY, Singapore, Perth, Australia, Toronto, ON, and elsewhere.
- Contributing author of 1995 WEF MOP 22 "Odor Control in Wastewater Treatment Plants," 2001 IWA "Odours in Wastewater Treatment," and 2003 WEF "Control of Odors and Emissions from Wastewater Treatment Plants."
- Serving as independent peer reviewer for major odor/corrosion control projects in Los Angeles, CA, Washington, DC, Oakland, CA, Toronto, ON, and Santa Cruz, CA.

REPRESENTATIVE PROJECTS

Township of Woodbridge, NJ Biological Odor Control. Bowker & Associates worked with a local firm to evaluate odor emissions and their control at a large wastewater pumping station. An innovative odor containment and treatment system was conceived and designed. A biological scrubber eliminated odor complaints, and the new odor containment system greatly improved working conditions.

Oakland and Macomb Counties Odor and Corrosion Control. Bowker & Associates was a key player in the assessment of corrosion and odors in a large deep-tunnel collection system serving suburban Detroit. A variety of recommendations were developed to mitigate odor releases and control corrosion in the tunnel system, including upstream chemical addition, improved ventilation with odor treatment, and protection of the concrete with an inert lining system.

Humber WWTP Odor Control Improvements. Bowker & Associates participated in the Value Engineering Program for the proposed Humber WWTP odor control improvements in Toronto. New recommendations developed by the VE Team resulted in significant projected savings in both capital and O&M costs. Bowker & Associates was subsequently part of the design team for the improvements, which consisted largely of containment of the odors followed by treatment in organic media biofilters.

City of Los Angeles Independent Odor Control Review. Bowker & Associates, Inc. was selected by the City of Los Angeles, the State of California, and U.S. EPA to provide an independent review of the City of LA Sewer Odor Control Program as required by a Court settlement regarding sewer odor emissions. The program included extraction and treatment of sewer air with 2-stage odor control systems at seven locations.

Collier County, FL Odor/Corrosion Control Project. Bowker & Associates worked with a major national engineering firm to assess and control odors and corrosion in a large, complex wastewater collection system in Collier County, Florida. Recommendations included turbulence reduction, biological treatment of odorous air, and rehabilitation of corroded pump stations.

Lexington, KY Town Branch WWTP Odor Control Project. Bowker & Associates assisted a local engineering firm in the evaluation and design of innovative odor control improvements that included odor treatment by activated sludge diffusion and oxygen ionization.

Washington, DC Odor Control Peer Review. Bowker & Associates was selected to provide expert peer review for a comprehensive assessment of odor emissions and their control for the 350 mgd Blue Plains WWTP in Washington, DC.

Salem, MA and New Bedford, MA Odor Control Optimization Studies. Bowker & Associates conducted odor control optimization studies and fugitive odor emissions surveys at two 30 mgd wastewater treatment plants in eastern Massachusetts.

Onondaga County Odor/Corrosion Control Projects. Bowker & Associates conducted comprehensive odor and corrosion assessment and control projects for the 80 mgd Syracuse Metro WWTP as well as the Baldwinsville and Oak Orchard WWTPs operated by the County of Onondaga.

City of Edmonton Odor/Corrosion Control Projects. Bowker & Associates has worked with a large Canadian engineering firm on multiple projects involving odors and corrosion in the sewer system, treatment plant, and off-site sludge treatment/storage facility serving the City of Edmonton, Alberta.

Henrico County, VA Odor and Corrosion Control Assessment. Bowker & Associates worked with a national engineering firm to conduct a comprehensive assessment of odors and corrosion in a large wastewater collection system. Recommendations included an innovative iron-peroxide chemical addition process, a cost-saving biological scrubber system, and rehabilitation of corroded sewer lines.

City of Mamaroneck, NY Odor and Noise Control at a Solid Waste Transfer Station. Bowker & Associates worked with Webster Environmental Associates to quantify the odor and noise emissions from the waste transfer station, and assess their impact via dispersion modeling. Recommendations included use of high-velocity dispersion fans, collection and treatment of odorous air, and multiple noise control systems.

PARTIAL LIST OF PUBLICATIONS

Bowker, R.P.G., P.H. Albert, A. Dalmazzi, J. Pratt, D. Bowen, "Control of Odor Emissions from a CSO Storage Tunnel in Providence, RI", in Proceedings of WEF Odor Specialty Conference, Louisville, KY, 2012.

Bowker, R.P.G., D.J. Skibicki, J.T. Kotowski, "Innovative Odor Containment and Treatment at a Large Wastewater Pumping Station," in Proceedings of WEF Odor Specialty Conference, Charlotte, NC, 2010.

Bowker, R.P.G., et al, "Collection System Ventilation Research Report," Water Environment Research Foundation, Alexandria, VA, 2009.

Bowker, R.P.G., S. Sibold, A. Rupprecht, and J. Reish, "Magnesium Hydroxide Controls Sulfide Corrosion in Rural Pennsylvania Sewer System," in Proceedings of WEF Odor and Air Emissions Specialty Conference, Phoenix, AZ, April 2008

Bowker, R.P.G., D.A. Apgar, J. Witherspoon et al, "Minimization of Odors and Corrosion in Collection Systems," Water Environment Research Foundation, Alexandria, VA 2007.

Bowker, R.P.G., Michael A. McGinley, and James Schubert, "Analysis of Ambient Odor Data from an Industrial Area with Multiple Odor Sources," in Proceedings of WEF/A&WMA Odors and Air Emissions Specialty Conference, Bellevue, WA, April, 2004.

Bowker, R.P.G. and Robert Trueblood, "Control of ATAD Odors at the Eagle River Water and Sanitation District," in Proceedings of WEF Conference on Control of Odors and VOC Emissions, Albuquerque, NM, April, 2002.

Bowker, R.P.G. (contributing author), "Odours in Wastewater Treatment. Measurement, Modeling and Control," International Water Association, London, 2001.

Bowker, R.P.G. and B. Blades, "Optimization of Packed Bed Scrubbers to Control Odors from Solids Handling Processes," in Proceedings of WEF Specialty Conference on Odors and VOC Emissions, Cincinnati, OH, April, 2000.

Bowker, R.P.G. (contributing author), "Odor and VOC Control Handbook," McGraw-Hill, New York, 1998.

Bowker, R.P.G., "Biological Odor Control by Diffusion into Activated Sludge Basins," in Proceedings of WEF Conference on Control of Odors and VOC Emissions, Houston, TX, April, 1997.

Bowker, R.P.G. (contributing author), Manual of Practice No. 22, "Odor Control at Wastewater Treatment Facilities," Water Environment Federation, Alexandria, VA, 1995.

Bowker, R.P.G., A.A. King, and G.W. Holcomb, "U-Tube Oxygen Dissolver Controls Odors," Water Environment & Technology, 7(1):20-21, January, 1995.

Bowker, R.P.G., "Containment of Odors at Wastewater Treatment Facilities," Journal of the New England Water Environment Association, 28(2):211-220, November, 1994.

Bowker, R.P.G., "Guide to Septage Treatment and Disposal," EPA/625/R-94/002, U.S. EPA Office of Research and Development, Washington, DC, September, 1994.

Bowker, R.P.G., C.M. McGinley, N.A. Webster, "Estimating Odor Emission Rates from Wastewater Treatment Facilities," in Proceedings of WEF Conference on Odor and Volatile Organic Compound Emission Control for Municipal and Industrial Treatment Facilities, Jacksonville, FL, April, 1994.

Bowker, R.P.G., G.A. Audibert, H.J. Shah, and N.A. Webster, "Detection, Control, and Correction of Hydrogen Sulfide Corrosion in Existing Wastewater Systems," EPA 832-R-92-001, U.S. EPA Office of Water, Washington, DC, 1992.

Smith, J.M., R.P.G. Bowker, and H.J. Shah, "Handbook: Sewer System Infrastructure Analysis and Rehabilitation," EPA/625/6-91/030, U.S. EPA Office of Research and Development, Cincinnati, OH, October, 1991.

Bowker, R.P.G., J.M. Smith, and H.J. Shah, "Hydrogen Sulfide Corrosion in Wastewater Collection and Treatment Systems - Report to Congress," EPA 430/09-91-009, U.S. EPA Office of Water, Washington, DC, September, 1991

Bowker, R.P.G., Stensel, H.D., "U.S. EPA Design Manual for Phosphorus Removal," EPA/625/1-87/001, Cincinnati, Ohio, September, 1987.

Bowker, R.P.G., Smith, J.M., Webster, N.A., "U.S. EPA Design Manual for Odor and Corrosion Control in Sanitary Sewerage Systems and Treatment Plants," EPA/625/1-85/018, Cincinnati, Ohio, October, 1985.

**AMENDMENT NO. 1 TO
PROFESSIONAL SERVICES AGREEMENT
FOR THE GOOSE CREEK INN SANITARY SEWER
EXTENSION PROJECT
COF Contract No. 2017-0276**

THIS AMENDMENT is made and entered into on this the ____ day of _____, 201_, by and between the **City of Franklin, Tennessee** ("City") and **C&T ENGINEERING AND INSPECTION, LLC** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") (COF Contract No. 2017-0276) entitled City of Franklin, Tennessee Professional Services Agreement, Goose Creek Inn Sanitary Sewer Extension Project ("Project"), dated the 14th day of November, 2017; and

WHEREAS, the City and Consultant realize the need for additional resident project representative services related to construction services support to fully complete the Project's final construction; and

WHEREAS, the Consultant has provided a Proposal for an increase in resident project representative services for the Goose Creek Inn Sanitary Sewer Extension Project, as described in Attachment A dated June 1, 2018, in the amount of **THIRTY-THREE THOUSAND EIGHT HUNDRED TEN AND NO/100 DOLLARS (\$33,810.00)**; and

WHEREAS, the City has reviewed the Proposal and desires to enter into an Amendment to the Agreement to include the final design as stated above for the Project as proposed by the Consultant.

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. The Consultant shall perform the work as proposed in the Scope as found in the June 1, 2018, letter of proposal (**Attachment A**) which includes the Scope of Services for this Amendment. Attachment A shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. The City shall pay the Consultant in an amount not to exceed **THIRTY-THREE THOUSAND EIGHT HUNDRED TEN AND NO/100 DOLLARS (\$33,810.00)** for the additional services as described in Attachment A.

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 14, 2017, , are unchanged and remain in full force and effect.

(Signatures on page 3)

IN WITNESS WHEREOF, the parties have executed this Amendment.

CITY OF FRANKLIN, TENNESSEE

C&T ENGINEERING AND INSPECTION, LLC

By: _____
Dr. Ken Moore
Mayor
Date: _____

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

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Tiffani M. Pope, Staff Attorney



Engineering and Inspection, LLC

6/1/2018

Ms. Michelle Hatcher-Director
Franklin Water Management Department
124 Lumber Drive
Franklin, TN 37064

**Re: Goose Creek Inn Sewer Extension
Fee Increase-Resident Project Representative Services
C&T No. 2017-0276**

Dear Michelle,

Due to the Contractor's construction schedule and hours worked we have exhausted our initial fee of \$33,915.00 for **Resident Project Representative (RPR)** services for the Goose Creek Inn Sewer extension project. A Notice to Proceed (NTP) was issued with a commencement date of February 8, 2018 with a contract completion date within 90-days of NTP, completing work May 6, 2018. Our RPR budget was based on this 90-day original construction schedule.

Work orders extended the completion date to June 3, 2018. Our billings to date trailed below the budget established in our proposal, which allowed us to extend our scope over a longer period than estimated initially. Based upon our estimation at this time, the budget remaining will cover our services through June 2, 2018.

Based upon the contractor's current working hours and proposed schedule an anticipated substantial completion date of July 27, 2018 with final completion date of August 3, 2018 for a total of 9- additional weeks to complete the project. We are respectfully requesting a fee increase of **\$33,810.00** for the services described above related to RPR services.

We appreciate the opportunity to provide these additional services to the City of Franklin. The total adjusted fee ceiling of **\$67,725.00** will not be exceeded without prior approval by the City. If the City is in agreement with the terms of this fee increase, we will execute a formal amendment to our contract. If you have any questions or concerns regarding this request, please do not hesitate to call me at (615) 567-3306.

Sincerely,

~~C&T Engineering and Inspection, LLC~~

A handwritten signature in blue ink, appearing to read 'Carla S. Lamb', is written over the company name.

Carla S. Lamb
President

C.c. Patricia McNeese - FWMD

RESOLUTION NO. 2018-57

A RESOLUTION AWARDDING THE CONSTRUCTION CONTRACT (COF CONTRACT NO. 2017-0186) TO ADAMS CONTRACTING, LLC. IN THE AMOUNT OF \$256,225.10 FOR THE CARNTON LANE CULVERT REPLACEMENT PROJECT

WHEREAS, City staff has determined the existing corrugated metal Pipe (CMP) located on Carnton Lane is in need of replacement; and

WHEREAS, the construction of the Carnton Lane Culvert Replacement Project generally includes the construction of a box culvert on Carnton Lane over Saw Mill Creek; and

WHEREAS, on April 27, 2018, sealed bids were received in the Engineering Department, City Hall, 109 3rd Avenue South, Suite 142, Franklin, Tennessee 37064 and were publicly opened and read aloud for the Carnton Lane Culvert Replacement Project (COF 2017-0186).

NOW THEREFORE, BE IT RESOLVED, BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS:

SECTION I: Approval is granted to award the construction contract (COF Contract No. 2017-0186) to Adams Contracting, LLC. for the Carnton Lane Culvert Replacement Project in the amount of Two Hundred Fifty-Six Thousand Two Hundred Twenty-Five and 10/100 Dollars (\$256,225.10).

SECTION II: The Board of Mayor and Aldermen hereby establishes a project contingency in the amount not to exceed Seventy-Five Thousand and no/100 Dollars (\$75,000.00). Authority is granted to the City Administrator, Director of Engineering and Assistant Director of Engineering to review and approve the spending of the project funding and contingency for the project. Spending of the project contingency shall be documented as part of the projects final change order and reported to the Board at the completion of construction.

IT IS SO RESOLVED AND DONE on this ____ day of _____ 2018.

ATTEST:

CITY OF FRANKLIN, TENNESSE

By: _____
ERIC S. STUCKEY
City Administrator

By: _____
DR. KEN MOORE
Mayor

Approved as to Form

By: _____
Shauna R. Billingsley
City Attorney

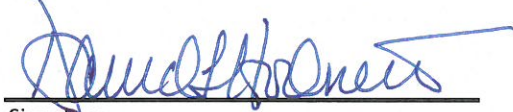
TABULATED BID RESULTS COF 2017-0186 CARNTON LANE CULVERT REPLACEMENT
4/27/2018

Item No.	Item Description	Quantity	Unit	ADAMS CONTRACTING		JENCO CONTSTRUCTION		JARRETT BUILDERS	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
105-01	CONSTRUCTION STAKES, LINES AND GRADES	1	LS	\$2,500.00	\$2,500.00	\$25,000.00	\$25,000.00	\$13,615.00	\$13,615.00
201-01	CLEARING AND GRUBBING	1	LS	\$8,000.00	\$8,000.00	\$30,000.00	\$30,000.00	\$22,250.00	\$22,250.00
202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	1	LS	\$15,000.00	\$15,000.00	\$25,000.00	\$25,000.00	\$4,450.00	\$4,450.00
203-30.01	ROADWAY APPROACHES	1	LS	\$25,000.00	\$25,000.00	\$50,000.00	\$50,000.00	\$20,725.00	\$20,725.00
204-08	FOUNDATION FILL MATERIAL	9	C.Y.	\$60.00	\$540.00	\$70.00	\$630.00	\$46.00	\$414.00
209-05	SEDIMENT REMOVAL	15	C.Y.	\$25.00	\$375.00	\$35.00	\$525.00	\$35.00	\$525.00
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	475	L.F.	\$5.00	\$2,375.00	\$5.00	\$2,375.00	\$4.00	\$1,900.00
209-08.08	ENHANCED ROCK CHECK DAM	4	EACH	\$350.00	\$1,400.00	\$550.00	\$2,200.00	\$675.00	\$2,700.00
209-09.01	SANDBAGS	1250	BAG	\$2.50	\$3,125.00	\$6.00	\$7,500.00	\$9.00	\$11,250.00
209-09.04	SEDIMENT FILTER BAG (15' X 10')	2	EACH	\$500.00	\$1,000.00	\$500.00	\$1,000.00	\$500.00	\$1,000.00
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	40	S.Y.	\$10.00	\$400.00	\$10.00	\$400.00	\$11.15	\$446.00
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	370	TON	\$32.00	\$11,840.00	\$28.00	\$10,360.00	\$48.00	\$17,760.00
303-01.01	GRANULAR BACKFILL (ROADWAY)	118	TON	\$35.00	\$4,130.00	\$60.00	\$7,080.00	\$46.00	\$5,428.00
303-10.01	MINERAL AGGREGATE (SIZE 57)	11	TON	\$35.00	\$385.00	\$75.00	\$825.00	\$64.00	\$704.00
303-10.03	MINERAL AGGREGATE (SIZE 68)	19	TON	\$35.00	\$665.00	\$75.00	\$1,425.00	\$56.00	\$1,064.00
307-01.07	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M	41	TON	\$180.00	\$7,380.00	\$169.95	\$6,967.95	\$225.00	\$9,225.00
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	1	TON	\$950.00	\$950.00	\$1,500.00	\$1,500.00	\$2,525.00	\$2,525.00
402-02	AGGREGATE FOR COVER MATERIAL (PC)	4	TON	\$160.00	\$640.00	\$60.00	\$240.00	\$415.00	\$1,660.00
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	1	TON	\$950.00	\$950.00	\$1,800.00	\$1,800.00	\$2,524.00	\$2,524.00
411-01.10	ACS MIX (PG64-22) GRADING D	51	TON	\$210.00	\$10,710.00	\$186.45	\$9,508.95	\$245.00	\$12,495.00

Item No.	Item Description	Quantity	Unit	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
604-01.01	CLASS A CONCRETE (ROADWAY)	70	C.Y.	\$875.00	\$61,250.00	\$1,000.00	\$70,000.00	\$960.00	\$67,200.00
604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	10871	LB.	\$1.10	\$11,958.10	\$1.50	\$16,306.50	\$1.40	\$15,219.40
604-02.03	EPOXY COATED REINFORCING STEEL	270	LB.	\$1.50	\$405.00	\$1.80	\$486.00	\$2.00	\$540.00
604-03.01	CLASS A CONCRETE (BRIDGES)	15	C.Y.	\$1,250.00	\$18,750.00	\$1,000.00	\$15,000.00	\$445.00	\$6,675.00
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	1400	LB.	\$1.25	\$1,750.00	\$1.50	\$2,100.00	\$2.25	\$3,150.00
621-03.07	48" TEMPORARY DRAINAGE PIPE	52	L.F.	\$150.00	\$7,800.00	\$200.00	\$10,400.00	\$171.00	\$8,892.00
701-01.01	CONCRETE SIDEWALK (4")	309	S.F.	\$12.00	\$3,708.00	\$12.50	\$3,862.50	\$9.00	\$2,781.00
702-03	CONCRETE COMBINED CURB & GUTTER	3	C.Y.	\$750.00	\$2,250.00	\$600.00	\$1,800.00	\$1,335.00	\$4,005.00
705-01.05	GUARDRAIL AT BRIDGE ENDS LOW VOLUME	63	L.F.	\$50.00	\$3,150.00	\$100.00	\$6,300.00	\$110.00	\$6,930.00
705-06.30	GUARDRAIL TERMINAL (TYPE 21 MASH TL-2)	4	EACH	\$2,600.00	\$10,400.00	\$2,500.00	\$10,000.00	\$3,335.00	\$13,340.00
709-05.06	MACHINED RIP-RAP (CLASS A-1)	47	TON	\$50.00	\$2,350.00	\$65.00	\$3,055.00	\$73.00	\$3,431.00
712-01	TRAFFIC CONTROL	1	LS	\$15,000.00	\$15,000.00	\$18,000.00	\$18,000.00	\$835.00	\$835.00
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	24	L.F.	\$60.00	\$1,440.00	\$175.00	\$4,200.00	\$55.00	\$1,320.00
712-05.01	WARNING LIGHTS (TYPE A)	4	EACH	\$50.00	\$200.00	\$100.00	\$400.00	\$50.00	\$200.00
712-06	SIGNS (CONSTRUCTION)	60	S.F.	\$11.00	\$660.00	\$20.00	\$1,200.00	\$12.00	\$720.00
712-07.03	TEMPORARY BARRICADES (TYPE III)	48	L.F.	\$17.00	\$816.00	\$25.00	\$1,200.00	\$18.00	\$864.00
716-05.01	PAINTED PAVEMENT MARKING (4" LINE)	0.15	L.M.	\$15,000.00	\$2,250.00	\$8,000.00	\$1,200.00	\$7,000.00	\$1,050.00
717-01	MOBILIZATION	1	LS	\$12,500.00	\$12,500.00	\$30,000.00	\$30,000.00	\$22,993.60	\$22,993.60
740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	115	S.Y.	\$3.00	\$345.00	\$5.00	\$575.00	\$4.00	\$460.00
801-01.07	TEMPORARY SEEDING (WITH MULCH)	3	UNIT	\$100.00	\$300.00	\$100.00	\$300.00	\$225.00	\$675.00
803-01	SODDING (NEW SOD)	263	S.Y.	\$6.00	\$1,578.00	\$8.00	\$2,104.00	\$8.00	\$2,104.00
Total Amount					\$256,225.10		\$382,825.90		\$296,045.00

Item No.	Item Description	Quantity	Unit	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
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I hereby certify that this is a true and correct record with all errors and extension of unit price corrected.



Signature

David L. Hodnett

Printed Name

Staff Engineer City of Franklin

Tuesday, May 1, 2018

Res 2018-56
Exhibit A
PG 1 of 1

CITY OF FRANKLIN
AGREEMENT OF SALE

PROJECT: FIRE HALL NUMBER 7 PROPERTY
4416 PEYTONSVILLE ROAD

This agreement entered into on this the 13 day of June 2018
between BRANT NELSON DODD AND BARBARA J. DODD
hereinafter called Seller and the City of Franklin hereinafter called City shall continue for a period
of 180 days under the terms and conditions listed below. This Agreement embodies all
considerations agreed to between the Seller and the City.

- A. The Seller hereby offers and agrees to convey to the City all interest in the lands identified
as 4416 Peytons ville Road; Tax Map 117, Parcel 28.00, upon the City tendering the
purchase price of FOUR HUNDRED FIFTY THOUSAND DOLLARS AND NO CENTS
(\$450,000.00) said tract being further described as follows:

4416 Peytons ville Road Franklin, TN; Tax Map 117, Parcel 28.00,

- B. The City agrees to pay for the expenses of title examination, preparation of instrument of
conveyance and recording of deed. The City will reimburse the Seller for expenses
incident to the transfer of the property to the City. Real Estate Taxes will be prorated.

- C. Retention of Improvements

The City of Franklin agrees to give Mr. and Mrs. Dodd until December 1, 2018 to remove
any and all improvements on the property. If improvements are not removed by December
2, 2018 the City of Franklin will remove the all personal property at the City's cost. At no
time will the City of Franklin be responsible for any damages or losses to any personal
property that remains on the property after the time of closing. Seller agrees to not
interfere with any construction activity on the property during the removal of
improvements. Seller will be required to show proof of insurance for any contractors or
hired labor on the property (i.e.. House Movers, etc.)

By initialing seller agree to terms and conditions stated above ENS, BJD

- D. The Seller states in the following space the name of any Lessee of any part of the property
to be conveyed and the name of any other parties having any interest of any kind in said
property: _____

Brant Nelson Dodd
BRANT NELSON DODD

Barbara J. Dodd
BARBARA J. DODD

PREPARED FOR:

CITY OF FRANKLIN
ATTN: BEN WORLEY
109 3RD AVENUE SOUTH
FRANKLIN, TENNESSEE 37064

APPRAISAL REPORT OF:

+/-3.03 ACRES OF LAND
TAX MAP 117, PARCEL 28.00
4416 PEYTONSVILLE ROAD
WILLIAMSON COUNTY, TENNESSEE 37064

APPRAISED BY:

TED A. BOOZER, MAI
STATE CERTIFIED REAL ESTATE APPRAISER, CG-973

PREPARED BY:

BOOZER & COMPANY, P.C.
106 MISSION COURT, SUITE 1001
FRANKLIN, TENNESSEE 37067

EFFECTIVE DATE OF APPRAISAL:

MAY 29, 2018

DATE OF REPORT:

JUNE 14, 2018

June 14, 2018

City of Franklin
Attn: Ben Worley
109 3rd Avenue South
Franklin, Tennessee 37064

**RE: Appraisal Report of:
+/-3.03 Acres of Land
Tax Map 117, Parcel 28.00
4416 Peytonsville Road
Williamson County, TN 37064**

Dear Mr. Worley:

In accordance with your request, I have personally inspected and appraised the above captioned property for the purpose of estimating the "as is" market value of the fee simple estate.

The function or intended use of this Appraisal Report is to provide a basis of market value for internal purposes. The intended user of the report is the **City of Franklin**. This report is for the exclusive use of the addressee, and **Boozer & Company, P.C.** is not responsible for unauthorized use of this report.

The subject of this appraisal is a +/-3.03-acre tract of land located along the east side of Peytonsville Road, just east of Interstate 65, in an unincorporated area of Williamson County, Tennessee. The tract is improved with an unoccupied modular home, built in 1976, along with some other ancillary improvements. Based on the highest and best use of the subject tract, the improvements do not contribute to the overall property value. The property is identified by the Williamson County Assessor of Property as Parcel 28.00 on Tax Map 117 and has a street address of 4416 Peytonsville Road, Williamson County, Tennessee.

To the best of our knowledge, this appraisal report conforms to the current requirements prescribed by the Uniform Standards of Professional Appraisal Practice of the Appraisal Standards Board of the Appraisal Foundation (as required by the Financial Institutions Reform, Recovery and Enforcement Act - FIRREA).

The person signing this appraisal report has the knowledge and experience to complete the assignment competently. The person signing this report is duly licensed by the appropriate state to perform this level of appraisal under certificate number CG-973.

The market value estimate contained herein is based on information provided by the property contact, our client, personal inspections, public records and other pertinent information. This appraisal is based on the assumption that the furnished data is true and correct.

Mr. Worley
Page 2
June 14, 2018

The appraisal report, which follows, contains a summary of our investigation and analysis. The pertinent facts and data, which we believe applicable to the property, are described and the reasons leading to our estimate of value are included. The appraisal was not based on a requested minimum valuation, or a specific valuation, or the approval of a loan.

“As Is” Market Value

Based upon our investigation and subject to the general assumptions and limiting conditions as set forth in the report, it is my opinion that the “as is” market value of the subject property's fee simple estate, as of May 29, 2018, was:

FOUR HUNDRED FIFTY THOUSAND DOLLARS
\$450,000.00

The estimated marketing period and exposure time for the property to achieve the estimated market values shown above is **twelve months**.

We would like to thank you for selecting our firm for this assignment and if we may be of further assistance, please advise.

Sincerely,

BOOZER & COMPANY, P.C.



Ted A. Boozer, MAI
State Certified General R. E. Appraiser, CG-973

**BOOZER &
COMPANY, P.C.**

**Extent of Appraisal
Process:**

The following appraisal report is intended to comply with requirements set forth under the Financial Institutions Reform Recovery and Enforcement Act (FIRREA); the Interagency Appraisal and Evaluation Guidelines; and the Uniform Standards of Professional Appraisal Practice (USPAP), effective January 1, 2018. The report contains a concise review of the appraiser's market data, analyses, and conclusions, and may not be understood properly without additional information retained in our files. In the completion of this assignment, the appraiser signing this report has adhered to the Competency Rule of the Uniform Standards of Professional Appraisal Practice.

**Significant Observations
and Limiting Conditions:**

We also obtained pertinent information from public records, public officials, property owners, property managers, real estate professionals, and other reliable sources. The market value estimate contained herein is based on the assumption that the furnished information is true and correct.

Property Identification:

3.03 Acre Tract
4416 Peytonsville Road
Williamson County, Tennessee

Tax Map/Parcels:

117/028.00

Purpose of the Appraisal:

Market value estimate

**Intended Use & User of
Appraisal:**

The function or intended use of this Appraisal Report is to provide a basis of market value for internal purposes. The intended user of the report is the **City of Franklin**. This report is for the exclusive use of the addressee, and **Boozer & Company, P.C.** is not responsible for unauthorized use of this report.

Definition of Market Value:

Market value as used in this appraisal is defined as "the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus." Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- (1) Buyer and seller are typically motivated;
- (2) Both parties are well informed or well advised, and acting in what they consider their own best interests;
- (3) A reasonable time is allowed for exposure in the open market;
- (4) Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- (5) The price represents the normal consideration for the property sold unaffected by special or creative financing or sales

concessions granted by anyone associated with the sale (12 C.F.R. Part 34.42(g)).

**Property Rights
Appraised:**

Fee simple estate

**Definition of Fee Simple
Estate:**

Fee simple estate is defined as the *"absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat"* (page 90, *The Dictionary of Real Estate Appraisal*, Sixth Edition).

Ownership History:

Title to the subject is currently vested in **Brant Nelson Dodd, et ux Barbara Jean H. Dodd**. Ownership was last conveyed on May 2, 1970 from M. A. Hartley, et ux Irene Hartley, via deed of record in Deed Book 170, Page 256 (ROWCT). The consideration shown on the deed was \$2,200.

According to officials with the City of Franklin, the property is under contract at a purchase price of \$450,000. No value is attributable to the improvements, therefore the pending purchase price reflects a unit value of \$3.41/SF of land area.

The above title information is provided only to give a general background of the ownership history of the subject. To our knowledge, the information is accurate; however, we do not guarantee any of the title history shown above.

Legal Description:

The legal description for the subject is included in the copy of the most recent deed of record in the addenda of this report.

**Effective Date of
Appraisal:**

May 29, 2018 (Date of Inspection)

Date of Report:

June 14, 2018

Scope of the Appraisal:

- Inspected and photographed subject tract;
- Reviewed recorded deeds, plat, and ownership records;
- Obtained site specific information related to the property from Mr. Ben Worley with the City of Franklin;
- Analyzed neighborhood, zoning, and tax assessment data;
- Gathered and analyzed market data to arrive at highest and best use of each subject tract, "as vacant" and "as improved";
- Estimated the market value of subject based on the Sales Comparison Approach;
- Reconciled the results of this analysis to estimate the "as is" market value of the subject property's fee simple estate;
- Estimated appropriate marketing time and exposure period for the subject tract.

Neighborhood Data:

General Boundaries: The neighborhood is located in south-central Williamson County, along the southern fringe of the Franklin city limits. Geographically, the neighborhood consists of the area surrounding the Goose Creek Bypass interchange with Interstate 65 at Exit 61. General boundaries include the Harpeth River and South Carothers Road to the north, Interstate 840 to the south, Arno Road & Peytonsville Trinity Road to the east and Columbia Pike to the west. The neighborhood includes areas located within the city limits of Franklin, the Town of Thompson's Station and unincorporated Williamson County.

Access/Transportation: Interstate 65 is currently a four to eight-lane controlled access interstate highway which bisects the neighborhood in a north-south direction. The Tennessee Department of Transportation (TDOT) recently widened the portion of I-65 serving the neighborhood, increasing travel lanes to four in each direction between Goose Creek Bypass and Interstate 840. According to TDOT, 2015 traffic counts along Interstate 65 averaged 65,403 vehicles per day in the neighborhood.

Lewisburg Pike (US 431) and Columbia Avenue (US 31) are the primary traffic arteries serving the neighborhood. Both highways consist of two-lane arterials that provide north-south access along the west margin of the neighborhood and are contained within rights of way of varying width. According to TDOT, 2015 traffic counts along Lewisburg Pike and Columbia Avenue averaged 6,335 vehicles per day and 13,018 VPD, respectively.

Carothers Parkway South, an extension of South Carothers Road to Long Lane on the east side of Interstate 65, was recently completed and has greatly enhanced the connectivity in the neighborhood. The road was designed as a major collector, and was graded for a 4-lane divided highway; however, only the eastern 2 lanes were built initially. Sidewalks were also be provided with the initial build. TDOT traffic history data is not available on this new section of roadway.

Goose Creek Bypass (TN 248) is the primary east-west traffic route serving the area and links both Lewisburg Pike and Columbia Avenue to Interstate 65 (Exit 61). The two-lane collector is contained within a right of way of varying width. As part of the interstate widening project, the Goose Creek Bypass interchange was recently modified to accommodate the growth that is occurring in the neighborhood. The project included widening the Goose Creek Bypass bridge to ten lanes, providing opposing dual left turn lanes and three through lanes in each direction. Goose Creek Bypass was widened to a four-lane median divided facility with bike lanes. Federal requirements restrict access within a certain distance of an interstate interchange, so a new cul-de-sac terminus to Old Peytonsville Road was constructed as well as an extension to the new Berry Farms development, which provides access to Goose

Creek Bypass. East of I-65, Long Lane was re-aligned to provide access to the existing TA Truck Stop. Traffic counts along Goose Creek Bypass averaged 11,394 vehicles per day in 2015 according to TDOT estimates.

Interstate 840, a four-lane controlled-access highway, bounds the neighborhood to the south and is accessible via interchanges with Columbia Pike, Lewisburg Pike and Peytonsville Road. Traffic counts along I-840 averaged 29,705 vehicles per day in 2015 according to TDOT estimates.

Pratt Lane is a 2-lane county-maintained road that intersects a 90 degree turn in Peytonsville Road approximately 0.9-mile southeast of the Goose Creek Bypass interchange with Interstate 65. Per the Franklin Major Thoroughfare Plan Long Range Project (2035 Horizon Year), a 1.3-mile section of Pratt Lane between Peytonsville Road and the Southern UGB will be improved to function as a 3-lane collector. Other roads serving the neighborhood are generally two-lane county-maintained roads.

Land Uses/Percent Built-Up: Due to the area's distance from downtown Franklin and large tracts of vacant and agricultural land, the neighborhood has historically been considered semi-rural in nature and is estimated to be only 40% built up at this time. Residential uses primarily consist of single-family dwellings on acreage and large-lot subdivisions with minimum 1.0-acre lots, which is the maximum approved by the County in areas without public sewer service. Each buildable lot is required to have a private septic system with proper soils to support such systems or an alternative sewage treatment system such as a sand filtration or Shaeffer system. However, the City of Franklin has recently annexed portions of the neighborhood and approved large-scale mixed-use developments including Berry Farms and Stream Valley. The Five Mile Sewer Project has extended public sanitary sewer service south along Interstate 65 into the neighborhood and has allowed higher density single-family development as well as approval for multi-family apartments and large-scale commercial retail and office projects. Existing commercial uses, primarily highway-service related in nature, are concentrated along the Goose Creek Bypass near the I-65 interchange, but significant new commercial development is approved for the neighborhood. Community support facilities such as schools, churches, parks, etc. are present throughout the neighborhood. Schools are operated by the Williamson County Public School System. Emergency services such as 911 dispatch, police and fire are provided by the City of Franklin and Williamson County.

Residential Development: Berry Farms is a 608-acre mixed-use development located in the immediate vicinity of the I-65/Goose Creek By-Pass interchange that is approved for nearly 3.1 million

square feet of office space, nearly 1.8 million square feet of retail space and approximately 1,146 residential units. Located on approximately 228 acres situated immediately west of the interstate is the Town Center at Berry Farms, which is the first component of this project to be developed and will contain 550,000 SF of retail, 585,000 SF of office, 368 multifamily residential apartment units and 278 single-family residential units upon completion. Vertical construction within Phase I of this project commenced in 2012 and has yielded commercial and residential lots. Additional phases of Berry Farms include Chadwell at Berry Farms, approved for office, retail and residential, and Reams-Fleming at Berry Farms, approved for office, retail, civic and multifamily.

Stream Valley is a 345-acre master-planned mixed-use development located in the southwest quadrant of the Interstate 65/Goose Creek Bypass interchange, south of Berry Farms. The development includes 800± single family lots surrounded by open space amounting to 45% of the land area and is approved for 290,000 SF of office and 10,000 SF of retail. National homebuilder Ryan Homes bought rights to all of the development's remaining lots in 2012, triggering an increase in home sales.

Ladd Park is a 616.5-acre residential development located on the north side of Long Lane in the northeast quadrant of the Interstate 65/Goose Creek Bypass interchange. The project is entitled for 1,046 single family lots, producing an overall density of 1.7 units per acre.

Lockwood Glen is a 221-acre residential development located along Carothers Parkway South in the northeast quadrant of the Interstate 65/Goose Creek Bypass interchange. The development is approved for 624 dwelling units including 384 single family homes and 240 townhomes, producing an overall density of 2.8 units per acre.

Simmons Ridge is an 88.6-acre residential development located along Carothers Parkway South in Franklin. The development is approved for 408 dwelling units including 90 single family homes and 318 townhomes, producing an overall density of 4.6 units per acre. This project was originally approved for 156 detached units in 2003, but has experienced numerous delays, as well as increases to approved density. Controversy arose when area residents requested that the Board of Mayor and Aldermen (BOMA) restrict development until the Carothers Parkway South road project was underway.

Waters Edge is a 195.5-acre residential development located along the Carothers Parkway South road project in the northeast quadrant of the Interstate 65/Goose Creek Bypass interchange. The

development was initially approved for 336 dwelling units including 213 single family homes and 123 townhomes, producing an overall density of 1.72 units per acre. However, the developers recently received approval to increase density to 1.91 units per acre, which permits 373 units. The breakdown is 241 single family homes and 132 townhomes.

Helm Square is a 57-acre residential development located along Carothers Parkway South in the northeast quadrant of the Interstate 65/Goose Creek Bypass interchange. The development is approved for 168 dwelling units, producing an overall density of 2.9 units per acre.

Riverbluff is a 43-acre residential development located on the east side of Lewisburg Pike, south of Mack Hatcher Parkway. The project was originally approved for 79 dwelling units. However, BOMA increased the number of entitlements to 91 units before subsequently reducing the number to 80 units after the developer eliminated one internal street from the development plan. The changes to the plan and associated reduction to the number of approved lots was the result of the developer's discussions with Columbia Gulf, which has a gas line and easement on the property that would have to be crossed to include the removed street and additional 11 lots.

As discussed above, there are a number of existing and proposed residential developments located in the neighborhood, which is in response to the tremendous population growth experienced in Franklin and Williamson County. Franklin's municipal boundaries and urban growth boundary have expanded to include the bulk of the neighborhood, and the interchange of I-65 and Goose Creek Bypass is situated in the center of most of the proposed new development. Below is a chart summarizing the major developments described above:

SUMMARY OF MAJOR RESIDENTIAL DEVELOPMENTS			
<u>Project</u>	<u>Acres</u>	<u>Development Type</u>	<u>Residential Entitlements</u>
Berry Farms	608	Mixed-Use	1,146
Stream Valley	345	Mixed-Use	800
Ladd Park	616.5	Residential	1,046
Lockwood Glen	221	Residential	624
Simmons Ridge	88.6	Residential	408
Waters Edge	195.5	Residential	373
Helm Square	57	Residential	168
Riverbluff	43	Residential	80
<i>Total</i>	<i>2,175</i>		<i>4,645</i>

Commercial Development: Berry Farms has emerged as a desirable office address and a number of major employers have announced plans to relocate headquarters facilities to the development. A description of significant projects is included below:

- Ramsey Solutions acquired a site in the southernmost area of the Reams Fleming at Berry Farms development for a corporate headquarters location that is approved for three (3) 200,000 square office buildings and a 50,000 square foot conference center. The first phase includes a 200,000 square foot office building that is projected to be completed by mid-2018;
- The Tennessee Baptist Convention is in the process of moving their headquarters to the Town Center at Berry Farms and will occupy 40,000 square feet of office space that is expected to be completed in the fall of 2017;
- Lee Company recently purchased a site in the Town Center at Berry Farms for development of a 100,000 SF Class "A", LEED Certified office building. Reportedly, Lee Company intends to owner occupy the majority of the building and lease the balance on the open market; and
- Alfa Insurance is in the process of moving their regional headquarters to the Town Center at Berry Farms and will occupy over 60,000 square feet of office space that is expected to be completed in early 2018.

Additional commercial projects ongoing at the Berry Farms development include an under-construction Publix Supermarket that is scheduled to open in the fall of 2016 and a Hampton Inn & Suites that is scheduled to open in the fall of 2017.

Competitive Advantages/Disadvantages: The subject neighborhood benefits from a good location and accessibility along the southern fringe of Franklin. Interstate 65 was recently widened to accommodate increased traffic flow due to a growing population in the area and the Goose Creek Bypass was improved to increase its capacity based on current and future need. With the amount of available land suitable for development in Franklin quickly diminishing, pressure is building to develop fringe areas and radial growth southward along major arterials and I-65 has pressed into the neighborhood. The City of Franklin has recently annexed land within the neighborhood and extended sewer service, making higher density residential and commercial development possible. Accordingly, the neighborhood is well positioned for future growth.

Conclusion: The outlook for the neighborhood is excellent for future growth based on its desirable location, good access to major transportation routes and accessibility of utilities, which are currently being extended to newly annexed areas. Also, convenience for most family-oriented needs is good due to the neighborhood's proximity to downtown Franklin, Cool Springs and Spring Hill. Large-scale mixed-use projects currently under construction in the neighborhood will bring additional housing, as well as retail shopping and office uses that will benefit local residents and create draw to

the neighborhood from surrounding areas. Property values are expected to increase as land is absorbed into the city limits of Franklin and the existing inventory of lots is absorbed.

Zoning:

MGA-1 – Municipal Growth Area District 1:

The purpose of the Municipal Growth Area District 1 (MGA-1) is for this area to remain largely undeveloped until such a time that the land may be annexed into a municipality. Until such annexation, the municipal growth areas are considered a part of the County's rural landscape and as such, this district is established to protect the rural character of Williamson County by allowing for agricultural, rural, and low-density residential development. The dimensional standards for the MGA-1 district are as follows.

TABLE 10.02-7: DIMENSIONAL STANDARDS FOR THE MUNICIPAL GROWTH AREA DISTRICT-1			
DIMENSIONAL STANDARDS	RESIDENTIAL STRUCTURES		NONRESIDENTIAL STRUCTURES
Minimum Lot Area	1 acre		1 acre
Maximum Gross Density	1.0 unit per acre		Not Applicable
Minimum Lot Width	Traditional Subdivisions 1 acre to 2.99 acres	130 feet	130 feet
	Traditional Subdivisions 3 acres to 4.99 acres	160 feet	
	Traditional Subdivisions 5 acres or Greater	200 feet	
Front Yard Setback	Traditional Subdivisions 1 acre to 4.99 acres	60 feet	60 feet
	Traditional	100 feet	

City of Franklin Urban Growth Boundary

According to the Franklin Tennessee Land Use Plan, which was adopted by the Franklin Planning Commission February 19, 2004, the subject property is located in the "Goose Creek" character area, and is designated as a "regional commerce" district. Accordingly, the subject property will likely have some commercial development potential once annexed into the city limits, and it is reasonable to assume that annexation is likely once requested by the property owner.

Property Tax Data:

The subject is currently identified by the Williamson County Assessor of Property as Parcel 028.0 on Tax Map 117. The 2017 tax rate is \$2.15 per \$100 of assessed value. The subject is classified as residential property and appropriately assessed at 25% of its appraised value. The subject's annual tax burden is summarized as follows.

Annual Property Tax Burden Estimate

Map/Parcel	117/28.00
Land Value	\$141,700
Improvement Value	<u>+ 6,900</u>
Total	\$148,600
Assessment Ratio	<u>x 0.25</u>
Assessment	\$35,425
Tax Rate	<u>x 0.0215</u>
Tax Burden	\$798.73

Site Data:

The subject is a rectangular-shaped tract located on the east side of Peytonsville Road, roughly 2,000' east of Interstate 65. The property is located just outside the city limits of Franklin in Williamson County, Tennessee. The tract is improved with an unoccupied modular home, built in 1976, along with some other ancillary improvements. Based on the highest and best use of the subject tract, the improvements do not contribute to the overall property value.

The rectangular shaped tract contains 3.03 acres, and measures roughly 200' in width and 525' in depth. Positioned in the curve of Peytonsville Road, the property includes approximately 250' of frontage along this two-lane county thoroughfare. The majority of the tract features a cleared, gently sloping topography slightly above road grade. A few scattered hardwood trees are located around the existing home site.

All public utilities are available to the site with the exception of sanitary sewer, which is in close proximity and could easily be extended once annexed by the City of Franklin. There are no known easements or encumbrances known that are detrimental to the utility or value of the site. The subject is not located in a 100-year floodplain according to FEMA Flood Insurance Rate Map 47187C0355F, dated September 29, 2006 (Un-shaded Zone X).

This appraisal is based on the assumption that there are no environmental conditions on or in the property or in proximity that would cause a loss in value (See Item 13 of General Assumptions and Limiting Conditions). Subsoil is assumed adequate to support improvements approved by zoning.

Offsite, Peytonsville Road is a two-lane county street that is contained within a 30' ROW along the subject's frontage. Surrounding uses include agricultural and single family dwellings on medium to large acreage tracts, and commercial development to the west. Overall, the property is judged suitable and marketable for small scale commercial use once annexed.

Highest and Best Use:

The reasonably probable and legal use of the subject, as vacant, which is physically possible, financially feasible and results in the highest value would be small-scale commercial use once annexation is requested from the City of Franklin. The most probable buyer is an owner-occupant or developer.

The highest and best use, as improved, is demolition and/or removal of the existing improvements to make way for future small-scale commercial development.

Valuation:

The typical and theoretical real estate appraisal includes three separate but interrelated preliminary approaches to value, which are correlated into a single final value conclusion. The preliminary approaches are identified as the Cost Approach, the Sales Comparison Approach and the Income Capitalization Approach.

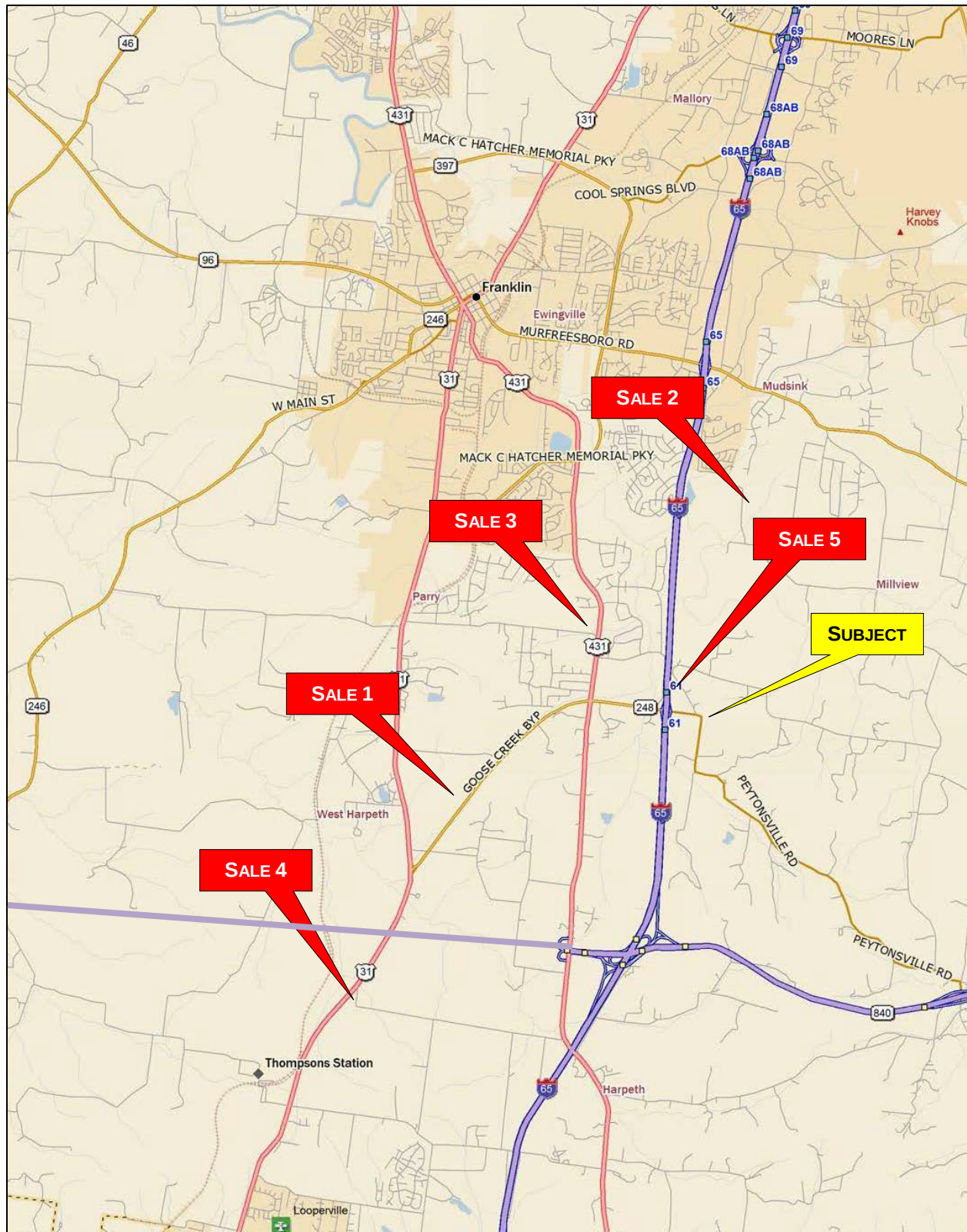
In the appraisal of a specific property, one or more of the approaches may be more applicable than the others, and one or more of the approaches may be impractical because of the lack of suitable data in the market with which to make comparisons. The subject will be valued as a vacant tract of land, consistent with the highest and best use determination. Accordingly, only the sales comparison approach was processed.

SALES COMPARISON APPROACH

The Sales Comparison Approach is *"The process of deriving a value indication for the subject property by comparing sales of similar properties to the property being appraised, identifying appropriate units of comparison, and making adjustments to the sale prices (or unit prices, as appropriate) of the comparable properties based on relevant, market-derived elements of comparison."* (The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute)

The Sales Comparison Approach relies on the principle of substitution, which implies that a prudent person will not pay more to buy a property than it will cost to buy a comparable substitute property. The subject of this appraisal is a 3.03-acre tract of land located along the east side of Peytonsville Road, just east of Interstate 65, in Williamson County, Tennessee. My investigation revealed the following sales of similar land tracts in the area.

MAP OF COMPARABLE LAND SALES



SUMMARY OF LAND SALES						
#	Date Bk/Pg	Map/Parcel Zone	Address	Size Acre	Sale Price	\$/SF
1	1/1/2014 6113/537	118/10.07 MGA-1	2646 Goose Creek ByPass	7.000	\$600,000	\$1.97
2	12/18/2017 7259/590	089/041.0 MGA-1	4356 S. Carothers Road	6.000	\$630,000	\$2.41
3	Pending N/A	106/009.0 MGA-1	West Side Lewisburg Pike	1.58	\$470,000	\$6.83
4	6/27/2017 7111/711	145/002.05 C	SEC Columbia Pike & Critz Lane	1.61	\$764,750	\$10.90
5	6/16/2017 7102/476	106O-A-004.0 GC	4412 Franklin South Ct.	0.910	\$865,000	\$21.82
Average Indications				3.42	\$665,950	\$8.79

Analysis of Comparable Sales

In this area, the most widely accepted method of valuing small commercial tracts of land is on a per-square foot basis, which was the unit of measurement utilized in this analysis. As shown in the summary chart above, four closed sales and one pending sale were included in this analysis, all of which were selected due to their similarities to the subject. The comparables form a range in unit price from \$1.97/SF to \$21.82/SF, with a mean indication of \$8.79/SF and a median of \$6.83/SF.

The comparable sales were compared to the subject based on property rights conveyed, financing, sale conditions, market conditions, and physical characteristics. To the best of our knowledge, all the sales represented arms-length transactions, which included the fee simple estate property rights. All of the sales were cash to seller conveyances, whereby financing was not a factor in the sales price. We are not aware of any unusual sale conditions involved in any of the closed transactions. Accordingly, no adjustments were necessary.

Market Conditions: Sale 1 closed in 2014 while Sales 2, 4 & 5 closed in 2017. Sale 3 is a pending transaction. All of the comparable sales represent some of the most recent transactions of properties deemed similar to the subject, and differences in market conditions will be considered on a qualitative basis.

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The subject is located along the east side of Peytonsville Road, just east of I-65 in an unincorporated area of Williamson County, Tennessee. All five sales are located within a two-mile radius of the subject, with Sales 2, 3 & 4 being in closest proximity. Similar to the subject, Sales 1, 2 & 3 are located within unincorporated areas of Williamson County, Tennessee, but within Franklin's Urban Growth Boundary (UGB). Sale 4 is located within the Town of Thompson's Station and Sale 5 is located within the City of Franklin.

All five sales are similar to the subject in terms of topography and development potential. Sale 4 benefits from having a corner location while Sale 5 has interstate visibility – neither of which are available to the subject. Sewer service is available to Sales 4 & 5, but was unavailable to Sales 1, 2 & 3 at the time of transfer. Sewer has since been extended to Sale 1 and will be extended to Sale 3 in the near future.

The comparable sales range in size from 0.91 acres to 7.00 acres, with an average of 3.42 acres. The subject contains 3.03 acres, which is bracketed by the sales. Typically, with all other factors remaining equal, there is an inverse relationship between size and price per square foot. This inverse relationship between size and price per SF was reflected by the sales data, and will be considered on a qualitative basis.

We also considered the recent sales activity of the Berry Farms project, located across Interstate 65 from the subject at the southeast quadrant of Lewisburg Pike and Goose Creek By-Pass. To date, 20 land sales have taken place within this project ranging in size from 0.40 to 8.33 acres, with an average size of 1.97 acres. The sales prices have varied from \$5.03 to \$34.95 per SF, with an average of \$14.51/SF. Uses within Berry Farms include day care, office, condominium, retail, and hospitality. These land sales set the upper limit of market value for land in the immediate neighborhood.

In addition, the pending sales price of the subject has also been considered. According to city officials, the property is under contract for \$450,000 or \$3.41/SF. It is my understanding the property was not officially marketed for sale, and no former listing information could be found on the local MLS service. The purchase price was negotiated directly with the owner by a city official.

Conclusion of Land Value: In conclusion, the comparables included in this analysis provide a reasonable range from which to estimate the subject's market value. Based on the preceding

analysis, the subject is considered superior to Sales 1 & 2, slightly inferior to Sale 3, and inferior to Sales 4 & 5. Therefore, having considered all pertinent factors, with emphasis placed on the subject's location, size and utility, it is my opinion that the pending purchase price of \$3.41/SF is strongly supported by the market data, and is reflective of market value for the subject property. The subject site contains 3.03 acres or 131,987 SF. The calculation to derive the "as is" market value of the subject property is shown as follows:

"AS IS" MARKET VALUE CALCULATION

Land Area		Unit Value		Market Value
131,987 SF	X	\$3.41/SF	=	\$450,076
Rounded to:				\$450,000

"As Is" Market Value

Based upon my investigation and subject to the general assumptions and limiting conditions as set forth in the report, it is my opinion that the "as is" market value of the subject property's fee simple estate, as of May 29, 2018, was:

FOUR HUNDRED FIFTY THOUSAND DOLLARS

\$450,000.00

ESTIMATED MARKETING AND EXPOSURE TIME

Marketing Time: *"An opinion of the amount of time it might take to sell a real or personal property interest at the concluded market value level during the period immediately after the effective date of an appraisal. Marketing time differs from exposure time, which is always presumed to precede the effective date of an appraisal."* (Page 140, *The Dictionary of Real Estate Appraisal*, 6th Edition, Appraisal Institute) Based on discussions with local brokers and considering the current market conditions found in the local real estate market, the marketing period time is estimated to be **twelve months**.

Exposure Time: *"The estimated the length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective opinion based on an analysis of past events assuming a competitive and open market."* (Page 83, *The Dictionary of Real Estate Appraisal*, 6th Edition, Appraisal Institute) Considering the high level of activity experienced in the local market area over the past several months, a reasonable exposure time is estimated to be **twelve months**.

CERTIFICATION OF THE APPRAISER

I certify that, to the best of my knowledge and belief...

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, unbiased professional analyses, opinions and conclusions.
3. I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
4. I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
5. My engagement in this assignment was not contingent upon developing or reporting predetermined results.
6. My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
7. My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice and the Code of Ethics of the Appraisal Institute.
8. The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
9. Ted Boozer has made a personal inspection of the property that is the subject of this report.
10. No one provided significant real property appraisal assistance to the person signing this report.
11. As of the date of this report, I, Ted A. Boozer, MAI have completed the requirements of the continuing education program of the Appraisal Institute.
12. Ted A. Boozer hereby certifies that he is a Tennessee State Certified General Real Estate Appraiser and his certificate number is CG 973.
13. This appraisal assignment was not made, nor was the appraisal rendered on the basis of a requested minimum valuation, specific valuation, or an amount which would result in the approval of a loan.
14. The appraisal is in conformity with Uniform Standards of Professional Appraisal Practice.
15. I have not appraised this property in the three years prior to accepting this assignment.



Ted A. Boozer, MAI, CG-973
State Certified General Real Estate Appraiser

GENERAL ASSUMPTIONS AND LIMITING CONDITIONS

This Appraisal Report and resulting estimate of value, made expressly for the City of Franklin, is subject to the following assumptions and limiting conditions:

1. *The forecasts, projections, or operating estimates contained herein are based upon current market conditions, anticipated short-term supply and demand factors, and a continued stable economy. Therefore, these forecasts are subject to changes in future conditions. Value estimates in this appraisal report are stated in United States currency as of the date of appraisal.*
2. *No responsibility is assumed for the legal description or for matters including legal or title considerations. Title to the property is assumed to be good and marketable and in Fee Simple, unless otherwise stated in the report.*
3. *The property is appraised free and clear of all existing liens and encumbrances, including deed restrictions and developers agreements, unless otherwise stated in this appraisal report.*
4. *Information furnished by others is believed to be true, correct, and reliable. A reasonable effort has been made to verify such information; however, no responsibility for its accuracy is assumed by the appraiser(s).*
5. *Maps, plats, and exhibits included in this appraisal report are for illustration only, as an aid in visualizing matters discussed within the report. They should not be considered as surveys or relied upon for any other purpose. The appraiser(s) has not made a survey of the property, and no responsibility is assumed in connection with such matters.*
6. *The physical condition of the improvements described herein was based on a visual, walk-through inspection. No liability is assumed for the soundness of structural members, building components, mechanical equipment, plumbing, or electrical components as no professional tests were made of the same. The appraiser(s) assumes that no hidden or unapparent conditions of the property, subsoil, or structures exist, which would render the property more or less valuable. The appraiser(s) assumes no responsibility for such conditions, or for engineering, which might be required to discover such factors. The appraiser(s) recommends that the client obtain an opinion from a competent engineering firm.*
7. *It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in this appraisal report.*
8. *It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless a nonconformity has been stated, defined, and considered in this appraisal report.*
9. *It is assumed that all required licenses, certificates of occupancy, consents, or other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate(s) contain in this report is based.*
10. *It is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that no encroachment or trespass exists, unless noted in this appraisal report.*
11. *Value estimates in this appraisal report apply only to the entire property, and cannot be prorated to individual portions or fractional interests. Any proration or division of interest will invalidate the value estimate(s), unless such proration or division of interests is set forth in this appraisal report.*

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COMPANY, P.C.**

12. *The appraiser(s) is not required to give testimony or attendance in court by reason of this appraisal, with reference to the property in question, unless arrangements have been made previously therefore. The fee charged for this appraisal does not include payment for court testimony or for further consultation.*
13. *Unless otherwise stated in this appraisal report, the appraiser(s) did not observe the existence of hazardous material, which may or may not be present on the property. The appraiser(s) has no knowledge of the existence of such materials on or in the property. The appraiser(s), however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. Value estimates within this appraisal report are predicated on the assumption that there is no such material on or in the property, that would cause a loss in value. No responsibility is assumed for any expertise or engineering knowledge required to discover them. The appraiser(s) recommends that appropriate experts be retained to investigate and determine to what extent, if any, such substances are present and what risks, if any, are involved.*
14. *The determination concluded in this appraisal, as to whether or not the subject property is located within a Flood Hazard Zone, is based solely on an inspection of available Flood Insurance Rate Map(s) (FIRM) which are distributed by the National Flood Insurance Program (NFIP). The NFIP maps represent the most recent revisions available after reasonable investigations. Although these maps are the basis for flood hazard determination, the map scale is typically not adequate for accurate comparisons with other maps and/or surveys. Therefore, the determination presented herein regarding location of the subject property outside or within a flood hazard zone should not be construed as a guarantee or certification. Certification of this can only be provided by a qualified engineer and/or surveyor. If there is any possibility that the subject is within an identified flood hazard zone, we recommend that the property should be covered by adequate flood insurance.*
15. *Unless otherwise noted in this appraisal report, no consideration in the valuation process has been given to subsurface rights (minerals, oil, water, etc.) that may be found on the subject property.*
16. *Any proposed or incomplete improvements included in this appraisal report are assumed to be completed in accordance with approved plans and specifications and in a workmanlike manner.*
17. *The appraiser(s) reserves the right to alter opinions of value contained in this appraisal report on the basis of information withheld or not discovered in the normal course of a diligent investigation.*
18. *The Americans With Disability Act (ADA) became effective July 26, 1992. The appraiser has not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis would reveal the need for renovations to comply with that statute. Such a requirement could have an adverse impact on the market value of the property. Because the appraiser has no direct evidence relating to this issue, the appraiser did not consider possible noncompliance with the requirements of the ADA in this report.*

QUALIFICATIONS OF TED A. BOOZER, MAI

Boozer & Company, P.C.
106 Mission Court, Suite 1001
Franklin, TN 37067
615-591-4422 (office)
tedboozer@boozercompany.com

AREA SERVED

Middle Tennessee with emphasis on Davidson, Williamson, Sumner, Wilson, Rutherford, Maury, Dickson, Robertson, Montgomery and Cheatham counties.

EDUCATION

Jacksonville State University - Jacksonville, Alabama (1987 - 1991)

- Bachelor of Science Degree in Finance, Real Estate Minor
- Graduated with Special Honors in Finance and Real Estate

Appraisal Institute and Professional Courses/Seminars:

Real Estate Principals (1A1) - AIREA, 1991
Basic Valuation Procedures (1A2) - AIREA, 1992
Advanced Right-of-Way Plans Interpretation - T.D.O.T., 1992
Capitalization Theory & Techniques, Part A (1BA) - AI, 1992
Capitalization Theory & Techniques, Part B (1BB) - AI, 1992
Advanced Applications (Case Studies - 550) - AI, 1994
Dynamics of Office Building Valuation - AI, 1996
Report Writing & Valuation Analysis - AI, 1997
Standards of Professional Practice, Parts A & B - AI, 1997
The Appraisal of Local Retail Properties - AI, 1999
Evaluating Commercial Construction - AI, 2002
Advanced Condemnation Appraising (720) - AI, 2003
Effective Appraisal Writing - AI, 2004
Highest & Best Use and Market Analysis - AI, 2005
Appraising for Alternative Uses - AI, 2009
Appraisal Challenges: Declining Market & Sales Concessions - AI, 2009
Appraising Convenience Stores - AI, 2009
Introduction to Valuation for Financial Reporting - AI, 2010
Litigation Appraising: Specialized Topics & Applications - AI, 2010
Understanding & Testing DCF Models - AI, 2011
Appraising the Appraisal - Appraisal Review - AI, 2013
Marketability Studies: Six Step Process & Basic Applications - AI, 2013
The New Age of Energy - IRWA/TAC, 2013
Eminent Domain Law Basics for ROW Professionals - IRWA, 2014
Subdivision Valuation - AI, 2015
Review Theory - General - AI, 2015
USPAP Update Course - AI, 2017

EXPERIENCE

January, 1996 – Present: Co-Owner and Vice-President of **BOOZER & COMPANY, P.C.**, a real estate appraisal and consulting firm specializing in the valuation of all types of office, retail, industrial, land, and multi-family residential properties, with special emphasis on residential subdivision development appraisals. Also have extensive experience in valuation of partial interests, easements, and various specialized property types, including eminent domain proceedings and appraisal reviews.

Independent contract real estate appraiser with various MAI's in East and Middle Tennessee, from July, 1993 to December, 1995. Real estate appraiser with East Tennessee Appraisal Group, Knoxville, TN, from May of 1991 to June of 1993. Real estate appraiser trainee with Area-Wide Appraisals, Inc., Anniston, AL, 1990.

PROFESSIONAL AFFILIATION

Tennessee State Certified General Real Estate Appraiser, CG-973
Member of the Appraisal Institute (MAI Designation)
General Guidance Chair – Greater TN Chapter of Appraisal Institute (2001-2002)
Tennessee Department of Transportation – TDOT Approved Appraiser
Nashville MTA/RTA – Approved Appraiser & Review Appraiser
Real Estate Affiliate Broker - State of Tennessee - License Number 00274320
Member of Greater Nashville Association of Realtors®

ADDENDA

SUBJECT PHOTOGRAPHS



View East of Subject Property from Peytonsville Road



View SE of Subject Property from Peytonsville Road

SUBJECT PHOTOGRAPHS



Modular Single-Family Residence



Rear View of Subject Site with Other Improvements (No Value)

SUBJECT PHOTOGRAPHS



View SouthEast along Peytonsville Road with Subject at Left



View NorthWest along Peytonsville Road with Subject at Right

SUBJECT DEED

BOOK 170 PAGE 256

This document was prepared by
R. L. RICHARDSON, JR., ATTORNEY
Public Square, Franklin, Tennessee

5-2 1970
TRANSFER TAX 6.85
MORTGAGE TAX 50
PROBATE FEE 7.00
TOTAL PAID 115.92
RECEIPT NO. 03

REG. OR DEP. REG.
WILLIAMSON COUNTY

FOR AND IN CONSIDERATION OF THE SUM of One Hundred
Fifty and no/100 (\$150.00) Dollars, paid in cash; the receipt
of which is hereby acknowledged.

We, M. A. Hartley and wife, Irene Hartley, have bargained
and sold, and do hereby transfer and convey unto Brant Nelson
Dodd and wife, Barbara Jean H. Dodd, the following described
land in the Tenth Civil District of Williamson County, Ten-
nessee, more particularly described as follows:

Being a tract or parcel of land lying wholly within
the Tenth Civil District of Williamson County, Ten-
nessee, and bound in general by Peytonville Road on
the west, Hartley on the north and east and by
Woodside on the south.

Beginning in the center of Peytonville Road at the
northwest corner of Woodside, thence with the said
centerline of Peytonville Road North 5 deg. 25 min.
West 56 feet, North 17 deg. West 52 feet, North 35
degrees 40 min. West 49 feet and North 48 degrees
15 min. West 37 feet; thence with the following two
new lines North 89 degrees 45 min. East 418.2 feet to
an iron post and South 1 degree West 162.3 feet to
a point in the north fence line of Woodside; thence
with his existing north fence line South 88 degrees
30 min. West 345 feet to the point of beginning and
containing 1.4 acres, more or less.

Being part of the property conveyed to M. A. Hartley
et ux, by deed of Ben E. Givens et ux, as of record
in Deed Book 79, page 391, in the Register's Office
of Williamson County, Tennessee.

TO HAVE AND TO HOLD the said lands, with the improvements
and appurtenances thereunto belonging, to the said Brant Nelson
Dodd and wife, Barbara Jean H. Dodd, their heirs and assigns,
forever.

STATE OF TENNESSEE	
COUNTY OF WILLIAMSON	
THE ABOVE DECLARATION OR VALUE WHICHEVER IS GREATER FOR THIS TRANSFER IS	
\$150.00	
SUBSCRIBED AND SIGNED TO & FILED BY THE	
COMMISSIONER	DAY 15 1970
(AFFIX SEAL)	

SUBJECT DEED

BOOK 170 PAGE 257

And we covenant with the said Brant Nelson Dodd and wife, Barbara Jean H. Dodd, that we are lawfully seized of said land, have a good right to convey it, and that it is unencumbered.

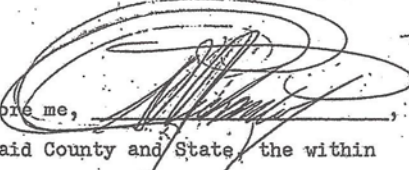
And we do further covenant and bind ourselves, our heirs and representatives to warrant and forever defend the title to said property to the said Brant Nelson Dodd and wife, Barbara Jean H. Dodd, their heirs and assigns, against the lawful claims of all persons.

Witness our hands this the 2nd day of May, 1970.

M A Hartley

Mrs Irene Hartley

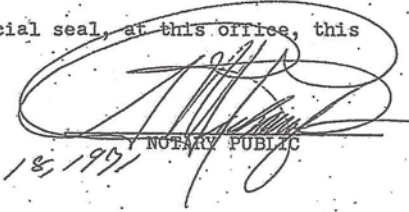
STATE OF TENNESSEE
WILLIAMSON COUNTY

Personally appeared before me, , a Notary Public in and for said County and State, the within named, M. A. Hartley and wife, Irene Hartley, the bargainors, with whom I am personally acquainted, and acknowledged that they executed the annexed instrument for the purpose therein contained.

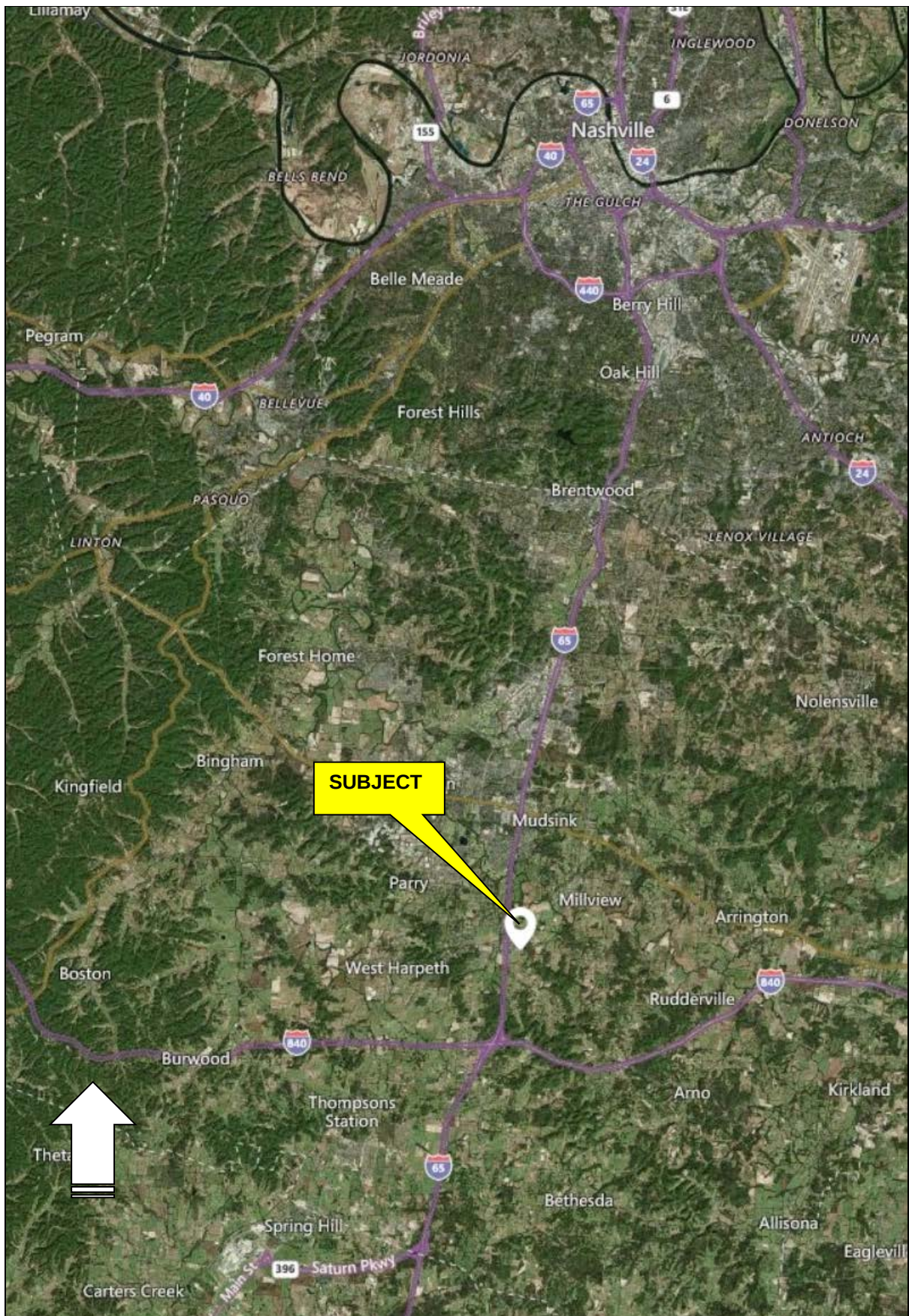
Witness my hand and official seal, at this office, this 2nd day of May, 1970.



My commission expires: Oct 18, 1971


NOTARY PUBLIC

NEIGHBORHOOD MAP



TAX MAP

WILLIAMSON COUNTY TAX MAP 117
PARCEL 28.00



AERIAL MAP - CLOSE UP



RESOLUTION NO. 2018-56

A RESOLUTION TO FINALIZE THE PROPERTY ACQUISITION ASSOCIATED WITH FIRE STATION
NUMBER 7

WHEREAS, the Board of Mayor and Aldermen unanimously approved Resolution 2016-69, "A Resolution to Adopt the Project List for Phase I of the FY 2017-2026 CIP (Capital Investment Program)"; and

WHEREAS, Resolution 2016-69 included funding for Fire Station 7 in the amount of \$4,330,000; and

WHEREAS, During the design process it was determined that the city needed to acquire some additional property located at 4416 Peytonsville Road to accommodate the future Fire Station and the future extension of Goose Creek Bypass; and

WHEREAS, the property owner of 4416 Peytonsville Road has signed an agreement of sale, Exhibit A, in the amount of \$450,000 based on a fair market appraisal prepared by Boozer & Company, P.C. on May 29, 2018.

NOW THEREFORE, BE IT RESOLVED, BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, AS FOLLOWS: The City Administrator and City Attorney shall have the authority to enter into an agreement and finalize the acquisition of the property located at 4416 Peytonsville Road on behalf of the Board of Mayor and Aldermen.

IT IS SO RESOLVED AND DONE on this ____ day of _____ 2018.

ATTEST:

CITY OF FRANKLIN, TENNESSE

By: _____
ERIC S. STUCKEY
City Administrator

By: _____
DR. KEN MOORE
Mayor

Approved as to Form

By: _____
Shauna R. Billingsley
City Attorney

RESOLUTION 2018-55

A RESOLUTION AWARDED THE CONSTRUCTION CONTRACT (COF CONTRACT NO. 2018-0052) TO RENASCENT, INC IN THE AMOUNT OF \$30,829.16 FOR THE DEMOLITION OF STRUCTURES LOCATED AT 403 & 405 HILLSBORO ROAD.

WHEREAS, the city property as referenced to for many years as The Hill Property has reached an end regarding its need and usefulness to the City of Franklin and is now becoming and is attracting vandalism; and

WHEREAS, the facility is no longer safe for staff personnel to utilize the facility for work and or training and the amount of funds that would be required to refurbish the structures including life safety issues has been deemed to costly to make repairs and that it is considered vacant property and should be removed only leaving the building foundation systems on site leaving the concrete slabs cleared; and

WHEREAS, on May 30, 2019 sealed bids were received in the Facilities Department, City Hall, 109 3rd Avenue South, Suite 117, Franklin, Tennessee 37064 and were publicly opened and read aloud for the 405 & 403 5th Ave. N Demo Project (COF Contract No 2018-0052); and

NOW THEREFORE, BE IT RESOLVED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that approval is granted for the bid award to Renascent, Inc. for the demolition of structures located at THE HILL site (COF Contract No. 2018-0052) in the amount of Thirty Thousand Eight Hundred Twenty-Nine dollars and sixteen cents. (\$30,829.16)

BE IT FURTHER RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE that the Facilities Director is hereby authorized to have authority to review and approval the spending of all project funds included in the bid and award of the construction contract for the

of structures located at 403 & 405 5th Ave. N (COF Contract No. 2018-0052).

IT IS SO RESOLVED AND DONE on this ___ day of _____

201
8

ATTEST:

By: _____

—

ERIC S. STUCKEY
City Administrator

CITY OF FRANKLIN, TENNESSEE:

By: _____

Dr. Ken Moore, Mayor

Approved as to Form:

By: _____

Shauna R. Billingsley,

City Attorney

RESOLUTION 2018-01

A DRAFT RESOLUTION AWARDING THE CONSTRUCTION CONTRACT (COF CONTRACT NO 2017-0264) TO KIEWIT INFRASTRUCTURE SOUTH CO. IN THE AMOUNT OF \$132,890,000.00 FOR THE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT

WHEREAS, the City of Franklin (City) Board of Mayor and Aldermen (BOMA) approved on March 3, 2013, COF Contract No. 2013-0001, the Water Reclamation Facility (WRF) Modifications and Expansion Project (Project) with CDM Smith, Inc. (Consultant), to provide for the design and upgrade of the WRF in order to upgrade equipment and processes to provide additional wastewater capacity as identified in the Integrated Water Resources Plan (IWRP); and

WHEREAS, on June 18, 2018, sealed bids were received in the Engineering Department, City Hall, Franklin, Tennessee and were publicly opened and read aloud for the Water Reclamation Facility Modifications and Expansion Project (COF Contract No 2017-0264); and

WHEREAS, four (4) bids were received for the construction of the Project ranging from a low of \$132,380,00.00 to a high of \$148,805,824.00 (see attached certified bid tabulation) with the low bid being submitted by Kiewit Infrastructure South Co. of Nashville, Tennessee; and

WHEREAS, four (4) additive alternates were provided that the City feels may have been warranted on this project, and received bids on these items from the Contractor; and the City selected one (1) to include as an addition to the Base Bid; this being the addition of a jet mixing system in the equalization basin to aid in the operation and maintenance of the facility; and

WHEREAS, it is the recommendation of the Consultant with concurrence of City Staff to enter into (award) the construction contract (COF Contract No. 2017-0264) with Kiewit Infrastructure South Co. in the Total Base Bid amount of ONE HUNDRED THIRTY-TWO MILLION EIGHT HUNDRED NINETY THOUSAND and NO/100 Dollars (\$132,890,000.00); and

WHEREAS, included in the Total Base Bid are several Pre-selected technologies and Allowances and a Contingency that will require some negotiation and approval during the construction of the Project; and

WHEREAS, the BOMA finds that it is in the best interest of the City and for the efficiency of performing the WRF construction contract to authorize the City Administrator and Water Management Department Director to negotiate and approve the expenditures of the Allowances and Contingency up to the limits as stipulated in the Bid Form with regular reporting of said expenditures to the BOMA; and

WHEREAS, pursuant to the specifications for the Project, Section 10.12 and Section 16.1, the City is waiving any informality due to Kiewit Infrastructure South Co. not having submitted an original signature on the Bid Form.

NOW THEREFORE, BE IT RESOLVED by the Board of Mayor and Aldermen of the City of Franklin, Tennessee, that approval is granted to waive the signature informality on the Bid Form and for the bid award to Kiewit Infrastructure South Co. for the Water Reclamation Facility Modifications and Expansion Project (COF Contract No. 2017-0264) in the amount of **ONE HUNDRED THIRTY-TWO MILLION EIGHT HUNDRED NINETY THOUSAND and NO/100 Dollars (\$132,890,000.00).**

BE IT FURTHER RESOLVED BY THE BOARD OF MAYOR AND ALDERMEN OF THE CITY OF FRANKLIN, TENNESSEE, that the City Administrator and the Water Management Director

is hereby authorized to have authority to review and approve the spending of Allowances and Contingencies up to the limits as stipulated in the Bid Form.

IT IS SO RESOLVED AND DONE on this ____ day of _____, 2018.

ATTEST:

CITY OF FRANKLIN, TENNESSEE:

By: _____
ERIC S. STUCKEY
City Administrator

By: _____
Dr. Ken Moore
Mayor

Approved as to Form

By: _____
Shauna R. Billingsley
City Attorney



3200 Windy Hill Road
Suite 210 West
Atlanta, Georgia 30339
tel: 404 720-1400

June 22, 2018

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

Subject: Evaluation of Bids – Franklin WRF Modifications & Expansion Project (Re-Bid)
COF Contract No. 2017-0264

Dear Ms. Hatcher:

Bids for the above referenced project were received on June 18, 2018, until 2:00 p.m. Central Time and subsequently opened. The bidders and their Total Bids are summarized in the certified Bid Tabulation, three copies of which are attached to this letter. The bids are listed below and in the Bid Tabulation in numerical order, with the low bidder listed first.

Bidder		Total Bid
1	Kiewit Infrastructure South Co.	\$132,380,000
2	Garney Companies, Inc.	\$134,736,600 ¹
3	Oscar Renda Contracting, Inc.	\$138,867,564
4	Brasfield & Gorrie, LLC	\$148,805,824

¹ Corrected value. See Page 2 for an explanation of the correction.

Each bidder acknowledged receipt of the six Addenda issued for this project and supplied a Bid Bond in the amount of 5 percent of the Total Bid. Bids for this project are to remain firm for a period of 90 calendar days, excluding Saturdays, Sundays, and legal holidays after the actual date of the opening of the bids; the bids will expire on October 24, 2018.

Each bidder submitted a Bid Proposal containing the following information as required by the Bid Documents.

- Bid Form (Section 00300), including Part 1 – Base Bid, Part 2 – Allowance Items, and Part 3 – Bid Summary
- Bid Security (Section 00410, Bid Bond Form), including Power of Attorney





Ms. Michelle M. Hatcher, P.E.

June 22, 2018

Page 2

- Affidavit of Drug-Free Workplace (Section 00440)
- Affidavit of Title VI Compliance (Section 00450)
- Affidavit of Non-Collusion (Section 00480)
- Tennessee Contractor's License Number and Subcontractors' License Information

CDM Smith checked the status of each bidder's contractor's license and subcontractors' licenses using the License Search and Verification service at the State of Tennessee Department of Commerce & Insurance's Web site (<http://verify.tn.gov/>). Each bidder possesses a valid Class MU (Municipal and Utility Construction) license or a combination of Class MU-A (Underground Piping) and MU-B (Water and Sewer Systems) licenses, with an Unlimited monetary limit. Kiewit Infrastructure South Co. also possesses a Class MU-C (Grading and Drainage) license.

Kiewit Infrastructure South Co. was the only bidder to submit evidence that it had contacted, in letters sent and tracked via Federal Express, at least 10 certified Disadvantaged Business Enterprise (DBE) subcontractors, professional service providers, suppliers, and/or equipment vendors in order to solicit their subcontract participation in the work. This evidence must be provided in accordance with the State Revolving Fund (SRF) Loan Program's Bidder's Requirements for Solicitation and Documentation of DBE Participation, found in Section 00801, SRF Contract Requirements; however, it is not required to be submitted with the bid package. The omission of this information from the other three bidders' bid packages is not grounds for rejection of their bids.

Mathematical errors were found in Garney Companies, Inc.'s and Oscar Renda Contracting, Inc.'s bid proposals. These errors are described below.

- Garney Companies, Inc.'s error was in the calculation of the Total Price for Base Bid Item 34, Over Excavation and Associated Backfill with Structural Fill. The Unit Price entered was \$32.00 per cubic yard (CY), which when multiplied by 6,200 CY should have resulted in a Total Price of \$198,400. The value Garney entered in the Total Price column was \$210,800.
- Oscar Renda Contracting, Inc. entered a Unit Price of \$1,100,000.00 for Base Bid Item 21, Scum Holding Tanks, but then entered an extra zero in the Total Price so that it read \$1,1000,000.00.

Per the instructions on Page 00300-9, in the event of a discrepancy between the unit price bid and the extension, the unit price will be deemed intended by the bidder and the extension shall be adjusted. The Total Prices were adjusted accordingly. The correction to Oscar Renda Contracting, Inc.'s bid did not affect their Total Bid amount. The Total Bid for Garney Companies, Inc., was





Ms. Michelle M. Hatcher, P.E.

June 22, 2018

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reduced from \$134,749,000 to \$134,736,600. This corrected amount is included in the Bid Tabulation and in the table on the first page of this letter.

Each bidder entered prices in Part 4, Additive and Deductive Alternates for Bid. These prices are summarized at the end of the Bid Tabulation.

The following issues were identified during the review of the bids.

- Brasfield & Gorrie, LLC
 - In the Bid Form, corrections to Part 6 (Base Bid Major Equipment Items) were not initialed.
 - Also in the Bid Form, in Article 7.01A, the type of security (Bid Bond or cash or check) was not identified.
- Garney Companies, Inc.
 - See the previous page for a description of the mathematical error found in Garney Companies, Inc.'s bid.
- Kiewit Infrastructure South Co.
 - Kiewit's Bid Form did not contain all original signatures. Page 00300-31 appears to have been signed by the company's Senior Vice President, scanned, reprinted, and then signed and sealed by the Corporate Secretary. This is an informality; per Section 00100 (Instructions to Bidders), Article 7.1, Bid Proposals will be rejected if any of the signatures on the Bid Form are a reproduced copy, such as, but not limited to a photostatic copy or a facsimile transmission. However, Articles 10.12 and 16.1 allow the Owner to waive any informalities if it is in the Owner's best interest to do so. CDM Smith discussed this with Kiewit, who is providing a replacement page with original signatures.
 - In Part 6 of the Bid Form, on Page 00300-23, Kiewit selected "Other" for Section 11610 (Laboratory Fume Hoods) and entered the words "B and C" in the blank provided. It is not clear whether this entry indicates Kiewit's intention to provide products of both Fisher Hamilton LLC and Hanson Lab Furniture, who are listed in the table as Options b and c, respectively. CDM Smith discussed this with Kiewit, and Kiewit will provide clarification on this item.
 - The electrical subcontractor license classification printed on Kiewit's bid envelope did not completely match the information on the State web site. The classification CE-C was printed on the bid envelope, but Wayne J. Griffin Electric, Inc.'s actual classification is CE-





Ms. Michelle M. Hatcher, P.E.

June 22, 2018

Page 4

B per the State database. The State's list of contractor classifications states that the CE-B classification was the designation for prior exam prior to 1992, but the State database indicates that the firm has been licensed in Tennessee since 1993. CDM Smith discussed this with Kiewit, and Kiewit is obtaining clarification on the license classification from Wayne J. Griffin Electric, Inc.

- The distribution of the costs in Kiewit's bid form does not appear to be balanced. Our concern is to avoid transferring this imbalance to the Schedule of Values and ending up with a front-loaded Schedule of Values. This was discussed with Kiewit, who acknowledged that the bid is unbalanced and stated that they intend to work with the City and CDM Smith to create a balanced Schedule of Values. Kiewit followed up with an e-mail confirming this.
- Oscar Renda Contracting, Inc.
 - The Bid Form was dated June 15, 2018 (the original due date for bids) instead of June 18, 2018.
 - See Page 2 for a description of the mathematical error found in Oscar Renda Contracting, Inc.'s bid.
 - In Part 3 of the Bid Form, the Total Base Bid from Part 1 was left blank. This is an informality; per Article 7.2 of the Instructions to Bidders, proposals will be rejected as being irregular if they show any omissions, and per Article 10.2, all blank spaces for Bid prices must be filled in with the unit prices for the item or the lump sum for which the Bid is made. Under Articles 10.12 and 16.1, the Owner may waive any informalities if it is in the Owner's best interest to do so.
 - In Article 7.01A of the Bid Form, the type of security (Bid Bond or cash or check) was not identified.
 - Oscar Renda Contracting, Inc., submitted an executed copy of EPA Form 6100-4, DBE Subcontractor Utilization Form. The response "No" was selected in response to the statement, "I have identified potential DBE certified subcontractors" without the requested explanation. However, this form was not required to be submitted at bid time.

Although the bid from the lowest, responsive, responsible bidder, Kiewit Infrastructure South Co., contained irregularities, these irregularities were not particularly worrisome, and we otherwise found the bid package to be responsive, professional and acceptable. Accordingly, CDM Smith recommends that the City issue a Notice of Award, contingent upon Tennessee SRF Loan Program





Ms. Michelle M. Hatcher, P.E.
June 22, 2018
Page 5

approval, to Kiewit Infrastructure South Co. for the Franklin WRF Modifications and Expansion Project.

The City and CDM Smith discussed the prices Kiewit entered in Part 4, Additive and Deductive Alternates for Bid. The City wishes to accept Additive Alternate A (Addition of Jet Mixing System to EQ Tank) for Kiewit's proposed price of \$510,000. No other Additive or Deductive Alternates are accepted. The addition of \$510,000 to Kiewit's Total Bid of \$132,380,000 results in a contract amount of \$132,890,000.

The original bid packages will be returned to the City under separate cover. If you have any questions or comments, or if you require any additional information, please do not hesitate to contact me or Carrie Carden.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. P. Huguenard'.

Robert P. Huguenard, P.E., BCEE
Senior Project Manager
CDM Smith Inc.

cc: Mark Hilty, City of Franklin
Brian Goodwin, City of Franklin
Zack Daniel, CDM Smith
Project File (14915-96594-WRF)



BID TABULATION SHEET

CLIENT:
CITY OF FRANKLIN, TENNESSEE
FRANKLIN WRF MODIFICATIONS AND EXPANSION PROJECT (RE-BID)
COF CONTRACT NO. 2017-0264
CDM SMITH PROJECT NO. 14915-96594-WRF

BID OPENING:
JUNE 18, 2018
2:00 P.M. LOCAL TIME

PREPARED BY:
CDM SMITH INC.
3200 WINDY HILL ROAD, SUITE 210 WEST
ATLANTA, GEORGIA 30339
(404) 720-1400

CERTIFIED AS CORRECT:
Cauli D. Caud
DATE: 6/22/18



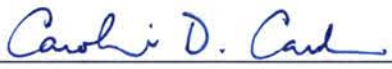
BIDDERS IN ALPHABETICAL ORDER:				Brasfield & Gorrie, LLC 3021 7th Avenue South Birmingham, AL 35233 (205) 328-4000		Garney Companies, Inc. 200 Crutchfield Avenue Nashville, TN 37210 (615) 350-7975		Kiewit Infrastructure South Co. 1700 Hayes Street, Suite 104 Nashville, TN 37203 (925) 595-8774		Oscar Renda Contracting, Inc. 608 Henrietta Creek Road Roanoke, TX 76262 (817) 491-2703	
Item No.	Item Description	Estimated Quantity	Units	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures
PART 1 - BASE BID											
1	Mobilization and Demobilization: For All Costs Associated with Project Mobilization and Demobilization in Accordance with the Drawings and Specifications	LS	LS	\$ 800,000.00	\$ 800,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00
2	Electrical Building Structure	LS	LS	\$ 3,633,000.00	\$ 3,633,000.00	\$ 6,285,000.00	\$ 6,285,000.00	\$ 2,500,000.00	\$ 2,500,000.00	\$ 16,000,000.00	\$ 16,000,000.00
3	Headworks	LS	LS	\$ 9,000,000.00	\$ 9,000,000.00	\$ 12,089,000.00	\$ 12,089,000.00	\$ 7,000,000.00	\$ 7,000,000.00	\$ 12,500,000.00	\$ 12,500,000.00
4	Equalization Basin	LS	LS	\$ 7,940,000.00	\$ 7,940,000.00	\$ 9,209,000.00	\$ 9,209,000.00	\$ 7,999,996.00	\$ 7,999,996.00	\$ 14,000,000.00	\$ 14,000,000.00
5	Alum System	LS	LS	\$ 1,440,000.00	\$ 1,440,000.00	\$ 1,725,000.00	\$ 1,725,000.00	\$ 850,000.00	\$ 850,000.00	\$ 1,100,000.00	\$ 1,100,000.00
6	BNR Distribution Box	LS	LS	\$ 307,000.00	\$ 307,000.00	\$ 810,000.00	\$ 810,000.00	\$ 750,000.00	\$ 750,000.00	\$ 500,000.00	\$ 500,000.00
7	Structural repairs to BNR Basins 1 and 2 as shown on Drawing S-12:										
	7A. Repairs to slab and wall expansion joints (Repair Notes 1, 2, and 3)	1,730	LF	\$ 9.00	\$ 15,570.00	\$ 41.00	\$ 70,930.00	\$ 10.00	\$ 17,300.00	\$ 7.00	\$ 12,110.00
	7B. Repairs to cracked and spalled concrete (Repair Notes 4, 5, 6, 7, 9, and 11)	110	SF	\$ 495.00	\$ 54,450.00	\$ 106.00	\$ 11,660.00	\$ 80.00	\$ 8,800.00	\$ 45.00	\$ 4,950.00
	7C. Repairs to cracked and spalled concrete at beam bearing connection to existing wall (Repair Note 10)	10	SF	\$ 515.00	\$ 5,150.00	\$ 256.00	\$ 2,560.00	\$ 120.00	\$ 1,200.00	\$ 160.00	\$ 1,600.00
	7D. Repairs to exposed reinforcing (Repair Note 8)	40	SF	\$ 545.00	\$ 21,800.00	\$ 179.00	\$ 7,160.00	\$ 100.00	\$ 4,000.00	\$ 80.00	\$ 3,200.00
8	Modifications to Existing Mechanical Surface Aerators at BNR Basins 1, 2, and 3 (See Section 11372 and Appendix F)	LS	LS	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00	\$ 146,011.00
9	BNR Basin Improvements	LS	LS	\$ 3,945,000.00	\$ 3,945,000.00	\$ 5,112,000.00	\$ 5,112,000.00	\$ 1,000,000.00	\$ 1,000,000.00	\$ 4,250,000.00	\$ 4,250,000.00
10	Clarifier Distribution Box	LS	LS	\$ 582,000.00	\$ 582,000.00	\$ 906,000.00	\$ 906,000.00	\$ 400,000.00	\$ 400,000.00	\$ 2,500,000.00	\$ 2,500,000.00
11	WAS Pumps	LS	LS	\$ 583,000.00	\$ 583,000.00	\$ 470,000.00	\$ 470,000.00	\$ 2,400,000.00	\$ 2,400,000.00	\$ 300,000.00	\$ 300,000.00
12	Retrofit of Scum Pumps	LS	LS	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00	\$ 8,869.00
13	Structural Repairs to Spalled Concrete at the Return Sludge Pump Station as Shown on Drawing S-24	LS	LS	\$ 26,000.00	\$ 26,000.00	\$ 29,700.00	\$ 29,700.00	\$ 10,000.00	\$ 10,000.00	\$ 5,000.00	\$ 5,000.00
14	Replacement of Filter Media in ABW Filter 1	LS	LS	\$ 64,000.00	\$ 64,000.00	\$ 80,000.00	\$ 80,000.00	\$ 40,000.00	\$ 40,000.00	\$ 180,000.00	\$ 180,000.00

BID TABULATION SHEET

CLIENT:
CITY OF FRANKLIN, TENNESSEE
FRANKLIN WRF MODIFICATIONS AND EXPANSION PROJECT (RE-BID)
COF CONTRACT NO. 2017-0264
CDM SMITH PROJECT NO. 14915-96594-WRF

BID OPENING:
JUNE 18, 2018
2:00 P.M. LOCAL TIME

PREPARED BY:
CDM SMITH INC.
3200 WINDY HILL ROAD, SUITE 210 WEST
ATLANTA, GEORGIA 30339
(404) 720-1400

CERTIFIED AS CORRECT:

DATE: 6/22/18



BIDDERS IN ALPHABETICAL ORDER:				Brasfield & Gorrie, LLC 3021 7th Avenue South Birmingham, AL 35233 (205) 328-4000		Garney Companies, Inc. 200 Crutchfield Avenue Nashville, TN 37210 (615) 350-7975		Kiewit Infrastructure South Co. 1700 Hayes Street, Suite 104 Nashville, TN 37203 (925) 595-8774		Oscar Renda Contracting, Inc. 608 Henrietta Creek Road Roanoke, TX 76262 (817) 491-2703	
Item No.	Item Description	Estimated Quantity	Units	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures
15	ABW Filters Demolition and Modifications	LS	LS	\$ 157,000.00	\$ 157,000.00	\$ 1,194,000.00	\$ 1,194,000.00	\$ 160,000.00	\$ 160,000.00	\$ 1,600,000.00	\$ 1,600,000.00
16	Denitrification Filter Modifications	LS	LS	\$ 387,000.00	\$ 387,000.00	\$ 1,267,000.00	\$ 1,267,000.00	\$ 150,000.00	\$ 150,000.00	\$ 1,450,000.00	\$ 1,450,000.00
17	New UV Disinfection System: Work Not Captured under Base Bid Item No. 18	LS	LS	\$ 2,239,000.00	\$ 2,239,000.00	\$ 1,671,000.00	\$ 1,671,000.00	\$ 400,000.00	\$ 400,000.00	\$ 2,700,000.00	\$ 2,700,000.00
18	Pre-Negotiated Ultraviolet (UV) Disinfection System and Services as Supplied by TrojanUV (See Section 11265 and Appendix B)	LS	LS	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00	\$ 806,353.00
19	Reclaimed Water Pump Station Modifications	LS	LS	\$ 1,090,000.00	\$ 1,090,000.00	\$ 1,815,000.00	\$ 1,815,000.00	\$ 100,000.00	\$ 100,000.00	\$ 2,000,000.00	\$ 2,000,000.00
20	Existing UV Structure Demolition and Modifications	LS	LS	\$ 20,000.00	\$ 20,000.00	\$ 722,000.00	\$ 722,000.00	\$ 30,000.00	\$ 30,000.00	\$ 17,000.00	\$ 17,000.00
21	Scum Holding Tanks	LS	LS	\$ 500,000.00	\$ 500,000.00	\$ 377,000.00	\$ 377,000.00	\$ 50,000.00	\$ 50,000.00	\$ 1,100,000.00	\$ 1,100,000.00
22	WAS Storage Tank	LS	LS	\$ 1,200,000.00	\$ 1,200,000.00	\$ 115,000.00	\$ 115,000.00	\$ 500,000.00	\$ 500,000.00	\$ 3,525,000.00	\$ 3,525,000.00
23	Solids Processing Building	LS	LS	\$ 30,650,000.00	\$ 30,650,000.00	\$ 31,900,000.00	\$ 31,900,000.00	\$ 61,137,000.00	\$ 61,137,000.00	\$ 28,200,000.00	\$ 28,200,000.00
24	Digested Biosolids Storage Tank	LS	LS	\$ 752,000.00	\$ 752,000.00	\$ 984,000.00	\$ 984,000.00	\$ 75,000.00	\$ 75,000.00	\$ 150,000.00	\$ 150,000.00
25	Biosolids Odor Control System	LS	LS	\$ 1,682,000.00	\$ 1,682,000.00	\$ 646,000.00	\$ 646,000.00	\$ 50,000.00	\$ 50,000.00	\$ 1,500,000.00	\$ 1,500,000.00
26	THP Slab, Canopy and System	LS	LS	\$ 870,000.00	\$ 870,000.00	\$ 1,730,000.00	\$ 1,730,000.00	\$ 150,000.00	\$ 150,000.00	\$ 1,000,000.00	\$ 1,000,000.00
27	Pre-Negotiated Thermal Hydrolysis Pretreatment (THP) System and services as supplied by Cambi, Inc. (See Section 11351 and Appendix C)	LS	LS	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00	\$ 3,232,721.00
28	Anaerobic Digesters	LS	LS	\$ 4,045,000.00	\$ 4,045,000.00	\$ 3,393,000.00	\$ 3,393,000.00	\$ 800,000.00	\$ 800,000.00	\$ 2,000,000.00	\$ 2,000,000.00
29	Digester Building	LS	LS	\$ 7,665,000.00	\$ 7,665,000.00	\$ 11,035,000.00	\$ 11,035,000.00	\$ 20,900,000.00	\$ 20,900,000.00	\$ 10,000,000.00	\$ 10,000,000.00
30	Combined Heat and Power (CHP) System	LS	LS	\$ 5,154,000.00	\$ 5,154,000.00	\$ 5,400,000.00	\$ 5,400,000.00	\$ 700,000.00	\$ 700,000.00	\$ 3,600,000.00	\$ 3,600,000.00
31	Other Elevated Piping Systems	LS	LS	\$ 28,680,000.00	\$ 28,680,000.00	\$ 5,000.00	\$ 5,000.00	\$ 20,000.00	\$ 20,000.00	\$ 250,000.00	\$ 250,000.00
32	Demolition not Included in Other Base Bid Items	LS	LS	\$ 1,695,000.00	\$ 1,695,000.00	\$ 1,815,000.00	\$ 1,815,000.00	\$ 40,000.00	\$ 40,000.00	\$ 250,000.00	\$ 250,000.00
33	Rock and Boulder Excavation	3,200	Tons	\$ 62.00	\$ 198,400.00	\$ 30.00	\$ 96,000.00	\$ 40.00	\$ 128,000.00	\$ 65.00	\$ 208,000.00
34	Over Excavation and Associated Backfill with Structural Fill	6,200	CY	\$ 45.00	\$ 279,000.00	\$ 32.00	\$ 198,400.00	\$ 21.00	\$ 130,200.00	\$ 11.00	\$ 68,200.00

BID TABULATION SHEET

CLIENT:
CITY OF FRANKLIN, TENNESSEE
FRANKLIN WRF MODIFICATIONS AND EXPANSION PROJECT (RE-BID)
COF CONTRACT NO. 2017-0264
CDM SMITH PROJECT NO. 14915-96594-WRF

BID OPENING:
JUNE 18, 2018
2:00 P.M. LOCAL TIME

PREPARED BY:
CDM SMITH INC.
3200 WINDY HILL ROAD, SUITE 210 WEST
ATLANTA, GEORGIA 30339
(404) 720-1400

CERTIFIED AS CORRECT:
Carl D. Carl
DATE: 6/22/18



BIDDERS IN ALPHABETICAL ORDER:				Brasfield & Gorrie, LLC 3021 7th Avenue South Birmingham, AL 35233 (205) 328-4000		Garney Companies, Inc. 200 Crutchfield Avenue Nashville, TN 37210 (615) 350-7975		Kiewit Infrastructure South Co. 1700 Hayes Street, Suite 104 Nashville, TN 37203 (925) 595-8774		Oscar Renda Contracting, Inc. 608 Henrietta Creek Road Roanoke, TX 76262 (817) 491-2703	
Item No.	Item Description	Estimated Quantity	Units	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures
35	Temporary Erosion and Sedimentation Control	LS	LS	\$ 209,000.00	\$ 209,000.00	\$ 229,000.00	\$ 229,000.00	\$ 118,000.00	\$ 118,000.00	\$ 200,000.00	\$ 200,000.00
36	Long Term Revegetation and Stabilization	LS	LS	\$ 63,000.00	\$ 63,000.00	\$ 50,000.00	\$ 50,000.00	\$ 90,000.00	\$ 90,000.00	\$ 50,000.00	\$ 50,000.00
37	Temporary Access Road	LS	LS	\$ 219,000.00	\$ 219,000.00	\$ 332,000.00	\$ 332,000.00	\$ 113,000.00	\$ 113,000.00	\$ 200,000.00	\$ 200,000.00
38	Paving	LS	LS	\$ 738,000.00	\$ 738,000.00	\$ 775,000.00	\$ 775,000.00	\$ 660,000.00	\$ 660,000.00	\$ 550,000.00	\$ 550,000.00
39	Additional Photographic Services as Requested by the Owner per Section 01322										
	39A. Photographer's mobilization / demobilization (trip) cost	10	Trips	\$ 150.00	\$ 1,500.00	\$ 150.00	\$ 1,500.00	\$ 150.00	\$ 1,500.00	\$ 155.00	\$ 1,550.00
	39B. Photographer's hourly rate	40	Hours	\$ 150.00	\$ 6,000.00	\$ 150.00	\$ 6,000.00	\$ 300.00	\$ 12,000.00	\$ 200.00	\$ 8,000.00
40	On-Call Assistance and Maintenance Supervision for the Pre-Dewatering Centrifuges	4	Weeks	\$ 8,000.00	\$ 32,000.00	\$ 7,000.00	\$ 28,000.00	\$ 8,000.00	\$ 32,000.00	\$ 8,000.00	\$ 32,000.00
41	Hauling, Alkalinity Addition, Reconstitution, Heating, and Injection of Seed Sludge for the Anaerobic Digesters (See Section 01666)	135	Tons	\$ 400.00	\$ 54,000.00	\$ 730.00	\$ 98,550.00	\$ 430.00	\$ 58,050.00	\$ 200.00	\$ 27,000.00
42	Commissioning Services for the Biosolids Treatment System	LS	LS	\$ 421,000.00	\$ 421,000.00	\$ 265,000.00	\$ 265,000.00	\$ 500,000.00	\$ 500,000.00	\$ 50,000.00	\$ 50,000.00
43	Electrical Subcontractor Costs Not Captured under Other Bid Items	LS	LS	\$ 16,600,000.00	\$ 16,600,000.00	\$ 6,800,000.00	\$ 6,800,000.00	\$ 10,400,000.00	\$ 10,400,000.00	\$ 12,000,000.00	\$ 12,000,000.00
44	PCSS Equipment, Materials and Services	LS	LS	\$ 3,000,000.00	\$ 3,000,000.00	\$ 2,050,000.00	\$ 2,050,000.00	\$ 2,100,000.00	\$ 2,100,000.00	\$ 2,000,000.00	\$ 2,000,000.00
45	All Other Work under the Bidding Documents, Complete as Indicated on the Drawings and Specifications, Exclusive of Base Bid Items 1 through 44 Listed Above	LS	LS	\$ 2,508,000.00	\$ 2,508,000.00	\$ 13,156,186.00	\$ 13,156,186.00	\$ 20,000.00	\$ 20,000.00	\$ 3,000,000.00	\$ 3,000,000.00
46	Owner's Contingency	N/A	N/A	N/A	\$ 4,000,000.00	N/A	\$ 4,000,000.00	N/A	\$ 4,000,000.00	N/A	\$ 4,000,000.00
TOTAL, PART 1 - BASE BID (Items 1 through 46) (CALCULATED IN THIS SPREADSHEET)					\$ 147,725,824.00		\$ 133,656,600.00		\$ 131,300,000.00		\$ 137,787,564.00
TOTAL, PART 1 - BASE BID (Items 1 through 46) (ENTERED BY BIDDER ON BID FORM)					\$ 147,725,824.00		\$ 133,669,000.00		\$ 131,300,000.00		\$ 137,787,564.00

BID TABULATION SHEET

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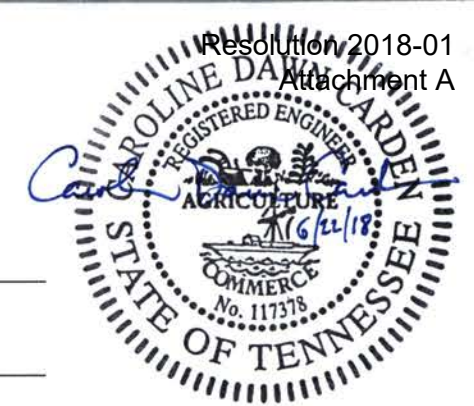
BID OPENING:
JUNE 18, 2018
2:00 P.M. LOCAL TIME

PREPARED BY:
CDM SMITH INC.
3200 WINDY HILL ROAD, SUITE 210 WEST
ATLANTA, GEORGIA 30339
(404) 720-1400

CERTIFIED AS CORRECT:

Carol D. Carl

DATE: 6/22/18



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Item No.	Item Description	Estimated Quantity	Units	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures
PART 2 - ALLOWANCE ITEMS											
1	Allowance for procurement of equipment and furnishings for the Solids Processing Building laboratory and control room	As determined by the Engineer		\$ 70,000.00	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00	\$ 70,000.00
2	Allowance for inspection and refurbishment or replacement, as needed, of existing discharge valves at the Reuse Pump Station	As determined by the Engineer		\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
3	Allowance for structural modifications associated with the selection of a Pre-Dewatering Centrifuge differing from that shown on the Drawings	As determined by the Engineer		\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00
4	Allowance for structural modifications associated with the selection of a Post-Dewatering Screw Press differing from that shown on the Drawings	As determined by the Engineer		\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00
5	Allowance for the purchase and installation of ground cover, shrubbery, plants, and trees as specified by the City of Franklin Building & Neighborhood Services Department	As determined by the Engineer		\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00
6	Allowance for improvements to and refurbishment of the remaining ABW Filter	As determined by the Engineer		\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00	\$ 20,000.00
7	Allowance for materials testing (See Section 01400)	As determined by the Engineer		\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00	\$ 500,000.00
8	Allowance for Middle Tennessee Electrical Membership Corporation (MTEMC) fees	Fee to be negotiated with MTEMC		\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00	\$ 150,000.00
9	Allowance for purchase and delivery of spare parts	As determined by the Engineer		\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00
TOTAL, PART 2 - ALLOWANCE ITEMS (Items 1 through 9)					\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00

BID TABULATION SHEET

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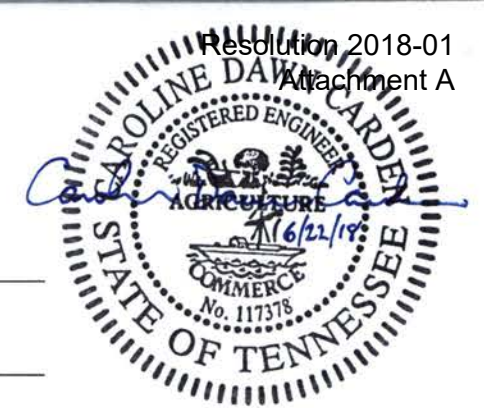
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Item No.	Item Description	Estimated Quantity	Units	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures	Unit Price in Figures	Total Price in Figures
PART 3 - BID SUMMARY											
TOTAL PART 1 - BASE BID (CALCULATED)					\$ 147,725,824.00		\$ 133,656,600.00		\$ 131,300,000.00		\$ 137,787,564.00
TOTAL PART 2 - ALLOWANCE ITEMS					\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00
TOTAL BID (CALCULATED IN THIS SPREADSHEET)					\$ 148,805,824.00		\$ 134,736,600.00		\$ 132,380,000.00		\$ 138,867,564.00
TOTAL PART 1 - BASE BID (ENTERED BY BIDDER ON BID FORM)					\$ 147,725,824.00		\$ 133,669,000.00		\$ 131,300,000.00		\$ 137,787,564.00
TOTAL PART 2 - ALLOWANCE ITEMS					\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00		\$ 1,080,000.00
TOTAL BID (ENTERED BY BIDDER ON BID FORM)					\$ 148,805,824.00		\$ 134,749,000.00		\$ 132,380,000.00		\$ 138,867,564.00

PART 4 - ADDITIVE AND DEDUCTIVE ALTERNATES FOR BID										
Additive Alternate A - Addition of Jet Mixing System to EQ Tank	LS	N/A	\$ 450,000.00	N/A	\$ 950,000.00	N/A	\$ 510,000.00	N/A	\$ 320,000.00	
Additive Alternate B - Additional Demolition in Existing Sludge Treatment Area	LS	N/A	\$ 440,000.00	N/A	\$ 405,000.00	N/A	\$ 839,000.00	N/A	\$ 215,000.00	
Additive Alternate C - Demolition of Existing Headworks	LS	N/A	\$ 170,000.00	N/A	\$ 180,000.00	N/A	\$ 316,000.00	N/A	\$ 90,000.00	
Additive Alternate D - Change Electrical Building from Precast to CMU	LS	N/A	\$ 30,000.00	N/A	\$ 95,000.00	N/A	NO BID	N/A	\$ 10,000.00	
Deductive Alternate A (Not Used)	LS	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	
Deductive Alternate B (Not Used)	LS	N/A	\$ -	N/A	\$ -	N/A	\$ -	N/A	\$ -	
Deductive Alternate C - Change SBS Roofing Systems to TPO	LS	N/A	\$ 23,000.00	N/A	\$ 19,000.00	N/A	\$ 30,000.00	N/A	\$ 65,000.00	
Deductive Alternate D - Construct Berms Instead of Hauling Excess Material	LS	N/A	\$ 115,000.00	N/A	\$ 40,000.00	N/A	\$ 1,000.00	N/A	\$ 80,000.00	



City of Franklin, Tennessee

Water Reclamation Facility Modifications and Expansion Project Discussion

July 10, 2018





City of Franklin, Tennessee

Project Background

- Integrated Water Resources Plan (initiated in 2009)
 - Upgrade existing WRF to 16 MGD
 - Anticipate more stringent permit limits
 - Construct 16 MGD biosolids treatment capacity at existing site
 - Selection criteria: efficient operations, decreased energy consumption, sustainability and reliability, diverse portfolio disposal options, risk reduction, focus on odor control, automation, Class A EQ



City of Franklin, Tennessee

Summary of Proposed Upgrades - Liquid

- Construction of a new EQ and headworks facility
- Addition of phosphorus removal capability (biological and chemical)
- Construction of a new UV disinfection facility
- Upgrades to the reclaimed water pump station
- Upgrades to the facility-wide odor control
- Significant electrical improvements
- Implementation of a new SCADA system



City of Franklin, Tennessee

Summary of Proposed Upgrades - Solids

- Construction of a new solids processing building
 - Centrifuge thickening, screw press dewatering, truck loading, laboratory, CHP engine, boiler,
- Construction of a new thermal hydrolysis process skid
- Construction of three new anaerobic digesters
- Upgrades to the facility-wide odor control
- Significant electrical improvements
- Implementation of a new SCADA system



City of Franklin, Tennessee

Bidding Process Summary

- Opened June 18, 2018 at 2pm Board Room

Bidder		Total Base Bid
1	Kiewit Infrastructure South Co.	\$132,380,000
2	Garney Companies, Inc.	\$134,736,600
3	Oscar Rends Contracting, Inc.	\$138,867,564
4	Brasfield & Gorrie, LLC	\$148,805,824



City of Franklin, Tennessee

Additive and Deductive Alternatives

- Project was bid with a number of additive and deductive alternates to the total bid price.
- Staff recommends Alternate A as a valuable alternative
 - Additive Alternate A – addition of a jet mixing system in the equalization tank (\$510,000)
 - As flow is routed and contained in the equalization basin, the addition of the jet mixing system prevent settling
 - Redundant help with odors
 - Aid staff in maintenance of tank after use



City of Franklin, Tennessee

Construction Timeline

- 42 month construction period (3.5 years)
- Temporary access off Mack Hatcher (right in / right out)
- Maintain operations throughout construction (specific sequence of construction has been defined)



City of Franklin, Tennessee

Financial Summary

- Staff is working with COS consultant to evaluate any impacts with respect to rates
- Savings of \$19,375,953 from the June 2018 rebid of the project based upon the January 2018 initial bid
- State Revolving Fund is providing \$100,000,000 of loan at 1.47% with a 30 year term
 - \$225,000 in principle forgiveness
 - Saving over \$30,000,000 in interest as what would be expected from the bond market
 - Continuing to pursue additional SRF funding
- The approved 5-year rate plans have allowed WMD to accumulate funds that will be used to fund a portion of the remaining project costs



City of Franklin, Tennessee

Bid Award Timeline

- Bids opened June 15, 2018
 - Valid for 90-days (September 13, 2018)
- Sent to SRF for bid award approval (~30-45 days)
- Notice-To-Proceed within 90 days of SRF approval



City of Franklin, Tennessee

WRF Upgrades and Expansion Project

Discussion

June 28, 2018

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
Paul Holzen, City Engineer/Director of Engineering
Jonathan Marston, Assistant Director of Engineering

SUBJECT: Status Report for Transportation, Stormwater, and Parks Capital Projects

Purpose

The purpose of this memo is to provide information to the Franklin Board of Mayor and Aldermen (BOMA) concerning the status of some of the City's transportation, stormwater, and parks capital projects.

Transportation

Mack Hatcher Parkway Northwest Extension (SR-96 West to Hillsboro Road)	
Key Dates:	Design Start – August 14, 2007 (BOMA Approval); Re-Design Completion – October 2017; ROW Start – December 2009; ROW Completion – December 2017; Construction Bid Date – December 2018 / January 2019* <i>*Denotes Estimated Date</i>
Cost:	Design – \$3,502,501; ROW – \$13,397,520 (Provided by TDOT); Construction – \$48,200,000 (Provided by TDOT) <i>Note: City of Franklin Funding Commitment of \$5,000,000</i>
Status Update:	On May 9, 2017, TDOT released its annual 3-year (FY 2018-2020) transportation program. The construction of Mack Hatcher Parkway, from Highway 96 West (SR-96) to Hillsboro Road (SR-106) is included in the list of projects. It is programmed to receive funding in FY 2018. TDOT has requested changes to the proposed acquisition of 1 property. These changes will delay the construction letting. Staff continues to work with TDOT to minimize that delay.

Hillsboro Road Improvements Phase 2 (Independence Square to Mack Hatcher Parkway)	
Key Dates:	Design Start – March 24, 2008 (BOMA Approval); Design Completion – March 2015; ROW Start – March 2013; ROW Completion – May 2015; Bid Date – January 2016; Construction Start – April 18, 2016; Original Construction Completion – June 21, 2017 (430 calendar days); Missed Construction Completion – November 22, 2017 (CO#1 Additional 154 Calendar Days; 584 Calendar Days based upon delays and utility conflicts); Construction Completion – June 2018 (Contractor Delays)

	<i>*Denotes Estimated Date</i>
Cost:	Design – \$1,324,221 (Design fees include the SR96-IndSq Project as well); ROW – \$3,000,000; Construction Bid – \$11,995,005.13 (\$1,750,000 Reimbursable through State and Federally Approved Funding; Includes AT&T and ATMOS Reimbursable items totaling \$441,677.00); Current Construction – \$12,049,584.48 (CO#1)
Status Update:	The project is substantially complete, and ready for a final walk-thru (scheduled for Monday, June 25 th). Liquidated Damages were assessed at \$1,600 a day until substantial completion was reached. Change Order #2 is on the June 26 th BOMA agenda for a contract increase of \$661,244.97.

Hunters Bend Elementary Safe Routes to School	
Key Dates:	Design Start- January 2014; Design Complete – December 2015; ROW Acquisition - N/A; Construction Start – April 24, 2017; Construction Complete – Substantial Completion on May 9, 2018 (Contract Deadline January 31, 2018) <i>*Denotes Estimated Date</i>
Cost:	Design/Inspection - \$157,955; Construction - \$673,076
Status Update:	Project is substantially complete and fully open to pedestrian traffic. Only minor punch list items remain.

Murfreesboro Road (SR-96) Sidewalk (Pinkerton Park to Mack Hatcher Parkway)	
Key Dates:	Design Start- June 2014; Design Complete – June 2017; ROW Acquisition Complete – August 2017; Construction Start – August 14, 2017; Construction complete – July 2018* <i>*Denotes Estimated Date</i>
Cost:	Total – \$1,511,299.81
Status Update:	All sidewalk and drives are poured. Contractor is hauling topsoil and dressing slopes. Pedestrian buttons are installed. Final dressing of slopes and seeding will continue. Completion date July 2018.

Franklin Road Corridor Improvements (Harpeth River Bridge to Harpeth Industrial Court)	
Key Dates:	Design Start- January 2015; ROW Design Complete – December 2017; ROW Acquisition Start - April 2018; Construction Start – May 2019* <i>*Denotes Estimated Date</i>
Cost:	Total - \$14,300,000.00 (Estimated)
Status Update:	Final design updates are still ongoing. Right-of-way acquisition process began this Spring. A public meeting was held on March 20 th . Easement offers go out to the residents in Summer 2018.

East McEwen Drive Phase 4 Improvements (Cool Springs Boulevard to Wilson Pike)	
Key Dates:	Design Start – April 2015; NEPA Completion – July 2018*; Design Completion –

	December 2018*; ROW Acquisition Start – October 2018*; ROW Acquisition End – December 2019*; Construction Start – January 2020*; Construction End – May 2022 <i>*Denotes Estimated Date</i>
Cost:	Design - \$1,210,000 (Preliminary - \$497,000; Final - \$713,000); NEPA - \$125,018 ROW Acquisition – TBD; Construction – TBD
Status Update:	Final NEPA document has been submitted to TDOT for review and approval. Designer is working on finals plans, which include proposed utility relocations. Right-of-way process will begin later in 2018 (e.g. late Summer/early Fall)

Columbia Avenue Widening & Improvements (Mack Hatcher Parkway to Downs Boulevard)	
Key Dates:	Preliminary Design/Environmental Start - February 9, 2016 (BOMA Approved); Preliminary Design/Env. Completion – February 2018; Design Start – August 2018*; Design Completion – December 2019*; ROW Start– March 2020*; ROW End – October 2021*; Construction Start – March 2022*; Construction End – October 2024* <i>*Denotes Estimated Date</i>
Cost:	Prelim. Design – \$1,070,450.00; Design TBD; ROW – TBD; Construction – TBD;
Status Update:	The Board has selected the 5-lane access management option. Staff is working to prepare exhibits to facilitate discussions with the BOMA about utilities and bicycle/pedestrian facilities for this project.

East McEwen Drive Roundabout Modifications	
Key Dates:	Design Start – March 2017; Design Complete– July 2018*; ROW Start – July 2018*; ROW Complete – September 2018*; Construction – TBD <i>*Denotes Estimated Date</i>
Cost:	Preliminary Design/Environmental – \$86,155; ROW - \$350,000 Construction - \$1,250,000
Status Update:	Consultant is working to finalize plans and determine any necessary utility relocations. ROW anticipated to start in July 2018. Depending upon the completion of the ROW process, construction could begin in September/October timeframe.

Intersection Improvements at Mallory Lane and Liberty Pike	
Key Dates:	Design Start – February 14, 2017 (BOMA Approved); Design Completion – TBD; ROW – TBD; Construction – TBD
Cost:	Design - \$229,965.00; ROW – TBD; Construction – TBD;
Status Update:	Consultant is working on the completion of plans. Draft right-of-way plans were submitted on 1-10-18 and have been reviewed by staff. Traffic geometrics are being investigated for final lane number and capacity. Geotechnical firm is preparing to investigate subsurface conditions in preparation for retaining wall

	design.
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Stormwater

100-Block Battle Avenue Drainage Improvements	
Key Dates:	Design Start – July 24, 2012 (BOMA Approved); Design Completion – April 2018*; Easement Acquisition Completion – TBD Construction Start – TBD <i>*Denotes Estimated Dates</i>
Cost:	Initial Study – \$46,500.00; Final Design – \$131,700.00 (Including Amendment 1 of \$68,200.00); Construction Estimate- \$2,400,000.00* (Includes \$1MM for Easements)
Status Update:	Staff seeks direction from the Board on whether to proceed with the project.

Jordan Branch of Spencer Creek (Cool Springs East) Stream Restoration	
Key Dates:	Design Start – May 26, 2015 (BOMA Approved); Design Completion – June/July 2018*; ROW/Easement Acquisition – May 2018*; Construction - TBD <i>*Denotes Estimated Dates</i>
Cost:	Design - \$113,445.00; Construction Estimate - \$750,000
Status Update:	Construction contract was advertised for bids on June 7 TH . The bid opening will be on July 10 TH . Construction should begin in late Summer.

Ralston Creek (Liberty Hills) Stream Restoration	
Key Dates:	Feasibility Study Start – November 19, 2015 (BOMA Approved); Feasibility Study Completion – April 2017; Design Start – September 2017; Design End – TBD; ROW/Easement Acquisition – TBD; Construction - TBD
Cost:	Design - \$68,700.00
Status Update:	Feasibility Study Complete. Consultant working on a stream bank stabilization project and updating the model to determine exact floodplain to present at a public meeting. A public meeting will be scheduled for July 2018 to determine how to proceed with the project and to provide an overview of the feasibility study.

Harpeth River Bank Stabilization at the Water Reclamation Facility	
Key Dates:	Design Start – August 11, 2015 (BOMA Approved); Design Completion – Fall 2017; ROW/Easement – N/A; Construction Start – September 2018; Construction End – December 2017
Cost:	Design - \$74,000.00; ROW/Easement – N/A; Construction – 311,782.21
Status Update:	Work is complete. Staff and the designer continue to monitor the site. A final change order will be presented to the BOMA for consideration.

Carnton Lane Culvert Replacement	
Key Dates:	Design Start- September 9, 2016 (BOMA Approved); Design Completion- July 2017; ROW/Easement(s) – November 2017; Construction Start– July 2018*; Construction End – October 2018* <i>*Denotes Estimated Dates</i>
Cost:	Design - \$18,580.00; ROW/Easement – N/A; Construction – TBD
Status Update:	Project was advertised for bids, and bids were opened April 27, 2018. Contract was awarded to Adams Contracting, LLC. Notice to Proceed will be issued upon completion of signed contracts.

Watson Branch Culvert Rehabilitation	
Key Dates:	Design Start – November 22, 2016 (BOMA Approval); Design Completion – October 2017; ROW/Easement Start – November 2017; ROW/Easement End – March 2018; Construction Start – August 2018*; Construction End – November 2018*; <i>*Denotes Estimated Dates</i>
Cost:	Design - \$30,640.00; ROW/Easement – TBD; Construction – TBD
Status Update:	Preliminary plans are complete. ARAP and CGP permits were approved by TDEC and received June 5, 2017. A permit to access TDOT right of way on Mack Hatcher was received June 13, 2017. Temporary construction easements and PU&DE easement documents have been filed with court.

Parks

Southeast Municipal Complex Master Planning	
Key Dates:	Planning Start – June 2017; Planning Completion – August 2018*
Cost:	Planning - \$396,046.00; Design – TBD; Construction - TBD
Status Update:	Geotechnical investigation, traffic analysis, and ESA Permit are complete. Placement and footprint of new wastewater plant has been finalized. A core group meeting was conducted on 8-31-17 to get input from stakeholders. A public input meeting was conducted on February 5, 2018 at City Hall and was well attended. Consultant completed the draft concept plan February 13, 2018, and presented it to the BOMA meeting on March 13, 2018. Four meetings have been held with staff and input received on the naming and branding of park.

Southeast Municipal Complex (Lockwood Parcel) Construction Documents	
Key Dates:	Design Start – July 2017; Design Completion – TBD;
Cost:	Design - \$310,158.00; Purchase of property – \$500,000; Construction – TBD;
Status Update:	The boundary survey, Robinson Lake hydrographic survey, and the preliminary dam analysis are complete. The Topographic survey is almost finished. A more in-depth conceptual plan for the dam is underway. The purchase of the property was

MEMORANDUM

	recently completed by the City.
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