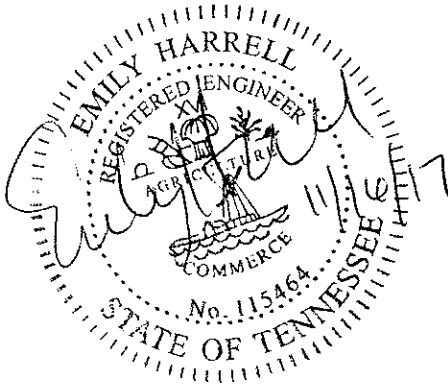


PROJECT MANUAL
FOR
SEWER LAGOON DREDGE AND LAND APPLICATION



City of Lakeland
November 2017

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STANDARD
ADVERTISEMENT FOR BIDS
FOR
SEWER LAGOON DREDGE AND LAND APPLICATION
FOR
CITY OF LAKELAND
LAKELAND, TENNESSEE

Notice is hereby given, pursuant to Tennessee Statute Section 16-19-104, the City of Lakeland, Tennessee, will receive sealed bids until 2:00 p.m., Local Time, November 30, 2017 for the following:

SEWER LAGOON DREDGE AND LAND APPLICATION

Bids must be in one sealed envelope with statement thereon "BID ENCLOSED, SEWER LAGOON DREDGE AND LAND APPLICATION" and be submitted to the receptionist at the City of Lakeland, Tennessee 10001 U.S. Highway 70, at or before the above stated time. Bids will be opened publicly, read aloud, and tabulated by the City Manager, or his or her Designee, at the above stated time and place, unless an alternative site is designated in writing prior to the time of Bid Opening. No bid may be withdrawn for a period of thirty (30) days after the date set for opening thereof. The City of Lakeland, Tennessee reserves the right to reject any or all bids and to waive any informalities or technicalities in the bidding; provided, however, that any bid received after the time specified or without accompanying Bid Guaranty, as stated below, will not be considered.

Bidding Documents, including specifications, are currently available from the City of Lakeland Tennessee, 10001 U.S. Highway No. 70, Lakeland Tennessee.

A Bid Guaranty in the form of a properly executed Bid Bond payable to the City in the amount of not less than 5% of the total base bid amount must accompany each bid. Pursuant to T.S. 12-4-201, in lieu of a Bid Bond, the following securities or cash may be substituted at the percentage rate required for such bond: United States treasury bond or general obligation bond or certificates of deposit irrevocably pledged from a state or national bank having its principle office in Tennessee or a state or federal saving and loan association having its principal office in Tennessee, or any state or national banks or state or federal savings and loans associations that has its principal office located outside of Tennessee and that maintains a branch in this state, or a letter of credit or cash. The successful Bidder will be required to execute an Agreement with the City, in the form supplied in the bidding documents, within thirty (30) days after Notice of Award is issued. The Notice of Award shall serve as notice that the Agreement is ready for execution. The Bid Guaranty shall be forfeited as liquidated damages if the Bidder fails to execute the Agreement within thirty (30) days after such Notice is issued, or fails to provide proper Bond or other form of Guaranty, as approved. The Bid Guaranty, if a Bid Bond, shall be

executed by a surety or guarantee company authorized to do business in Tennessee. The Attorney-in-Fact who executes the Bond on behalf of the surety shall affix a certified and current copy of its Power of Attorney from the surety. No other type of Bid Guaranty will be accepted. The City may proceed against a Bid Guaranty unless either: a) the Agreement has been executed by Contractor and Performance, and Labor and Material Payment Bonds have been furnished, as required; or, b) the specified time has elapsed so that Bids may be withdrawn; or, c) the Bid has been rejected.

Notice is hereby given that preference will be granted to Tennessee contractors, subcontractors, laborers, and materials, supplies, equipment, machinery, and provisions produced, manufactured, supplied, or grown in Tennessee, as required by Tennessee Statute Section 12-4-121 et seq.

A Pre-Bid Conference will be held at 2:00 p.m., Local Time, November 21, 2017 at Lakeland City Hall. A site tour may be held to review the Project following this conference. Contact for this Project is Emily Harrell, PE, City Engineer at (901) 867-5418.

Attendance in the Pre-Bid Conference is not mandatory for Contractors who wish to be considered qualified and/or responsible.

Jim Atkinson
City Manager

Publish: November 16, 2017
 November 21, 2017

STANDARD
INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS.

1.1 Terms used in these Instructions to Bidders have the meanings assigned to them in the Standard General Conditions, as modified by the Supplementary Conditions unless otherwise stated herein.

1.2 Certain additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

A. Bidder: One who submits a bid directly to the City.

B. Successful Bidder and/or Contractor: This term means the qualified, responsible, and responsive Bidder, as determined by the City, who has submitted the lowest bid, and to whom the City has awarded the Contract.

C. Bid Documents: Prior to award of the contract, all documents in the Bid Package are considered "Bid Documents." This includes the Advertisement for Bid, Instructions to Bidders, Bid Forms, Bond Forms, Sample Agreement, Standard General Conditions, Supplementary Conditions, Technical Specifications, drawings, etc. Bid Documents also include any addenda issued prior to the opening of the bids.

D. Contract Documents: Following the award of the contract, contract documents shall include those documents listed above in "C." -- with the exception of the Advertisement for Bid, Bid Bond and the Instructions to Bidders; the executed performance and payment bonds; change orders; and, all written agreements and/or written documents executed between the City and Contractor.

2. COPIES OF BIDDING DOCUMENTS.

2.1 Complete sets of Bidding Documents, which include the Advertisement for Bids, these Instructions to Bidders, Bid Form, Bid Bond, Contract Documents, and Addenda, may be obtained from the City of Lakeland, Engineering Office, 10001, U.S. Highway 70, Lakeland, Tennessee 38002.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; the City assumes no responsibility to Bidders for errors or misinterpretations, including those resulting from the use of incomplete sets of Bidding Documents.

2.3 The City, and/or its agent, in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids on the Work and does not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS.

3.1 Pre-qualification Requirements: Attendance at the Pre-Bid Conference may be considered by the City in determining a Bidder's qualifications. Consult Section 5 below.

3.2 Post Bid Qualifications: To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five (5) days of Owner's request written evidence demonstrating Bidder's responsibility, including, but not limited to, matters such as financial data and previous experience. Each Bid will be considered a warrant of Bidder's qualification to do business in this state. Proof of such qualifications may be required upon five (5) days notice.

3.3 Bidding Preferences: Pursuant to T.S. 12-4-802 whenever the lowest responsible and responsive bidder on a public construction project in this state is a resident of another state which is contiguous to Tennessee and which allows a preference to a resident contractor of that state, a like reciprocal preference is allowed to the lowest responsible and responsive bidder on such project who is either a resident of this state or is a resident of another state which does not allow for a preference to a resident contractor of that state.

3.4 Responsible and Responsive Bidders: Pursuant to TS 12-4-801, a responsible bidder means a person who has the capacity in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance and; and Responsive Bidder means a person who has submitted a bid which confirms in all material respects to all document, whether attached or incorporate by reference, utilized for soliciting bids.

4. PRE-BID CONFERENCE.

A Pre-bid Conference will be held at the time and place stated in the "Advertisement for Bid." Attendance at the Pre-bid Conference is not mandatory.

The purpose of the Conference is to review project requirements and provide bidders an opportunity to visit the project site to make their own determination of existing conditions.

Minutes will be taken of the Pre-bid Conference, and thereafter consulted as a bidding document.

5. EXAMINATION OF CONTRACT DOCUMENTS AND SITE.

5.1 Before submitting a Bid, each Bidder must do at least the following:

- A. Examine the Bidding Documents thoroughly;
- B. Visit the site to become familiar with local conditions that may in any manner affect cost progress, or performance of the Work;
- C. Become familiar with federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the work; and
- D. Study and carefully correlate Bidder's observations with the Bidding Documents.

5.2 Reference is made to the Supplementary Conditions, for the identification of those reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress, or performance of the work which has/have been relied upon by Engineer in preparing the Drawings and Specifications. The City will provide copies of such reports for review to any Bidder requesting them (if applicable). These reports are not guaranteed as to accuracy or completeness. Before submitting a Bid each Bidder will, at its own expense, make such additional investigations and tests as the Bidder may deem necessary to determine the time, price, and other terms and conditions of the Contract Documents.

5.3 On request the City will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid. The City may require any Bidder desiring access to execute an appropriate release form.

5.4 The lands upon which the work is to be performed, right-of-way for access thereto and other lands designated for use by Contractor in performing the work are identified in the Supplementary Conditions, Special Provisions, and/or Drawings.

5.5 The submission of a Bid will constitute an incontrovertible representation by the Bidder that: Bidder has read and understands the Bidding Documents and the Bid is made in accordance therewith; Bidder has visited the site and become familiar with the local conditions under which the work is to be performed; Bidder assumes responsibility for estimating properly the difficulties and costs of successfully performing the work; Bidder has complied with every requirement of these instructions; and that the Bidding Documents are sufficient in scope and detail to indicate and convey an understanding of all terms and conditions for performance of the Work.

6. AVAILABILITY OF LANDS.

6.1 Access to private property required by Contractor for staging areas, temporary facilities or other uses in addition to those identified in the Bidding or Contract Documents shall be obtained and paid for by Contractor. Such costs are to be considered incidental to the Contract and merged with Bid Items described and are to be provided without additional compensation to Contractor.

7. INTERPRETATIONS.

All questions about the meaning or intent of the Bidding Documents shall be submitted to Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten (10) days prior to the date for opening the Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral interpretations, clarifications, or comments are not binding upon the City, and do not serve to amend, modify, or in any way change the basic Bidding Documents, and shall be relied upon by Bidder at his own risk.

8. BID GUARANTY.

8.1 A Bid Guaranty in the form of a properly executed Bid Bond payable to the City in the amount of not less than 5% of the total base bid amount must accompany each bid. Pursuant to T.S. 12-4-201, in lieu of a Bid Bond, the following securities or cash may be substituted at the percentage rate required for such bond: United States treasury bond or general obligation bond or certificates of deposit irrevocably pledged from a state or national bank having its principle office in Tennessee or a state or federal saving and loan association having its principal office in Tennessee, or any state or national banks or state or federal savings and loans associations that has its principal office located outside of Tennessee and that maintains a branch in this state, or a letter of credit or cash. The successful Bidder will be required to execute an Agreement with the City, in the form supplied in the bidding documents, within thirty (30) days after Notice of Award is issued. The Notice of Award shall serve as notice that the Agreement is ready for execution. The Bid Guaranty shall be forfeited as liquidated damages if the Bidder fails to execute the Agreement within thirty (30) days after such Notice is issued, or fails to provide proper Bond or other form of Guaranty, as approved. The Bid Guaranty, if a Bid Bond, shall be executed by a surety or guarantee company authorized to do business in Tennessee. The Attorney-in-Fact who executes the Bond on behalf of the surety shall affix a certified and current copy of its Power of Attorney from the surety. No other type of Bid Guaranty will be accepted. The City may proceed against a Bid Guaranty unless either: a) the Agreement has been executed by Contractor and Performance, and Labor and Material Payment Bonds have been furnished, as required; or, b) the specified time has elapsed so that Bids may be withdrawn; or, c) the Bid has been rejected. .

8.2 The Bid Guaranty of the Successful Bidder will not be released unless and until such Bidder has executed the Agreement and furnished the required contract Bond(s). If the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Bonds within thirty (30) days of the Notice of Award, or fails to proceed with the performance of the Contract, the City may annul the Notice of Award and the Bid Guaranty of that Bidder will be forfeited as liquidated damages, it being agreed that exact damages are difficult or impossible to calculate, and the Bid Guaranty amount is the best estimate.

9. CONTRACT TIME.

The number of days within which, or the date by which, the Work is to be completed (the Contract Time) is set forth in the Bid Form and will be included in the Agreement.

10. LIQUIDATED DAMAGES.

Provisions for liquidated damages are to be set forth in the Agreement.

11. MATERIAL AND EQUIPMENT.

11.1 The materials, products, and equipment described in the Bidding Documents establish a standard or required function, dimension, appearance, and quality to be met by any proposed substitution.

11.2 Materials containing asbestos will not be accepted.

11.3 No substitution will be considered unless written request for approval has been submitted by the Bidder on an appropriate form, and has been received by the Engineer or the City's designated agent at least TEN (10) DAYS prior to the date for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment, or work that incorporation of the substitute would require, shall be included. The burden of proof of the merit and adequacy of a proposed substitute is upon the Bidder. The decision of approval or disapproval of a proposed substitution by the Engineer or the City's designated agent will be final.

If any proposed substitution is approved, such approval will be described in an addendum. Bidders shall not rely upon approvals made in any other manner.

11.4 When generic parameters for performance and/or appearance are specified, those materials which comply with specifics as delineated do not require a written request for approval. They must be capable of withstanding specification comparison, however, at the time of product data and shop drawing submittal.

12.5 Pursuant to T.S. 12-4-121, "Preference is hereby given to materials, supplies, equipment, machinery, and provisions produced, manufactured, supplied or grown in Tennessee, quality being equal to articles offered by the competitors outside of the State."

12. SUBCONTRACTORS, ETC.

12.1 If required by the City, the identity of certain Subcontractors and other persons and organizations shall be submitted to the City in advance of the Notice of Award. The apparent Successful Bidder, and any other Bidder so requested by the City, will within seven (7) days after the day of the Bid opening, submit to the City a list of names and addresses of all Subcontractors and

other persons and organizations whom Bidder proposes will furnish material and/or equipment for the Work. Such list shall be accompanied by an experience statement with pertinent information as to similar projects and other evidence of qualification for each Subcontractor, person, and organization if requested by the City. If the City or Engineer after due investigation has reasonable objection to any proposed Subcontractor, or other person, or organization, the City may, before giving the Notice of Award, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price. If the apparent Successful Bidder declines to make any such substitution and the Agreement is not awarded to such Bidder for that reason, the Bidder's refusal will not constitute grounds for forfeiting the Bid Guaranty. Any Subcontractor, other person, or organization so listed and to whom the City or Engineer does not make written objections prior to giving of the Notice of Award will be deemed acceptable to the Owner and Engineer.

13. BID FORM

13.1 The Bid Form is included with the Bidding Documents. Bidders shall bid all schedules and alternates (if any) as set forth in the Bid Form.

13.2 Bid Forms must be completed in ink or by typewriter. Corrections must be initialed by the Bidder. The Bid price of each item on the form must be stated in words and numerals; in case of a conflict, words will take precedence.

13.3 Bids by corporations or limited liability companies must be executed in the business entity's name by the president or a vice-president (or other officer or member accompanied by evidence of authority to sign), and the signature attested to by an authorized officer or member. The business entity's address and state of incorporation shall be shown below the signature.

13.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature. The official address of the partnership must be shown below the signature.

13.5 All names must be typed or printed below the signature.

13.6 The bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form). Failure to acknowledge receipt of Addenda shall not constitute an adjustment of the Contract Price provided on the Bid Form.

13.7 The address to which communications regarding the Bid are to be directed must be shown.

13.8 All items which are not specifically referred to in the Bid Form but are included in the plans or specifications are to be considered incidental to the performance of the major work described and shall be constructed as indicated on the plans or called for in the specifications without additional remuneration.

14. SUBMISSION OF BIDS.

14.1 Bids shall be submitted not later than the time and at the place indicated in the Advertisement for Bids and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the Bid Guaranty and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof. All bidding information shall be included in the sealed envelope.

14.2 Contractors' Licenses, Bids Contractors and electrical, plumbing, and HVAC subcontractors who do jobs costing \$25,000 or more must be licensed by the state (T.C.A. § 62-6-102, T.C.A. § 62-6-111). Officials issuing a permit or work order to an unlicensed contractor are guilty of a Class A misdemeanor (T.C.A. § 62-6-120). The name, license number, license expiration date, and classification of contractors applying to bid on jobs must appear on the bid envelope when the bid is more than \$25,000. If the bid is less than \$25,000, only the name of the contractor must appear on the outside of the envelope. Upon opening the envelope, if the bid exceeds \$25,000, the bid is automatically disqualified (T.C.A. § 62-6-119(b)). The name of a prime contractor who does electrical, plumbing, heating, ventilation, and air conditioning must appear on the outside of the envelope. Failure of a bidder to comply voids the bid, and it may not be opened. It is a Class A misdemeanor for any person to disregard the above requirements. Municipalities may not impose additional licensing requirements on state-licensed contractors (T.C.A. § 62-6-111(i)(2)(c)). T.C.A. § 62-6-137, however, allows municipalities to require a permit bond for contractors to ensure that the contractor complies with applicable laws and ordinances. Approving the permit bond program requires a two-thirds vote of the governing body.

15. MODIFICATION AND WITHDRAWAL OF BIDS.

15.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the same manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

15.2 If, within twenty-four (24) hours after Bids are opened, any bidder files a duly signed written notice with the City and promptly thereafter demonstrates to the satisfaction of the City that there was a material and substantial mistake in the preparation of his Bid, that Bidder may withdraw its Bid and the Bid Guaranty will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work.

16. OPENING OF BIDS.

Bids will be opened publicly and read aloud. An abstract of the bid schedule will be made available after the opening of Bids.

17. BIDS TO REMAIN EFFECTIVE.

All Bids not modified or withdrawn as provided in Section 16, shall remain effective for thirty (30) days after the day of the Bid opening, but the Owner may, in its sole discretion, release any Bid and return the Bid Guaranty prior to that date.

18. AWARD OF CONTRACT.

18.1 The City reserves the right to reject any and all Bids; to waive any and all irregularities or informalities; to negotiate specific contract terms not inconsistent with the Advertisement for Bids, with the Successful Bidder; and to disregard all nonconforming, nonresponsive, unbalanced, or conditional Bids. Discrepancies between words and numerals will be resolved in favor of words. Discrepancies between the indicated sum of any column of numerals and the correct sum thereof will be resolved in favor of the correct sum.

18.2 A Bidder shall bid all schedules and alternates (if any) as set forth in the Bid Form. The City reserves the right in awarding the Agreement to consider the competency, responsibility, and suitability of the Bidder, as well as the amounts of the various bids. The Work, therefore, may not necessarily be awarded to the low bidder.

18.3 In evaluating Bids, the Owner reserves the right to limit the scope of the project to the monies available for the project.

18.4 The Owner may consider, among other things, the qualifications and experience of Subcontractors and other persons and organizations who are proposed to furnish material or equipment for the Work; operating costs; maintenance considerations; performance data; and guarantees of materials and equipment.

18.5 The Owner may conduct such investigations as it deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualification, and financial ability of the Bidders, proposed Subcontractors, and other persons and organizations proposed to do the Work in accordance with the Bidding Documents.

18.6 If the Agreement is to be awarded, it will be to the lowest Bidder who is determined qualified and responsible in the sole discretion and best interest of the City. The low bid shall be determined based upon an evaluation of the Total Base Bid. The City reserves the right to accept or reject alternates in any order or combination; and to accept or reject any schedule or all schedules.

If the low bid is to be awarded in any other manner, applicable laws must be consulted and the above paragraphs must be modified.

18.7 If the Agreement is to be awarded, the Owner will give the Successful Bidder a Notice of Award within thirty (30) Days after the day of the Bid opening.

19. PERFORMANCE AND PAYMENT BONDS AND INSURANCE CERTIFICATES.

The General and Supplementary Conditions set forth the City's requirements as to Performance and Payment Bonds and Insurance Certificate(s). When the Successful Bidder delivers the executed Agreement to the Owner, it shall be accompanied by the required Bonds and Insurance Certificate(s).

19.1 Pursuant to T.S. 12-4-201, no contract shall be let for any public work in this state, by any city, county or state authority, until the contractor shall have first executed a good and solvent bond to the effect that the contractor will pay for all the labors and materials used by the contractor, or any immediate or remote subcontractor under the contractor, in such contract, in lawful money of the United States. The bond to be so given shall be for twenty-five (25%) of the contract price on all contracts in excess of one hundred thousand dollars (\$100,000). Where advertisement is made, the condition of the bond shall be stated in advertisement; provided that T.S. 12-4-201 shall not apply to contracts of one hundred thousand dollars (\$100,000) or less.

20. SIGNING OF AGREEMENT.

When the City gives a Notice of Award to the Successful Bidder, it will be accompanied by one (1) unsigned counterpart of the Agreement and the Performance and Payment Bonds. Within thirty (30) days thereafter, Contractor shall comply with the conditions precedent in the Notice of Award. Within ten (10) days thereafter, the City will deliver one (1) fully signed counterpart to Contractor. The City will deliver one signed copy of the Agreement within the project manual.

Notes:

Revised 10.11.09 paragraph 14.1 and 14.2

EXHIBIT "A"
STANDARD
BID FORM

PROJECT IDENTIFICATION: City of Lakeland, Tennessee
Project Description: Sewer Lagoon Dredge and Land
Application

THIS BID SUBMITTED TO: City of Lakeland, Tennessee
10001 U.S. Highway 70
Lakeland, Tennessee 38002

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the City in the form included in the Bidding Documents and to complete all Work as specified or indicated in the Bidding Documents for the Contract Price by May 18, 2018 and completed and ready for final payment not later than May 25, 2018 in accordance with the Bidding Documents.
2. Bidder accepts all of the terms and conditions of the Advertisement for Bids and Instructions to Bidders, including without limitation those dealing with the disposition of Bid Guaranty. This Bid will remain effective for thirty (30) days after the day of Bid opening. Bidder will sign the Agreement and submit the Bonds and other documents required by the Bidding Documents within thirty (30) days after the date of the City's Notice of Award.
3. Notice that preferences will be granted pursuant to Tennessee Statutes is hereby acknowledged.
4. In submitting this Bid, Bidder represents, as more fully set forth in the Bidding Documents, that:
 - A. Bidder has examined copies of all the Bidding Documents and of the following addenda (receipt of all which is hereby acknowledged):

Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
 - B. Bidder has examined the site and locality where the work is to be performed, the federal, state, and local Laws and Regulations, and the conditions affecting cost, progress, or performance of the work and has made such independent investigations as Bidder deems necessary;

- C. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, corporation, or other business entity. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid. Bidder has not solicited or induced any person, firm, or a corporation to refrain from bidding. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or against the City.

- 5. Bidder is bidding all schedules, alternates, if any, and will complete the Work for unit price(s) stated on the attached bid schedule based on materials actually furnished and installed and services actually provided. The Bid is summarized below on the basis of estimated quantities:

TOTAL BASE BID, IN NUMERALS: \$_____

TOTAL BASE BID, IN WORDS: _____
_____ DOLLARS.

- 6. Bidder agrees that the work for the City will be as provided above.

- 7. Bidder accepts the provisions of the Bidding Documents as to liquidated damages in the event of failure to complete the work on time, unless otherwise stated as provided below. Bidder agrees that such liquidated damages are not a penalty and that the amount provided is as close an estimate as possible to actual damages. Any exceptions or objections to this provision are stated in writing and attached hereto by Bidder.

- 8. The following documents are attached to and made a condition of this Bid:
 - A. Required Bid Guaranty in the form of a Bid Bond. (Unless otherwise provided by the City.)

 - B. Itemized Bid Schedule.

- 9. Communications concerning this Bid shall be addressed to:

Address of Bidder: _____

- 10. The terms used in this Bid are defined in and have the meanings assigned to them in the General Conditions, except as provided in the Supplementary Conditions and Bidding Documents.

Submitted on _____, 2017.

Bidder is bidding as a _____ (Insert Resident or Non-Resident)

IF BIDDER IS:

AN INDIVIDUAL

By: _____ (seal)
(Individual's Name)

doing business as: _____

Business Address: _____

Phone Number: _____

A PARTNERSHIP

By: _____ (seal)
(Firm's Name)

(General Partner)

Business Address: _____

Phone Number: _____

A CORPORATION OR LIMITED LIABILITY COMPANY

By: _____ (seal)
(Corporation's or Limited Liability Company's Name)

(State of Incorporation or Organization)

By: _____ (seal)

(Title)

(Seal)

Attest: _____

Business Address: _____

Phone Number: _____

A JOINT VENTURE

By: _____ (seal)
(Name)

(Address)

By: _____ (seal)
(Name)

(Address)

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bid Schedule
Sewer Lagoon Dredge and Land Application

BID DATE: _____
 COMPANY NAME: _____
 ADDRESS: _____

Contractor shall furnish and install items as shown on the Drawings or called for in the Specifications. All costs not included in the schedule that are necessary to provide a complete, functional project as depicted in the Drawings and Specifications are to be considered incidental and merged with costs of other related bid items.

LS = Lump Sum R&R = Remove and Replace LF = Linear Feet F&I = Furnish and Install
 SY = Square Yard FA = Force Account CY = Cubic Yard EA = Each Ton = Ton

Schedule A -

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
1	Dredge and Inject Sludge from Sewer Lagoon	LS	1		
2	Mobilization	LS	1		
Total Bid Schedule A					

Total Base Bid : _____
 _____ Dollars (\$ _____).

STANDARD
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as Principal, and _____ as Surety, are hereby held and firmly bound, unto the City of Lakeland, Tennessee a Municipal Corporation as OWNER, in the penal sum of _____ Dollar(s) (\$) _____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns, which represents five percent (5%) of the Principal's Total Base Bid.

The Condition of the above obligation is such that whereas the Principal has submitted to the City of Lakeland, Tennessee a certain BID, whereby it has offered to enter into an Agreement in writing with OWNER, for the Sewer Lagoon Dredge and Land Application.

NOW, THEREFORE,

A. If said BID shall be rejected; or,

B. If said BID shall be accepted and the Principal shall execute and deliver the Agreement to OWNER within thirty (30) days after Notice of Award (which shall constitute presentation of the Agreement to the Principal for the purpose of execution) and shall furnish Guarantors as provided in the Bidding Documents for this Project for Principal's faithful performance of said Agreement and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall otherwise proceed with the performance of said Agreement, then this obligation shall be void, otherwise the same shall remain in full force and effect and OWNER may proceed against the BOND. It is expressly understood and agreed, however, that the liability of Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such BID, to a maximum of ninety (90) days after its submission to OWNER; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, this ____ day of _____, 2017.

STANDARD FORM OF
AGREEMENT BETWEEN OWNER AND CONTRACTOR

THIS AGREEMENT is made between the City of Lakeland, hereinafter referred to as the "Owner," and _____ hereinafter referred to as the "Contractor."

WHEREAS, the City of Lakeland is desirous of dredging and land applying sludge from the lagoon at the Scotts Creek Wastewater Treatment Plant; and,

WHEREAS, _____ is able and willing to provide those services to the City of Lakeland, Tennessee.

NOW, THEREFORE, it is hereby agreed as follows:

ARTICLE 1. WORK.

Contractor shall perform all the work required by the Contract documents for the Sewer Lagoon Dredge and Land Application, Lakeland, Tennessee.

ARTICLE 2. ENGINEER.

The Project has been designed by the City of Lakeland Engineering Office, 10001 U.S. Highway 70, Lakeland, Tennessee, who is hereinafter referred to as the "Engineer" and who is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract documents in connection with completion of the Work in accordance with the Contract documents.

ARTICLE 3. CONTRACT TIME.

- 3.1 The Work will be substantially completed by May 18, 2018 and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions by May 25, 2018.
- 3.2 Liquidated Damages. Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not substantially completed by the time specified in Paragraph 3.1 above, plus any extension thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not substantially completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner one Hundred Dollars (\$100.00) for each day that expires after the time specified in Paragraph 3.1 for substantial completion. After Substantial Completion, if the Contractor shall neglect, refuse, or fail to complete the remaining work within the time specified in paragraph 3.1

for completion and readiness for final payment or any proper extension thereof granted by Owner, Contractor shall pay Owner One Hundred Dollars (\$100.00) for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment. It is further agreed that such liquidated damages are not a penalty, but represent the parties' best estimate of actual damages.

ARTICLE 4. CONTRACT PRICE.

In Consideration of the performance of the work in accordance with the Contract documents for this Unit Price Contract, Owner shall pay Contractor in current funds a not-to-exceed total contract price of _____ Dollars (\$_____), subject to additions and deductions by Change Order approved by the Owner. The contract fee shall be based on materials actually furnished and installed and services actually provided based on the unit prices contained in the Bid Form and Itemized Bid Schedule, included as Exhibit "A" (pages BF-1 -- BS-1) and by this reference made a part of this Agreement.

ARTICLE 5. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed through the Engineer as provided in the General Conditions.

5.1 Progress Payments. Owner shall make progress payments on the basis of Contractor's Applications for Payment as recommended by Engineer, on or about the 25th day of each month during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the Schedule of Values provided for in Paragraph 14 of the General Conditions, subject to the cutoff and submittal dates provided in the General Provisions.

5.1.1 During the course of the Contract progress payments will be made in an amount equal to 95% of the Work completed, less in each case the aggregate of payments previously made.

5.1.2 In the event the Contractor makes only one application for payment upon substantially completing the Work, progress payment will be made in an amount equal to 95% of the Work completed. Owner shall withhold five percent (5%) of the work completed as retainage, said retainage to be paid in accordance with the provisions of Paragraph 5.2, Final Payment.

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Paragraph 14.13 of the General Conditions, Engineer shall recommend payment and present Contractor's Final Application for Payment to the City in accordance with Tennessee Statutes 54-5-122. Before final acceptance of the project as having been finally completed, the contractor shall furnish evidence of payment in full for materials and labor to the City in accordance with Tennessee 54-5-122. When this is done, full settlement may be made with the contractor, but not until thirty (30) day's notice is some newspaper published in the county where the work is done, if there is a newspaper there, and if not, in a newspaper in an adjoining county that settlement is about to be

made and notifying all claimants to file notice of their claims with the officials and the period for filing shall not be less than thirty (30) days after the last published notice. In the event claims are filed, the officials shall withhold a sufficient sum to pay the claims in the same way and manner as is provided for claimants making claims against contractors dealing with the Department of Transportation in accordance with Statutes 54-5-123, and claimants may bring suits against contractors in the way and manner provided in 54-5-124, as suits are brought against contractors dealing with the department. Where claims are allowed by the Courts, Statutes 54-5-125 and 54-5-127 shall be applicable.

ARTICLE 6. WITHHELD FUNDS.

Pursuant to Tennessee Statutes Section 66-11-144 et seq., withheld percentages for Contracts exceeding \$500,000.00 will be retained in an account in the name of the Contractor (except when specifically waived in writing by Contractor) which has been assigned to the Owner until the Contract is completely, satisfactorily, and finally accepted by the Owner. Unless a depository is designated by the Contractor in a written attachment hereto, the Contractor's signature hereon shall act as authority for the Owner to designate a retainage depository on behalf of the Contractor, for the purposes specified in Tennessee Statutes Section 66-11-144. The Contractor's signature hereon shall act as an assignment of the depository account to the Owner, as provided by Tennessee Statutes Section 66-11-144 et seq., whether the depository is designated by the Contractor or by the Owner.

ARTICLE 7. CONTRACTOR'S REPRESENTATIONS.

In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

- 7.1 Contractor has familiarized himself with the nature and extent of the Contract documents, Work, locality, and with all local conditions and federal, state, and local Laws and Regulations that in any manner may affect cost, progress, or performance of the Work.
- 7.2 Contractor has studied carefully all reports of investigations and test of subsurface and latent physical conditions at the site or otherwise affecting cost, progress, or performance of the Work which were relied upon by Engineer in the preparation of the Drawings and Specifications and which have been identified in the Supplementary Conditions.
- 7.3 Contractor has made or caused to be made examinations, investigations, and test and studies as he deems necessary for the performance of the Work at the Contract price, within the Contract Time, and in accordance with the other terms and conditions of the Contract documents; and no additional examinations, investigations, tests, reports, or similar data are or will be required by Contractor for such purposes.
- 7.4 Contractor has correlated the results of all such observations, examinations, investigations, tests, reports, and data with the terms and conditions of the Contract documents.

7.5 Contractor has given Engineer written notice of all conflicts, errors, or discrepancies that he has discovered in the Contract documents and the written resolution thereof by Engineer is acceptable to Contractor.

ARTICLE 8. CONTRACT DOCUMENTS.

The Contract documents which comprise the entire agreement between Owner and Contractor are attached to this Agreement, made a part hereof and consist of the following:

- 8.1 This Agreement (Pages SFA-1 to SFA-5, inclusive).
- 8.2 Joint Account Agreement or Letter of Forfeiture waiving same (if applicable)
- 8.3 Exhibit "A" - Bid Form and Bid Schedule.
- 8.4 Affidavit of Drug Free Work Program
- 8.5 No Addenda
- 8.6 Performance Bond
- 8.7 Certificates of Insurance, of Workers' Compensation Coverage, and of Unemployment Insurance Coverage.
- 8.8 2013 Standard General Conditions of the Construction Contract (Pages i to 62, inclusive).
- 8.8 Standard Supplementary Conditions (Pages SSC-1 to SSC-16, inclusive).
- 8.9 General Requirements, consisting of 7 sections
- 8.10 Special Provisions (Section 01810)
- 8.11 Technical Specifications consisting of 3 sections
- 8.12 Notice of Award.
- 8.13 Notice to Proceed.
- 8.14 Minutes of the Pre-Bid Conference, if any.
- 8.15 Shop Drawings and other Submittals furnished by Contractor during performance of the Work and accepted by the Owner.

8.16 Any modifications, amendments, and supplements, including Change Orders, issued pursuant to Paragraphs 3.4 and 3.5 of the General Conditions, on or after the effective date of this Agreement.

8.17 Notice of Substantial Completion.

ARTICLE 9. MISCELLANEOUS PROVISIONS.

Terms used in this Agreement, which are defined in the General Conditions, shall have the meanings designated in those conditions.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in one (1) original copy on the day and year first above written.

APPROVED AS TO FORM:

(PROJECT: _____)

DATED this ____ day of _____, 2017.

ATTEST:

By: _____

Title: _____

ATTEST:

By: _____

Title: _____

CONTRACTOR:

By: _____

Title: _____

OWNER:
CITY OF LAKELAND, TENNESSEE
A Municipal Corporation

By: _____

Wyatt Bunker
Title: Mayor

PERFORMANCE BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER (name and address):

City of Lakeland
10001 Highway 70, Lakeland, TN 38002

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description (name and location): Sewer Lagoon Dredge and Land Application

BOND

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (seal)

Surety's Name and Corporate Seal (seal)

By: _____
Signature

By: _____
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Lakeland
10001 Highway 70, Lakeland, TN 38002

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*): Sewer Lagoon Dredge and Land Application

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. Reserved.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.
9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address, and Telephone)*

Surety Agency or Broker:

Owner's Representative *(Engineer or other)*:

DRUG-FREE WORKPLACE AFFIDAVIT

STATE OF _____

COUNTY OF _____

The undersigned, principal officer of _____, an employer of five (5) or more employees contracting with _____ County government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of _____ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. § 50-9-113.

Further affiant saith not.

Principal Officer

STATE OF _____

COUNTY OF _____

Before me personally appeared _____, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this _____ day of _____, 20_____.

Notary Public

My commission expires: _____

SECTION 01010

SUMMARY OF WORK

A. Project Identification:

Sewer Lagoon Dredge and Land Application

B. Project Summary:

This project includes dredging sludge from the lagoon at the Scotts Creek Wastewater Treatment Plant located at 9708 Old Brownsville Road. The sludge shall be land applied by way of injection on the land adjacent to the plant. All material dredged from the lagoon shall be hauled in water tight containers. The Contractor shall submit detailed records of the dredging and application of the biosolids.

The City has received Notice of Coverage for Biosolids Land Application from the Tennessee Department of Environment and Conservation (TDEC). Contractor shall follow 40CFR503 Tennessee Code regarding rules and setbacks for Biosolid Land Application procedures. The Contractor shall have no history of or current Notice of Violations from TDEC. The permit application and supporting documentation are included in Appendix A.

C. Particular project requirements.

1. Notify Owner of existing conditions differing from those indicated on the drawings. Verify the existence and location of underground utilities along the route of proposed work. Omission from, or inclusion of, locations on the drawings, is not to be considered as the nonexistence of, or the definite location of, existing underground utilities. Do not remove or alter existing utilities without prior written approval.
2. The Contract Documents are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonably implied or necessary for proper performance of the project shall be included.
3. The Provisions are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, "furnish..." means "Contractor shall furnish..."

END OF SECTION

SECTION 01100

GENERAL CONSTRUCTION REQUIREMENTS

PART 1 - Description.

To establish uniform requirements for construction of water distribution facilities, sanitary sewerage collection facilities, storm sewer collection systems, streets, and associated appurtenances which will enable the construction to be performed in accordance with Local, State, and Federal laws.

1.01 Definitions.

- A. For the purposes of these specifications, the words and phrases set out in the following articles shall have the meanings as follows:
1. "City" means the governing body of the city of Lakeland, TN.
 2. "Contractor" means the individual, partnership, firm, or corporation contracting with the developer or the City which will be performing the work, or which will be performing the construction activities.
 3. "Developer" means partnership, firm, or corporation developing property where construction will be performed.
 4. "Engineer" means the consultant or City Engineer.
 5. "Owner" means the individual, partnership, firm or corporation being the owner of record of property where construction will be performed.
 6. "Underground facility" means any item of personal or public property buried or placed below ground for use in connection with the storage or conveyance of electronic, water, sewage, telephonic or telegraphic communications, cable television, electric energy, oil, gas, hazardous liquids, or other substances and including, but not limited to pipes, sewers, water, storm water, conduits, cables, valves, lines, wires, manholes, and attachments.
- B. The following abbreviations shall have the designated meanings:
1. "APWA" means the American Public Works Association.
 2. "ASTM" means the American Society for Testing and Materials.
 3. "AWWA" means the American Water Works Association.

4. "AASHTO" means the American Association of State Highway & Transportation Officials.
- C. Reference to a specific specification, i.e., AWWA C900, means the latest Edition of that specification.

PART 3 Execution

3.01 Scheduling and Construction Progress.

- A. Prior to the start of any work, the Contractor shall submit in writing to the Engineer for review, a progress schedule that shall be followed as closely as possible. Progress scheduling using critical path method is approved and encouraged. Once work has started on a street, it must be pursued continuously until all work on that street is finished.
 1. The Contractor shall schedule a preconstruction conference prior to the start of work. Persons attending shall include representatives of the Contractor, subcontractors, owner, developer, Engineer, and affected utilities.
- B. Each successive phase of work will follow the preceding phase as closely as possible so that the time any one street is under construction is kept to a minimum.
- C. In the event that the work is not being accomplished expeditiously or in accordance with the time period set forth in the progress schedule, or if the work on an excavation has ceased or is abandoned without due cause, the Engineer may give written notice to the Contractor and/or the surety company for the project.

3.02 Notification of Landowners, Residents, and Businesses

- A. At least one (1) week prior to beginning construction operations Contractor shall notify in writing, all those directly affected by the Work, including the Fire, Ambulance, Police Departments, and the Engineer's Office. The notification shall include the following as a minimum:
 1. Name, address, telephone number, and contact person for Developer, Developer's Contractor, Owner, and Engineer.
 2. A brief description of the proposed Work.
 3. Name and telephone number of Contractor's person to contact in emergency.
 4. A map showing the Work area, the traffic control plan, and the planned access to be provided to the affected properties. The map should also show the property or business owners' access during construction, and access in case of an emergency for fire, ambulance, police, or other emergency service agency vehicles.

5. A schedule for start up and completion of the Work. Schedules shall be updated as needed as the work progresses.
6. Contractor shall notify property owner and occupant 24 hours in advance of any disruption of service or access.

3.03 Available Maintenance Personnel

The Contractor shall have personnel available to maintain the Work as required, 24 hours per day every day. Accordingly, the Contractor shall furnish the City, the Owner, the Engineer, and the Shelby County Sheriff's Office with the names, addresses, and telephone numbers of local employees or representatives who will be available to maintain the Contractor's work during non-working periods, evenings, nights, weekends, and holidays.

3.04 Utility Locates

- A. It is the responsibility of the Contractor to obtain locates for buried facilities within the project area prior to the start of work as necessary and as required by law. The Contractor is responsible for any damage to buried utilities or damage or injury to persons or property resulting from Contractor's work in the vicinity of the utilities.
- B. It is the responsibility of the Contractor to provide advance notice to all utility notification centers serving that area. The Contractor shall request the notification center to provide the nature, location, and elevation of the utility at each location and at whatever interval is necessary for the work. If the utility company cannot or will not provide the information, the Contractor shall obtain the information by whatever means are necessary. For each location that the utility is exposed, the Contractor shall locate the utility by tying it both horizontally and vertically by coordinates, to the datum established by the City.
- C. At all utility crossings the Contractor shall locate the utility at a minimum of one point directly over the proposed line or appurtenance. When existing utilities that parallel the proposed line or appurtenance are exposed by excavation, the Contractor shall locate the utility by tying it both horizontally and vertically to the datum and include the information on the record drawings. At a minimum, the utility shall be tied horizontally and vertically at 300-foot (90 m) intervals.
- D. If during the field location of the utilities, additional unforeseen utilities are discovered, the Contractor shall immediately notify the Engineer and proceed in accordance with approval of the Engineer. The utility must be located by the Contractor as specified above and include the information on the record drawings.
- E. The Contractor must protect all existing utilities and improvements, public or private, located on the right-of-way, and other work areas, during the entire period of his work. Special care must be taken in backfilling and compacting under and around

such improvements. Any breakage or damage to underground facilities caused by trenching, backfilling, resurfacing, or any other activity associated with the work shall be the responsibility of the Contractor.

- F. Whenever utility mains or services are crossed, the utility owner shall be notified and the crossing shall be constructed in accordance with the utility owner's requirements.
- G. Before the Contractor begins his grading operations, he shall confer with the owners of any underground or overhead utilities which may be in or in close proximity to the grading areas, and shall arrange for the necessary disconnection of these utilities in accordance with the regulations of the utility companies concerned. The Contractor shall take such measures as the Engineer may direct in protecting these utilities properly throughout the period his grading operations are in progress. The party or parties owning or operating overhead or underground utilities shall perform the actual work of moving, repairing, reconditioning, or revising the utilities, except as otherwise specified in this Section. Whenever and wherever such operations are undertaken by the owners of utilities, the Contractor shall cooperate to the extent that ample protection of their work will be provided so that the entire work as contemplated may be expedited to the best interests of all concerned, as judged by the Engineer.
- H. Protect and safeguard existing service lines and utilities structures, the locations of which have been made known to the Contractor by the owners of the utilities or by others, prior to excavation or construction of fills or embankments, from damage during grading operations. Any damage to such lines or structures shall be repaired at the Contractor's expense. The above provisions are applicable to all service lines or utilities structures, all or any portion of which protrude above the original ground or street surfaces, or lie beneath such surfaces in any grading area or any other area upon which the Contractor has encroached.

3.05 Protection of Existing Buildings and Structures

For collapse of adjacent buildings, sidewalks, structures, and underground or above ground utilities, the Contractor shall repair damage done to the owner's property or any other property, on or off the premises, by reason of his operations. The Contractor shall adequately brace walls during backfilling and compacting operations.

3.06 Construction Stakes – Alignment and Grades

- A. All work shall be constructed in accordance with lines and grades shown on the drawings and as designated by the Engineer. These lines and grades may be modified by the Engineer as provided in the General Conditions.
- B. The Contractor shall provide experienced personnel, materials, and equipment necessary to complete all survey, layout, and measurement work. The Contractor shall keep the Engineer informed a reasonable time in advance, of the times and places he wishes to do work so that initial control points may be designated.

3.07 Restoration of Street Surface, Street Signs, Curbs, Driveways, Sidewalks, Irrigation and Landscaping

- A. Wherever existing improvements are removed, damaged or otherwise disturbed by Contractor's activities, Contractor shall replace or repair the improvements to conditions equal to or better than the condition prior to the start of work. Any crushed rock, sod, or natural vegetation disturbed by the Contractor shall be replaced, rebuilt or restored to conditions equal to or better than the condition prior to the start of work.

3.08 Temporary Utilities, Public Access and Safety

- A. Contractor shall provide temporary water and sewer service to properties when permanent facilities will be out of service for eight (8) hours or longer, or when other circumstances make it necessary. Where service cannot be interrupted, such as sewer mains, Contractor shall provide plant and equipment to pump around the sections which are out of service.
- B. Where the Engineer deems necessary, the Contractor shall provide access wherever possible to public and private property to prevent serious inconvenience to pedestrian and vehicular traffic. This shall not be construed to require the Contractor to provide such access at the times and locations where it will interfere with his construction progress. The Contractor shall furnish, place, and maintain sufficient flags, flares, barricades, signs, etc., along the location of his work in accordance with the Federal Highway Administration, "Manual on Uniform Traffic Control Devices." Flag persons shall be utilized if necessary to maintain safe traffic flow.

3.09 Erosion and Sediment Control

- A. Erosion and sediment control shall be performed in accordance with rules and regulations adopted by the City of Lakeland and the Tennessee Department of Environment and Conservation.

3.10 City Permits

- A. All necessary permits shall be obtained prior to the beginning of any construction project. Those permits may include: City of Lakeland/TDEC Permit to Construct, Street Cut Permits, Traffic Control Permits, Bonds, and Erosion and Sediment Control Permit, as well as any other appropriate permits required for the project by the City.

3.11 Punchlist and Final Closeout

- A. Initial City Punchlist

1. The Contractor, Owner, Engineer, and City personnel will conduct an initial walkthrough and develop a list of deficiencies that will be presented to the Contractor by the Engineer.
2. The Contractor, Owner, and Engineer will conduct a walkthrough identifying items to be corrected. A final punch list will be developed by the Contractor and Engineer. The punch list will contain dates for completion of the various identified items.
3. All items on the list will be completed to the satisfaction of the City prior to acceptance of the project and start of the one-year warranty period.

3.12 Submittals

The Contractor shall submit for approval by the Engineer a minimum of five (5) copies of data required by specific sections of this specification.

3.13 Workmanship and Cleanup

- A. All debris and rubbish caused by the operations of the Contractor shall be removed, and the areas occupied during his operations shall be left in a neat and presentable condition satisfactory to the Engineer. Construction cleanup and all backfill operations shall immediately follow installation of underground facilities. Cleanup shall be completed to allow local traffic on the street and access to driveways, parking lots, etc. During construction, all existing gutters, storm drains, runoff channels, etc. shall be kept clean of dirt, rubble, or debris which would impede the flow of storm sewer.
- B. Excess, unsuitable, and waste materials from the project (including that from trench excavation, pavement removal, curbwalk removal, and grading operations), shall be suitably disposed of, offsite, by Contractor.
- C. Excess material resulting from parkway and shoulder finishing and other final operations shall not be permitted to accumulate on the pavement surface and shall be removed concurrently with the finishing operations. Care shall be taken to prevent the entrance of this material into drainage structures or other waterways during the construction period. It shall be the responsibility of the Contractor to properly dispose of all excess material.

3.14 Design Mixes, Testing and Quality Assurance

- A. The testing requirements and cost responsibilities of design mixes, testing requirements, and quality assurance testing are listed in each specific section of these specifications.
- B. Unless specified by the contract documents, or addressed specifically within these

Standard Specifications, the Owner will be responsible for moisture/density/compaction testing only. If the initial moisture/density/compaction test fails to meet the minimum standards as established by these specifications, the Contractor shall pay for any and all additional tests until a moisture/density/compaction test meeting the minimum standards is obtained.

END OF SECTION

SECTION 01200

PROJECT COORDINATION

PART 1 – Description

1.01 Summary

- A. Contractor shall schedule a preconstruction conference (if required) to be held within twenty (20) days of the Notice of Award. Contractor's assigned supervisory personnel and subcontractors shall attend this conference. Contractor shall provide a work schedule at or prior to this meeting for review by all parties. A corrected schedule shall be provided within seven (7) days following the meetings.
- B. Conduct all construction activities between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, except in cases of emergencies. No work will be allowed on Saturdays without the Owner's permission, and no work, except for emergencies, will be allowed on Sundays. All pavement subgrade excavation shall be observed by the Owner Representative. The Owner's Representative shall determine the depth of the subgrade excavation prior to backfill.
- C. Contractor shall obtain water for use during construction at his expense. If Contractor elects to obtain water from the public water utility, he will make all the arrangements, comply with their regulations, and pay all fees and charges.

1.02 Coordination With Public And Private Agencies

- A. If utility companies elect to repair or replace their lines in the project area, their crews will be permitted access to the area to accomplish their work.
- B. Contractor is responsible for locating and protecting existing underground improvements. Contact all utility companies for location of their facilities. To contact all utility companies call the local underground number at least 48 hours prior to excavation for field locates.
- C. Contractor shall have personnel available to maintain his work as required 24 hours per day every day. Contractor is responsible for housekeeping, dust and erosion control, and shall provide all equipment and personnel necessary to meet the requirements of this responsibility. Contractor shall provide Engineer with the name(s) and telephone number(s) of the person(s) designated to be available for after-hours contact. If this person cannot be contacted, Owner may use its equipment to correct problems. In this case, Contractor shall pay all costs incurred by Owner.

- D. Do not utilize private property for any purpose without written permission from the property owner.

1.03 Coordination With Owner And Engineer

- A. Construct all work in accordance with the lines and grades shown on the Drawings, and as designated by Engineer (when applicable). Engineer may modify these lines and grades as provided in the General Conditions. Where the Contract Documents specify survey work to be provided by Engineer, give Engineer a minimum of 24 hours notice.
- B. Owner shall employ and pay for the services for an independent testing agency to perform tests as required by the Contract Documents. Notify Engineer a minimum of 24 hours in advance to request testing. Contractor shall be responsible for cost of re-tests required if the results of the original tests do not meet the minimum requirements.
- C. Coordinate on-site staging areas, access and temporary facilities with Owner.
- D. For additional information, contact Philip Stuckert, Lakeland City Engineer at 867-5418.

1.04 Coordination Of Construction

- A. Contractor is responsible for coordinating work of all trades by preparation of schedules and progress reports, coordination of drawings and other work as necessary.
- B. Schedule work to produce orderly, continuous progress and avoid delays due to lack of materials, subcontractor schedule, lack of available manpower, etc.
- F. Contractor is responsible for ensuring that installed and/or completed work is complete and satisfactory prior to enclosing or covering. Call for required inspections in a timely manner and do not cover work that requires inspection.

END OF SECTION

SECTION 01340

SUBMITTALS

PART 1 - Description

1.01 Summary

- A. Comply with Submittal format requirements as specified in the Contract Documents.
- B. Provide, in a timely manner, the number of copies and types of submittals listed in individual sections of the Contract Documents. If not specified elsewhere, provide the following as a minimum:
 - 1. Mix designs and certifications of compliance for Portland Cement Concrete, Cement Treated Base, Aggregate Base Course, Asphaltic paving material, and any other material or product used as part of this project as required in the Standard Specifications.
 - 2. Closeout submittals.
- C. Provide required resubmittals in the appropriate quantities if original submittals are not approved.
- D. Samples and shop drawings shall be prepared specifically for this project. Shop drawings shall include dimensions and details, including adjacent construction and related work. Note any special coordination required. Note any deviations from requirements of the Contract Documents. Submittal data shall be properly labeled indicating specific service for which material or equipment is to be used, section and article number of specifications, project name, Contractor, etc. Data of a general nature will not be accepted.
- E. Failure of Contractor to submit shop drawings in ample time for checking shall not entitle him to an extension of contract time.

END OF SECTION

SECTION 01505

TEMPORARY FACILITIES

PART 1 - Description

1.01 Summary

A. Provide temporary services and utilities, including utility costs:

1. Potable and non-potable water.
2. Lighting and power.
3. Toilet facilities.
4. Materials storage.
5. Heating.

B. Provide construction facilities, including utility costs;

1. Construction equipment.
2. Dewatering and pumping.

C. Provide security and protection requirements:

1. Fire extinguishers.
2. Site enclosure fence, barricades, warning signs, and lights.
3. Snow and ice removal, if applicable.

D. Provide personnel support facilities:

E. Sanitary facilities.

1. Drinking water.
2. Cleaning and trash removal.
3. First aid and Emergency Medical Services.
4. Trash removal.

END OF SECTION

SECTION 01650

MEASUREMENT AND PAYMENT PROCEDURES

PART 1 – Description

All work completed under this Contract will be measured by the Engineering according to the bid items and to the construction drawings. Units of measurement and dimensions will be shown in these specifications.

1.01 Payment

A. Progress payments will be processed in accordance with the following schedule.

<u>Cut-Off Date</u>	<u>Date of Submittal</u>
December 22, 2017	December 29, 2017
January 19, 2018	January 26, 2018
February 16, 2018	February 23, 2018
March 23, 2018	March 30, 2018
April 20, 2018	April, 27, 2018
May 18,2018	May 25, 2018

Submit pay requests to the City by the dates of submittal listed above.

B. Owner will make progress payments as defined in Article 5 of the Agreement, on the forms provided by the Engineer.

C. If the Contractor elects to enter into a joint account agreement, two (2) pay requests and vouchers must be submitted. One pay request and voucher for the appropriate progress payment amount, the other for the retained amount.

1.02 Measurement of Quantities

Quantities shown on the bid schedule are estimated and are to be considered approximate. Actual constructed quantities will vary. The Contractor will be compensated only for those items and materials actually installed and approved as part of the project. No additional pay will be granted for items or materials not installed.

A. Payment will be made for the work completed and stored materials less retained amounts in accordance with provisions of the contract documents.

B. Payment amounts will be based on the scheduled values and mutually agreed upon percentage of completion for each item.

1.03 Bid Item Descriptions

The cost of all material and labor required to complete this project as specified and shown on the drawings, but not specifically included as a pay item, shall be included in the bid price of its related bid item. No extra pay shall be granted for items that are reasonably foreseen as necessary for the proper installation of an item.

PART 3 Execution

3.01 Measurement and Payment of Bid Items

A. Dredge and Inject Sludge from Sewer Lagoon

1. Measurement of this item shall be paid by lump sum (LS) of sludge dredged from the sewer lagoon and land applied by injection. This item shall include dredging, hauling and injecting sludge and all necessary equipment and materials required to perform work. Payment shall be made by the contract unit price per Lump Sum (LS).

B. Mobilization

1. Includes all costs for mobilization and bonding complete, including mobilization of equipment to the project site and property owner notifications in accordance with these specifications. Cost for mobilization not to exceed 10-percent of the Total Base Bid for each bid schedule. If the Contractor's bid price for mobilization exceeds 10-percent of the Total Base Bid for the bid schedule, the Owner will pay 10-percent of the Total Base Bid for the bid schedule after the Contractor mobilizes equipment on site. The remaining amount will be paid following substantial completion of the entire contract. Payment shall be by the contract unit price per Lump Sum (LS).

END OF SECTION

SECTION 01750

CONTRACTOR CLOSEOUT

PART I Description

1.01 SUMMARY

- A. Provide prerequisites to substantial completion.
 - 1. Punch list.
 - 2. Supporting documentation.
 - 3. Warranties.
 - 4. Certifications.

- B. Provide prerequisites to final acceptance.
 - 1. Final payment request with supporting affidavits.
 - 2. Completed punch list.
 - 3. Submit record documents: One set of drawings and project manual with all changes noted in red and Project Manual changes flagged with page tabs.
 - 4. Final clean-up.
 - 5. Removal of temporary facilities.

END OF SECTION

SECTION 01810

SPECIAL PROVISIONS

PART 1 Description

1.01 SUMMARY

- A. These "Special Provisions" supplement, clarify, or modify provisions of Specifications as they apply to this project.
- B. Requirements of Special Provisions, General and Supplemental Conditions apply to work performed under all sections of this project.
- C. Work of this contract shall include all work required to construct the entire Project as shown on the drawings and defined by the Specifications and other contract documents, unless specific exceptions are stated therein.
- D. DISCREPANCY BETWEEN SPECIAL PROVISIONS, SPECIFICATIONS, AND PLANS. In the event of discrepancy between Special Provisions and other sections of the Specifications, the Special Provisions will take precedence over the Specifications, the General Conditions, and the Supplemental Conditions. The Specifications will take precedence over the Plans.

1.02 LABOR PRACTICES

A. EIGHT-HOUR WORK DAY

The Contractor's attention is directed to, Limitation on work hours; overtime; exceptions. a) No person shall require laborers, workmen, or mechanics to work more than eight hours in any one calendar day or forty hours in any one week upon any public works of the state, or any of its political subdivisions, except as hereafter authorized. An employee may agree to work more than eight hours per day or more than forty hours in any week provided the employee shall be paid at the rate of one and one-half times the regularly established hourly rate for all work in excess of forty hours in any one week.

1.03 CONSTRUCTION WATER

The Contractor is responsible for supplying water for construction purposes. If the Contractor wishes to use existing fire hydrants for water, he shall make the proper arrangements with the owner of the hydrant. The Contractor will be responsible for compliance with that owner's

requirements as well as the payment of any fees for its use. Construction water is considered incidental to this project and no separate payment will be made to the Contractor for this item. If the Contractor wishes to use water from a resident, he shall obtain written permission from that resident to do so.

1.04 SAFETY

In accordance with generally accepted construction practices, the Contractor will be solely and completely responsible for safety conditions at and adjacent to the job site, including the safety of all persons and property during the performance of the work. The Contractor shall comply with all federal, state, and local safety laws and regulations. This requirement shall apply continuously, and shall not be limited to normal working operations. The Engineer's construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site. This paragraph shall be applicable to the Contractor and all of the Contractor's subcontractors.

In addition, the Contractor shall provide barriers, fences, signs, lights, etc. as necessary to control access to the site.

Contractor shall provide Owner a written copy of their confined spaced program, proof of record-keeping protocol and inventory of appropriate equipment such as monitors for atmospheric hazards and rescue equipment. These documents shall be submitted at the preconstruction conference.

1.05 DISPOSAL OF WASTE MATERIALS

Excess, unsuitable, and waste materials from this project (including that from trench excavation, pavement removal, piping removal, and grading operations), shall be disposed of, offsite, by Contractor. Such disposal shall be considered incidental, and shall not be a pay item.

1.06 CODES AND STANDARDS

All materials and the completed installation shall comply with applicable standards promulgated pursuant to the State of Tennessee and City of Lakeland.

1.07 CLEANING AND FINISHING

After completion of all work all debris and foreign material will be removed by the contractor. The project area, including staging areas, shall be clean and functional. This will include the restoration of any disturbed landscaping in the work area.

1.08 TRAFFIC CONTROL

A traffic control plan is required for repairs in areas affecting traffic. The Contractor is responsible for furnishing a traffic control plan to the City Engineer at least one week prior to the start of construction. At least one lane of roadway shall remain open at all times. The City Engineer's approval is required prior to closing an entire street. The closure should not exceed forty-eight (48) hours and proper signage shall be installed detouring traffic and warning of construction.

END OF SECTION

SECTION 01551

TEMPORARY TRAFFIC CONTROLS

PART 1. Description

To establish uniform requirements for detours, signs and barricades, and traffic control plans associated with construction activities performed on or affecting City of Lakeland streets. The work in this article shall consist of furnishing, erecting, maintaining, relocating, and removing temporary traffic control devices at the locations specified on the drawings and as directed by the Engineer. All traffic control devices shall conform to the provision for construction signing as set forth in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) latest edition.

PART 2 MATERIALS

2.01 Traffic Control Products

A. Sign Panels

1. Sign panels will be constructed of $\frac{3}{4}$ " plywood conforming to plywood sign panels and barricades of the standard specification for road and bridge construction; or 6061-T6 or 5052-H38 aluminum alloy sheeting conforming to ASTM B209.
2. Wood sign panels will be backed with metal backing angles; except that backing is not required for those sign panels 48" x 60" or smaller.
3. Aluminum sign panels will be 0.125" thick and backed with metal backing angles; except that those sign panels 48" x 60" or smaller may be:
 - i. 0.080" thick and backed with metal backing angles or 2 x 4 lumber; or,
 - ii. Unbacked, 0.125" thick.
4. Special signs which are unique to the project, i.e., signs not shown on the plans or included in part VI of the MUTCD, and signs shown on the plans which contain a message that is unique to the project, will be furnished by the contractor, as specified on the plans, and erected by the Contractor. Posts and hardware for fixed special sign installations, and all equipment for portable special sign installations will be furnished by the contractor. Post lengths will be specified by the Engineer. Upon removal, the special sign panels, posts, hardware, and portable installation equipment will remain the property of the Contractor.

- i. Special signs will be erected on fixed mountings unless portable mountings are authorized by the Engineer.
- B. Barrels will be plastic conforming to the MUTCD, with 6" wide reflective stripes.
- C. Temporary markings
 1. Temporary reflective pavement markings will be paint, preformed tape, or raised pavement markers, and will be suitable for use on either Portland cement concrete or asphalt pavements. Minimum acceptable standards are as follows:
 - i. Paint used for temporary markings will be commercially manufactured highway striping paint. The paint will be applied without dilution.
 - ii. All painted stripes will be 4" wide, and will be reflectorized by dropping or spraying glass beads onto the wet paint.
 - iii. The reflective beads will conform to AASHTO Specification M247, Type 1.
 2. Temporary reflective pavement striping tape will be 4" wide, pressure-sensitive tape manufactured for use as pavement striping.
 - i. Striping tape applied to finished pavement surfaces which will be returned to normal traffic use will be a removable type.
 - ii. Striping tape applied to temporary pavement surfaces which will be obliterated may be a non-removable type.
 - iii. Striping tape applied to the surface of intermediate lifts of asphalt pavement may be non-removable type, and may be let in place. If a removable type is used, it will be removed before placing the next lift.
 3. Temporary retro-reflective raised pavement markers manufactured by Astro Optics of Schaumburg, Illinois, Model No. TPM, or Stimsonite Products of Niles, Illinois, Model No. 66, or an approved equal will be acceptable.
 4. Temporary retro-reflective motorist guidance markers manufactured by Davidson Plastic Company of Ken, Washington, Model NO. TRPM, or TOM, or an approved equal will be acceptable.

PART 3 EXECUTION

3.01 Traffic Control Plans

- A. A complete traffic control plan shall be submitted to the Engineer and the Lakeland City Engineering office at least one week prior to the start of construction.
1. Traffic will be permitted to use the street at all times, unless a detour is specifically permitted on the drawings or by the Engineer. Access to all abutting residences and properties shall be maintained to the maximum extent possible.
 2. The Contractor shall construct and maintain temporary crossings, complete with flagmen, whenever necessary to expedite the work or to maintain traffic. The Contractor shall furnish not less than two flagmen at each location where loading or depositing of material requires the turning of the trucks on any highway or street and where the operation of construction equipment endangers traffic. Temporary crossings shall be of ample size to safely carry the load which comes upon them.
 - i. The Contractor shall maintain the streets in a passable condition. The work shall be conducted so as to create a minimum of inconvenience to traffic.
 - ii. Excavations which traverse a street shall be limited to one-half the width of the street at any one time, unless an emergency situation exists which requires that the entire width of the street be excavated. City Engineer's office approval is required prior to excavation traversing an entire street.
 3. The Contractor shall furnish sufficient signs and barricades to facilitate the directing of traffic. Unless directed otherwise by the Engineer, all signs and barricades shall conform to:
 - i. Within the "Manual on Uniform Traffic Control Devices (MUTCD), " latest edition.
 4. The Contractor shall have a sufficient number of barricades and signs on hand prior to the start of the construction
 - i. Each detour sign shall be reflectorized and shall be illuminated with two battery-powered blinkers with six-inch (6") amber lenses.
 - ii. All barricades shall have blinker lights on each end.
 - iii. It shall be the Contractor's responsibility to make necessary checks and inspections of all lights and barricades every day, including Sundays and holidays.
 5. Temporary suspension of work does not relieve the Contractor of the responsibility outlined in the above requirements.

3.02 Permits

- A. The Contractor shall obtain all necessary permits from the City Engineer's office for any closure of any street or portion thereof, as provided in the Lakeland Municipal Code. Along with the permit application, the Contractor shall provide a sketch showing traffic routing and traffic control devices to be used. The construction traffic control sketch shall be approved by the City Engineer's office before the permit is issued.

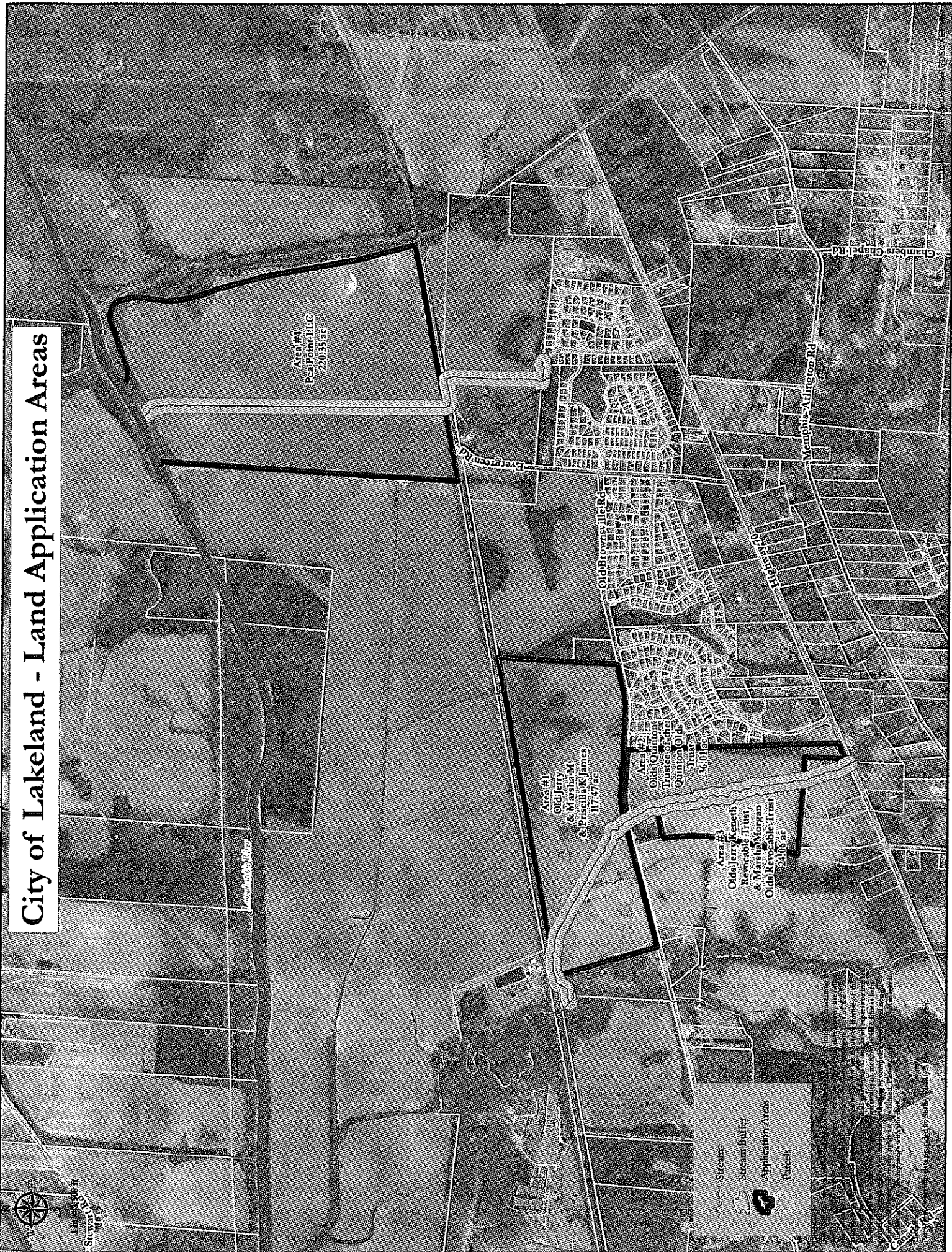
3.03 Street Closure

- A. The City Engineer may permit the closing of streets to all traffic for a period of time prescribed by the office if, in the City Engineer's Opinion, it is necessary.

END OF SECTION

APPENDIX A

City of Lakeland - Land Application Areas



Area #4
Real Point LLC
220.35 ac

Area #1
Old Jerry
& Marjorie M.
& Patricia K. James
17.47 ac

Area #2
Olds Quinton Trust
& Patricia K. James
36.01 ac

Area #3
Olds Jerry, Kenneth,
Revocable Trust,
& Marsha Morgan
Olds Revocable Trust
24.06 ac

Streams
Stream Buffer
Application Areas
Perezak



Prepared by: [illegible]

APPENDIX B

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

**MS. EMILY HARRELL
CITY ENGINEER
e-copy: eharrell@lakelandtn.org
10001 HWY 70
LAKELAND, TN 38002**

General SOP for the Land Application of Non-Exceptional Quality Biosolids Notice of Coverage Fact Sheet

The Division of Water Resources received from your company a Notice of Intent (NOI) to be covered under the General State Operating Permit for the Land Application of Non-Exceptional Quality Biosolids (Biosolids GP). **We have recorded site information and are hereby notifying you that this land application site is covered under the Biosolids GP.**

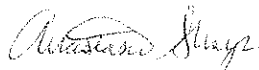
Enclosed with this fact sheet you will find a Notice of Coverage (NOC) with the permit tracking number (TNB078255), facility's name, address and other relevant information associated with your facility/site. In order to get a copy of the Biosolids GP requirements we ask you to visit our web site:
<http://www.tn.gov/environment/permits/>.

We will provide you with a printed copy of the Biosolids GP only upon your request.

If you do not have access to the web, or have other questions, call us at (888) 891-TDEC or contact me by E-mail at Anastasia.Sharp@tn.gov.

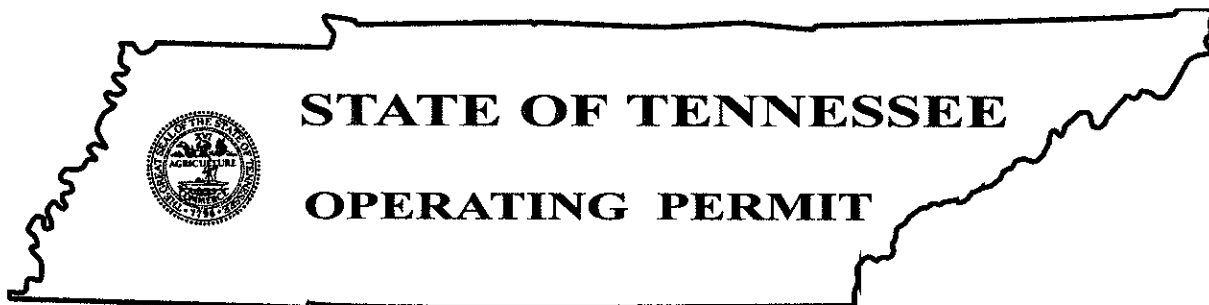
Thank you for your time and assistance.

Sincerely,



Anastasia Sharp
State Biosolids Coordinator

cc: Division of Water Resources - Permit File & Memphis EFO



Tracking No. TNB078255

NOTICE OF COVERAGE
under the General State Operating Permit for the
LAND APPLICATION OF NON-EXCEPTIONAL QUALITY BIOSOLIDS

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.):

Permittee: **City of Lakeland**

is authorized: to land apply non-exceptional quality biosolids

generated at a site located at: **10001 Highway 70 in Lakeland, Shelby County**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

Coverage under this general permit shall become effective on

and shall expire on **April 30, 2019**

Notice of Coverage issued: **September 27, 2017**

Information and links to the Biosolids General Permit can be found at:
<http://www.tn.gov/environment/permits/>

NOTICE OF INTENT (NOI) for Land Application of Non-Exceptional Quality Biosolids

E. VECTOR ATTRACTION REDUCTION LEVEL ACHIEVED: Indicate the option used to achieve the vector attraction reduction.

- Option 1 Option 2 Option 3 Option 4
 Option 5 Option 6 Option 7 Option 8

If one of the vector attraction reduction Options 1 - 5 is selected, do the biosolids meet Class A pathogen reduction requirements prior to or at the same time as meeting the vector attraction reduction requirements?

- Yes No

Provide a detailed description of the vector attraction reduction treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate vector attraction reduction is being achieved:

See Attached

F. If one of the vector attraction reduction Options 1 - 8 above was not performed, indicate how the vector attraction reduction will be performed on the field as part of the land application process:

- Option 9 (Subsurface Injection) Option 10 (Incorporation)

G. SAMPLING PLAN: Include a detailed copy of the biosolids sampling plan as specified in the instructions. The sampling plan must address sampling protocols for contaminants, pathogen reduction, and vector attraction reduction quality criteria.


See Attached

H. LAND APPLICATION AREA(S): Include a list of land application area(s) that will be used for disposal of biosolids. Attach a detailed map showing appropriate buffers in accordance with section 3.2.1 (add additional pages if necessary)

Area Number	Area (acres)	Application Rate (tons/acre) per section 3.2.2	Latitude (decimal)	Longitude (decimal)
1	117	3.3	-89.735041	35.271074
2	36	3.3	-89.732249	35.267592
3	24	3.3	-89.733610	35.266327
4	220	3.3	-89.718236	35.281946

I. CERTIFICATION: I certify, under penalty of law, that contaminant concentrations in the biosolids, pathogen reduction, vector attraction reduction, and other quality criteria of the biosolids stated in the regulations have been met or, if appropriate, will be met prior to land application of biosolids. I further certify that other information in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my own knowledge as well as the inquiry of the person(s) who manage the system, or those directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief, is true, accurate and complete. I further acknowledge that the facility or generator of biosolids described above is eligible for coverage under TDEC's General Permit for the Land Application of Biosolids. I am aware that there are significant penalties for submitting false information, including possibility of fines and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Name: Jim Atkinson Title: City Manager

Signature: 

Telephone: (901) 867 - 2717 Date Signed: 8 / 10 / 17

NOTE: In evaluating NOI forms, TDEC may request additional information to complete its review to determine the eligibility for coverage under TDEC's General Permit.

Submit the original completed and signed form to Water.Permits@tn.gov or:
 Biosolids NOI Processing - Division of Water Resources
 William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor
 Nashville, TN 37243-1102



BACKGROUND INFORMATION/QUESTIONS

FILL IN BELOW

WWTP NAME	Scotts Creek
WWTP NPDES PERMIT NUMBER	TN0078255
SITE NAME	Scotts Creek
COUNTY	Shelby
E.A.C.	
SITE TRACKING NUMBER	1
LABORATORY NAME	Waypoint Analytical
DATE OF ANALYSIS	2/14/17

SLUDGE/BIOSOLID ANALYSIS LABORATORY RESULTS

(Attached a copy of the laboratory analysis used for these calculations to this report)

TOTAL KJELDAHL NITROGEN (TKN)	44,417	mg/kg
AMMONIUM NITROGEN (NH ₄ -N)	4,380	mg/kg
NITRATE + NITRITE NITROGEN (NO ₃ -N + NO ₂ -N)	174	mg/kg
NITROGEN FROM SUPPLEMENTAL FERTILIZERS (If Appropriate)		lbs/acre
NITROGEN FROM IRRIGATION WATER (If Appropriate)		lbs/acre
NITROGEN FROM PREVIOUS CROP (Unless 2 is based on soil testing)		lbs/acre
OTHER (If Appropriate) Specify _____		lbs/acre

SELECT CROP TYPE

(SELECT ONLY ONE)

YES

1 - CORN (GRAIN) EXPECT YIELD 100 - 125 BUSHELS	<input type="checkbox"/>
2 - CORN (GRAIN) EXPECT YIELD 126 - 150 BUSHELS	<input type="checkbox"/>
3 - CORN (SILAGE) EXPECT YIELD 20 TONS	<input type="checkbox"/>
4 - SOYBEANS EXPECT YIELD 30 BUSHELS	<input type="checkbox"/>
5 - SOYBEANS EXPECT YIELD 40 BUSHELS	<input type="checkbox"/>
6 - SOYBEANS EXPECT YIELD 50 BUSHELS	<input type="checkbox"/>
7 - WHEAT EXPECT YIELD 40 BUSHELS	<input type="checkbox"/>
8 - SUMMER ANNUAL GRASS EXPECT YIELD 6 TONS (1 CUTTINGS)	<input checked="" type="checkbox"/>
9 - HYBRID HAY EXPECT YIELD 8 TONS (4 CUTTINGS)	<input type="checkbox"/>
10 - TALL FESCUE HAY EXPECT YIELD 3 TONS (2 CUTTINGS)	<input type="checkbox"/>
11 - ORCHARD GRASS HAY EXPECT YIELD 4 TONS (2 CUTTINGS)	<input type="checkbox"/>
12 - SORGHUM (GRAIN) EXPECT YIELD 60 BUSHELS	<input type="checkbox"/>
13 - COTTON EXPECT YIELD 1 BALE / ACRE	<input type="checkbox"/>
14 - COTTON EXPECT YIELD 1.5 BALE / ACRE	<input type="checkbox"/>

CROP TYPE (LBS N/ACRE/YEAR)

120

VOLATILIZATION FACTORS K_v

(SELECT ONLY ONE)

- 1 - ARE BIOSOLIDS LIQUID AND SURFACE APPLIED?
2 - ARE BIOSOLIDS LIQUID AND INJECTED INTO SOIL?
3 - ARE BIOSOLID DEWATERED AND APPLIED IN ANY MANNER?

YES

-

VOLATILIZATION FACTORS K_v =

1

MINERALIZATION RATE F_M

WHAT BIOSOLID PROCESS GENERATE THE FRACTION (F_M) OF ORGANIC NITROGEN? (SELECT ONLY ONE)

SELECT PROCESS

- NONE (Unstabilized)
ALKALINE STABILIZATION
AEROBIC DIGESTION
ANAEROBIC DIGESTION
COMPOSING

SELECTION CHOICE:

1 SELECTED

MINERALIZATION RATE F_M =

0.3

AGRONOMIC LOADING RATE

3.3

tons/acre

APPENDIX C



2790 Whitten Road, Memphis, TN 38133
Main 901.213.2400 ° Fax 901.213.2440
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2/21/2017

City of Lakeland
Mr. Spencer Smalley
10001 US Hwy 70
Lakeland, TN, 38002

Ref: Analytical Testing
Lab Report Number: 17-045-0256
Client Project Description: Sludge Testing

Dear Mr. Spencer Smalley:
Waypoint Analytical, Inc. received sample(s) on 2/14/2017 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Randy Thomas
Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

Alabama #40750	Louisiana #04015	VA NELAP #460181	Texas #T104704180-11-6	Arkansas #88-0650
Mississippi	California #2904	NC #415	Oklahoma #9311	Virginia #00106
Kentucky #90047	Tennessee #TN02027	EPA #TN00012	Kentucky UST #41	





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04135
 City of Lakeland
 Mr. Spencer Smalley
 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97449**
 Sample ID : **1**

Matrix: **Solids**
 Sampled: **2/14/2017 8:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	95.2	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	2980	mg/Kg - dry	521	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	8750	cfu/g - dry	208	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	43.8	mg/Kg - dry	20.8	1	02/16/17 19:08	BKN	9056
Nitrite (NO2-N)	<20.8	mg/Kg - dry	20.8	1	02/16/17 19:08	BKN	9056
Nitrate+Nitrite-N	43.8	mg/Kg - dry	20.8	1	02/16/17 19:08		9056
pH	7.0	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	4.80	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	55.8	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	43100	mg/Kg - dry	1040	1	02/20/17 14:11	CLP	4500NORGD-201:
Total Phosphorus	15400	mg/Kg - dry	104	1	02/15/17 21:08	CCR	6010C
Total Arsenic	<20.8	mg/Kg - dry	20.8	1	02/15/17 21:08	CCR	6010C
Total Cadmium	<2.08	mg/Kg - dry	2.08	1	02/15/17 21:08	CCR	6010C
Total Copper	533	mg/Kg - dry	5.21	1	02/15/17 21:08	CCR	6010C
Total Lead	16.1	mg/Kg - dry	6.25	1	02/15/17 21:08	CCR	6010C
Mercury (Total)	0.796	mg/Kg - dry	0.277	1	02/15/17 12:19	KKM	7471A
Total Molybdenum	5.58	mg/Kg - dry	5.21	1	02/15/17 21:08	CCR	6010C
Total Nickel	20.2	mg/Kg - dry	5.21	1	02/15/17 21:08	CCR	6010C
Total Potassium	1990	mg/Kg - dry	104	1	02/15/17 21:08	CCR	6010C
Total Selenium	<20.8	mg/Kg - dry	20.8	1	02/15/17 21:08	CCR	6010C
Total Zinc	715	mg/Kg - dry	10.4	1	02/15/17 21:08	CCR	6010C

**Qualifiers/
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



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04135
 City of Lakeland
 Mr. Spencer Smalley
 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97450**
 Sample ID : **2**

Matrix: **Solids**
 Sampled: **2/14/2017 8:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	95.9	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	3370	mg/Kg - dry	610	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	487	cfu/g - dry	243	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	56.1	mg/Kg - dry	24.4	1	02/16/17 19:17	BKN	9056
Nitrite (NO2-N)	<24.4	mg/Kg - dry	24.4	1	02/16/17 19:17	BKN	9056
Nitrate+Nitrite-N	56.1	mg/Kg - dry	24.4	1	02/16/17 19:17		9056
pH	7.0	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	4.15	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	61.0	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	48000	mg/Kg - dry	1220	1	02/20/17 14:14	CLP	4500NORGD-2011
Total Phosphorus	16600	mg/Kg - dry	122	1	02/15/17 21:12	CCR	6010C
Total Arsenic	<24.4	mg/Kg - dry	24.4	1	02/15/17 21:12	CCR	6010C
Total Cadmium	<2.44	mg/Kg - dry	2.44	1	02/15/17 21:12	CCR	6010C
Total Copper	595	mg/Kg - dry	6.10	1	02/15/17 21:12	CCR	6010C
Total Lead	16.4	mg/Kg - dry	7.32	1	02/15/17 21:12	CCR	6010C
Mercury (Total)	0.583	mg/Kg - dry	0.324	1	02/15/17 12:20	KKM	7471A
Total Molybdenum	6.10	mg/Kg - dry	6.10	1	02/15/17 21:12	CCR	6010C
Total Nickel	21.1	mg/Kg - dry	6.10	1	02/15/17 21:12	CCR	6010C
Total Potassium	2180	mg/Kg - dry	122	1	02/15/17 21:12	CCR	6010C
Total Selenium	<24.4	mg/Kg - dry	24.4	1	02/15/17 21:12	CCR	6010C
Total Zinc	800	mg/Kg - dry	12.2	1	02/15/17 21:12	CCR	6010C

**Qualifiers/
 Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



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 Mr. Spencer Smalley
 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97451**
 Sample ID : **3**

Matrix: **Solids**
 Sampled: **2/14/2017 8:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	95.8	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	3400	mg/Kg - dry	595	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	952	cfu/g - dry	238	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	80.2	mg/Kg - dry	23.8	1	02/16/17 19:26	BKN	9056
Nitrite (NO2-N)	28.1	mg/Kg - dry	23.8	1	02/16/17 19:26	BKN	9056
Nitrate+Nitrite-N	108	mg/Kg - dry	23.8	1	02/16/17 19:26		9056
pH	6.9	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	4.22	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	58.8	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	45500	mg/Kg - dry	5950	5	02/20/17 15:12	CLP	4500NORGD-201:
Total Phosphorus	14900	mg/Kg - dry	119	1	02/15/17 21:16	CCR	6010C
Total Arsenic	<23.8	mg/Kg - dry	23.8	1	02/15/17 21:16	CCR	6010C
Total Cadmium	<2.38	mg/Kg - dry	2.38	1	02/15/17 21:16	CCR	6010C
Total Copper	486	mg/Kg - dry	5.95	1	02/15/17 21:16	CCR	6010C
Total Lead	14.5	mg/Kg - dry	7.14	1	02/15/17 21:16	CCR	6010C
Mercury (Total)	0.490	mg/Kg - dry	0.317	1	02/15/17 12:22	KKM	7471A
Total Molybdenum	<5.95	mg/Kg - dry	5.95	1	02/15/17 21:16	CCR	6010C
Total Nickel	18.3	mg/Kg - dry	5.95	1	02/15/17 21:16	CCR	6010C
Total Potassium	2160	mg/Kg - dry	119	1	02/15/17 21:16	CCR	6010C
Total Selenium	<23.8	mg/Kg - dry	23.8	1	02/15/17 21:16	CCR	6010C
Total Zinc	660	mg/Kg - dry	11.9	1	02/15/17 21:16	CCR	6010C

**Qualifiers/
 Definitions**

DF Dilution Factor

MQL Method Quantitation Limit



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04135
 City of Lakeland
 Mr. Spencer Smalley
 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97452**
 Sample ID : **4**

Matrix: **Solids**
 Sampled: **2/14/2017 8:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	95.9	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	4590	mg/Kg - dry	610	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	9510	cfu/g - dry	243	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	195	mg/Kg - dry	24.4	1	02/16/17 19:36	BKN	9056
Nitrite (NO2-N)	89.8	mg/Kg - dry	24.4	1	02/16/17 19:36	BKN	9056
Nitrate+Nitrite-N	285	mg/Kg - dry	24.4	1	02/16/17 19:36		9056
pH	6.7	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	4.14	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	59.5	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	33900	mg/Kg - dry	1220	1	02/20/17 14:16	CLP	4500NORGD-2011
Total Phosphorus	15600	mg/Kg - dry	122	1	02/15/17 21:30	CCR	6010C
Total Arsenic	<24.4	mg/Kg - dry	24.4	1	02/15/17 21:30	CCR	6010C
Total Cadmium	<2.44	mg/Kg - dry	2.44	1	02/15/17 21:30	CCR	6010C
Total Copper	463	mg/Kg - dry	6.10	1	02/15/17 21:30	CCR	6010C
Total Lead	14.5	mg/Kg - dry	7.32	1	02/15/17 21:30	CCR	6010C
Mercury (Total)	0.378	mg/Kg - dry	0.324	1	02/15/17 12:23	KKM	7471A
Total Molybdenum	<6.10	mg/Kg - dry	6.10	1	02/15/17 21:30	CCR	6010C
Total Nickel	22.0	mg/Kg - dry	6.10	1	02/15/17 21:30	CCR	6010C
Total Potassium	2590	mg/Kg - dry	122	1	02/15/17 21:30	CCR	6010C
Total Selenium	<24.4	mg/Kg - dry	24.4	1	02/15/17 21:30	CCR	6010C
Total Zinc	632	mg/Kg - dry	12.2	1	02/15/17 21:30	CCR	6010C

**Qualifiers/
 Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



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04135
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 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97453**
 Sample ID : **5**

Matrix: **Solids**
 Sampled: **2/14/2017 8:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	96.0	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	4850	mg/Kg - dry	625	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	3250	cfu/g - dry	250	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	196	mg/Kg - dry	25.0	1	02/16/17 19:45	BKN	9056
Nitrite (NO2-N)	66.3	mg/Kg - dry	25.0	1	02/16/17 19:45	BKN	9056
Nitrate+Nitrite-N	263	mg/Kg - dry	25.0	1	02/16/17 19:45		9056
pH	6.9	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	4.01	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	66.1	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	43000	mg/Kg - dry	1250	1	02/20/17 14:17	CLP	4500NORGD-2011
Total Phosphorus	14200	mg/Kg - dry	125	1	02/15/17 21:34	CCR	6010C
Total Arsenic	<25.0	mg/Kg - dry	25.0	1	02/15/17 21:34	CCR	6010C
Total Cadmium	<2.50	mg/Kg - dry	2.50	1	02/15/17 21:34	CCR	6010C
Total Copper	423	mg/Kg - dry	6.25	1	02/15/17 21:34	CCR	6010C
Total Lead	11.2	mg/Kg - dry	7.50	1	02/15/17 21:34	CCR	6010C
Mercury (Total)	0.473	mg/Kg - dry	0.333	1	02/15/17 12:24	KKM	7471A
Total Molybdenum	<6.25	mg/Kg - dry	6.25	1	02/15/17 21:34	CCR	6010C
Total Nickel	16.0	mg/Kg - dry	6.25	1	02/15/17 21:34	CCR	6010C
Total Potassium	2490	mg/Kg - dry	125	1	02/15/17 21:34	CCR	6010C
Total Selenium	<25.0	mg/Kg - dry	25.0	1	02/15/17 21:34	CCR	6010C
Total Zinc	570	mg/Kg - dry	12.5	1	02/15/17 21:34	CCR	6010C

**Qualifiers/
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



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04135
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 10001 US Hwy 70
 Lakeland , TN 38002

Project Sludge Testing
 Information :

Report Date : 2/21/2017

Report Number : **17-045-0256**

REPORT OF ANALYSIS

Received : 2/14/2017

Lab No : **97454**
 Sample ID : **6**

Matrix: **Solids**
 Sampled: **2/14/2017 8:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	96.7	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Ammonia Nitrogen	7090	mg/Kg - dry	758	1	02/21/17 12:00	ZBD	4500NH3C-2011
Fecal Coliform	2730	cfu/g - dry	303	1	02/14/17 15:30	CLC	9222D-1997
Nitrate (NO3-N)	136	mg/Kg - dry	30.3	1	02/16/17 19:54	BKN	9056
Nitrite (NO2-N)	40.0	mg/Kg - dry	30.3	1	02/16/17 19:54	BKN	9056
Nitrate+Nitrite-N	176	mg/Kg - dry	30.3	1	02/16/17 19:54		9056
pH	6.8	s.u.		1	02/15/17 13:31	SAJ	9045D
Total Solids	3.29	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Volatile Solids	62.0	%	0.100	1	02/17/17 10:17	CJR	2540G-2011
Total Kjeldahl Nitrogen	53000	mg/Kg - dry	1520	1	02/20/17 14:18	CLP	4500NORGD-2011
Total Phosphorus	15500	mg/Kg - dry	152	1	02/15/17 21:39	CCR	6010C
Total Arsenic	<30.3	mg/Kg - dry	30.3	1	02/15/17 21:39	CCR	6010C
Total Cadmium	<3.03	mg/Kg - dry	3.03	1	02/15/17 21:39	CCR	6010C
Total Copper	455	mg/Kg - dry	7.58	1	02/15/17 21:39	CCR	6010C
Total Lead	13.4	mg/Kg - dry	9.09	1	02/15/17 21:39	CCR	6010C
Mercury (Total)	<0.403	mg/Kg - dry	0.403	1	02/15/17 12:26	KKM	7471A
Total Molybdenum	<7.58	mg/Kg - dry	7.58	1	02/15/17 21:39	CCR	6010C
Total Nickel	17.3	mg/Kg - dry	7.58	1	02/15/17 21:39	CCR	6010C
Total Potassium	2910	mg/Kg - dry	152	1	02/15/17 21:39	CCR	6010C
Total Selenium	<30.3	mg/Kg - dry	30.3	1	02/15/17 21:39	CCR	6010C
Total Zinc	645	mg/Kg - dry	15.2	1	02/15/17 21:39	CCR	6010C

**Qualifiers/
 Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit

Cooler Receipt Form

Customer Number: **04135**
Customer Name: **City of Lakeland**
Report Number: **17-045-0256**

Shipping Method

Fed Ex US Postal Lab Other :
 UPS Client Courier Thermometer ID: #8

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Number of coolers received	<input type="text" value="1"/>		
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)			<input type="checkbox"/> Low concentration EnCore samplers (48 hr)
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)			<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Any regulatory non-compliance issues will be recorded on non-compliance report.

Signature: Date & Time:



Kit ID:	0000076859
Initiated By:	Randy Thomas
Project Comment	

CHAIN-OF-CUSTODY

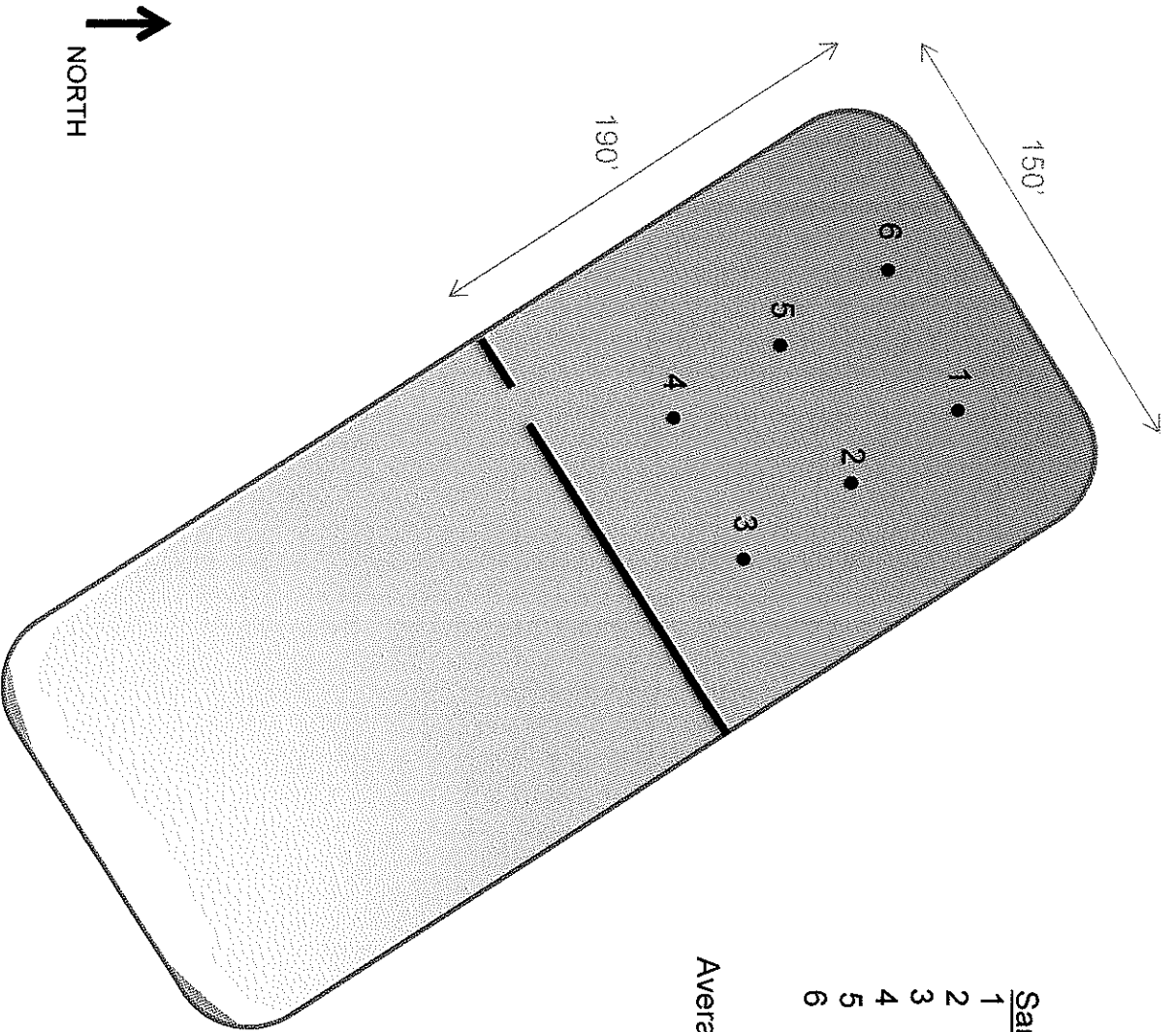
Company Name City of Lakeland	Company Number 04135	Client Project Manager/Contact Mr. Spencer Smalley	Purchase Order Number
Site Name	Project Number	<input type="checkbox"/> RUSH - Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed	Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other
LIMS Project ID Lakeland - Sludge Testing	Project Manager Phone #	Project Manager Email ssmalley@lakelandtn.org	Site/Facility ID #

Date	Time	Sample ID	Matrix	Grab/Comp	# of Cont	Container Type	Preservation	Analyses
2/14	8:10	1	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC
	8:15	2	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC
	8:20	3	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC
	8:25	4	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC
	8:30	5	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC
	8:35	6	Solids	G	1	Glass - 9oz	NONE	pH/Moist/TKN/PO4/K/As/Cd/Cu/Pb/Mo/Ni/Se/Zn/Hg/NH3/NO3NO2/TS/TVS/FC

For Laboratory Use Only			Sampled by (Name - Print)	Client Remarks/Comments				
Ice	Custody	Lab Comments	<i>Eddie Jackson</i>					
Y/N	Seals		Relinquished by: (SIGNATURE)	Date	Time	Received by: (SIGNATURE)	Date	Time
	Y/N		<i>Spencer Smalley</i>			<i>Spencer Smalley</i>	2/14/17	11:29
			Relinquished by: (SIGNATURE)	Date	Time	Received by: (SIGNATURE)	Date	Time
Blank/Cooler Temp			Relinquished by: (SIGNATURE)	Date	Time	Received by: (SIGNATURE)	Date	Time
<i>5.5 2 #8</i>			<i>Spencer Smalley</i>	<i>2/14/17</i>		<i>Spencer Smalley</i>	<i>2/14/17</i>	

Lakeland, TN WWTP Lagoon Grid Map

Sludge Sample Harvest Locations



<u>Sample Location</u>	<u>Depth</u>
1	8.5'
2	8.5
3	8.5
4	9.0
5	8.5
6	9.0

Average Lagoon Depth 8.67'

