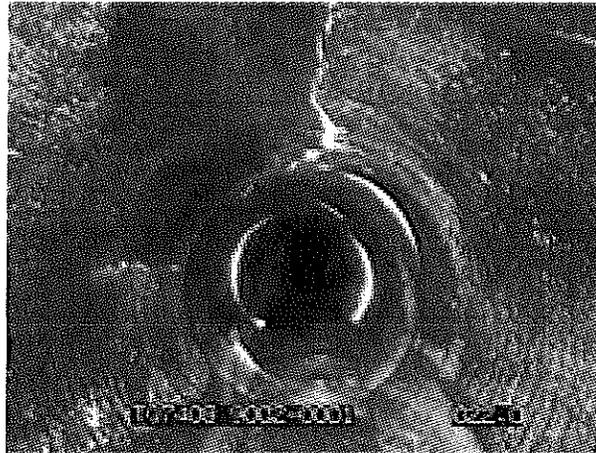
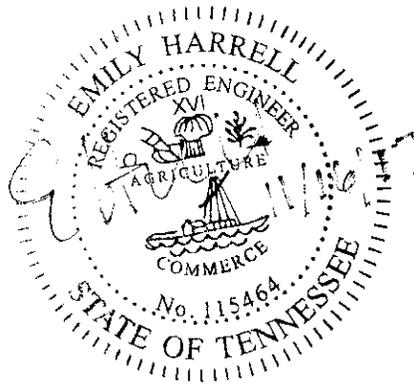


BID DOCUMENTS
FOR
FISCAL YEAR 2018
SANITARY SEWER VIDEO INSPECTION



City of Lakeland
November 2017

PROJECT MANUAL
FOR
FISCAL YEAR 2018
SANITARY SEWER IMPROVEMENTS



City of Lakeland
November 2018

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STANDARD
ADVERTISEMENT FOR BIDS
FOR
FISCAL YEAR 2018 SEWER VIDEO INSPECTION
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:

FISCAL YEAR 2018 SEWER VIDEO INSPECTION

Bids must be in one sealed envelope with statement thereon "BID ENCLOSED, FISCAL YEAR 2018 SEWER VIDEO INSPECTION" 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 No bid may be withdrawn for a period of thirty (30) days after the date set for opening thereof.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 1:00 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.

- 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.

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

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.

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: FY18 Sanitary Sewer Video Inspection

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 March 23, 2018 and completed and ready for final payment not later than March 30, 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
Fiscal Year 2018 Sanitary Sewer Video Inspection

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	Sanitary Sewer Video Inspection 8" Pipe	LF	36,632		
2	Sanitary Sewer Video Inspection 15" Pipe	LF	2,221		
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 FY18 Sanitary Sewer Video Inspection.

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 Fiscal Year 2018 Sanitary Sewer Video Inspections; 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 Fiscal Year 2018 Sanitary Sewer Video Inspection, 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 March 23, 2018 and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions by March 30, 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:

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

ATTEST:

OWNER:
CITY OF LAKELAND, TENNESSEE
A Municipal Corporation

By: _____

By: _____

Wyatt Bunker

Title: _____

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): FY18 Sewer Video Inspection

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:

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:

Fiscal Year 2018 Sanitary Sewer Video Inspection

B. Project Summary:

This project includes a digital video inspection of the sanitary sewer system within Stonebridge Subdivision. A map locating the sewer lines and manholes to be video inspected is included in Appendix A of the bid documents.

A general description of the work includes the following; however, this is not an exhaustive list:

- Conduct a digital video inspection on approximately 36,632 linear feet of 8-inch sanitary sewer pipe, 2,221 linear feet of 15” sanitary sewer pipe and 196 sanitary sewer manholes. Video inspection shall be conducted using a digital video camera and equipment especially for sewer inspection. All sewer inspection shall comply with the City of Lakeland’s specifications contained herein.
- All sanitary sewer lines have been cleaned by the City of Lakeland Sewer Department. The Lakeland Sewer Department will be available to the contractor during the video inspection should a line need additional cleaning.
- A report shall be provided to the Engineer upon completion detailing each inspection and shall include a DVD of all video inspections as well as digital photos of areas in need of repair. The report shall reference the manhole numbers shown on the enclosed map. A guideline for the report and DVD are outlined in the specifications contained herein.
- Temporary traffic control measures shall be used during work conducted in the roadway. One lane of roadway must remain open at all times.

C. Particular project requirements.

1. Apply for, obtain, and pay for permits when required to perform the work.
2. Field-verify dimensions indicated on drawings (when applicable) before fabricating or ordering materials. Do not scale drawings.
3. 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.

4. 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.
5. 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, curbside 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. Should the aggregate base material not be stable for paving operations, the paving contractor shall notify the city and move onto the next patch without incurring additional cost to the owner.
- 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 City Representative

- A. Construct all work in accordance with the lines and grades shown on the Drawings, and as designated by City Designee/Engineer (when applicable). City Designee may modify these lines and grades as provided in the General Conditions. Where the Contract Documents specify survey work to be provided by City Designee/Engineer, give 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 Emily Harrell PE, City Engineer at 867-2717.

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:

1. Sanitary facilities.
2. Drinking water.
3. Cleaning and trash removal.
4. First aid and Emergency Medical Services.
5. 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

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. Sanitary Sewer Video Inspection 8" Pipe

1. Measurement of this item shall be paid by lineal foot (LF) of sanitary sewer pipe inspected with digital video equipment. This item shall include furnishing all necessary equipment to conduct a video inspection, conducting a digital video inspection of sanitary sewer lines and manholes, furnishing a report detailing each inspection, furnishing a DVD of all inspections, and furnishing photographs of areas in need of repair. Temporary traffic control in the form of eighteen inch cones, barrels, and/or signage shall be included in this bid item. Payment shall be made by the contract unit price per Lineal Foot (LF) inspected.

B. Sanitary Sewer Video Inspection 15" Pipe

1. Measurement of this item shall be paid by lineal foot (LF) of sanitary sewer pipe inspected with digital video equipment. This item shall include furnishing all necessary equipment to conduct a video inspection, conducting a digital video inspection of sanitary sewer lines and manholes, furnishing a report detailing each inspection, furnishing a DVD of all inspections, and furnishing photographs of areas in need of repair. Temporary traffic control in the form of eighteen inch cones, barrels, and/or signage shall be included in this bid item. Payment shall be made by the contract unit price per Lineal Foot (LF) inspected.

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

SECTION 02550

SANITARY SEWER CLEANING AND INTERNAL INSPECTION

PART 1 – Description

A.01 Summary

- A. The work under this section consists of furnishing all labor, materials and equipment required to perform sewer line cleaning and closed circuit television inspection of sewer lines.
- B. Cleaning, root removal, and internal closed circuit television inspection work shall be performed by operators familiar with handling equipment employed. Contractor shall have a minimum of three (3) years experience with internal cleaning and inspection of sewer lines.
- C. Equipment used shall be in good working order and provide continuous operation during TV/Video inspection and cleaning. DVD shall be of good visual quality capable of slow motion and pausing without significant reduction of visual quality.
- D. Debris removal and disposal shall be done in accordance with all federal, state, and local standards.

PART 2 – Materials & Equipment

2.01 Submittals

- A. The Contractor shall submit to the Owner a list of prior work experience demonstrating the 3 year minimum experience required.
- B. The Contractor shall submit to the Owner a list of equipment, materials, and personnel to be used on the project, including all permits obtained prior to commencing with the work.
- C. The Contractor shall submit a list of root inhibiting chemicals with information on toxicity and hazardous nature of each chemical and manufacturer's recommended storage and handling information (MSDS).

2.02 Materials

A. Chemical Root Inhibitor

- 1. The chemical shall be mixed at a safe level of concentration and have the ability to remain active for a minimum of twelve (12) months.

2.03 Equipment

All equipment shall be approved by the Owner prior to commencement of cleaning.

A. Hydraulically Propelled Cleaning Equipment

1. The hydraulically propelled cleaning equipment shall be a movable dam type and be constructed in such a way that a portion of the dam be collapsed at any time during the cleaning operation to protect against flooding the sewer. The movable dam shall be equal in diameter to the pipe being cleaned and shall provide a flexible scraper around the outer periphery to insure removal of grease. If sewer cleaning balls or other equipment that cannot be collapsed are used, special precautions to prevent flooding of the sewers and public or private property shall be taken.

B. High Velocity Jet (Hydro-cleaning) Equipment

1. High-velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a selection of two or more high-velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 to 45 degrees in all size lines designated to be cleaned. Equipment shall also include a high-velocity gun for washing and scouring manhole walls and base. The gun shall be capable of producing flows from a fine stream to a solid stream.
2. The high-velocity jet equipment shall have the following minimum capabilities:
 - a. Minimum water storage capacity of six hundred (600) gallons
 - b. Minimum delivery capacity of 30 gallons per minute at 1000 pounds per square inch (psi). Booster pump (positive displacement) shall be capable of 300 to 2,000 psi with a pressure regulator.
3. All controls shall be located so that equipment can be operated above ground.

C. Digital Video Inspection Equipment

1. Digital Video Inspection Equipment shall be specifically designed and constructed for sewer line inspection. Camera shall have high-resolution color with adjustable iris focus. Focal distance shall be adjustable through range from 6 inches to infinity. Camera shall have pan and tilt capability. Integral lighting shall be suitable to provide illumination and clear video image of the entire periphery of the pipe. Variable intensity control of camera lights and remote control for focus and iris shall be located at monitoring station. Camera shall have the capability to operate in 100% relative humidity conditions. The system shall be capable of random access retrieval of inspection footage and displaying this footage on a computer screen with some level of plan schematic to show locations.

PART 3 – Execution

3.01 Sewer Cleaning

- A. Sanitary sewer lines and manholes shall be cleaned using equipment capable of removing sludge, dirt, sand, rock, grease, roots and other foreign materials and obstructions from sewer

lines and manholes. All material resulting from the sewer line cleaning shall be removed from the sewer lines and associated structures.

- B. Sewer line cleaning shall be performed by a high velocity jet cleaner (hydroflushing). The tools (including hydroflush nozzles), equipment, and methods employed by the Contractor shall be approved by the Owner. Any method other than hydroflushing shall have prior approval by the Owner.
- C. The Contractor shall install a trap in the outlet of the downstream manhole prior to cleaning each gravity sewer line containing sludge, dirt, sand, rock, grease, roots, and any other foreign materials. The Contractor shall remove all trapped materials from the manhole prior to the removal of the trap.
- D. Hydroflushing of all sewer lines shall include a minimum of two passes (each pass consists of running hydroflush cleaning tool manhole to manhole). The Contractor shall verify the hydroflush cleaning tool reached the next manhole on each pass.
- E. If the cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning reattempted. The cost of multiple manhole setups shall be borne by the Contractor. If successful cleaning cannot be performed from two manholes, or the equipment is unable to traverse the entire section, the Contractor shall notify the Owner.
- F. Sewer line showing evidence of being more than one-half filled with solids or if excessive root intrusion is present that would render hydroflushing an ineffective method of cleaning, the Contractor shall determine if other cleaning methods (bucket, hydroflush chain flail, or hydroflush root saw) should be utilized prior to hydroflushing.
- G. Roots shall be removed in designated sections where root intrusion is a problem. Roots shall not be a reason for reverse set-ups. Special attention should be used during the cleaning operation to ensure complete removal of roots from joints of 33" diameter and smaller pipes and to ensure 90%-95% removal on pipes 36" diameter and larger.
- H. The Contractor shall remove water from any sags greater than one (1) inch in depth using a high pressure jet cleaner before camera inspection.
- I. Service laterals protruding into the main line being inspected shall be cut off with a chain cutter or similar device if service lateral prevents complete inspection of line.
- J. Cleaning shall not precede televising by more than one (1) week. If more than one (1) week elapses, re-cleaning may be required prior to televising.
- K. Washwater containing waste and/or debris shall not be disposed of or discharged in streets, ditches, canals, rivers, etc. All spills shall be contained, removed and cleaned up immediately after occurrence by Contractor at no cost to the Owner, Spills shall be disinfected by an approved disinfection method. The Contractor shall immediately report all

spills to the Owner with a follow up written report of the spill within 24 hours. The report shall contain a full review of the occurrence and actions taken.

- L. Contractor shall be responsible for damage to public and private property as a result of cleaning operations. All damage caused by Contractor shall be repaired to original condition at the Contractor's expense.
- M. Acceptance of cleaning work in sewer line sections shall not be made until internal television inspection has been completed. If video inspection shows cleaning to be unsatisfactory, the Contractor shall be required to re-clean and re-inspect the sewer line at no additional cost to the Owner.

3.02 Internal Television Inspection

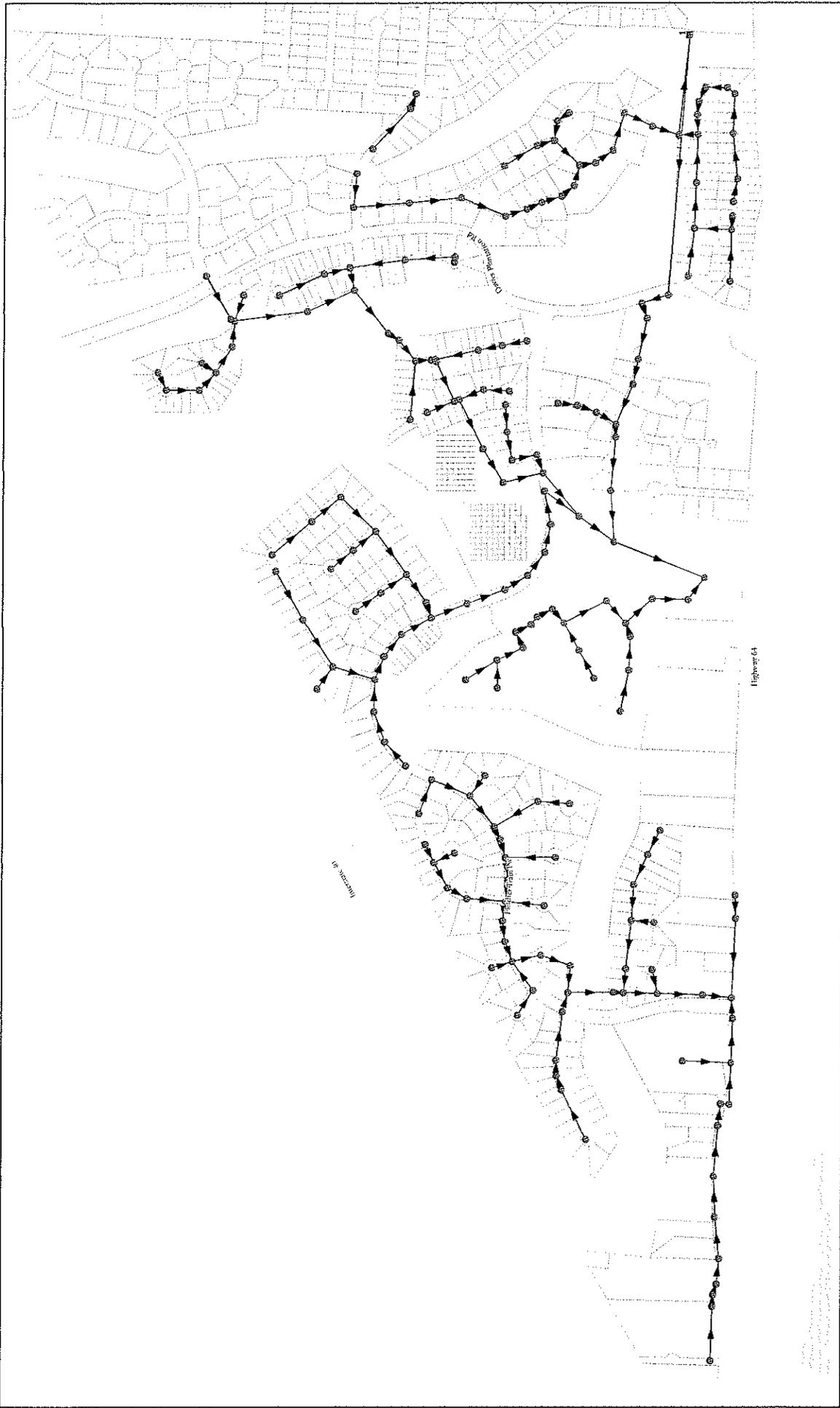
- A. The Contractor shall maintain necessary capabilities to perform digital video inspection of sewer lines ranging from 6-inches to 120-inches in diameter, with lengths not exceeding 1,000 feet. The digital camera used for the inspection shall be specifically designed and constructed for the inspection of the appropriate pipe size.
- B. The camera, monitor, and other components of the video system shall be capable of producing picture quality to the satisfaction of the Engineer; and if necessary, equipment shall be removed and no payment will be made for an unsatisfactory inspection.
- C. Inspection personnel shall investigate the interior condition of each sewer pipe and manhole to verify proper cleaning has been completed and identify all observed root intrusions, structural defects, pipe sags, exfiltration, infiltration, and inflow, as well as the general condition of the pipe and manhole.
- D. Video inspections shall be conducted within two (2) weeks of pipe cleaning. Pipes shall be recleaned by the Contractor without additional compensation if video inspection is delayed beyond two (2) weeks.
- E. Video inspection of sewer line shall be done one manhole section at a time. The camera shall be moved through the pipeline in either direction at a uniform rate, stopping when necessary to insure proper documentation of the sewer's condition. In no case shall the camera be pulled or propelled at speed greater than thirty (30) feet per minute. The camera height shall be adjusted such that the camera lens is always centered in the pipe being inspected.
- F. Concurrent video inspections shall be conducted only when video inspections are prohibited by observed structural deficiencies, blockages, and/or manhole accessibility limitations. If, during the inspection operation, the camera will not pass through the entire manhole section, the Contractor shall set up his equipment so that the inspection can be performed from the opposite manhole.
- G. When sewer line depth of flow at upstream manhole of sewer line section being worked is above maximum allowable for video inspection, flow shall be reduced to level shown below

by operation of pump stations, plugging or blocking of flow, or by pumping and bypassing of flow. Depth of flow shall not exceed twenty percent (20%) of the inside pipe diameter when performing video inspection.

- H. When flow in a sewer line is plugged, blocked, or bypassed, the Contractor shall take precautions to protect the sewer lines from damage that might result from sewer surcharging. The Contractor shall insure that sewer flow control operations do not cause flooding or damage to public or private property. Contractor is responsible for all damage to public and private property as a result of sewer flow control operations.
- I. If at any time the Contractor must leave the Public Right of Way or the Owner's easement area to perform work, he must first gain verbal approval from the Owner and written permission from the property owner being encroached on. The Contractor will be solely responsible for any damages or claims resulting from work done on private property.
- J. Inspection personnel shall produce color digital video footage of each inspection. Video footage shall contain the following printed information at the beginning of each inspection:
 - 1. Project Name
 - 2. Starting Manhole and Ending Manhole Numbers
 - 3. Date and Time
 - 4. Sewer Pipe Material
 - 5. Sewer Pipe Diameter
 - 6. Video Index Counter Number
 - 7. Camera Operator's Initials
- K. A distance meter shall be furnished on the video. The meter shall be checked using distances between manholes. Meter distances and actual distances shall be consistent. All distance measurements shall begin at the center of the starting manhole and end at the center of the ending manhole.
- L. Inspection personnel shall provide video footage of the interior of each sewer pipe and manhole as part of each inspection-providing clear and accurate images of all observed service connections, root intrusions, structural defects, pipe sags, exfiltration, infiltration, and inflow, as well as the general condition of each pipe and manhole.
- M. Video footage of each inspection shall draw attention to identified defects and potential problems.
- N. The Contractor is responsible for maintaining all data collected from each video inspection within a database management application. At a minimum, the database management application shall be developed using a relational database software package compatible with Microsoft Windows 2000 environment. The database management application shall be user friendly and provide flexibility in retrieval, sorting, querying, and reporting of stored records. The data must be stored in tables that are Microsoft Access compatible.

- O. The Contractor shall provide the Owner with one (1) DVD copy of the video inspection report presenting the output of the database management application, along with a brief summary of inspection activities. At a minimum, the output of the database application shall include a summary report sheet, cross-sectional view and plan view of all identified defects, service connections, and other relevant observations from each sewer line and manhole inspected. The inspection report shall clearly show the location in relation to the adjacent manhole of each observed root intrusion, structural defect, exfiltration, infiltration, inflow, beginning and end of pipe sag, building sewer, storm sewer connection, and other discernable features.

- P. Digital photographs shall be provided in a database format compatible with the Owner's database system. Digital photographs are required for each "immediate fix" or "major" defect in the lines. The digital photographs shall display the distance from the center of the manhole and shall be referenced to upstream and downstream manhole numbers. The digital photographs shall be provided to the Owner on a CD upon completion.



◉ Sewer Manhole — Sewer Pipe
 ◻ Lift Station



1 inch = 550 Feet
 0 550 1,100 Feet

FY18 Sanitary Sewer Video Inspection

CITY OF
LAKELAND