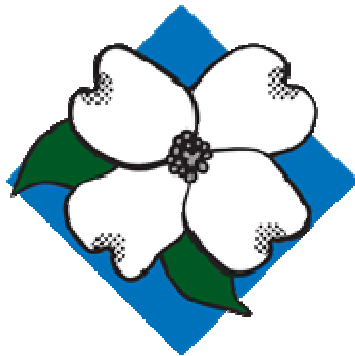


PROJECT MANUAL

for

SANITARY SEWER REAM &
RELINING (8" DIP)

BID #CPL2022-003
Flowery Branch, Georgia



Flowery Branch

PREPARED BY:



3011 Sutton Gate Dr., Suite 130
Suwanee, Georgia 30024
(770) 831-9000

CPL PROJECT NUMBER: 16531.00
April 20, 2022

FLOWERY BRANCH
CPL 16531.00

SANITARY SEWER REAM & RELINE (8"DIP)
PROJECT DIRECTORY SECTION 00 001-1

OWNER **CITY OF FLOWERY BRANCH** (770) 967-6371
PO Box 757
5410 Pine Street
Flowery Branch, GA 30542

Hon. Ed Asbridge – Mayor

PRIMARY CONSULTANT:

ENGINEER **CLARK PATTERSON LEE** (770) 831-9000
3011 Sutton Gate Drive, Suite 130 FAX (770) 831-9243
Suwanee, Georgia 30024

Rich Edinger, P.E. – Vice President
Larry Genn, P.E. – Civil Engineer

FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)
BID NUMBER: #CPL2022-003, FLOWERY BRANCH, GEORGIA

The City of Flowery Branch is soliciting competitive sealed bids from qualified contractors for:

FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

Sealed bids will be received by the City of Flowery Branch, 5410 Pine Street, Flowery Branch, Georgia 30542, until 2:00 p.m. local time on Friday, June 24, 2022. Any bid received after 2:00 p.m. will not be accepted. Bids will be privately opened by the city. The bid envelope must be marked on the outside with Bid Number, name of Bidder, and the Bid Date.

A PRE-BID MEETING will be held at the City of Flowery Branch City Hall, PO Box 757, 5410 Pine Street, Flowery Branch, GA 30542 on Wednesday, June 15, 2022, at 10:00 AM.

Work required under this Contract includes furnishing materials, labor, equipment, etc. for the Reaming & Relining of approximately 480 LF 8" DIP with Cast in Place Piping (CIPP), as well as rehabilitation of 3 existing sanitary sewer manholes in accordance with provided construction documents.

Bid Packages are available by contacting:

CPL – Attn: Beth Farmer
3011 Sutton Gate Drive, Suite 130
Suwanee, GA 30024
Email: bmfarmer@cplteam.com
PH: 770-831-9000

Bids shall be entered on a **UNIT PRICE** basis and as described in the project manual.

Bids in the case of Corporations not chartered in Georgia, must be accompanied by proper certification stating that said Corporation is authorized to do business in the State of Georgia.

No Bidder may withdraw his Bid within ninety (90) days after the actual date of the opening thereof.

All Bidders are required to submit a Bid Bond, or a certified check made payable to the City of Flowery Branch in the amount of five percent (5%) of the total amount bid. The successful bidder will be required to furnish a contract performance bond and payment bond in the amount of one hundred percent (100%) of the total amount bid and provide insurance coverage as required by the contract documents. The Bid Bond or certified check must be enclosed in the envelope with the sealed bid.

Bonding Company must be licensed to do business in Georgia, licensed to do business by the Georgia Secretary of State, authorized to do business in Georgia by the Georgia Insurance Department, listed in the Department of the Treasury's Publication of Companies Holding Certificates of Authority as Acceptable Surety on Federal Bonds and as Acceptable Reinsuring Companies and have an A.M. Best rating of A-, Class V or higher.

The Owner will award the Contract to the lowest "qualified" bidder, subject with the Owner's right to reject any or all bids, to waive technicalities, and to make an award deemed in its best interests.

CITY OF FLOWERY BRANCH

SECTION I
INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS:

- 1.1 The terms used in Instructions to Bidders and defined in General Conditions (Section G) shall have meanings assigned to them in General Conditions.
- 1.2 The term "Successful Bidder" means the Bidder to whom the Owner awards or expects to award the contract.

2. COPIES OF BID DOCUMENTS:

- 2.1 Bid Document Package may be available in advance to contractors and other interested parties at the cost and location stipulated in the INVITATION TO BID.
- 2.2 Complete sets of Bid Documents shall be used in preparing Bids. The Owner assumes no responsibility for errors or misinterpretations resulting from using incomplete sets of Bid Documents.
- 2.3 The Owner, in making Bid Documents available on the above terms, does so only to obtain Bids on Work and does not confer license or grant for any other use.
- 2.4 Any part of the Bid Documents may be modified by Addenda.

Where forms are provided, **THEY MUST BE USED WITHOUT SUBSTITUTION!** Use of forms other than those provided by the City shall constitute a non-responsive Bid and shall be rejected.

NOTE: Bidder must submit one original and one copy of Bid Documents to include: Bid Form; Instructions to Bidders; Bidder's Affidavit; Non-Collusion Affidavit; and Bid Bond.

3. QUALIFICATIONS OF BIDDERS:

- 3.1 The City may make any investigations deemed necessary to determine Bidder's ability to perform the Work, and Bidder shall furnish all information and data requested by the City. The City reserves right to reject any bid from any Bidder that the City considers not properly qualified to carry out Contract obligations or able to satisfactorily complete the Work on schedule.
- 3.2 If Bidder does not have offices in the State of Georgia, such Bidder shall designate a proper agent in the State of Georgia on whom service can be made in the event of litigation.

4. EXAMINATION OF BID DOCUMENTS AND SITE:

- 4.1 Before submitting Bid, each Bidder shall: (a) examine the Bid Document Package thoroughly; (b) visit the site to become familiar with local conditions affecting cost or Work progress or performance; (c) become familiar with federal, state, and local laws, ordinances, rules, and regulations affecting cost or Work progress or performance; (d) study and carefully correlate Bidder's observations with the Bid Document Package; and, (e) notify The Engineer concerning conflicts, errors, or discrepancies in Bid Document Package.
- 4.2 On request, The Engineer may provide each Bidder access to the site to conduct investigations and tests that Bidder deems necessary in order to submit Bid subject to easement acquisitions and existing conditions.
- 4.3 Bid submission will constitute **incontrovertible** representation that Bidder understands and has complied with requirements contained in this Article 4, and that Bidder has read and understood the Bid Document Package and hereby stipulates that the documents are sufficient in scope and detail to indicate and convey understanding for terms and conditions in order to perform Work.

5. ADDENDA AND INTERPRETATIONS:

- 5.1 Questions concerning meaning or intent of Bid Document Package shall be directed in writing to Larry Genn at lgenn@cplteam.com. Replies will be issued by Addenda mail or delivered to parties recorded by the City as having received Bid Document Package. Questions received less than seven (7) business days prior to date for opening Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 5.2 Addenda may be issued to modify Bid Document Package as deemed necessary by the City.

6. BID SECURITY:

- 6.1 Each bid shall be accompanied by Bid Security made payable to Owner in the amount equal to five percent (5%) of the Bidder's maximum Bid Price. Bid Security shall be cashier's check or Bid Bond issued by Surety meeting requirements contained in paragraph 23 below. **Bid bond must be on City provided form found in bid package.** Failure to use City forms may constitute a non-responsive bid and may be rejected.
- 6.2 Bid Security for Successful Bidder will be retained until Bidder has executed Agreement and furnished required payment and performance bonds. If Successful Bidder fails to furnish the qualifications submittals or fails to execute and deliver Agreement and furnish required Payment and Performance Bonds within fifteen (15) calendar days after Notice of Award, Owner may annul Notice of Award and Bidder's Bid Security will be forfeited.

Bid Security, for any Bidder that the City believes to have reasonable chance to receive award, may be retained by Owner until the ninety-first (91st) day after

Bid opening. If Notice of Award is issued within ninety (90) calendar days after Bid opening, Bid Security for Bidder receiving Notice of Award may be retained by Owner up to ninety (90) calendar days after Notice of Award.

- 6.3 Bid Bond shall be issued by company having a registered agent in State of Georgia and shall comply with the additional requirements of paragraph 23 below.

7. CONTRACT TIME:

The Work shall be completed within sixty (60) consecutive calendar days. Time can be extended to allow for relining material manufacturing.

8. EXAMINATION OF BID PLANS AND SPECIFICATIONS:

Bidders are advised to carefully examine the Bid Plans and Specifications for the proposed Work. The Bid Plans indicate the surface and underground structures likely to affect the prosecution of the Work insofar as they have been determined, but the information indicated is not guaranteed as being correct and complete. Bidders are expected to examine the Bid Plans and the location of the Work, verify all information with authorities concerned, and judge for themselves all the circumstances affecting the cost of the Work and the time required for its completion, and shall assume all patent and latent risks in connection therewith.

9. BID BOND FORFEITURE:

The Successful Bidder, upon his failure or refusal to execute and deliver the Contract and Bonds required within fifteen (15) calendar days after receipt of Notice of Award, shall forfeit to the Owner, as penalty for such failure or refusal, the security deposited with Bid.

Provisions for penalty are set forth in the Advertisement for Bid, Bid Documents, and Specifications (including General Conditions).

10. SUBSTITUTE OR "OR EQUAL" TERMS:

- 10.1 The Contract, if awarded, will be based on material and equipment described in Plans or specified in Specifications without consideration for possible substitute or "or equal" items. Where indicated in Plans or specified in Specifications, substitute or "or equal" material or equipment may be furnished or used by Contractor, **if acceptable to the Engineer**. Application for substitute or "or equal" items will be considered by the Owner until seven (7) calendar days **prior** to date for opening Bids.

Procedure for submitting application and consideration by the Engineer is set forth in General Conditions and may be supplemented in Paragraphs 11.2 and 11.3 following.

- 10.2 Materials or equipment specified or described in Bid Document Package by proprietary name or by naming a particular supplier are intended to establish type, function, and quality required. Unless name is followed by words

indicating no substitution is permitted, materials or equipment from other suppliers may be accepted by the Engineer **if sufficient information is submitted by Bidder** to allow the Engineer to determine material or equipment proposed is equivalent or equal to named material or equipment. Bidders shall make written application to the Engineer for proposed substitute material or equipment, and shall certify that the proposed substitute material or equipment will perform adequate functions and achieve results called for by general design, be similar and equal substance to item specified, and be suited to same use as specified material or equipment. Application shall state that the Engineer's acceptance of proposed substitute will not prejudice Contractor's achieving Substantial Completion on time, will or will not require changes to Contract Documents to adapt design to proposed substitute, and will or will not require payment for license fee or royalty. Bidder shall indicate acceptance of responsibility for all costs of redesign, which will be required through approval of Bidder's application.

Variations for proposed substitute from item specified will be identified in application and available maintenance, repair, and replacement service will be indicated.

- 10.3 Bidders may propose substitute construction means, methods, sequences, techniques, or procedures for specific construction means, methods, techniques, sequences, or procedures indicated in or required by Bid Document Package. Bidders shall submit sufficient information to allow the Engineer to determine substitute proposed is equivalent to means, method, sequence, technique, or procedure indicated or required by Bid Document Package. Procedure for review by the Engineer will be similar to method provided in Paragraph 11.2 above.
- 10.4 The Engineer will be allowed reasonable time to evaluate each proposed substitute. No application for substitute will be considered later than seven (7) calendar days prior to bid opening date. The Engineer will be sole judge concerning proposed substitute acceptability.

11. SUBCONTRACTORS, SUPPLIERS AND OTHERS:

- 11.1 Each Bid shall identify names and addresses for subcontractors, suppliers, and other persons and organizations furnishing material and equipment, or Bid will be considered non-responsive. The Bidder is cautioned that any person, firm or other party to whom it is proposed to award a subcontract under this Contract must meet the same conditions of experience, competent personnel and workman's compensation insurance as the Bidder.

If requested by the Engineer, the Successful Bidder and any other Bidder shall, within seven (7) calendar days after request, submit to the Engineer experience statement with pertinent information for similar projects and other qualifications for each subcontractor, supplier, person, and organization. If the Engineer, after due investigation has reasonable objection to any proposed subcontractor, supplier, person, or organization, the Engineer may, before giving Notice of Award, request Successful Bidder to submit acceptable substitute without increase in Contract Price or Contract Time. If Successful Bidder declines to make substitution, the Engineer may elect not to award contract to Bidder.

Bidder's declining to make substitution will not constitute grounds for sacrificing Bid Security.

- 11.2 Procedures for approving Subcontractors after executing Agreement are described in the General Conditions. No subcontractors may be employed without the specific written authorization of the Engineer.
- 11.3 No Contractor will be required to employ subcontractor, supplier, person, or organization against whom Contractor has reasonable objection.

12. NOTICE OF SPECIAL CONDITIONS:

Attention is particularly called to those parts of the Specifications (including General Conditions) which deal with the following:

- a. Insurance Requirements

13. BID FORM:

- 13.1 Bid Form is included in the Bid Document package purchased by the Bidders.
- 13.2 Bid Forms shall be completed and submitted in duplicate.
- 13.3 Bids by corporations shall be executed in corporate name by president or vice-president (or other corporate officer accompanied by evidence indicating officer has authority to sign) and corporate seal shall be affixed and attested by secretary or assistant secretary. Corporate address and state of incorporation shall be shown below signature. If Bid is executed by someone other than president or vice-president, attach to Bid certified corporate resolution by board of directors authorizing person to execute Bid for Corporation.
- 13.4 Bids by partnerships shall be executed in partnership name and signed by partner, whose title shall appear under signature and official partnership address shall be shown below signature.
- 13.5 If requested, person signing Bid for corporation or partnership shall produce evidence satisfactory to Owner indicating person's authority to bind corporation or partnership.
- 13.6 Names shall be typed or printed below signature.
- 13.7 Bid shall contain acknowledgement Bidder has received Addenda (Addenda numbers shall be filled in on Bid Form).
- 13.8 Address and telephone number for communications regarding Bid shall be shown.
- 13.9 Bidder must furnish, in his Bid (if not furnished with Pre-Qualification Package), summary information relative to the facilities, ability, and financial resources available for the fulfillment of the Contract.

14. QUANTITIES OF WORK:

The quantities of Work shown on the drawings are approximate and are assumed solely for comparison of the proposals. They are not guaranteed to be accurate statements or estimates of quantities of Work that are to be performed under the Contract, and any departure, therefrom will not be accepted as valid grounds for any claim for damages, for extension of time or for loss of profits; nor will any additional payments other than that bid, be made regardless of the actual quantities required or ordered to complete the Work.

15. SUBMISSION OF BIDS:

- 15.1 Bids shall be submitted before time and at place indicated in Advertisement for Bid and shall be submitted in sealed envelope with the following notation on the face:

BID NUMBER CPL2022-003
FLOWERY BRANCH
SANITARY SEWER REAM & RELINE (8" DIP)
NAME OF BIDDER: _____
DATE DUE DATE: Friday, June 24, 2022 at 2:00 p.m.

If Bid is sent through mail or other delivery system, sealed envelope shall be enclosed in separate envelope with same notations as above on face.

- 15.2 Each Bid shall contain following documents in completed form (City forms must be used without substitution):

1. Bid Form
2. Bidder's Affidavit
3. Non-Collusion Affidavit
4. Bid Security (Surety Bond on City provided Form or Certified or Cashier's Check)
5. Power of Attorney (Surety Bonds only)
6. Corporate authority to execute Bid (required for any corporate officer other than president or vice-president)

- 15.3 More than one Bid received for same work from individual, firm, partnership, corporation, or association under same or different names will not be considered. Reasonable grounds for believing any Bidder is interested in more than one Bid for same work will cause Owner to reject all Bids from Bidder. If Owner believes collusion exists among Bidders, Bids from participants in collusion will not be considered.

- 15.4 Conditions, limitations, or provisions attached by the Bidder to the Bid Forms may cause its rejection. Bids containing Items not included in the form of Bid will be considered irregular.

16. MODIFICATION AND WITHDRAWAL OF BIDS:

- 16.1 Withdrawal Prior to Time for Receiving Bids: Bids may be modified or withdrawn by appropriate document duly executed (in manner Bid must be executed) and delivered to place where Bids are to be submitted at any time prior to deadline for submitting Bids. Bid Withdrawal will not prejudice Bidder's rights to submit new Bid prior to Bid Date and Time.
- 16.2 Withdrawal After Time for Receiving Bids: After period for receiving Bids has expired, no Bid may be withdrawn, modified, or explained except as provided for in paragraph 18 below.

17. OPENING OF BIDS:

Bids will be opened publicly at the time and place set forth in the INVITATION TO BID and read aloud. Abstract listing amount for Base Bids and major alternates will be made available after Bid opening.

- 17.1 After Bid opening Bidder has up to twenty-four (24) hours to notify the City that Bidder made an obvious error in Bid calculation. Bid Bond withdrawal for this reason shall be requested in writing within this same twenty-four (24) hour period. Said written request shall be accompanied by sufficient documentation to demonstrate the origin and composition of the "obvious error." Bid Bond may not be withdrawn for any other reason.

18. BIDS TO REMAIN OPEN:

Bids shall remain open for acceptance by Owner for ninety (90) calendar days after Bid opening. Owner may, at its sole discretion, release any Bid prior to that date.

19. AWARD OF CONTRACT:

- 19.1 To extent permitted by applicable state and federal laws and regulations, Owner reserves the right to reject any and all Bids, to waive any and all informalities, and to disregard nonconforming, non-responsive, or conditional Bids. Bids may be considered irregular and subject to rejection if they show serious omission, unauthorized form alterations, use unauthorized forms, unauthorized alternate bids, incomplete or unbalanced unit prices, or other irregularities. Discrepancies between words and figures will be resolved in favor of correct sum. Any mistake which is obviously a clerical one, such as an error in price extension, or in placement of decimal points, reversal of prices, FOB destination, FOB point of origin, etc., may be corrected by the purchasing authority after verification is made by the bidder. However, under no circumstances can unit prices be changed.
- 19.2 Contract will be awarded by Owner pursuant to applicable law. Nothing contained herein shall place duty upon Owner to reject bids or award contract based upon anything other than Owner's sole discretion as described herein.
- 19.3 The City may consider qualifications and experience for subcontractors, suppliers, persons, and organizations proposed for Work.

- 19.4 The City may conduct investigations deemed necessary to assist in evaluating Bids and to establish responsibility, qualifications, and financial ability for Bidders, proposed Subcontractors, persons, and organizations to do Work. Owner reserves right to reject Bid from any Bidder not passing evaluation to Owner's satisfaction.
- 19.5 One contract for Work will be awarded, if award is made, based upon Base Bid to lowest responsible, responsive Bidder. Alternate Bids will not be considered as basis for award unless specifically stated on the Bid Form. Successful Bidder will be required to perform Work as Prime Contractor. Work performed by Contractor shall be 50% minimum. No Contract assignment or subcontracting will be allowed without written permission from the Engineer.
- 19.6 The Successful Bidder will be required to furnish a Performance and Payment Bond, Each in a sum not less than one hundred percent (100%) of the amount of the Contract. The Bonds shall be that of an approved surety meeting the requirements as noted in paragraphs 6 and 24 herein.
- 19.7 If at any time after the execution and approval of the Contract and of the Surety Bonds as required in the Bid Advertisement, the Owner shall deem any of the Sureties upon such Bonds to be unsatisfactory, or such Bonds to be inadequate security for the Owner, the Contractor shall, within five (5) calendar days after notice from Owner to do so, furnish new or additional Contract Bonds, in form and sum, and signed by such Sureties who all shall be satisfactory to the Owner. No further payment will be deemed due nor will any further payment be made to the Contractor unless such new or additional Bonds are furnished and approved. The premium on such Bonds shall be paid by the Contractor.

Failure of the Contractor to submit approved Performance and Payment Bonds within the required five (5) calendar days shall, at the discretion of the Owner, constitute a forfeiture of the Bid Bond.

20. SUBMITTALS BY SUCCESSFUL BIDDER:

- 20.1 Owner intends to award contract to Bidder competent to perform and complete Work in satisfactory manner. Owner will require Successful Bidder to submit, within seven (7) calendar days after receiving written request from the Engineer and prior to contract award, Preliminary Progress Schedule and Schedule of Values, as set forth below.
- 20.2 Preliminary Progress Schedule shall be submitted in triplicate and include time-scaled schedule and narrative in accordance with appropriate formats established in the Engineers' written request for schedules. Activities in schedule shall show order Successful Bidder proposes to perform Work within constraints and sequencing conditions set forth in Specification (including General Conditions) and shall indicate starting and completion dates for key milestones and Work pertaining to each Specifications division within each major structure or geographical area on site. Activities shall identify significant submittals and approvals, major equipment deliveries, equipment testing, Owner's responsibilities, affected utilities, and other similarly involved third parties.

- 20.3 Schedule of Values shall include Bid itemization by major structures or Work areas.
- 20.4 Successful Bidder and surety, if any, agree any delays within Bidder's control in delivering submittals shall constitute request by Bidder for time extension and Bid shall remain open for Owner's acceptance. If Owner agrees to time extension, Bidder shall comply with Submittal Requirement within five (5) additional calendar days. At Owner's option, failure by Successful Bidder to deliver submittals within extended period will void Bid evaluation and will constitute proof Successful Bidder has abandoned Bid, Bid Security may be declared forfeited to Owner as liquidated damages, and Work may be awarded to Another Bidder.

21. BUSINESS LICENSE:

Successful Bidder's submittals shall include a copy of Bidder's business license.

22. TAXES:

Contractor shall pay applicable sales, consumer, use, and other similar taxes required by law. Contractor is responsible for reviewing pertinent state statutes involving sales tax and complying with requirements.

The Contract prices for articles, materials, or equipment names herein are subject to increase by the amount of any additional tax or taxes affecting the articles, materials or equipment involved in the Contract imposed by or under the authority of the Federal or State Government and passed or taking effect after the receipt of Bids, and shall continue in effect during such time as such tax or taxes are lawfully collectible; provided, however, that in the event of such increase in cost, the claim shall be presented within thirty (30) days and supported by evidence of such additional tax, satisfactory to the City Attorney.

23. QUALIFICATIONS OF SURETY COMPANIES:

In order to be acceptable to Owner, surety company issuing Bid Guaranty Bonds or 100% Performance/Payment bonds as required in Bid Advertisement shall meet and comply with following minimum standards:

- 23.1 Bonding Company must be licensed to do business in Georgia by the Georgia Secretary of State, authorized to do business in Georgia by the Georgia Insurance City, listed in the City of the Treasury's Publication of Companies Holding Certificates of Authority as Acceptable Surety on Federal Bonds and as Acceptable Reinsuring Companies and have an A.M. Best rating of A-, Class VI or higher.
- 23.2 All bonds must be submitted on forms provided by the City and agencies providing bonds and insurance must provide proof that they meet the criteria outlined in the bid and contract documents.
- 23.3 Surety shall be admitted to do business in State of Georgia and shall be registered to provide such surety the State of Georgia Insurance Commissioner.

- 23.4 Attorneys-in-fact who sign bid bonds or performance/payment Bonds shall file with bond certified power of attorney to sign bond.
- 23.5 Surety company agents shall list name, address, and telephone number on bonds.
- 23.6 Performance and payment Bonds shall extend twelve (12) months beyond date of final payment and shall contain waiver for alteration to Contract terms, time extensions, or forbearance on Owner's part.

24. EXECUTION OF WRITTEN CONTRACT

Successful Bidder will be required to sign written contract identified in bid package as Agreement. Unsigned Agreement will be submitted to Successful Bidder either prior to or along with the Notice of Award. The Contractor shall sign and deliver the fully executed Agreements to Owner with all required bonds within ten (10) calendar days following receipt of Agreement forms, (unless otherwise stipulated by the Owner).

25. AREA OFFICE:

If required by the Engineer, the Contractor will be required to establish an office and an equipment and spare parts storage yard within Gwinnett County to conduct this work and must arrange to cope with any emergency that may arise in connection with the Work on a twenty-four (24) hour per day, seven (7) day per week basis.

26. PROTESTS:

Owner is responsible for resolving protests concerning contract award, claims, disputes, alleged license fees, and other related procurement matters in accordance with sound business judgment and good administrative practice. Following procedures shall be used for this purpose:

- 26.1 Any party with direct financial interest adversely affected by Owner's procurement decision shall file protest under this article or be barred further relief.
- 26.2 Protest shall: (a) be made in writing, oral protests will not be permitted; (b) adequately state basis for protest and relief requested; and (c) be received by Owner within seven (7) calendar days from date basis for protest was, or should have been, known.
- 26.3 Owner may defer protested procurement upon receiving procedurally adequate protests, provided in any even awarding contract, subcontract, or procurement for sub item may be permitted, at Owner's sole discretion, where award will not materially affect resolving protest.
- 26.4 Protest shall be limited to: (a) issues arising from procurement provisions contained in Specifications; and (b) state or local law. No protest may be filed with respect to basic project design.
- 26.5 City Attorney will establish procedures for resolving protests. Owner will rely for protest resolution on decisions issued under Georgia law, as well as decisions issued under Georgia law, as well as decisions issued by other states, Federal

courts, U.S. Comptroller General, or other Federal agencies with extensive procurement expertise, if state law is not clearly established.

27. BIDDER'S ACKNOWLEDGEMENT:

The undersigned bidder acknowledges all requirements outlined in the above "Instructions to Bidders Package" and all documents referred to therein. This signed form must accompany the completed bid form submitted at the time of bid.

SIGNATURE: _____
(President, Vice President or
Corporate Officer)

DATE: _____

PRINTED NAME: _____

TITLE: _____

ATTESTED BY: _____
(Secretary of Corporation)

DATE: _____

PRINTED NAME: _____

TITLE: _____

SEAL

(Corporate Seal Required if Bidder is a Corporation)

COMPANY NAME:

ADDRESS:

CITY: _____ STATE: _____ ZIP: _____

TELEPHONE NO:

END OF SECTION 00 100

FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

BID NUMBER CPL2022-003

BID DATE: JUNE 24, 2022

SUBMITTAL DATE: _____

BY: _____
(Bidder)

PROJECT DESCRIPTION: The project **includes furnishing materials, labor, equipment, etc. for the Reaming & Relining of approximately 480 LF 8" DIP with Cast in Place Piping (CIPP), as well as rehabilitation of 3 existing sanitary sewer manholes in accordance with provided construction documents. Effort will include erosion control measures.**

THIS BID IS SUBMITTED TO: City of Flowery Branch, Georgia (hereinafter called Owner) acting through its City Council.

A. Undersigned Bidder offers and agrees to enter into Agreement with Owner, in accordance with the instructions, requirements and forms included in Bid Document Package (including the Invitation to Bid and Instructions to Bidders Package), and to complete all Work for the Bid Price and within required calendar days, all in accordance with the Bid Document Package.

Bidder accepts terms and conditions contained in Bid Document Package including without limitation those dealing with Owner's time for accepting Bid and disposition of Bid Security.

In submitting this Bid, Bidder makes representations required by Instructions to Bidders and further warrants and represents:

Bidder has examined Bid Document Package, including Invitation for Bids and Instructions to Bidders, and following addenda:

No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____
No. _____	Dated _____	No. _____	Dated _____

Bidder has examined site and locality where the Work is to be performed and legal requirements (federal, state, and local laws, ordinances, rules, and regulations) and conditions affecting Work cost, difficulty, progress, or performance and has made independent investigations as Bidder deems necessary.

B. Bidder has carefully studied reports and drawings indicating subsurface conditions and drawing depicting physical conditions as identified in General Conditions and accepts determination concerning technical data contained in reports and drawings on which Bidder is entitled to rely.

C. Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) examinations, investigations, explorations, tests, and studies (in addition to or to supplement those referred to in "B" above) pertaining to subsurface or physical conditions at site or otherwise affecting

cost, progress, performance, or furnishing Work as Bidder considers necessary for performing or furnishing Work at Contract Price, within Contract Time, and in accordance with terms and conditions contained in Bid Document Package, including specifically provisions stated in General Conditions and no additional examinations, investigations, explorations, tests, reports, or similar information or data are or will be required by Bidder.

- D. Bidder has reviewed and checked Plans and data shown or indicated on Bid Document Package with respect to existing underground facilities at or contiguous to site and assumes responsibility for accurately locating underground facilities. No additional examinations, investigations, explorations, tests, reports, or similar information or data concerning underground facilities are or will be required by Bidder in order to perform and furnish Work at Contract Price, within Contract Time, and in accordance with terms and conditions contained in Bid Document Package, including specifically provisions stated in General Conditions.
- E. Bidder has correlated results from observations, examinations, investigations, explorations, tests, reports, and studies with terms and conditions contained in Bid Document Package.
- F. Bidder has given Owner written notice concerning conflicts, errors, or discrepancies discovered in Bid Document Package and written resolution by Owner is acceptable to Bidder.
- G. This Bid is genuine and not made in interest of or for any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules produced by any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

Bidder submits following unit prices identified in Bid Form as part of this Bid:

BID NUMBER: CPL2022-003 BID DATE: JUNE 24, 2022

SUBMITTAL DATE: _____

BY: _____
(Bidder)

BIDDERS SIGNATURE: _____



FLOWERY BRANCH - SANITARY LINE REAM & RELINE				
MARTIN ES PUMP STATION UPSTREAM				
ITEM	UNIT	QUANT	UNIT COST	TOTAL ITEM COST
Bypass pumping	EA	1		
TV & Ream 8" line	LF	480		
Reline (CIPP)	LF	480		
Rehabilitate Manhole (epoxy lining)	EA	3		
Rebuild & repair manhole bench	EA	3		
			TOTAL BID	

**FLOWERY BRANCH - SANITARY LINE REAM & RELINE
MARTIN ES PUMP STATION UPSTREAM**

ITEM	UNIT	QUANT	UNIT COST	TOTAL ITEM COST
Bypass pumping	EA	1		
TV & Ream 8" line	LF	480		
Reline (CIPP)	LF	480		
Rehabilitate Manhole (epoxy lining)	EA	3		
Rebuild & repair manhole bench	EA	3		
			TOTAL BID	

BASE BID

_____ Dollars _____ Cents
(Base Bid Includes all work identified in the contract documents).
\$ _____

Attached prices shall include all labor, materials, balling, shoring, removal, overhead (Direct and Indirect), profit, insurance, bonds, and other costs, to cover all finished Work.

Bidder agrees this Bid shall be good and may not be withdrawn for a period of 90 calendar days after scheduled closing time for receiving bids.

There is enclosed herewith a certified or cashier's check or a Bid Bond to the order of City of Flowery Branch, Georgia, in the sum of \$_____ Dollars.

Check or Bid Bond shall be equal to, not less than, the amount stipulated in INVITATION TO BID and it is understood and agreed that said check or Bid Bond shall be subject to terms and conditions stipulated in Bid Document Package.

Undersigned Bidder hereby agrees to each and every stipulation in Bid Document Package pertaining to the submission of Bids and further, if awarded the Contract, duly agrees to execute and secure the required Contract and Bid Document Package within fifteen (15) days from service of Notice of Award and deliver a surety bond or bonds as required by General Conditions. The name and business address of Bidder to which all formal Notices shall be sent:

Company: _____

Address: _____

Undersigned Bidder states the names and addresses of persons interested as principals in this Bid are as follows:
(Write first name in full):

BID NUMBER: CPL2022-003 BID DATE: JUNE 24, 2022

SUBMITTAL DATE: _____

BY: _____
(Bidder)

BIDDERS SIGNATURE: _____

Bidder shall state on line below, if a corporation, the name of State in which incorporated and the date of said incorporation:

Undersigned Bidder states (he/she/they) (is a/are) citizen(s) of the United States and all partners, associates, or principals interested herein are citizens of the United States, except: (Give full names and addresses):

Undersigned Bidder submitting this Bid certifies and affirms that such Bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any Bidder or person, to put in a sham Bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person to fix the Bid Price of affiant or any other Bidder, or to fix any overhead, profit, or cost element of said Bid Price, or of that of any other Bidder, or to secure any advantage against the City of Flowery Branch or any person interested in the proposed Contract; and that all statements contained in said Bid are true, and further, that such Bidder has not directly or indirectly submitted this Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof; and, that no member of Owner or other officers or employees of said Owner is interested directly or indirectly in the Bid or in any portion of the Bid nor the Contract or any part of the Contract which may be awarded the undersigned Bidder on the basis of such Bid.

The undersigned bidder acknowledges the requirements of the Plans and Specifications for this project. It is further understood that quantities are approximate, are solely for the purpose of comparing proposals, and are not represented by the Owner as an accurate statement of the actual work to be performed under the Contract.

The Bidder agrees to complete the Contract awarded within the "allowable calendar days for completion" from the date of the "Notice to Proceed" and he further agrees that the owner may

retain from the monies which may become due the amount of five hundred dollars per day for each and every day that the completion of the work may be delayed.

NOTE: See paragraph 13 of "Instruction to Bidders" for requirements in completing signature block below and remainder of this page.

SIGNATURE: _____
(President, Vice President or Corporate Office)

DATE: _____

PRINTED NAME: _____

TITLE: _____

ATTESTED BY: _____
(Secretary of Corporation must attest)

DATE: _____

PRINTED NAME: _____
(Corporate Seal Required if Bidder is a Corporation)

TITLE: _____

BIDDER'S AFFIDAVIT

BID NUMBER: CPL2022-003

BID DATE: JUNE 24, 2022

PROJECT DESCRIPTION: FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

STATE OF _____)

COUNTY OF _____)

(Name Printed)

being duly sworn, deposes and says that he resides at _____

that he is the

(Title)

(Name of Bidder)

who signed the above Bid Form, that he was duly authorized to sign and that the Bid is the true offer of the Bidder, that the seal attached is the seal of the Bidder and that all the declarations and statements contained in the Bid are true to the best of his knowledge and belief.

(Affiant)

Sworn to and subscribed before me this _____ day of _____, 2022.

(Notary Public in and for

County

My Commission expires _____.

(SEAL)

FORM OF NON-COLLUSION AFFIDAVIT

(This Non-Collusion Affidavit is Part of the Bid Documents)

BID NUMBER: CPL2022-003 BID DATE: JUNE 24, 2022

PROJECT DESCRIPTION: FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

STATE OF _____)
) SS
COUNTY OF _____)

(Name Printed)

being duly sworn, deposes and says that he is

(sole owner, partner, president, secretary, etc.)

the party making the foregoing Proposal or Bid; that such Bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any Bidder or person, to put in a sham Bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person to fix the Bid Price of affiant or any other Bidder, or to fix any overhead, profit, or cost element of said Bid Price, or of that of any other Bidder, or to secure any advantage against the City of Flowery Branch, or any person interested in the proposed Contract; and that all statements contained in said Proposal or Bid are true, and further, that such Bidder has not, directly or indirectly submitted this Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof; and, that no member of Owner or other officers or employees of said Owner is interested directly or indirectly in the Bid or in any portion of the Bid nor the Contract or any part of the Contract which may be awarded the undersigned Bidder on the basis of such Bid.

(Affiant)
Sworn to and subscribed before me this _____ day of _____, 2022.

(Notary Public in and for

County My Commission expires
(SEAL)

BID BOND

(This Bid Bond is part of the Bid Documents)

BID NUMBER: CPL2022-003

BID DATE: JUNE 24, 2022

PROJECT DESCRIPTION: FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contract)

a _____
(Corporation, Partnership or individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a Corporation of the State of _____, and a surety authorized by law to do business in the State of Georgia, hereinafter called Surety, are held and firmly bound unto

City of Flowery Branch

(Name of Obligee)

5410 Pine Street
Flowery Branch, Georgia 30542
(Address of Obligee)

hereinafter referred to as Obligee, in the penal sum of:

_____ Dollars (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

Page 2

BID NUMBER: CPL2022-003 BID DATE: JUNE 24, 2022

SUBMITTAL DATE: _____

BY: _____
(Bidder)

BIDDERS SIGNATURE: _____

WHEREAS, the Principal is about to submit, or has submitted, to the City of Flowery Branch, Georgia, a proposal for furnishing materials, labor, and equipment for: FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

WHEREAS, the Principal desires to file this Bond in accordance with law in lieu of a certified Bidder's check otherwise required to accompany this Proposal.

NOW, THEREFORE, the conditions of this obligation are such that if the proposal be accepted, the Principal shall within ten days after receipt of notification of the acceptance, execute a Contract in accordance with the Proposal and upon the terms, conditions, and prices set forth in the form and manner required by the City of Flowery Branch, Georgia, and execute a sufficient and satisfactory Performance Bond and Payment Bond payable to the City of Flowery Branch, Georgia, each in the amount of 100% of the total Contract Price, in form and with security satisfactory to said City of Flowery Branch, Georgia, and otherwise, to be and remain in full force and virtue in law, and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the City of Flowery Branch, Georgia, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. 13-10-1, et. sea. And 36-86-101, et. seg. and is intended to be and shall be constructed as a bond in compliance with the requirements thereof.

(SIGNATURES NEXT PAGE)

Page 3

Signed, sealed, and dated this ____ day of _____ A.D., _____.

ATTEST:

(Principal Secretary)

(SEAL)

(Witness as to Principal)

(Address)

ATTEST:

(Attorney-in-fact)

(SEAL)

(Witness as to Surety)

(Address)

(Principal)

By: _____

(Address)

(Surety)

By: _____

(Attorney-in-Fact and Resident Agent)

(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

AGREEMENT FOR

FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)

BID NUMBER: CPL2022-003

THIS AGREEMENT, made and executed in Flowery Branch, Georgia, this ____ day of _____, 2022, by and between the City of Flowery Branch situated in the State of Georgia, hereinafter called the "City" and _____ an individually owned company with principal offices at _____, hereinafter called the "Contractor".

WITNESSETH: That the said Contractor has agreed and by these presents does agree with the City for the prices stipulated in the Bid Form herein contained or hereunto annexed and under the penalty expressed in a bond bearing even date with these presents, and herein contained or hereunto annexed to furnish at his own cost and expense all materials, supplies, machinery, equipment, tools, apparatus, and other means of construction, maintenance and repair, and all management, supervision and labor, and perform all the work necessary to construct, maintain, repair, and complete the work within the scope of this Contract as outlined in the "Invitation to Bid", "Instructions to Bidders", "General Conditions", "Project Plans" and "Specifications" herein contained, including material furnished by the City (if any), commencing the Work within seven (7) calendar days from the date of "Notice to Proceed" from the City, and commencing emergency work within four (4) hours after notification by the City, in the manner specified and in conformity with the requirements set forth in the Project Plans and Specifications herein contained.

The Contractor shall proceed with the said work in a prompt and diligent manner at such times and in such order as the City may direct. Further, he shall complete the work to the satisfaction of the City and within 180 calendar days, and in default of completion within the time fixed, this Contract will be subject to termination as stipulated in the Bid Document Package.

The City shall not be liable to the Contractor for any neglect, default, delay or interference of or by any other contractor, nor shall any such neglect, default, delay, or interference of any other contract, or alteration which may be required in the work, release the Contractor from the obligation to finish the work within the time allowed.

It is further mutually agreed by the parties hereto that the work will be performed in accordance with Project Plans and Specifications together with any supplementary instructions as prepared or approved by the City and other contract documents, except in the case of emergency the work will be undertaken by the Contractor immediately upon notification by the City and will be performed in accordance with the contract documents and orders of the City.

AGREEMENT

Page 2

It is hereby mutually agreed that the City of Flowery Branch is to pay and the Contractor is to receive the prices bid in the Bid Form herein contained in the sum of 100% of the base bid, the total value being _____ or hereto annexed, as full compensation for furnishing all materials, supplies, machinery, equipment, tools, apparatus and other means of construction, maintenance and repairs, and all management, supervision, and labor, and perform all construction maintenance, and repair necessary to complete the work under the conditions herein specified, and for fully complying with the terms and conditions of this Contract; provided that any increased cost to the Contractor due to any subsequent levy of Federal or State taxes against any item entering into the work of this Contract exclusive of profits may be reimbursed to the Contractor by the City as provided hereunder.

Subject to the applicable provisions of law, this Contract shall be in full force and effect as a Contract, from the date on which a fully executed and approved counterpart hereof is delivered to the Contractor and shall remain and continue in full force and effect until after the expiration of the guarantee period and the Contractor and his Sureties are finally released by the City.

The Contractor shall remain responsible for performing, in accordance with the terms of the contract, all work assigned prior to the expiration of the allowable calendar days for completion period even if the work is not completed until after the expiration of the allowable calendar day for completion term.

The Bidder agrees to complete the Contract awarded within the "allowable calendar days for completion" from the date of the "Notice to Proceed" and he further agrees that the owner may retain from the monies which may become due the amount of one hundred dollars per day for each and every day that the completion of the work may be delayed.

(SIGNATURES NEXT PAGE)

IN WITNESS WHEREOF: The parties have executed this agreement the day and year above mentioned.

Signed, sealed, and dated this _____ day of _____ A.D., 20_____.

ATTEST:

CITY OF FLOWERY BRANCH,
GEORGIA

By: _____

(Witness)

(Mayor)

(SEAL)

ATTEST:

By: _____
(Contractor)

(Secretary)

(Title)

(Witness)

(Address)

APPROVED AS TO FORM:

(City Attorney)

NOTE: City Clerk should attest. If Contractor is a corporation, Secretary of Corporation should attest.

PERFORMANCE AND PAYMENT BONDS:

The City of Flowery Branch requires a performance bond and a payment bond, each having a bond value of one hundred percent (100%) of the total amount bid. The attached performance bond and payment bond must be used for this requirement.

PERFORMANCE BOND

Page 2

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, fully and faithfully perform said contract according to its terms, covenants, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreement of any and all duly authorized modifications of said contract that may hereafter be made, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed **thereunder**.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. 13-10-1, et. seq. and 36-86-10 L et.seq., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

(SIGNATURES NEXT PAGE)

Signed, sealed, and dated this _____ day of _____, A.D., 20__

ATTEST:

(Principal Secretary)

(Principal)

By: _____
(SEAL)

(Address)

(Witness as to Principal)

(Address)

(Surety)

ATTEST:
By: _____
(Attorney-in-Fact)

(Attorney in Fact)
And Resident Agent

(SEAL)

(Address)

(Witness as to Surety)

(Address)

NOTE: Date of Bond must not be prior to Date of Contract. If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

PAYMENT BOND

FLOWERY BRANCH – SANITARY SEWER REAM & RELINE (8" DIP)
BID NUMBER: CPL2022-003

KNOW ALL MEN BY THESE PRESENTS, That

(Name of Contractor)

(Address of Contractor)

a (Corporation, Partnership or Individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a Corporation of the State of _____ and a surety authorized by law to do business in the State of Georgia, hereinafter called Surety, are held and firmly bound unto

City of Flowery Branch
(Name of Obligee)

5410 Pine Street, Flowery Branch , Georgia 30078
(Address of Obligee)

hereinafter referred to as Obligee, for the use and protection of all subcontractors and all persons supplying labor, services, skill, tools, machinery, materials and/or equipment in the prosecution of the work provided for in the contract hereinafter referred to in the penal sum of 100% of the base bid, the total value being _____ in lawful money of the United States, for the payment of which sum, well and truly to be made, the Principal and Surety bind themselves, their, and each of their heirs, executors, administrators and successors, jointly and severally firmly by these presents.

The condition of this obligation is such, as whereas the Principal entered into a certain contract, hereto attached with the Obligee, dated _____, 20____ for _____

PAYMENT BOND
Page 2

NOW, THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH, that if the Principal shall well, truly, and faithfully perform said contract according to its terms, covenants and conditions, and shall promptly pay all persons furnishing labor, materials services, skill, tools, machinery and/or equipment for use in the performance of said Contract, then this obligation shall be void; otherwise it shall remain in full force and effect.

All persons who have furnished labor, materials, services, skill, tools, machinery and/or equipment for use in the performance of said Contract shall have a direct right of action on this Bond provided payment has not been made in full within ninety (90) days after the last day on which labor was performed, materials, services, skill, tools, machinery, and equipment furnished or the subcontract completed.

PROVIDED FURTHER, that said Surety to this Bond, for value received, hereby stipulates and agrees that no change, extension of time, alterations, or additions to the terms of the Contract or to the Work to be performed thereunder shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alterations, or additions to the terms of the Contract or to the work to be performed thereunder.

PROVIDED, HOWEVER, that no suit or action shall be commenced hereunder by any person furnishing labor, materials, services, skill, tools, machinery, and/or equipment having a direct contractual relationship with a subcontractor, but no contractual relationship express or implied with the Principal:

Unless such person shall have given notice to the Principal within ninety (90) days after such person did, or performed the last of the work or labor, or furnished the last of the materials, services, skill, tools, machinery and/or equipment for which claim is made stating with substantial accuracy the amount claimed and the name of the party to whom the materials, services, skill, tools, machinery and/or equipment were furnished, or for whom the work or labor was done or performed. Such a notice shall be served by mailing the same by registered mail, postage prepaid, in an envelope addressed to the Principal, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer, and a copy of such notice shall be delivered to the Obligee, to the person and at the address provided for in the Contract, within five (5) days of the mailing of the notice to the Principal.

PAYMENT BOND

Page 3

PROVIDED, FURTHER, that any suit under this bond must be instituted before the expiration of one (1) year after the acceptance of the public works covered by the Contract by the proper authorities.

PROVIDED, FURTHER, that Principal and Surety agree and represent that this bond is executed pursuant to and in accordance with the applicable provisions of the Official Code of Georgia Annotated, as Amended, including, but not limited to, O.C.G.A. 13-10-1, et. seg. and 36-86-101, et. seg., and is intended to be and shall be construed as a bond in compliance with the requirements thereof.

(SIGNATURES NEXT PAGE)

PAYMENT BOND

BID NUMBER: CPL2022-003

Page 4

Signed, sealed, and dated this _____ day of _____ A. D., 20__

ATTEST:

(Principal Secretary)

(Principal)

(SEAL)

By: _____

(Address)

(Witness as to Principal)

(Address)

(Surety)

(Surety)

By: _____

ATTEST:
By: _____
(Attorney-in-Fact)

(Attorney in Fact)
And Resident Agent

(Address)

(SEAL)

(Witness as to Surety)

(Address)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

ACKNOWLEDGEMENT OF CONTRACTOR, IF A CORPORATION

STATE OF _____)
) SS
COUNTY OF _____)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known, who, being by me duly sworn, did depose and say that he resides at _____

_____ that he is the _____ of _____
the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

(Notary Public)

(SEAL)
=====

ACKNOWLEDGEMENT OF CONTRACTOR, IF A PARTNERSHIP

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known, and known to me to be one of the members of the firm of _____
described in and who executed the foregoing instrument, and he acknowledged to me that he executed the same as and for the act and deed of said firm.

(Notary Public)

(SEAL)

=====

ACKNOWLEDGEMENT OF CONTRACTOR, IF AN INDIVIDUAL

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known, and known to me to be the person described in and who executed the foregoing instrument and acknowledged to me that he executed the same as and for the act and deed of said firm.

(Notary Public)

(SEAL)

=====

ACKNOWLEDGEMENT OF CONTRACTOR, IF A CORPORATION

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known, who, being by me duly sworn, did depose and say that he resides at _____

that he is the _____ of _____
the corporation described in and which executed the foregoing instrument; that he knows the seal
of said corporation; that one of the impressions affixed to said instrument is an impression of
such seal; that it was so affixed by order of the directors of said corporation, and that he signed
his name thereto by like order.

(Notary Public)

(SEAL)

=====

ACKNOWLEDGEMENT OF PRINCIPAL, IF A FIRM OR PARTNERSHIP

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known, and known to me to be one of the members of the firm of _____
_____ described in and who executed the foregoing instrument and he
acknowledged to me that he executed the same as and for the act and deed of said firm.

(Notary Public)

(SEAL)

=====

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me known to be the person described in and who executed the foregoing instrument and
acknowledged that he executed the same.

(Notary Public)

(SEAL)

=====

ACKNOWLEDGEMENT BY SURETY COMPANY

STATE OF)
) SS
COUNTY OF)

On this _____ day of _____, 20____ before me personally came and appeared _____
to me personally known of _____ the
corporation described in and which executed within the instrument, who being by me duly
sworn, did depose and say that he resides at _____
_____ that he is the
_____ of the said corporation; that he knows the seal of said
corporation; that the seal affixed to the said instrument is such corporate seal; that it was so
affixed by order of the Board of Directors of said corporation, and that he signed his name
thereto by like order.

(Notary Public)

(SEAL)

**GENERAL CONDITIONS
FOR CITY OF FLOWERY BRANCH CONSTRUCTION CONTRACTS**

GC-1 FAMILIARITY WITH SITE

Execution of this agreement by the Contractor is a representation that the Contractor has visited the site, has become familiar with the local conditions under which the Work is to be performed, and has correlated personal observations with the requirements of this agreement.

GC-2 CONTRACT DOCUMENTS

This agreement consists of the City of Flowery Branch invitation to bid, instructions to bidders, Contractor's bid form, construction form of agreement, Performance Bond, Payment Bond, general conditions, special provisions, specifications, plans, drawings, addenda, and written change orders.

GC-3 DEFINITIONS

The following terms as used in this agreement are defined as follows:

Change Order - a written order to the Contractor, prepared by the Engineer and issued by the City for changes in the Work within the general scope of the contract documents, adjustment of the contract price, extension of the contract time, or reservation of determination of a time extension.

City - City of Flowery Branch, Georgia, a political subdivision of the State of Georgia, acting by and through the City Council.

Day - a calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.

Notice to Proceed - written communication issued by the City, or their designated representative, to the Contractor authorizing him to proceed with the Work and establishing the date of commencement and completion of the Work.

Substantial Completion - the date certified by the Engineer when all or a part of the Work, identified in the Engineer's certification, is sufficiently completed in accordance with the requirements of the contract documents so that the identified portion of the Work can be utilized for the purposes for which it is intended.

Work - all of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to insure a functional and complete facility.

GQ-4 CODES

All codes, specifications, and standards referenced in the contract documents shall be the latest additions, amendments and revisions of such referenced standards in effect as of the date of the request for proposals for this contract.

GC-5 REVIEW OF CONTRACT DOCUMENTS

Before making its proposal to the City, and continuously after the execution of the agreement, the Contractor shall carefully study and compare the contract documents and shall at once report to the Engineer any error, ambiguity, inconsistency or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, or regulation of any public authority bearing on the performance of the Work. By submitting its proposal, the Contractor agrees that the contract documents, along with any supplementary written instructions issued by or through the Engineer that have become a part of the contract documents appear accurate, consistent and complete insofar as can be reasonably determined. If the Contractor has reported in writing any error, inconsistency, or omission to the City, has properly stopped the effected Work until instructed to proceed, and has otherwise followed the instructions of the Engineer, the Contractor shall not be liable to the City for any damage resulting from any such error, inconsistency, or omission in the contract documents. The Contractor shall not perform any portion of the Work without the contract documents, approved plans, specifications, products and data, or samples for such portion of the Work.

GC-6 STRICT COMPLIANCE

No observation, inspection, test or approval of the City or Engineer shall relieve the Contractor from its obligation to perform the Work in strict conformity with the contract documents.

GC-7 APPLICABLE LAW

All applicable State laws, City ordinances, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to this agreement. All Work performed within the right of way of the Georgia Department of Transportation shall be in accordance with DOT regulations, policies and procedures. The Contractor shall comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as specified and the Contractor agrees to indemnify and hold harmless the City, its officers, agents and employees, as well as the Engineer, against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree affecting the conduct of the Work, whether occasioned by the Contractor, his agents or employees.

GC-8 PERMITS & LICENSES

All permits and licenses necessary for the Work shall be secured and paid for by the Contractor. If any permit, license or certificate expires or is revoked, terminated, or suspended as a result of any action on the part of the Contractor, the Contractor shall not be entitled to additional compensation or time.

GC-9 TAXES

The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes, as well as any other taxes or duties on the materials, equipment, and labor for the Work provided by the Contractor which are legally enacted by any municipal, City, state or federal authority, department or agency at the time bids are received, whether or not yet effective. The Contractor shall maintain records pertaining to such taxes and levies as well as payment thereof and shall make the same available to the City at all reasonable times for inspection and copying.

GC-10 DELINQUENT CONTRACTORS

The City shall not pay any claim, debt, demand or account whatsoever to any person, firm or corporation who is in arrears to the County or City for taxes. The City shall be entitled to a counterclaim and offset for any such debt in the amount of taxes in arrears, and no assignment or transfer of such debt after the taxes become due shall affect the right of the City to offset any taxes owed against said debt.

GC-11 LIEN WAIVERS

The Contractor shall furnish the City with evidence that all persons who have performed Work or furnished materials pursuant to this agreement have been paid in full prior to submitting its demand for final payment pursuant to this agreement. In the event that such evidence is not furnished, the City may retain sufficient sums necessary to meet all lawful claims of such laborers and materialmen. The City assumes no obligation nor in any way undertakes to pay such lawful claims from any funds due or that may become due to the Contractor.

GC-12 MEASUREMENT

All items of Work to be paid for per unit of measurement shall be measured and certified by the Engineer.

GC-13 ASSIGNMENT

The Contractor shall not assign any portion of this agreement or moneys due therefrom without the prior written consent of the City. The Contractor shall retain personal control and shall provide personal attention to the fulfillment of its obligations pursuant to this agreement.

GC-14 FOREIGN CONTRACTORS

In the event that the Contractor is a foreign corporation, partnership, or sole proprietorship, the Contractor hereby irrevocably appoints the Secretary of State of Georgia as its agent for service of all legal process for the purpose of this contract only.

GC-15 INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall, at his sole cost and expense, indemnify, defend, satisfy all judgments, and hold harmless the City, the Engineer, and their agents and employees from and against all claims, damages, actions, judgments, costs, penalties, liabilities, losses and expenses, including, but not limited to, attorney's fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, action, judgment, cost, penalty, liability, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless whether such claim is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any of the rights or obligations of indemnity which would otherwise exist as to any party or person described in this agreement. In any and all claims against the City, the Engineer, or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation contained herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Worker's Compensation Acts, disability benefit acts, or other employee benefit acts.

GC-16 SUPERVISION OF WORK

The Contractor shall supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction methods and procedures and shall coordinate all portions of the Work pursuant to the contract subject to the overall coordination of the Engineer. All Work pursuant to this agreement shall be performed in a skillful and workmanlike manner.

GC-17 RESPONSIBILITY FOR WORK

The Contractor shall not be relieved from the Contractor's obligations to perform the Work in accordance with the contract documents by the activities or duties of the Engineer, including inspections, tests or approvals required or performed pursuant to this agreement.

GC-18 RESPONSIBILITY FOR ACTS OF EMPLOYEES

The Contractor shall be responsible to the City for the acts and omissions of its employees, subcontractors, and agents as well as any other persons performing Work pursuant to this agreement.

GC-19 PAYMENT FOR LABOR AND MATERIALS

Unless otherwise provided in this agreement, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the Work.

GC-20 DISCIPLINE ON WORK SITE

The Contractor shall enforce strict discipline and good order among its employees and subcontractors at all times during the performance of the Work. The Contractor shall not employ any subcontractor who is not skilled in the task assigned to it. The Engineer may, by written notice, require the Contractor to remove from the Work any subcontractor or employee deemed by the Engineer to be incompetent.

GC-21 HOURS OF OPERATION

All Work at the construction site shall be performed on weekdays between 7:00AM and 6:00PM in accordance with City Code section 26-188, except upon the Engineer's prior written consent to other Work hours.

GC-22 FAMILIARITY WITH WORK CONDITIONS

The Contractor shall take all steps necessary to ascertain the nature and location of the Work and the general and local conditions which may affect the Work or the cost thereof. The Contractor's failure to fully acquaint itself with the conditions which may affect the Work, including, but not limited to conditions relating to transportation, handling, storage of materials, availability of labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the City relating to the project which may affect the Work of the Contractor, applicable provisions of law, and the character and availability of equipment and facilities necessary prior to and during the performance of the Work shall not relieve the Contractor of its responsibilities pursuant to this agreement and shall not constitute a basis for an equitable adjustment of the contract terms. The City assumes no responsibility for any understandings or representations concerning conditions of the Work made by any of its officers, agents, or employees prior to the execution of this agreement.

GC-23 RIGHT OF ENTRY

The City reserves the right to enter the site of the Work by such agent as it may elect for the purpose of inspecting the Work or installing such collateral Work as the City may desire.

GC-24 NOTICES

Any notice, order, instruction, claim or other written communication required pursuant to this agreement shall be deemed to have been delivered or received as follows:

- (1) Upon personal delivery to the Contractor, its authorized representative, or the Engineer on behalf of the City. Personal delivery may be accomplished by in-person hand delivery or bona fide overnight express service.
- (2) Three days after depositing in the United States mail a certified letter addressed to the Contractor, the City, or the Engineer. For purposes of mailed notices, the City's mailing address shall be 5410 Pine Street, Flowery Branch, GA. 30542. The Contractor's mailing address shall be the address stated in its proposal, and the Engineer's mailing address shall be its address listed in the Notice to Begin Work.

GC-25 SAFETY

The Contractor shall take all reasonable precautions for the safety of all persons and property associated with the Work, and the Contractor shall erect and maintain, as required by existing conditions and the progress of the Work, all reasonable safeguards for the safety and protection of persons in the vicinity of the project.

GC-26 BLASTING AND EXCAVATION

The Contractor acknowledges that it is fully aware of the contents and requirements of O.C.G.A. §§ 25-9-1 through 25-9-12 concerning blasting and excavation near underground gas pipes and facilities and shall fully comply therewith.

GC-27 HIGH VOLTAGE LINES

The Contractor acknowledges that it is fully aware of the contents and requirements O.C.G.A. §§ 46-3-30 through 46-3-39 concerning safeguards against contact with high voltage lines, and the Contractor shall fully comply with said provisions.

GC-28 SCAFFOLDING AND STAGING

The Contractor acknowledges that it is the person responsible for employing and directing others to perform labor within the meaning of O.C.G.A. § 34-1-1 and agrees to comply with said provisions.

GC-29 CLEAN-UP

The Contractor shall clean up all refuse, rubbish, scrap materials, and debris caused by its operations to the end that the site of the Work shall present a neat, orderly and workmanlike appearance at all times.

GC-30 PROTECTION OF WORK

The Contractor shall be responsible for maintenance and protection of the Work until final completion of this agreement and acceptance of the Work as defined herein. Any portion of the Work suffering injury, damage or loss shall be considered defective and shall be corrected or replaced by the Contractor without additional cost to the City.

GC-31 REJECTED WORK

The Contractor shall promptly remove from the project all Work rejected by the Engineer for failure to comply with the contract documents and the Contractor shall promptly replace and re-execute the Work in accordance with the contract documents and without expense to the City. The Contractor shall also bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement.

GC-32 DEFECTIVE WORK

If the Contractor defaults or neglects to carry out any portion of the Work in accordance with the contract documents, and fails within three days after receipt of written notice from the City or the Engineer to commence and continue correction of such default or neglect with diligence and promptness, the City or the Engineer may, after three days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the City may have, make good such deficiencies and complete all or any portion of any Work through such means as the City may select, including the use of a new Contractor. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. In the event the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City on demand.

GC-33 NEW MATERIALS

The Contractor warrants to the City that all materials and equipment furnished under this contract will be new unless otherwise specified, and the Contractor further warrants that all Work will be of good quality, free from faults and defects, and in conformance with the contract documents. The warranty set forth in this paragraph shall survive final acceptance of the Work.

GC-34 CONTRACTOR'S WARRANTY

If within one year after the date of substantial completion and final acceptance of the Work by the City, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the contract documents, any of the Work is found to be defective or not in accordance with the contract documents, the Contractor shall correct such Work promptly after receipt of written notice from the City to do so. This obligation shall survive both final payment for the Work and termination of the contract.

GC-35 ASSIGNMENT OF MANUFACTURERS' WARRANTIES

Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the Work are hereby assigned by the Contractor to the City. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the City. All such warranties shall be directly enforceable by the City.

GC-36 WARRANTIES IMPLIED BY LAW

The warranties contained in this agreement, as well as those warranties implied by law, shall be deemed cumulative and shall not be deemed alternative or exclusive. No one or more of the warranties contained herein shall be deemed to alter or limit any other.

GC-37 STOP WORK ORDERS

In the event that the Contractor fails to correct defective Work as required by the contract documents or fails to carry out the Work in accordance with contract documents, the City, or the Engineer, in writing, may order the Contractor to stop Work until the cause for such order has been eliminated. This right of the City or Engineer to stop Work shall not give rise to any duty on the part of the City or the Engineer to execute this right for the benefit of the Contractor or for any other person or entity.

GC-38 TERMINATION FOR CAUSE

If the Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, suffers the appointment of a receiver on account of its insolvency, or fails to supply sufficient properly skilled Workers, materials, fails to make prompt payment to subcontractors or materialmen, disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, or is otherwise guilty of a material violation of this agreement and fails within seven days after receipt of written notice to commence and continue correction of such default, neglect, or violation with diligence and promptness, the City may, after seven days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the City may have, terminate the employment of the Contractor and take possession of the site as well as all materials, equipment, tools, construction equipment and machinery thereon. The City may finish the Work by whatever methods the City deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the contract price exceeds the cost of completing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the City on demand. This obligation for payment shall survive the termination of the contract. Termination of this agreement pursuant to this paragraph may result in disqualification of the Contractor from bidding on future City contracts.

GC-39 TERMINATION FOR CONVENIENCE

The City may, at any time upon 30 days written notice to the Contractor, terminate the whole or any portion of the Work for the convenience of the City. Said termination shall be without prejudice to any right or remedy of the City provided herein. In addition, in the event this agreement has been terminated due to the default of the Contractor, and if it is later determined that the Contractor was not in default pursuant to the provisions of this agreement at the time of termination, then such termination shall be considered a termination for convenience pursuant to this paragraph.

GC-40 TERMINATION FOR CONVENIENCE - PAYMENT

In the event that the City terminates this agreement for the convenience of the City, the City shall only be liable to the Contractor for those costs reimbursable to the Contractor plus a mark-up of ten percent on the actual fully accounted cost recovered pursuant to this paragraph. In the event that it appears that the Contractor would have sustained a loss on the entire contract had it been completed, no profit shall be included or allowed hereunder and an appropriate adjustment shall be made reducing the amount of settlement to reflect the indicated rate of loss. In the event of termination for the convenience of the City, the City shall pay the Contractor the following amounts determined by the Engineer:

- A. An amount for supplies, services, or property accepted by the City for which payment has not previously been made. The price to be paid for these items shall be equivalent to the aggregate price for such-supplies or services computed in accordance with the price specified in this agreement appropriately adjusted for any saving of freight or other charges; and
- B. The total of:
 - (1) The costs incurred in the performance of the Work terminated, including initial costs and preparatory expenses allocable thereto, but exclusive of any costs attributable to supplies or services previously paid;
 - (2) The costs of settling and paying claims arising pursuant to the termination of the Work under said contracts or orders which are properly chargeable to the terminated portion of the contract (exclusive of the amounts paid or payable on account of completed items or equipment delivered or services furnished by a subcontractor or vendor prior to the effective date of the notice of termination, which amounts shall be included in the costs payable pursuant to (A)); and
 - (3) The reasonable costs of settlement, including accounting, legal, clerical, and other expenses reasonable and necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the contract and for the termination and settlement of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to this agreement.

GC-41 TERMINATION FOR CONVENIENCE - PAYMENT LIMITATIONS

In the event of termination for the convenience of the City, the total sum to be paid to the Contractor shall not exceed the contract price as reduced by the amount of payments otherwise made, by the contract price for Work not terminated, and as otherwise permitted by the contract. Except for normal spoilage, and except to the extent that the City shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor the fair value, as determined by the Engineer, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the City or to another buyer.

GC-42 COST TO CURE

If the City terminates the whole or any part of the Work pursuant to this agreement, then the City may procure upon such terms and in such manner as the Engineer may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the City for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this agreement to the extent not terminated hereunder.

GC-43 ATTORNEY'S FEES

Should the Contractor default pursuant to any of the provisions of this agreement, the Contractor and its surety shall pay to the City such reasonable attorney's fees as the City may expend as a result thereof and all costs, expenses, and filing fees incidental thereto.

GC-44 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

After receipt of a notice of termination from the City, and except as otherwise directed by the Engineer, the Contractor shall:

1. Stop Work under the contract on the date and to the extent specified in the notice of termination;
2. Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the Work under the agreement as is not terminated;
3. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the notice of termination;
4. Assign to the City in the manner, at the times, and to the extent directed by the Engineer, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the City shall have the right, at its discretion, to settle or pay any and all claims arising out of the termination of such orders or subcontracts;
5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Engineer, to the extent the Engineer may require, which approval or ratification shall be final for all purposes;
6. Transfer title and deliver to the entity or entities designated by the City, in the manner, at the times, and to the extent, if any, directed by the Engineer, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the Work as has been terminated:

- (a) The fabricated or unfabricated parts, Work, and progress, partially completed supplies, and equipment, materials, parts, tools, dyes, jigs, and other fixtures, completed Work, supplies, and other material produced as a part of or acquired in connection with the performance of the Work terminated by the notice of termination; and
 - (b) The completed or partially completed plans, drawings, information, and other property to the Work.
7. Use its best efforts to sell in the manner, at the times, to the extent, and at the prices directed or authorized by the Engineer, any property described in Section 6 of this paragraph, provided, however, that the Contractor shall not be, required to extend credit to any buyer and further provided that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the City to the Contractor pursuant to this agreement.
8. Complete performance of such part of the Work as shall not have been terminated by the notice of termination; and
9. Take such action as may be necessary, or as the Engineer may direct, for the protection and preservation of the property related to the agreement which is in the possession of the Contractor and in which the City has or may acquire an interest.

GC-45 RECORDS

The Contractor shall preserve and make available to the City all of its records, books, documents and other evidence bearing on the costs and expenses of the Contractor and any subcontractor pursuant to this agreement upon three days advance notice to the Contractor.

GC-46 DEDUCTIONS

In arriving at any amount due the Contractor pursuant to the terms of this agreement, there shall be deducted all liquidated damages, advance payments made to the Contractor applicable to the termination portion of the contract, the amount of any claim which the City may have against the Contractor, the amount determined by the Engineer to be necessary to protect the City against loss due to outstanding potential liens or claims, and the agreed price of any materials acquired or sold by the Contractor and not otherwise recovered by or credited to the City.

GC-47 REIMBURSEMENT OF THE CITY

In the event of termination, the Contractor shall refund to the City any amount paid by the City to the Contractor in excess of the costs reimbursable to the Contractor.

GC-48 TERMINATION FOR CONVENIENCE – DELAY

The Contractor shall be entitled to only those damages and that relief from termination by the City as specifically set forth in this agreement. The City or the Engineer may issue a written order requiring the Contractor to suspend, delay or interrupt all or any part of the Work for such period of time as the City may determine to be appropriate for the convenience of the City. If the performance of the Work is interrupted for an unreasonable period of time by an act of the City or Engineer in the administration of this agreement, an equitable adjustment shall be made for any increase in the Contractor's costs of performance and any increase in the time required for performance of the Work necessarily caused by the unreasonable suspension, delay, or interruption. Any equitable adjustment shall be reduced to writing and shall constitute a modification to this agreement. In no event, however, shall an equitable adjustment be

made to the extent that performance of this agreement would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment pursuant to this paragraph shall be permitted before the Contractor shall have notified the Engineer in writing of the act or failure to act involved, and no claim shall be allowed unless asserted in writing to the Engineer within ten days after the termination of such suspension, delay or interruption.

GC-49 COMMENCEMENT AND DURATION OF WORK

The Contractor shall commence Work pursuant to this agreement within ten days of mailing or delivery of written notice to proceed by the City. The Contractor shall diligently prosecute the Work to completion within the time specified therefore. The capacity of the Contractor's construction and manufacturing equipment and plan, sequence and method of operation and forces employed, including management and supervisory personnel, shall be such as to insure completion of the Work within the specified time. The Contractor and City hereby agree that the contract time for completion of the Work is reasonable taking into consideration the average climatic conditions prevailing in the locality of the Work.

GC-50 TIME OF THE ESSENCE

All time limits stated in this agreement are of the essence of this contract.

OC-51 IMPACT DAMAGES

Except as specifically provided pursuant to a stop Work order or change order, the Contractor shall not be entitled to payment or compensation of any kind from the City for direct or indirect or impact damages including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever whether such delay, disruption, interference or hindrance is reasonable or unreasonable, foreseeable or unforeseeable, or avoidable, provided, however, that this provision shall not preclude the recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the City, its agents or employees. The Contractor shall be entitled only to extensions in the time required for performance of the Work as specifically provided in the contract.

GC-52 DELAY

The Contractor may be entitled to an extension of the contract time, but not an increase in the contract price, for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its subcontractors for labor strikes, acts of God, acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, by acts of another separate contractor, or by an act of neglect of the City with the Engineer.

GC-53 INCLEMENT WEATHER

The Contractor shall not be entitled to an extension of the contract time due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Engineer that there was greater than normal inclement weather considering the full term of the contract using a ten year average of accumulated mean values for climatological data compiled by the U.S. Department of Commerce for Atlanta, Georgia and that such greater than normal inclement weather actually delayed the Work, the Contractor shall not be entitled to an extension of time therefore.

GC-54 NOTICE OF DELAY

The Contractor shall not receive an extension of time unless a notice of a claim is filed with the City and the Engineer within ten days of the first instance of such delay, disruption, interference or hindrance and a written statement of the claim is filed with the Engineer and the City within 20 days of the first such instance. In the event that the Contractor fails to comply with this provision, it waives any claim which it may have for an extension of time pursuant to this agreement.

GC-55 NOTICE OF DELAY - CONTENTS

The notice of delay referenced in the preceding paragraph shall include specific information concerning the nature of the delay, the date of commencement of the delay, the construction activities affected by the delay, the person or organization responsible for the delay, the anticipated extent of the delay, and any recommended action to avoid or minimize the delay.

GC-56 PROGRESS OF WORK

To the extent that the Contractor is entitled to additional compensation for delay, an absolute condition precedent to such entitlement shall be in strict compliance with all requirements and procedures for entitlement to an extension of time herein. If the Work actually in place falls behind the currently updated and approved project network schedule, and it becomes apparent from the current schedule that Work will not be completed within the contract time, the Contractor agrees that it will, as necessary, or as directed by the Engineer, take action at no additional cost to the City to improve the progress of the Work, including increasing manpower, increasing the number of Working hours per shift or shifts per Working day, increasing the amount of equipment at the site, and any other measure reasonably required to complete the Work in a timely fashion.

GC-57 DILIGENCE

The Contractor's failure to substantially comply with the requirements of the preceding paragraph may be grounds for determination by the City or Engineer that the Contractor is failing to prosecute the Work with such diligence as will insure its completion within the time specified. In such event, the City shall have the right to furnish such additional labor and materials as may be required to comply with the schedule after 48 hours written notice to the Contractor, and the Contractor shall be liable for such costs incurred by the City.

GC-58 SET-OFFS

Any monies due to the City pursuant to the acceleration provisions of this agreement may be deducted by the City against monies due from the City to the Contractor.

GC-59 ACCELERATION - REMEDIES

The remedies of the City concerning acceleration are in addition to and without prejudice to all of the rights and remedies of the City at law, in equity, or contained in this agreement.

GC-60 TITLE TO MATERIALS

No materials or supplies shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which any interest is retained by the seller. The Contractor hereby warrants that it has good and marketable title to all materials and supplies used by it in the Work, and the Contractor further warrants that all materials and supplies shall be free from all liens, claims, or encumbrances at the time of incorporation in the Work.

GC-61 INSPECTION OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards and in accordance with the requirements of the contract documents. Additional tests performed after the rejection of materials or equipment shall be at the Contractor's expense.

GC-62 ENGINEER'S PRESENCE DURING TESTING

All tests performed by the Contractor shall be witnessed by the Engineer unless the requirement therefore is waived in writing. The Engineer may perform additional tests on materials previously tested by the Contractor, and the Contractor shall furnish samples for this purpose as requested.

GC-63 MATERIALS INCORPORATED IN WORK

The Contractor shall furnish all materials and equipment to be incorporated in the Work. All such materials or equipment shall be new and of the highest quality available. Manufactured materials and equipment shall be obtained from sources which are currently manufacturing such materials, except as otherwise specifically approved by the Engineer.

GC-64 STORAGE OF MATERIALS

Materials and equipment to be incorporated in the Work shall be stored in such a manner as to preserve their quality and fitness for the Work and to facilitate inspection.

GC-65 PAYROLL REPORTS

The Contractor shall not be required to furnish weekly payroll reports to the Engineer on this project.

GC-66 CONTRACTORS' REPRESENTATIVE

Before beginning Work, the Contractor shall notify the Engineer in writing of one person within its organization who shall have complete authority to supervise the Work, receive orders from the Engineer, and represent the Contractor in all matters arising pursuant to this agreement. The Contractor shall not remove its representative without first designating in writing a new representative. The Contractor's representative shall normally be present at or about the site of Work while the Work is in progress. When neither the Contractor nor its representative is present at the Worksite, the superintendent, foreman, or other employee in charge of the Work shall be an authorized representative of the Contractor.

GC-67 SPECIALTY SUB-CONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the project which, under normal contracting practices, are performed by specialty subcontractors. Neither the Contractor nor any subcontractor shall award Work to any subcontractor without the prior written consent of the City. The Contractor shall not award more than seventy-five percent of the Work to subcontractors.

GC-68 INSPECTION BY ENGINEERS

All Work pursuant to this agreement shall be subject to inspection by the Engineer for conformity with contract drawings and specifications. The Contractor shall give the Engineer reasonable advance notice of operations requiring, special inspection of a portion of the Work.

GC-69 WORK COVERED PRIOR TO ENGINEER'S INSPECTION

In the event that Work is covered or completed without the approval of the Engineer, and such approval is required by the specifications or required in advance by the Engineer, the Contractor shall bear all costs involved in inspection notwithstanding conformance of such portion of the Work to the contract drawings and specifications.

GC-70 ENGINEER'S AUTHORITY

The Engineer shall have the authority to decide all questions concerning interpretation and fulfillment of contract requirements, including, without limitation, all questions concerning the prosecution, progress, quality and acceptability of the Work. Any oral decision or instruction of the Engineer shall be confirmed in writing. All communications between the City and the Contractor shall be made through the Engineer. The Contractor shall submit to the Engineer a complete schedule of values of various portions of the Work, including quantities and unit prices, aggregating the contract price. The schedule shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Each item in the schedule of values shall include its proper share of overhead and profit. The schedule of values, when approved by the Engineer, shall be used only as a basis for the Contractor's monthly request for payment and shall not be used for additions to or deductions from the contract amount.

GC-71 PROGRESS ESTIMATES

The Contractor shall also prepare a written report for the Engineer's approval, on City forms of the total amount of value of Work performed to the date of submission. No progress estimate or payment shall be considered an approval or acceptance of any Work performed, and all estimates and payments shall be subject to correction in subsequent estimates. Progress payments shall be made for all completed activities and for suitably stored materials.

GC-72 PROGRESS PAYMENTS

Upon completion of each monthly estimate of Work performed and materials furnished, the Engineer shall recommend payment to the Contractor for the estimated value of such Work, materials, and equipment, less the amount of all prior payments and all liquidated damages. The Contractor will be paid 100 percent, less retainage, of the cost of materials received and properly stored but not incorporated into the Work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale to establish the City's title to such materials or equipment. No progress estimate or payment need be made when, in the Engineer's judgment, the increment in the estimated value of Work performed and materials furnished since the preceding estimate is less than \$10,000.

GC-73 TIME OF PAYMENT

The Contractor will be paid on or before the 25th day following receipt of an approved estimate. When the contractor has performed in accordance with the provisions of this Agreement, the City shall pay to the contractor, within 30 days of receipt by the City of any payment request based upon Work completed or service provided pursuant to the contract, the sum so requested, less the retainage stated in this Agreement, if any. In the event that the City fails to pay the contractor within 60 days of the City's receipt of a pay request based upon Work completed or service provided pursuant to the contract, the City shall pay the Contractor interest at the rate of 1/2 percent per month or pro rata fraction thereof beginning the 61st day following the City's receipt of the pay request. The contractor's acceptance of progress payments or final payment shall release all claims for interest on said payments. The provisions of this agreement are intended to supersede all provisions of the Georgia Prompt Pay Act as provided by law.

GC-74 RETAINAGE

The City shall retain from each progress payment ten percent of the estimated value of the Work performed until the progress payments, including retainage, total 50 percent of the contract price. Thereafter, no further retainage shall be withheld so long as the Contractor is making satisfactory progress to ensure completion of the Work within the time specified. Therefore, the City may reinstate the ten percent retainage, in the event the Engineer determines that the Contractor is not making satisfactory progress to complete the Work within the time specified in this agreement or in the event that the Engineer provides a specific cause for such withholding.

GC-75 PAYMENT OF SUBCONTRACTORS

The Contractor shall promptly pay each subcontractor upon the receipt of payment from the City. Such payment shall be made from the amount paid to the Contractor pursuant to the subcontractor's Work. The Contractor shall also maintain the records of the percentage retained from payments to the Contractor pursuant to such subcontractor's Work. The Contractor shall procure agreements from each subcontractor requiring each subcontractor to pay their subcontractors, agents and employees in a similar manner.

GC-76 CITY'S RESPONSIBILITIES TO SUBCONTRACTORS

Neither the City nor the Engineer shall have any obligation to pay any subcontractor except as otherwise required by law.

GC-77 PROGRESS PAYMENTS - ACCEPTANCE OF WORK

Certification of progress payments, as well as the actual payment thereof, shall not constitute the City's acceptance of Work performed pursuant to this agreement.

GC-78 PAYMENTS IN TRUST

All sums paid to the Contractor pursuant to this agreement are hereby declared to constitute trust funds in the hands of the contractor to be applied first to the payment of claims of subcontractors, laborers, and suppliers arising out of the Work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance for any other application.

GC-79 JOINT PAYMENTS

The City reserves the right to issue any progress payment or final payment by check jointly to the Contractor and any subcontractor or supplier.

GC-80 RIGHT TO WITHHOLD PAYMENT

The Engineer may decline to approve payment and may withhold payment in whole or in part to the extent reasonable and necessary to protect the City against loss due to defective Work, probable or actual third party claims, the Contractor's failure to pay subcontractors or material men, reasonable evidence that the Work will not be completed within the contract time or contract price or damage to the City or any other contractor on the project.

GC-81 CERTIFICATE OF-SUBSTANTIAL COMPLETION

Upon the Contractor's submission of a request for a certificate of substantial completion, the Engineer shall inspect the Work and determine whether the Work is substantially complete. If the Work is substantially complete, the Engineer shall issue a certificate of substantial completion of the Work which shall establish the date of substantial completion, shall state the responsibilities of the City and the Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall complete the items submitted by the Contractor as requiring correction or further Work. The certificate of substantial completion of the Work shall be submitted to the City and the Contractor for their written acceptance of the responsibilities assigned to them pursuant to such certificate.

GC-82 FINAL PAYMENT

Upon substantial completion of the Work and upon application by the Contractor and approval by the Engineer, the City shall make payment reflecting adjustments and retainage for the Work as provided in this agreement.

GC-83 COMMENCEMENT OF WARRANTIES

Warranties required by this agreement shall commence on the date of final completion of the project unless otherwise provided in the certificate of substantial completion.

GC-84 FINAL PAYMENT - WAIVER OF CLAIMS

The acceptance of the substantial completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of application for payment at substantial, completion and except for the retainage sums due at final acceptance. Following the Engineer's issuance of the certificate of substantial completion and the Contractor's completion of the Work pursuant to this agreement, the Contractor shall forward to the Engineer a written notice that the Work is ready for final inspection and acceptance and shall also forward to the Engineer a final application for payment. When the Engineer finds the Work acceptable and determines that the contract has been fully performed, the Engineer shall issue a certificate for payment which shall approve final payment to the Contractor.

GC-85 DOCUMENTATION OF COMPLETION OF WORK

Neither the final payment nor the remaining retainage shall become due until the Contractor submits the following documents to the Engineer:

- A. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied;
- B. The surety's consent to final payment; and

- C. Any other data reasonably required by the City or Engineer establishing payment or satisfaction of all such obligations, including releases, waivers of liens, and documents of satisfaction of debts.

In the event that a subcontractor refuses to furnish a release or waiver as required by the City or Engineer, the Contractor may furnish a bond satisfactory to the City to indemnify the City against such loss. In the event that any lien or indebtedness remains unsatisfied after all payments are made, the contractor shall refund to the City all moneys that the City may become compelled to pay in discharging such lien or other indebtedness, including all costs and reasonable attorney's fees.

GC-86 GOVERNING LAW

Each and every provision of this agreement shall be construed in accordance with and governed by Georgia law. The parties acknowledge that this contract is executed in Gwinnett County, Georgia and that the contract is to be performed in Gwinnett County, Georgia. Each party hereby consents to the Gwinnett Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this agreement, and each party hereby waives any and all objections to venue in the Gwinnett Superior Court.

GC-87 CHANGES AND EXTRA WORK

GC-87.1 AUTHORITY FOR CHANGES

The City may make changes in the Drawings or Specifications and in the quantities of Work to be done under the Contract.

GC-87.2 CHANGE ORDERS

Without invalidating the Contract, the City may at any time or from time to time, by written order, order additions, deletions, or revisions in the Work. These will be authorized by Change Orders. Upon receipt of the Change Order, Contractor shall promptly proceed with the Work involved. If any price or scope of the Work or an extension or shortening of the Contract Time is involved, an equitable adjustment will be made within the Change Order. In the event the contract price is increased by Change Order, the penal amount of the Payment and Performance Bonds shall be increased as provided for in Section GC-15. All changes in the Work authorized by Change Order shall be performed under the applicable Conditions of the Contract Documents.

GC-87.3 WRITTEN NOTICE

The City may, at the request of the Contractor, issue interpretations, clarifications and other instructions as to the intent of the Contract Documents, in the form of Written Notices. The City may also, at any time, make changes in the details of the Work by issuance of a Written Notice. Upon receipt of such a Written Notice containing interpretations, clarifications and other instructions, Contractor shall proceed with the Work and comply with the Written Notice unless Contractor believes that such Written Notice entitles him to a Change in Contract Price or Time or both.

Should Contractor believe that such Written Notice entitles him to change in Contract Price or Time, or both, he shall give the City notice in writing thereof within seven (7) days after receipt of the Written Notice. Thereafter within thirty (30) days, Contractor shall document the basis for the change in Contract Price or Time. The City shall render a timely, written decision on the Contractor's request for a change in Contract Price or Time. Should the City determine that the Contractor is not entitled to a change

in Contract Time or Price, the Contractor shall proceed as directed upon receipt of the City's decision. Failure to proceed shall constitute a breach of Contract and shall be a cause for the termination of the Contract.

Request for a Change Order arising out of a Written Notice will not be considered without the attachment thereto of a copy of the referenced Written Notice. No claim by Contractor will be allowed if asserted after Final Payment under this Contract.

GC-87.4 EXTRA WORK

Extra Work consists of new and unforeseen Work determined by the City not to be covered by any of the various items for which there is a bid price or by combination of such items.

GC-87.5 VARIATION IN QUANTITIES

Wherever the estimated quantities of Work to be done and materials to be furnished under this Contract are shown in any of the documents including the Proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the City to complete the Work contemplated by the Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

GC-88 CHANGE ORDERS

QC-88.1 GENERAL

The Contract Price may only be changed by a Written Change Order. Each change will be set forth in a Change Order prepared by the City and approved by City. Change Orders will specify (a) all additional Work to be done and Work to be omitted, if any, in connection with the change; (b) the basis of compensation to the Contractor for additional or omitted Work; and (c) any adjustment of the time of completion of the Work. If the City determines that a change requiring additional Work will cause, delay in completion of Work, he will grant an equitable time extension for the changed Work, or a subsequent Change Order may be issued at such time as the extent of such delay can be determined.

Upon receipt of a Change Order, Contractor shall comply therewith and perform each item of Work set forth therein, furnishing all labor, material, and equipment necessary therefore, in the same manner as if such Work were originally included in the Contract. In the absence of a Change Order, Contractor shall not be entitled to payment or an extension of the time of completion on account of any changes made.

GC-88.2 METHODS OF PAYMENT

The value of any Work covered by a Change Order or any claim for an increase or decrease in the Contract Price shall be determined by the following method, which is most advantageous to City, as determined by the City.

- A. Where the Work involved is covered by unit prices contained in Contract Documents, by application of unit prices to the quantities of the items involved.
- B. By mutual acceptance of a lump sum, based on a detailed breakdown of anticipated costs plus Contractor's fee for overhead, small tools, and profit.

- C. On the basis of the actual cost of the Work plus a Contractor's fee for overhead, small tools and profit. This method of payment is herein referred to as force account Work. Contractor's fee for force account Work performed by his own forces shall be twenty percent (20%) for direct labor and payroll burdens; five percent (5%) for all purchased material; and Contractor's fee for subcontracted Work shall be as defined hereinafter.

GC-88.3 LUMP SUM CHANGE ORDER WORK

Contractor shall prepare an estimate of all extra and deleted Work as described by Written Notice, using established unit prices where they are stated in the Bidding Documents. Estimates for labor, bonds, insurance, materials, and equipment required shall otherwise be based on the provisions set forth hereinafter.

GC-88.4 FORCE ACCOUNT WORK

When authorized by a Change Order, Contractor may perform Work on a force account basis and will be paid actual costs and a fee for properly allocated charges which may include labor, bond premium, supplies and materials, equipment and subcontract billings, incurred in the performance of such force account Work. as more particularly described below:

- A. Labor: For all labor and for foremen in direct charge of the specific operations, Contractor shall receive the actual rate of wage in effect at the time the force account Work is performed for each and every hour that said laborer, and foreman, are actually engaged in such Work. Said agreed rate shall be no higher than that regularly paid the employee. A foreman shall not be used where there are fewer than two (2) laborers employed, except with the written consent of the City. Contractor shall receive the actual costs paid to or in behalf of Workmen, by reason of fringe benefits, including but not limited to Social Security contribution, unemployment, excise and payroll taxes, Workmen's compensation, health and retirement benefits, sick leave, vacation and holiday pay. Expenses of Working after hours, on holidays, or on Saturdays and Sundays shall be included to the extent authorized by the City. Subsistence and travel allowance where required by collective bargaining agreements shall be included.

The charges for labor shall include all classifications through foremen when engaged in the actual and direct performance of the Work. They shall not include charges for such overhead personnel as assistant superintendents, superintendents, office personnel, timekeepers, and maintenance mechanics.

- B. Bonds and Insurance: For bonds and insurance premiums or increases thereto necessitated by the force account Work, Contractor shall receive the actual cost to which no percent shall be added. Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond and insurance.
- C. Materials: For materials accepted by the City and used as an integral part of the finished Work, Contractor shall receive the actual cost of such materials delivered on the Work, including transportation charges paid by him, exclusive of machinery rentals as hereinafter set forth.

If materials are procured by Contractor by a method which is not a direct purchase from and a direct billing by the actual supplier, the cost of such materials shall be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned and delivered to the site of the Work.

For other materials used in the construction which are not an integral part of the finished Work, such as, but not limited to, sheeting, false Work and form lumber, Contractor shall be reimbursed

in the amount agreed upon by the City before such Work is begun. The salvage value of such material will be taken into consideration in determining, the amount of reimbursement.

- D. Equipment: Contractor will be paid for the use of Contractor owned or rented equipment at seventy percent (70%).of the suggested monthly rental rates listed for such equipment in the Blue Book Rental Rates for Construction Equipment (published by Equipment Guide-Book Company of Palo Alto), except as modified below, which edition shall be the latest edition in effect at the time of commencement of the force account Work. Hourly rental rates shall be calculated by dividing the listed monthly rates as modified above by 176 hours. The rental rate for equipment used in excess of eight (8) hours per day, shall be at the rate of fifty percent (50%) of the hourly rates as calculated above. The rental rates for standby equipment, when authorized by the City, shall be at the rate of fifty percent (50%) of the hourly rate for equipment in use eight (8) hours per day. No payment of rentals for standby equipment will be made for more than eight (8) hours per Working day and no payment will be made for weekend days or holidays. If it is deemed necessary by Contractor to use equipment not listed in the applicable edition of the Blue Book Rental Rates, Contractor shall furnish the necessary cost data and paid invoices to the City for its use in establishment of such rental rate(s). Equipment must be in good operating condition. The rental rates paid as above provided shall include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs and maintenance of all kinds, depreciation, storage and insurance. Equipment operators will be paid for as stipulated herein.

The rental time to be paid for equipment on the Work site shall be the time the equipment is required for the force account Work being performed. The time shall include the time required to move the equipment to the location of the force account Work and return it to the original location or to another location requiring no more time than that required to return it to its original location. Moving time will not be paid if the equipment is used at the site of the force account Work on other than such force account Work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. No payment for loading and transporting will be made if the equipment is used at the site of the force account Work on other than such force account Work. Compensation will not be allowed while equipment is inoperative due to breakdown.

For the use of equipment moved in on the Work and used exclusively for Work paid for on a force account basis, providing the City has agreed to said move, Contractor will be paid the equipment use rates provided for in this clause, for the cost of transporting the equipment to the location of the Work and its return to its original location, and for the cost of loading and unloading the equipment, all in accordance with the following provisions:

1. The cost of transporting equipment shall not exceed the applicable minimum established rates by the State of Georgia Public Service commission.
 2. The equipment use period shall begin at the time the equipment is unloaded at the site of the force account Work, shall include each day that the equipment is at the site of the force account Work, excluding Saturdays and Sundays and other legal holidays unless the force account Work is performed on such days, and shall terminate at the end of the day on which the City instructs Contractor to discontinue the use of such equipment. The maximum time to be paid per day will not exceed eight (8) hours unless the equipment is in operation for a longer time.
- E. Subcontract Work: Where the Change Order applies to Work being performed under a subcontract, reimbursement, including the fee for small tools, overhead and profit for the subcontractor's Work performed on a force account basis shall be computed in precisely the same

manner as if performed by Contractor as indicated herein. One additional allowance of five percent (5%) of the subcontractor's total costs will be granted to Contractor for overhead and profit regardless of the tier of the subcontractor. If the subcontractor elects to contract out change order Work to a third (or lower) level contractor or supplier of purchased equipment, he shall not be entitled to fees, overhead or profit for such third (or lower) level Work or materials. The City reserves the right to direct the Contractor to contract directly with third (or lower) level subcontractors and suppliers of purchased equipment in order to avoid paying multiple fees, overhead and profit for such third (and lower level) subcontractors and suppliers of purchased equipment. If similar Work is not being performed at the Work site, and if required by City, Contractor shall obtain three (3) competitive bids for the requirements of the Change Order and the Contract Documents from Subcontractors acceptable to the City. Selection of the Subcontractor shall be subject to the approval of the City.

- F. Compensation: The compensation as set forth above shall be received by Contractor as payment in full for Work done on a force account basis. At the end of each day, Contractor's Representative and Inspector shall compare records of the Work performed including classification of all laborers, ordered on a force account basis.
- G. Statements: No payment will be made for Work performed on a force account basis until Contractor furnishes the County itemized statements of the cost of such force account Work detailed as to the following:
1. Labor - name, classification, date, daily hours, total hours, rate, and extension of each laborer and foreman.
 2. Equipment - size, type, identification number, dates, daily hours, total hours, rental rate, and extension of each unit of machinery and equipment.
 3. Materials - quantities of supplies and materials, prices, including transportation cost and extensions.
 4. Bonds and insurance premiums.
 5. Subcontract Work - force account detail as above or progress quantities and prices of unit price or lump sum subcontracts.
 6. Payments for items under paragraphs (a) to (f) inclusive, shall be conditioned upon Contractor's presentation of original receipted invoices for materials used and transportation charges. If, however, the materials used in the force account Work are not specially purchased for such Work but are taken from Contractor's stock, then in lieu of the original invoices) the statements shall contain or be accompanied by an affidavit of Contractor which shall certify that such materials were taken from his stock, that the price and transportation of the material as claimed represent actual cost.
- H. If, in the City's opinion, Contractor or any of his subcontractors, in performing force account Work, are not making efficient use of labor, material, or equipment and/or are proceeding in a manner which is expensive to the City, the City may request the Contractor to make more efficient use of labor, material and equipment. Contractor shall in good faith comply with such requests as are reasonable. If the Contractor fails to comply with such requests, the City may independently determine the reasonable cost of the Work and the Contractor will be entitled only to the reasonable cost so estimated by the City.

GC-88.5 CHANGE ORDERS LIMITED

Except as provided herein, no order, statement or conduct of the City or the Construction Program Manager shall be treated as a "Change Order" or entitle the Contractor to any adjustment hereunder of the Contract Price or Contract Time.

GC-88.6 NO WORK STOPPAGE

Nothing in this Article shall excuse the Contractor from proceeding with the Contract as changed.

GC-88.7 CONTRACT AMENDMENT

The amount payable to the Contractor under the Contract, the Contract Time, and the date required for performance of any part of the Work may be changed only by a Change Order to the Contract.

GC-89 DISAGREEMENT WITH ORDERS FOR CHANGE

Contractor's written acceptance of a Change Order or other order for changes shall constitute his final and binding agreement to the provisions thereof and a waiver of all claims in connection therewith, whether direct or consequential in nature. Should Contractor disagree with any order for changes, he may submit a notice of potential claim to the City, at such time as the order is set forth in the form of a Change Order. Disagreement with the provisions of an order for changes shall not relieve Contractor of his obligation under Clause GC-88, Change Orders.

GC-90 CHANGED CONDITIONS.

Contractor shall notify the City in writing of the following conditions, hereinafter called "changed conditions," promptly upon their discovery and before they are disturbed:

- A. Subsurface or latent physical conditions at the site of Work differing materially from those represented in this Contract; or
- B. Unknown physical conditions at the Site of the Work of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in this Contract.

The City will promptly investigate conditions of which it is so notified or conditions discovered by it which appear to be changed conditions, and will, as soon as practicable, issue appropriate orders or instructions. If the City determines that the conditions materially differ and that they will materially increase or decrease the costs of any portion of Work, it will issue a Change Order adjusting the compensation for such portion of Work.

GC-91 OPTIONAL CHANGE ORDER PROCEDURE

In the event that a change order is deemed necessary and is requested by the City, the Contractor, at his option, may elect to perform the necessary Work prior to the approval of the change order by the City Council. In such event, the Contractor shall proceed at his own risk that the City Council may not approve the change order.

Within thirty days following the Contractor's submission of a request for payment for the Change Order Work pursuant to this paragraph, the City shall initiate an agenda item requesting that the City

Council approve and execute a written change order for the Work in question. During the pendency of the agenda item, the Contractor shall not be entitled to compensation for the change order Work performed.

If the City Council subsequently approves and executes the change order, the Contractor shall be paid the sum approved in the change order from funds reserved by the City for payment of anticipated and approved written change orders in conjunction with this contract pursuant to Part III of the bid with regard to this project. If the City Council rejects or fails to approve the change order, the Contractor shall not be entitled to compensation for the Work performed pursuant to the change order request.

Nothing contained in this contract shall prevent or discourage the Contractor from electing to obtain prior written approval of a change order by the City Council prior to initiation of Work pursuant to such change order.

The parties to this agreement recognize that the Contractor's election to proceed with a change order prior to Council approval of such change order will evidence the Contractor's desire to continue the project without interruption. In the event that the Contractor determines to await Council approval of a written change order, however, neither party to this agreement shall be entitled to damages, including delay damages and impact damages, as a result of the change order approval process.

The Contractor hereby acknowledges that thirty to sixty days are normally required in order to obtain the City Council's approval of a written change order. The Contractor further acknowledges that no agent or employee of the City has authority to bind the City to a contract or change order, and approval by the City Council is necessary prior to the City's entry into a valid and binding contract or change order.

The Contractor further acknowledges that the funds reserved by the City pursuant to Part III of the bid concerning this project do not form a portion of the contract price for this project. Said funds merely represent the City's effort to set aside funds from its general operating budget to pay approved written change orders arising from this project. The Contractor acknowledges that the City is not obligated to expend any or all of the amount designated in Part III of the bid for this project, and the Contractor agrees to make no claim to any such funds which remain unexpended and unauthorized after completion of this agreement.

Each party to this agreement hereby warrants that it has read and fully understands each and every provision of these general conditions to the parties' construction contract. Each party further agrees that these general conditions form a portion of the construction contract and are hereby incorporated therein by reference.

GC-92 INSURANCE REQUIREMENTS

The limits of liability for the insurance shall provide coverage for not less than the following amounts or greater where required by laws or regulations:

1. Workers' Compensation, and related coverages:
 - a. State:
Statutory
 - b. Applicable Federal (e.g., Longshoremans'):
Statutory
 - c. Employers Liability:
\$1,000,000

2. Contractor's General Liability Insurance which shall include completed operations and product liability coverage's and eliminate the exclusion with respect to property under the care, custody and control of the contractor:
 - a. General Aggregate (Except Products-Completed Operations)
\$1,000,000
 - b. Products-Completed Operations Aggregate
\$1,000,000
 - c. Personal and Advertising Injury (Per Person / Organization)
\$1,000,000
 - d. Each Occurrence (Bodily Injury and Property Damage)
\$1,000,000
 - e. Property Damage Liability Insurance will provide Explosion, Collapse and Underground coverages where applicable.
 - f. Excess/Umbrella Liability
 - i. General Aggregate
\$1,000,000
 - ii. Each Occurrence
\$1,000,000
3. Automobile Liability:
 - a. Bodily Injury:
 - i. Each Person
\$1,000,000
 - ii. Each Accident
\$1,000,000
 - b. Property Damage:
 - i. Each Accident
\$1,000,000
 - OR
 - ii. Combined Single Limit of
\$1,000,000
(Bodily Injury & Property Damage)

4. The Contractual Liability coverage shall provide coverage for not less than the following amounts:
 - a. General Aggregate
\$1,000,000
 - b. Each Occurrence (Bodily Injury & Property Damage)
\$1,000,000

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PART 1 - GENERAL

1.01 GENERAL AND SUPPLEMENTARY CONDITIONS

- A. The requirements of the Agreement between Owner and Contractor and the General the Supplementary Conditions indicated in Division 0 are a part of and apply to all work hereunder.

1.02 PRE-CONSTRUCTION CONFERENCE

- A. Within 10 calendar days following issuance of the Written "Notice to Proceed" the architect/engineer shall schedule a conference for the purpose of reviewing the construction program with the contractor. The general contractor is encouraged to have all subcontractors present at the conference. The following issues will be addressed:
 - 1. Introduction of all attending parties
 - 2. Channels and procedures for communications
 - 3. Requests for substitutions in accordance with the requirements of specification Section 01 100, Part 1.02 F.
 - 4. Issuance of RFP's (Request for Proposals) by the architect shall be addressed by the General Contractor within 7 calendar days of receipt thereof in accordance with Supplementary Conditions indicated in Paragraph 7.1.5.
 - 5. Change order compensation based on figures indicated in Supplementary Conditions Paragraph 7.1.7.
 - 6. Pre-construction submittals indicated in Supplementary Conditions Paragraph 3.19.
 - 7. Shop drawings, samples and other project submittals issued in accordance with the requirements of Specification Section 01 100.
 - 8. Job progress meeting frequency. In addition to periodic progress meetings, the City would like to schedule a public "hard hat" tour of the project site, on a Saturday, near the contract completion date.
 - 9. Applications for payment issued in accordance with the requirements of the General Conditions of the contract for construction and all applicable supplementary conditions in Paragraphs 9.3.4.
 - 10. Safety precautions and programs as directed by the General Contractor in accordance with AIA General Conditions Article 10 and part 1.07 in Section 01010.
 - 11. Any mock-ups required.

12. Requests for time extensions shall be issued in accordance with the requirements of Supplementary Conditions Paragraph 8.3.4.
13. Discrepancies and conflicts in the Contract Documents shall be resolved using the order of precedence indicated in the Supplementary Conditions, paragraph 1.2.7. In the event of a possible discrepancy between portions of the contract documents, the Architect shall be notified in writing by the Contractor and a clarification will be issued. The Contractor assumes an obligation to bring all possible discrepancies within the Contract Documents to the Architects attention in writing for possible resolution prior to performing any construction related thereto. If the Contractor neglects to do so, all expenses related reparations required by the Owner due to such negligence shall be borne by the Contractor. In all instances, the Architect shall be the sole interpreter of the Contract Documents.
14. The date of substantial completion shall not be achieved, and the substantial completion certificate shall not be issued prior to receipt of the final official certificate of occupancy by the General Contractor.
15. Contract closeout/final payment requirements shall be clearly understood by the General Contractor. Piecemeal delivery of final closeout documents and materials is not acceptable.
16. Materials testing shall be conducted by a certified testing agency in accordance with the requirements of Section 01 400.
17. Immediately prior to substantial completion, the General Contractor shall prepare a comprehensive list of items to be corrected or completed (a punchlist) for the architects review in accordance with Paragraph 9.8.2 of the AIA General Conditions. The architect shall then add to or delete items from the list during a substantial completion inspection.
18. Permits, fees, licenses, etc..., shall be addressed in accordance with the requirements of General Conditions Section 3.7, all applicable supplementary conditions and Part 1.09 A of Section 01 010.
19. Compensation for stored material shall be as defined in Parts 6.2.1, 9.3.2, 10.2.1.2, 11.3.1.4 & 12.2.4 of the General Conditions as well as Part 9.3.2.1 of the Supplementary Conditions, Paragraph 1.03A of Section 01 010, Paragraph 1.03 A of Section 01 100 and Paragraph 2.04G of Section 01 500. Invoices for stored materials must be delivered with the applications for payment on which compensation for the stored materials has been requested. Invoices for stored materials delivered separately from the applications for payment will not be recognized until the following application for payment is received.
20. A lien waiver issued by the General Contractor shall be submitted with each application for payment. An individual lien waiver from each subcontractor will be required prior to final payment.

1.03 CONTRACTOR'S WORK AND MATERIALS STORAGE

- A. Contractor's materials storage area shall be determined at the pre-construction conference. The Contractor shall confine his storage therein and take necessary precautions to protect materials at his own expense against all weather conditions, theft and damage.
- B. All debris generated during the construction process shall be removed from the project site and adjacent property.

1.04 OVERLOADING

- A. Contractor shall be responsible for overloading any part or parts of the site beyond safe load carrying capacities.

1.05 MANUFACTURER'S DIRECTIONS

- A. Where it is required in the specifications that materials, products, processes, or equipment be installed or applied in accordance with manufacturer's instructions, directions, or specifications, it shall be construed to mean that said application or installation shall be in strict accordance with printed instructions furnished by the manufacturer of the material or system proposed for use under conditions similar to those experienced at the project.
- B. The Contractor shall notify the Utility Protection Center at 1-800-282-7411 prior to commencing with any subsurface excavations.

1.06 LAYING OUT WORK

- A. Prior to commencing work, the Contractor shall be responsible for careful comparison and review of all Architectural, Structural, Mechanical, Plumbing, Fire Protection, Electrical, Civil, Landscape and other working drawings. All drawings shall be compared with one another which in any way affect the work to be executed. Should any discrepancy be found, it shall immediately be reported to the Architect in writing for verification and adjustment.
- B. Contractor shall exercise proper precautions to verify figures and dimensions shown on the Drawings before laying out work and shall be held responsible for any error resulting from his failure to exercise such precaution. Drawings shall not be scaled for any purpose.

1.07 ACCIDENT PREVENTION

- A. Precaution shall be exercised at all times for the protection of all persons, including employees of the Contractor. Machinery equipment, openings, power lines and all other hazards shall be guarded or eliminated in accordance with the safety provisions of "The Manual of Accident Prevention in Construction" published by the Associated General Contractors of America.

1.08 PERIODIC CLEANING

- A. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.
- B. Site and Structure
 - 1. Maintain the site and adjacent areas in a neat and orderly condition at all times.
 - 2. At least weekly inspect the site and pick up all scrap, debris and waste material and remove them to the place designated for their storage.
 - 3. At least weekly and prior to any and all inspections, sweep interior spaces clean. "Clean" for the purpose of this paragraph shall be interpreted as meaning free from material capable of being removed by reasonable effort and a hand-held broom.

1.09 FINAL CLEANING

- A. "Clean" for the purpose of this Article shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality equipment and materials.
- B. Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris and waste.
 - a. Visually inspect finished surfaces and remove all traces of soil, waste materials, smudges and other foreign matter.
 - b. Remove all paint droppings, spots, stains and dirt from finished surfaces.
- C. Unless otherwise directed by the Architect, broom clean paved areas on the site and public paved areas adjacent to the site. Completely remove resultant debris.

1.10 PERMITS AND REGULATIONS

- A. All work and material shall be in accordance with Safety Orders of the Division of Industrial Safety, and other applicable Federal, State, County and City Municipal laws, ordinances, rules and regulations pertaining to construction. Nothing in the contract documents shall be construed to permit work not conforming thereto. The Contractor shall consult the Architect on all issues regarding possible non-conformance. Contractor shall provide all labor, materials and equipment to complete the work as required by all applicable laws, ordinances, rules and regulations. The Contractor shall consult the Architect before making any determinations as to changes in quality, scope and/or increases or decreases in cost.
- B. The Contractor shall notify all local utility companies prior to beginning any subsurface investigations.

1.11 PROJECT COMPLETION

- A. The City Engineer shall review the project for Substantial completion. If the project is Substantially complete, as defined in the General Conditions of the Contract for Construction, the City Engineer shall issue a Certificate of Substantial Completion.
- B. When the project is substantially complete (as defined in the Agreement Between the Owner and the Contractor) and all mechanical and electrical systems are operating after having been checked by the Contractor and/or manufacturer, the Contractor shall notify the Architect in writing at least seven days before the date of request for substantial completion inspection. The Contractor shall arrange for the presence of all subcontractors whose work is involved.
 - 1. No sooner than 2 calendar days prior to the proposed date of substantial completion inspection, the Contractor shall prepare a "Punch List" for items not completed and work not complying with the requirements of the Contract Documents. The City Engineer shall add to and/or delete items from the punch list during the Substantial Completion inspection. The "Punch List" shall not be construed as a contract requirement but is intended only to assist in the completion of the project. The Contractor shall make a diligent effort to complete all work in conformance with the requirements of the Contract Documents before requesting a "Punch List".
 - 2. Correction of items noted on the "Punch List" does not relieve the Contractor from conforming with all requirements of the Contract Documents.
- C. Before final payment is made, the following items shall be delivered in satisfactory form to the Owner:
 - 1. All maintenance/operating manuals and instructions.
 - 2. All guarantees required by the individual technical specification sections.
 - 3. All other required items noted in the Contract Documents.
 - 4. All items on the Punch List shall have been completed in satisfactory order and such notice forwarded in writing to the Architect.
 - 5. All as-built drawings shall be provided by the Contractor as described in the Specifications.
 - 6. All maintenance and replacement stock material required.
 - 7. Certificate which warrants that all materials, products and assemblies incorporated in this project are totally free of asbestos, PCB, or other such hazardous material.
 - 8. Owner, after completion of project, may elect and pay to use services of an independent testing agency to test for asbestos content.
- D. Final Inspection

1. When the work is completed in accordance with the Contract Documents and the requirements of Paragraphs A and B above and General and Supplementary Conditions of the contract for construction have been satisfied, the Contractor shall notify the City in writing that the work shall be ready for final inspection on a definite date, which shall be stated in such notice. The City shall receive such notification no sooner than seven calendar days prior to the date stated in such notice. The notice shall be forwarded to the City Engineer, who shall attach his endorsement as to whether or not he agrees with the Contractor's statement that the work will be ready for final inspection on the established date, but such endorsement shall not relieve the Contractor of any contractual responsibilities.
2. Final inspection shall be made by the Owner, City Engineer, and/or Consultants when the Contractor states that the project has been completed in accordance with the Contract Documents, all punch list items have been completed and a formal written request for final inspection is made as outlined above.

1.12 LIMITS OF WORK

- A. Work shall be performed as indicated on the working drawings.

1.13 OFFENSIVE BEHAVIOR

- A. A penalty of \$100.00 per event shall be levied against the General Contractor and, subsequently, deducted from the next application for payment for objectionable behavior by any of the General Contractor's forces while on the Owner's property, as determined by the Architect. This objectionable behavior shall include, but not necessarily be limited to, profanity, alcohol and/or illegal drug consumption or possession and sexual misconduct.
- B. All workmen shall be fully clothed and shall be expected to exhibit acceptable behavior. Association with the public shall be prohibited. Refer all non-project related visitors to the City Hall for assistance. Failure to comply with this requirement can subject personnel to being banned from the project site.

END OF SECTION 01 010

CONTRACTOR WARRANTY FORM

PROJECT: FLOWERY BRANCH – SANITARY REAM & RELINE (8" DIP)

LOCATION: FLOWERY BRANCH, GEORGIA

OWNER: CITY OF FLOWERY BRANCH

GENERAL CONTRACTOR:

We _____, contractor
(Company Name)

for _____, as described in Specification Section (s)
(list trade)

_____ do hereby warrant
(list appropriate sections of specifications)

that all labor and materials furnished and work performed in conjunction with the above referenced project are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one year from Date of Substantial Completion and that all street signs will be free from defects due to defective materials or workmanship for a period of seven years from Date of Substantial Completion.

This warranty commences at 12:00 noon on _____
and expires at 12:00 noon on _____.

Should by any defect develop during the warranty period due to improper materials, workmanship or arrangement, the defect shall, upon written notice by the Owner, be repaired or replaced by the undersigned at no expense to the Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner

DATE: _____ FOR: _____
(COMPANY NAME)

BY: _____

TITLE: _____

END OF SECTION 01740

FLOWERY BRANCH
CPL 16531.00

SANITARY REAM & RELINE (8" DIP)
SUBCONTRACTOR WARRANTY

SECTION 01 741-1

SUBCONTRACTOR WARRANTY FORM

PROJECT: FLOWERY BRANCH – SANITARY REAM & RELINE (8" DIP)

LOCATION: FLOWERY BRANCH, GEORGIA

OWNER: CITY OF FLOWERY BRANCH

GENERAL CONTRACTOR:

We _____, subcontractor
(Company Name)

for _____, as described in Specification Section (s)
(list trade)

_____ do hereby warrant
(list appropriate sections of specifications)

that all labor and materials furnished and work performed in conjunction with the above referenced project are in accordance with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of one year from Date of Substantial Completion and that all street signs will be free from defects due to defective materials or workmanship for a period of seven years from Date of Substantial Completion..

This warranty commences at 12:00 noon on _____
_____ and expires at 12:00 noon on _____.

Should by any defect develop during the warranty period due to improper materials, workmanship or arrangement, the defect shall, upon written notice by the Owner, be repaired or replaced by the undersigned at no expense to the Owner.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

DATE: _____ FOR: _____
(COMPANY NAME)

BY: _____
TITLE: _____

END OF SECTION 01 741

SANITARY SEWER REAM & RELINE (8" DIP)
CURED-IN-PLACE-PIPE (CIPP)
SPECIFICATIONS FOR CURED-IN-PLACE-PIPE (CIPP)

A. PROJECT INTENT:

1. It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, tightly formed to the original sanitary sewer conduit. The resin is to be cured using either hot water under hydrostatic pressure or steam pressure within the inserted tube. The cured-in-place-pipe (CIPP) shall be continuous and tight fitting.

B. REFERENCED DOCUMENTS:

1. These specification reference standards from the American Society for Testing and Materials, (ASTM):
 - a. ASTM F1216 (Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube),
 - b. ASTM F1743 (Rehabilitation of Existing Pipelines and Conduits by Pulled- in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP),
 - c. ASTM D5813 (Cured-in-Place Thermosetting Resin Sewer Pipe),
 - d. ASTM D790 (Test Methods for Flexural Properties of Un-reinforced and Reinforced Plastics and Electrical Insulating Materials), and D2990 (Tensile, Compressive, and Flexural Creep and Creep—Rupture of Plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof.

C. PRODUCT, MANUFACTURER/INSTALLATION REQUIREMENTS:

1. Sanitary sewer products are intended to have a 50-year design life, and in order to minimize the Owner's risk, only proven products, with substantial successful long—team records of accomplishment will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of bid proposals.

Products and installers seeking approval must meet following criteria to be deemed acceptable:

- a. For a product to be considered, a minimum of 10 successful sanitary sewer collection s) stem projects, of a similar size and scope of work, and 10,000 linear feet shall have been completed in the United States of America using the proposed product. The exact product intended for use on the proposed

project shall be documented as used on similar projects. Evidence shall be submitted and reviewed to the satisfaction of the Owner, to be deemed acceptable.

- b. For the proposed bidder to be considered and approved, the bidder must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 5 (five) years active experience in the commercial installation. In addition, the proposed bidder must have successfully installed at least 10,000 feet of the cured-in-place product intended for use on this project. The proposed bidder's project manager must have a minimum of 2 years of CIPP installation experience.

Acceptable documentation of these minimum installation requirements may be required to be submitted to the Owner prior to the Notice of Award.

- c. Sewer rehabilitation products submitted for approval must provide third party test results supporting the structural performance (short-term and long-term) of the product.
- d. Both the rehabilitation product manufacturing and installation processes shall operate under a quality management system, which is third-party certified to ISO 9000 or other recognized third-party certified organization standards. Proof of certification may be required for approval.
- e. The proposed bidder must own and operate its own permitted wet-out facility where the resin impregnation of the CIPP tube will be carried out. Documentation of such facility may be required to be submitted for approval. No wet-out of purchased materials (tube & resin) may be completed through third part companies.

D. MATERIALS:

1. Tube:

The sewn tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5.1 of ASTM F1743, Section 5.2.1 or ASTM D 5813, Sections 5 and 6. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

- a. The wet-out tube shall have a relatively uniform thickness that when compressed at installation pressures will equal or exceed the calculated minimum design CIPP wall thickness.
- b. The tube shall be manufactured to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance shall be made for circumferential stretching during installation.

- c. The outside layer of the tube shall be coated with an impermeable, flexible membrane that will contain the resin and allow the resin impregnation (wet out) procedure to be monitored.
- d. The tube shall contain no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.
- e. The wall color of the interior pipe surface of CIPP after installation shall be a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be accomplished.
- f. Seams in the tube shall be stronger than the non-seamed felt material.
- g. The tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 feet. Such markings shall include the manufacturers name or identifying symbol. The tubes shall be manufactured in the USA.

2. Resin:

The resin system shall be a corrosion resistant polyester or vinyl ester system including all required catalyst and initiators. The resin shall, when cured within the tube, create a composite that satisfies the requirements of ASTM F1216, ASTM D5813 and ASTM F1743, for the physical properties. The activated resin shall result in a CIPP that will comply with the structural and chemical resistance requirements of this specification.

E. STRUCTURAL REQUIREMENTS:

1. The cured-in-place-pipe (CIPP) shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall.
2. The proposed bidder must have performed long-term testing for flexural creep of the CIPP pipe material installed by his company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (tube and resin) and general workmanship of the installation and curing as defined within the relevant ASTM standard. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, of the long-term creep retention value utilized, will be verified by this testing. Retention values exceeding 50% of the short-term test results shall not be applied unless substantiated by qualified third-party test data to the Owner's satisfaction. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.
3. The Enhancement factor 'IN' to be used in 'Partially Deteriorated' Design conditions shall be assigned a value of seven (7).

4. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly of the probe or knife blade moves freely between the layers. If the layers separate during field sample testing, new samples will be required, to be obtained, from the installed pipe. Any reoccurrence may cause rejection of the work.
5. The cured pipe material cured-in-place-pipe (CIPP) shall conform to the structural properties, as listed below:

Minimum cured-in-place-pipe physical properties

Cured Polyester Composite

<u>Property</u>	<u>Test Method</u>	<u>Min. per ASTM F1216 Enhanced Resin</u>	
Modulus of Elasticity	ASTM D790	250,000 psi	300,000 psi
Flexural Stress	ASTM D790	4,500 psi	4,500 psi

6. The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in paragraph 5, above, or greatest values if substantiated by independent lab testing and in accordance with the design equations. Design Considerations of ASTM F1216, and the following design parameters:

Design Safety Factor (typically used value)	= <u>2.0</u>
Term Flexural Modulus to be used in Design	= <u>Retention Factor for Long—</u>
<i>determined by long-term tests described in section E.2 and approved by the Owner)</i>	<u>50% -75%</u> (is
Ovality* (calculated from XI.1 of ASTM F1216)	<u>2%</u>
Enhancement Factor, K	<u>7</u>
Groundwater Depth (above invert of existing pipe) *	<u>soil depth (ft)</u>
Soil Depth (above crown of existing pipe) *	<u>field conditions (ft)</u>
Soil Modulus **	<u>120 psi</u>
Soil Density **	<u>1000 pcf</u>
Live Load **	<u>H20 Highway</u>
Design Condition (partially or fully deteriorated) ***	<u>FD</u>

* Denotes information, which can be provided in inspection videotapes or project construction plans. Multiple lines segments may require a table of values.

** Denotes information required only for fully deteriorated design conditions.

*** Based on review of video logs, conditions of pipeline can be fully or partially deteriorated. (ASTM F1216) The Owner will be sole judge as to pipe conditions and parameters utilized in design.

7. Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural cured-in-place-pipe (CIPP) wall thickness computation.

F. TESTING REQUIREMENTS:

1. The cured-in-place-pipe (CIPP) shall meet the chemical resistance requirements of ASTM F1216. The CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical-testing requirements.
2. The hydraulic capacity of the pipelines cross-section shall be maintained as large as possible. The cured-in-place-pipe (CIPP) shall utilize a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.
3. When requested by the Owner, the Contractor shall submit test results from field installations of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section E.5, have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section J, paragraph 1.

G. INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS:

1. The drawings show the approximate locations of existing sanitary sewer manholes, to be used for access in completing the required work. Also shown on the drawings are the sanitary sewer pipelines, where the cured-in-place-pipe (CIPP) liners shall be installed. The length shown between manholes is for reference only. It shall be the contractor's responsibility to verify the length between manholes for the CIPP liners. The contractor shall determine all manhole access points required to complete the work and evaluate their accessibility for the work to be completed. If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall institute the actions necessary to obtain access and closure from the City. The Owner shall provide free access to water hydrants for cleaning, installation and other process related work items requiring water.
2. Clearing of Sewer Lines:
The Contractor, as required, shall remove all internal debris out of the sanitary sewer pipeline that could interfere with the installation of CIPP. The contractor shall also provide a dumpsite for all debris removed from the sewers during the cleaning operation. Unless stated otherwise, it is assumed the dumpsite will be at or near the sewage treatment facility to which the debris would have arrived in absence of the cleaning operation.
3. Bypassing Sewage:
The Contractor, as required, shall provide for the flow of sewage around the section or sections of pipe designated for repair. Plugging the sanitary sewer pipeline at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system shall make the bypass. The pump(s) and bypass line(s) shall be of adequate capacity to accommodate the sewage flow. The Owner may require a detail of the bypass plan to be submitted.

4. Inspection of Pipelines:
Inspection of pipelines shall be performed by the contractor in the presence of the Owner or the Owners representative, with experienced personnel trained in locating breaks, obstacles and service connections using closed circuit television (CCTV) inspection techniques. The pipeline interior shall be carefully inspected to determine the location of any conditions that may prevent proper installation of the CIPP. These shall be noted and corrected. A videotape and suitable written log for each line section shall be produced for and given to the Owner.
5. Line Obstructions:
It shall be the responsibility of the Contractor to clear the line of obstructions, such as solids and roots that will prevent the insertion of CIPP liner. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that would prevent the installation process, which cannot be removed by conventional sewer cleaning equipment, then the Owner may direct the Contractor to make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.
6. Public Notification:
The Contractor shall make every effort to maintain sanitary sewer service usage throughout the duration of the project. In the event that a connection will be out of service, the longest period of no service, shall be 4 hours.
7. The Contractor shall be responsible for confirming the locations of all branch service connections prior to installing the CIPP.

H. INSTALLATION:

1. The cured-in-place-pipe (CIPP) installation shall be in accordance with ASTM F1216, Section 7, or ASTM F1743, Section 6, with the following modifications:
 - a. Resin Impregnation:
The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the potential loss of resin during installation through cracks and irregularities in the original pipe wall, as applicable.
 - b. Tube Insertion:
The wet out tube shall be positioned in the pipeline using either inversion or a pull-in method as defined within relevant ASTM standards stipulated. If pulled into place, a power winch or its equivalent should be utilized and care should be exercised not to damage the tube, as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.
 - c. Temperature gauges shall be placed between the tube and the host pipe's invert position to monitor the temperatures during the cure cycle.

- d. Curing shall be accomplished by utilizing hot water under hydrostatic pressure or steam pressure in accordance with the manufacturer's recommended cure schedule. A cool-down process shall be conducted that complies with the resin manufacturer's specification.

I. REINSTATEMENT OF BRANCH CONNECTIONS:

1. It is the intent of these specifications that branch connections to buildings be re-opened without excavation, utilizing a remotely controlled cutting device, monitored by a CCTV. The Contractor shall certify a minimum of two complete functional cutters plus key spare components are on the job site before each installation or are in the immediate area of the jobsite and can be quickly obtained. Unless otherwise directed by the Owner or the Engineer, all laterals shall be reinstated. No additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work to public or private property.

J. INSPECTION:

1. The cured-in-place-pipe (CIPP) samples shall be prepared for each installation designated by the Owner or the Engineer or approximately 20% of the project's installations. Pipe physical properties will be tested in accordance with ASTM F1216 or ASTM F1743, Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in the table in Section E of this specification, Table 1 of ASTM F1216 of the values submitted to the Owner or Engineer by the Contractor for this project's CIPP wall design, whichever is greater.
2. Wall thickness of samples shall be determined as described in paragraph 8.1.6 of ASTM F1743. The minimum wall thickness at any point shall not be less than 87.5 % of the submitted minimum design wall thickness as calculated in Section 5 paragraph 6 of this document.
3. Visual inspection of the cured-in-place-pipe (CIPP) shall be in accordance with ASTM F1743, Section 8.6.

K. CLEAN-UP:

1. Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

END OF SECTION

REHABILITATION OF MANHOLES & SEWER STRUCTURES

1.0 DESCRIPTION

1.1 Scope:

Specifies rehabilitation of existing concrete and brick sanitary sewer manholes, lift stations and similar structures to eliminate infiltration provide protection against corrosion to the structure interior, repair and enhance structural integrity of the structure and includes work, materials, and equipment required for structure repairs, surface preparation, and application of a monolithic epoxy coating to specified surfaces.

1.2 Requirements:

The Contractor shall furnish all labor, materials, and equipment required to clean, grout, patch, structurally repair, reinforce and/or seal designated manholes, lift stations, and similar structures. This work shall also include temporary plugging of lines, bypass pumping of flows, capture and removal and disposal of debris. All rehabilitation work, including surface preparation shall be performed within the manhole and/or structure. This item also includes removal/replacement of manhole ring, cover and concrete collar or other to secure or adjust cover to required elevation. All work shall be performed in accordance with OSHA Confined Space Requirements and other applicable federal, state and local safety and environmental requirements. This shall include monitoring of Confined Space prior to entering the Confined Space, continuous monitoring of Confined Space, continuous supply of fresh air, personnel extraction devices and training of personnel of these safety devices. All work shall be performed under the supervision of a Certified Confined Space foreman/supervisor.

The Contractor shall be licensed in State of Georgia in accordance with State of Georgia requirements. Contractor must have satisfactory completion of (3) or more similar sized or more difficult jobs to project proposed The Contractor shall also be certified applicators and experienced for all products used to perform work. The Contractor shall be responsible for meeting all franchise or patent requirements.

1.3 References:

ACI- American Concrete Institute

ASTM- The published standards of the American Society for Testing and Materials, West Conshohocken, PA.

NACE- The published standards of National Association of Corrosion Engineers (NACE International), Houston, TX.

SSPC- The published standards of the Steel Structures Painting Council, Pittsburgh, PA

ACI 506.2-77 Specifications for Materials, Proportioning, and Application of Shotcrete

ASTM C109- Compressive Strength Hydraulic Cement Mortars

ASTM C267 Chemical Resistance of Mortars, Grouts, and Monolithic Surfacing and Polymer Concretes

ASTM C348- Flexural Strength Hydraulic Cement Mortars

ASTM C396- Compressive Strength of Cement Mortars

ASTM C579- Compressive Strength of Chemically Setting Silicate and Silica Chemical Resistant Mortars

ASTM C722- Standard Specifications for Chemical-Resistant Resin Monolithic Surfaces

ASTM D543- Resistance of Plastics to Chemical Reagents

ASTM D638- Tensile Properties of Plastics

ASTM D695- Compressive Properties of Rigid Plastics

ASTM D790- Flexural Properties of Unreinforced and Reinforced Plastics

ASTM 2240- Durometer Hardness, Type D

ASTM 2584- Volatile Matter Content

ASTM D4541- Pull-off Strength of Coatings Using a Portable Adhesion Tester

1.4 Submittals:

The following items shall be submitted:

1. Technical Data sheet on each product used, including ASTM test results indicating the product conforms to and is suitable for its intended use per these specifications.
2. Material Safety Data Sheets (MSDS) for each product used.
3. Project specific guidelines and recommendations.
4. Certification of Applicator for product being used.
5. Proof of any necessary federal, state, or local permits and licenses for work to be performed on project.

6. Work Plan including design details for any additional ancillary systems and equipment to be used in site and surface preparation, application and testing, diversion of flow, safety procedures, capture and removal of debris and/or construction materials and adherence to any required environmental regulations.

1.5 Quality Assurance and Warranty

The contractor shall initiate and enforce quality control procedures consistent with applicable ASTM, NACE and SSPC standards and the protective coating manufacturer's recommendations.

The contractor shall warrant all work against defects in materials and workmanship for a period of one (1) year from the date of final acceptance of the total project. Contractor shall, within a reasonable time after receipt of written notice thereof, repair defects in materials and/or workmanship which may develop during said one (1) year warranty period, and any damage to other work or structure caused by such defects or the repairing of the same, at Contractor's expense without cost to the City of Flowery Branch.

2.0 MATERIALS

2.1 Existing Structure Repair Materials:

Repair materials shall be used to fill voids, structurally reinforce and/or rebuild surfaces, etc. as determined necessary by the engineer and/or as necessary to adequately construct new protective coating lining system. Repair materials must be compatible with the specified epoxy coating and shall be applied in accordance with the manufacturer's recommendations. Contractor shall submit written proof and/or material certifications for verification by the engineer.

Examples of approved repair materials for interior of manholes and lift stations are:

1. 100% solids epoxy grout that can be "spinner" sprayed and specifically formulated for optimum epoxy top coating compatibility. The epoxy grout manufacturer shall provide instructions for epoxy top coating. Material selected shall be designed for use in manholes and other related wastewater structures.
2. Factory blended, rapid setting, high early strength, calcium aluminate, and/or fiber reinforced, non-shrink mortar pneumatically spray "centrifuge type spinner" applied.

All cementitious coating materials must be capable of placement thickness of ½" to 2" in one pass monolithic application. This mortar must be specifically formulated to be suitable for epoxy top coating. Material selected shall be designed for use in manholes and other related wastewater structures. Such repair mortars should not be used unless their manufacturer provides information as to its suitability for top coating with an epoxy coating. Project specific Submittals should be provided including application, cure time and surface preparation procedures which permit optimum bond strength with the epoxy coating. Sample product is Quadex Aluminaliner or approved equal. Project Engineer shall approve prior to use.

2.2 New Protective Coating Material

New protective coating material shall be Raven 405 ultra-high build epoxy coating, manufactured by Raven Lining Systems, Inc., Tulsa Oklahoma or approved equal. Nominal thickness shall be 150 mils. All material, equipment, storage, and handling shall be as per manufacturer's recommendations. Applicator must be experienced and certified by manufacturer to construct Raven 405 protective coating system.

If Contractor proposes to use an alternative protective coating material system the following must be submitted for review and approval.

1. Products must be applied by experienced and certified applicators. Contractor will be responsible for certification and other of licensed and franchised products, and use of proprietary products.

3.0 CONSTRUCTION REQUIREMENTS.

3.1 General procedures for repair and patching of concrete and masonry manholes lift stations and similar structures are outlined as follows:

1. Any area exhibiting movement or cracking due to expansion and contraction shall be grouted and patched to repair the crack repair or expansion joint damage. Materials must meet Section 2.0 MATERIALS above.
2. All surfaces that show exposed steel, spalling greater than 3/4" deep, or cracks greater than 3/8" wide, shall be patched using a quick setting, high strength cement mortar or a high-build, non-sagging epoxy grout after sandblasting steel to SSPC-10, or with high pressure water cleaning. Holes to be filled should be filled in lifts according to manufacturer's recommendations for the mortar or epoxy selected. Materials must meet Section 2.0 MATERIALS of this Special Provision.
3. All concrete that is not sound or has been damaged by chemical exposure should be removed to a sound concrete surface. Then surface profile to be reestablished as per these special provisions. Profile repair cementitious material shall be applied with a pneumatic "spinner" and then hand troweled as required by Project Engineer. A pneumatic "spinner" application is required for all manholes up to 6' diameter.
4. In masonry structures where spalling of brick or loss of mortar has created gaps greater than 1/4" in diameter between the bricks or blocks, the voids can generally be filled using a compatible quick setting cementitious mortar. Whenever structural integrity is questioned, a high strength cement mortar or epoxy grout shall be utilized. Materials must meet Section 2.0 MATERIALS above. In cases where there is loss of brick, brick shall be shaped to fill and repair voids in manhole. After construction of brick, remaining voids will be repaired as required in this section.

5. Repaired surfaces for concrete or masonry structures shall have a smooth profile, free of holes or honeycomb imperfections. Concrete, mortar surfaces shall have a smooth profile, but texture may be left similar to rough sand paper.
6. For all underground structures, surfaces to be treated shall be free of active leaks before coating. Leaks may be stopped with the use of approved quick setting hydraulic cement, water reactive gels and grouts, epoxy grout or equal.
7. All pipes connections in manholes shall be repaired, reinforced, and enhanced for structural integrity, and sealing of manhole. Work to meet materials and requirements of this special provision.
8. The area between the manhole and the manhole ring and any other area that might exhibit movement or cracking shall be grouted with a flexible or elastomeric grout or gel. Castings will be cleaned and coated to prevent corrosion. Casting may be brushed, blasted or other as required by the Engineer.
9. In cases where replacement of manhole ring and cover is required, the Contractor shall provide new ring and cover. Contractor shall provide all other material, labor and other to repair and adjust manhole ring and cover to required final elevation to meet field conditions with a reinforced 10" thick concrete collar, pavement patch, gravel, backfill or grading as required by the Project Engineer. Collar shall be approximately 4' x 4' x 10" minimum size, with #4 rebar in both directions at 6 inch centers. New ring & collar will be adjusted to match finished grade or to grade as required by Project Engineer.
10. Contractor shall also remove all dirt, rocks, rust, roots, grit, sludge and other debris from the interior of the manhole or structure.
11. Any manhole steps will be removed flush with wall and grouted with approved material. Any need for manholes steps shall be provided where steps are missing in the continuous run from top of manhole to 30" above bench.
12. All repairs must be inspected and approved by the City before further work will proceed. If required, Contractor will perform additional work to meet approval before proceeding further in rehabilitation process.

3.2 Surface Preparation

3.21 The surface to receive protective coating system shall be repaired, cleaned & prepared prior primer application and application of protective coating system. The surface shall receive final preparation immediately prior to application of protective coating. In many instances this is a separate operation after repair of structure and prior to application of coating. Surfaces to receive coating shall be cleaned and abraded to produce a sound surface with adequate profile and porosity to provide a strong bond between the protective coating and the substrate. Typical primer is AquataPoxxy A-10, generally 2-5 mils thickness per coat, prior to application of "Raven 405".

3.22 All contaminants including oils, grease, incompatible existing coatings, waxes, form release, curing compounds, tars, build ups, sealers, salts, foreign matter, or other contaminants shall be removed. This may be done with high pressure water, (3500 psi), high pressure jetting, abrasive blasting, shot blasting, detergent/hot water cleaning or other means. Method chosen shall be compatible to recommended protective coating system and shall not excessively damage existing structure. A mild chlorine solution may also be required to neutralize the surface to diminish microbiological bacteria growth prior to final rinse and coating.

3.23 Contractor shall be responsible for any additional surface preparation beyond previously described, as required by the coating manufacturer and methodology used by coating applicator.

3.3 Application of Protective Coating System

Protective Coating System shall be "Raven 405" ultra high build epoxy coating by Raven Lining Systems or approved equal. Any substitution will only be allowed in accordance with Section 2.2 of this Special Provision. Application of system must be performed by trained, certified and experienced personnel and in accordance to manufacturer's recommendations. Typical application thickness shall be 150 mils nominal thickness applied as per manufacturer's recommendations. Application shall include shelf, invert and manhole, structure vertical walls up to the lid or exit, manhole rings, adjustment devices, flat tops etc.

3.4 Diversion of Flow

Contractor shall be responsible for providing plugs and installing temporary plugging of lines, bypass pumping, diversion of flow, and other as required to complete rehabilitation of manholes, lift stations, and other structures. Contractor is also responsible for coordinating operations and informing the City of Flowery Branch Wastewater Department of all operations. Hot air may be introduced to accelerate cure times of mortars, epoxy and other. The system may put back into service after the initial set of the "Raven 405", approximately 6 hours when cured at 70 degrees F.

3.5 Testing & Inspection

3.51 During application, Contractor shall provide and use a wet film thickness gage meeting ASTM D4414 to ensure a monolithic coating and uniform thickness during application. This shall be verified by a City of Flowery Branch inspector.

3.52 After the protective coating has set hard to the touch the City of Flowery Branch may request inspection with high voltage holiday detection equipment. If requested, Contractor shall provide testing equipment and personnel to perform testing. The City of Flowery Branch will provide an inspector for verification of test results. An induced holiday shall be made on the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for the holidays at that particular area. The spark tester shall be initially set at 100 volts per 1 mil (25 microns) of film thickness applied but may be adjusted as necessary to detect the induced

Holiday. All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper or other hand tooling method. After abrading and cleaning, the additional protective coating material can be hand applied to the repair area. All touchup/repair procedures shall follow the protective coating manufacturer's recommendations. All costs shall be borne by the Contractor.

3.53 A final visual inspection shall be made by the City and contractor's representatives. Any deficiencies in the finished coating shall be marked and repaired as required. All costs shall be borne by the Contractor.

4. ENVIRONMENTAL.

4.1 Contractor shall provide methods to capture and prevent debris from entering the City of Flowery Branch Sewer System. Contractor shall use these methods during all operations of manhole or structure rehabilitation, which include cleaning, application of cementitious materials, epoxy coatings, and any other operations. All materials shall be removed from manhole/structure and disposed of by contractor. Failure to comply will result in shut down of contractor's operations until compliance can be achieved.

5. METHOD OF MEASUREMENT.

5.1 Rehabilitation of manhole, lift station or other structure shall be measured by each. This includes all work and requirements described in this section.

6. BASIS OF PAYMENT.

6.1 Rehabilitation of manhole, lift station, or other structure shall be paid for at contract price per each. Said unit price and payment will be considered payment in full for all labor, materials, equipment, and work inherent for rehabilitation as described in this Special Provision.

PAY ITEM DESCRIPTION	PAY UNIT
Rehabilitate Existing Sewer Manhole	Each
Build & repair Bench	Each

END OF SECTION