



## **REQUEST FOR BID**

**February 2016**

### **ANNUAL CONTRACT FOR CURED-IN-PLACE PIPE REHABILITATION**

**CLAYTON COUNTY WATER AUTHORITY  
1600 Battle Creek Road  
Morrow, GA 30260**

**Bid Opening:**            **Tuesday, April 5, 2016 at 2:00 p.m. (local time)  
1600 Battle Creek Road, Morrow, Georgia 30260**

**Non-Mandatory**  
**Pre-Bid Meeting:**      **Thursday, March 17, 2016 at 2:00 p.m. (local time)  
1600 Battle Creek Road, Morrow, Georgia 30260**

**This procurement has a SLBE bid discount.**

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Steel Traffic Plate Installation  
Slab on Grade  
Typical Asphalt Replacement  
Pipe Installation on Grade (PVC, HDPE)  
Pipe Installation on Grade (DI, RC, CM)  
Lateral Connection  
GA DOT 1033D  
GA DOT 1034D  
Manhole Sections  
Dog House Manhole

**Addenda** (None Issued at This Time)

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## **Division 1**

## **General Information**

### **Section 1: Request for Bids**

Clayton County Water Authority  
1600 Battle Creek Road  
Morrow, Georgia 30260

Name of Project: **Annual Contract for Cured-In-Place Pipe Rehabilitation**

The Clayton County Water Authority will open sealed bids from licensed contractors at its offices located at 1600 Battle Creek Road, Morrow, Georgia 30260, on **Tuesday, April 5, 2016 at 2:00 p.m. (local time)** for the rehabilitation work. Any bids received after the specified time will not be considered.

A Non-Mandatory pre-bid meeting will be held on **Thursday, March 17, 2016 at 2:00 p.m. (local time)** at 1600 Battle Creek Road, Morrow, Georgia, 30260.

In an effort to promote responsible environmental practices the bid package is available in electronic (Adobe PDF) format and can be requested by calling **770-960-5223**, M-F, 8:00 am - 5:00 pm or by e-mail to **CCWA\_Procurement@ccwa.us**. Bidders will need to provide contact information and an email address and any file size transfer limits to insure email transmittals can be made. A hardcopy bid package can also be requested at a cost of \$25.

Clayton County Water Authority

By: John Chafin, Chairman

**END OF SECTION**

## **Division 1**

## **General Information**

### **Section 2: General Overview**

#### **2.1 Intent and Purpose**

The Clayton County Water Authority (CCWA) intends to contract for the annual services of up to two experienced Contractors to install cured-in-place pipe (CIPP) and complete other material installations associated with sanitary sewer and stormwater sewer piping systems. To be considered responsive to this bid, bidders are required to bid on all work items listed on the Bid Form - Pay Item Schedule.

The CCWA intends to award a Primary contract, as well as a Back-Up contract to ensure that CCWA's requests under this annual contract can be performed as needed. A Primary contract will be awarded to the lowest responsive responsible bidder whose bid conforms to the Request for Bids specifications, and will be the most advantageous to the CCWA. A Back-Up contract may be awarded to the second lowest responsive responsible bidder whose bid conforms to the Request for Bids specifications, and will be the most advantageous to the CCWA. An evaluation will also be performed to ensure bidders comply with the required submittals. Determination of responsive responsible bidders will be the sole judgment of the CCWA. The work to be performed under this contract will be determined and assigned by CCWA on an "as-needed", "when-needed" basis. CCWA does not guarantee any minimum or maximum work quantities under this contract, and reserves the right to bid any similar type work of this contract as a separate procurement at its sole discretion.

Work assignments under this contract will be initially offered to the Primary Contractor. Should productivity and/or quality of work of the Primary Contractor not meet contract specifications and/or CCWA's expectations, then work will be offered to the Back-Up Contractor.

The initial term of this contract will be for twelve (12) months. The contract may be extended for a second and third 12 month period by mutual written consent by both parties within 90 days from the expiration date with no changes in terms, conditions, and bid prices.

#### **2.2 Bid Evaluation**

The total bid amount per bidder will be determined by taking the "unit cost" for each "work item" as shown on the "Bid Form - Pay Item Schedule" times an estimated annual quantity for each "work item". At the time of Bid Opening, CCWA will provide a list to each bidder of the "selected" work items and

## **Division 1**

## **General Information**

### **Section 2: General Overview**

“estimated annual quantities” that CCWA has selected to use in determining the “total bid amount”. Note that not all “work items” as shown on the Bid Form - Pay Item Schedule will be used in the bid evaluation process. Work items on the Bid Form – Pay Item Schedule not used in the award evaluation process will be examined by the CCWA to insure that the unit price is in line with comparable items contained in this bid and that any unit price that appear to be out of line may be used by the CCWA as a basis of denial/award of the particular bid and/or the unit price may be negotiated by CCWA. This determination will be at the sole discretion of CCWA.

#### **2.3 Addendum**

Bidders may submit questions regarding this bid prior to the bid opening. To be considered, all questions must be received by email at **CCWA\_Procurement@ccwa.us** by **2:00 pm EST, Friday, March 18, 2016**. Any and all responses to bidder’s questions will be issued in the form of an Addendum by email. All addenda issued shall become part of the Bid Documents.

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 1: Instructions to Bidders**

These instructions are to be followed by every entity bidding to provide the Clayton County Water Authority (CCWA) with goods and/or services. These instructions constitute an integral part of the Bid, and any Bidder agrees that tender of a Bid constitutes acknowledgment and acceptance of its obligation to adhere to these instructions, which are to be incorporated into and considered part of any contract the Bidder ultimately executes with the CCWA.

1. If there is any question whatsoever regarding any portion of the specifications, it shall be the Bidder's responsibility to seek clarification immediately from the CCWA, as early as possible prior to the bid opening. Regarding public works projects, requests for interpretations of specifications must be made in writing to the department proposing out the project not later than five (5) days prior to receipt of bids.
2. Unless it is otherwise stated in the bid documents, it shall be the responsibility of the bidder to inform itself as to all conditions of the work site and to make and take account thereof in calculating and submitting its bid. Documents may be made available by the CCWA during the bidding process; no warranty of accuracy is made in regard to these documents, and it is the responsibility of the bidder to make its own investigations as to the nature of the work and the conditions under which it shall be performed, and to make its own independent assumptions as to these matters. The burden of anticipating unforeseen circumstances, either hidden or latent, and the conditions of the work site and all related circumstances, and the cost of accommodating therefore should unanticipated circumstances be later encountered shall rest upon the bidder.
3. Pre-bid meeting or any other information session will be held at the location as indicated in the solicitation. Unless indicated otherwise, attendance is not mandatory; although vendors are strongly encouraged to attend. However, in the event the meeting is mandatory, then a representative of the vendor must attend the meeting in its entirety to be considered eligible for solicitation award. Late entry to the meeting will not be allowed.
4. In the event that, after the acceptance of a bid by the Board of Directors of the CCWA, any unsuccessful bidder wishes to contest such action, a written "Notice of Contest" must be filed with the General Manager no later than close of business on the 5th business day after the selection of successful bidder by the Board. Failure to timely file such notice shall forever preclude the filing of a contest of the award, or any civil action in the courts of the State of Georgia or of the United States.

## **Division 2**

## **Bid Requirements**

### **Section 1: Instructions to Bidders**

5. Information submitted by the Bidder in the bid process shall be subject to disclosure after bid award in accordance with the Georgia Open Records Act. Proprietary information must be identified and be accompanied by a signed affidavit outlining the redacted information. Entire bids may not be deemed proprietary.
6. Bids must be made on the enclosed Bid Form. Unless otherwise requested, one (1) original and at least two (2) copies of the Bid Form need to be submitted, and these copies must be **typewritten or printed in ink.** All copies of any Bid Forms must be signed in ink by the person or persons authorized to sign the Bid Form. The person signing the Bid Form must initial any changes or corrections.
7. The name of the person, firm, or corporation making the Bid must be printed in ink, along with the Bidder's signature, on all separate sheets of the Bid Form. If a Bid is made by an individual, his name and post office address must be shown. If made by a firm, or partnership, the name and the post office address of each member of the firm or partnership must be shown. If made by a Corporation, the person or persons signing the Bid must show the name of the State under the laws of which the Corporation is chartered and his, or their authority for signing same. The names, titles and addresses of the President, Secretary and the Treasurer and the corporate authority for doing business in this state shall be listed and returned with the Bid Form.
8. All Bids must be hand delivered, delivered by courier service, or mailed via the United States Postal Service. No facsimiles will be accepted. The person, firm, or corporation making the Bid shall submit it in a sealed envelope on or before the date and time specified in the Bid package. The envelope shall be marked "**Sealed Bid**" and carry the Bid title, and date and time of opening as set forth in the Bid package. The envelope shall also bear the name of the party making the Bid and the party's address. Address Bids to *Clayton County Water Authority, 1600 Battle Creek Road, Morrow, Georgia, 30260*. Even if a Bid is not submitted, the Bid Form should be returned signed and with an explanation, otherwise the result will be deletion from the mailing list.
9. If published price books are a part of your Bid, one price book must be included with your Bid Form, and the successful Bidder is required to furnish additional current price books after award of the Bid.
10. Alterations to the documents are strictly prohibited and shall result in automatic disqualification of the Bidder's bid. If there are "exceptions" to the specifications or comments to any of the solicitation requirements or other language, then the bidder



## **Division 2**

## **Bid Requirements**

### **Section 1: Instructions to Bidders**

may ask questions regarding those requirements or submit additional documentation as to the variation from the specifications, but may not alter any of the language contained in the solicitation.

11. In the case of goods, the person, firm or corporation making the Bid may Bid all items. All items may be considered separately, at the discretion of the CCWA.
12. Bids for public works whose price exceeds \$100,000.00 must be accompanied by a certified check, cashier's check, or acceptable bid bond in an amount not less than five percent (5%) of the amount bid.
13. Bidders for construction contracts where the laws of Georgia or the United States of America require a license in order to perform such construction must list the license number and class on the face of the bid envelope and must enclose copies of any required license with the bid.
14. When public work is let out for bid, no person shall prevent or attempt to prevent competition in such bid. Such bidders must make an oath filed with the officer who makes payments under the contract that they have not prevented or attempted to prevent competition in the bid process. Such oath must be signed by: if a partnership, all partners and any officer or agent or other person who acted on the partnership's behalf during the bid process; if a corporation, all officers, agents, or other persons who acted for the corporation in the bid process.
15. Bids shall not be withdrawn or cancelled by the bidder past the bid opening date and time. The bidder may make modifications/corrections to the bid by submitting a corrected seal bid but only if the change is prior to the bid opening. The corrected document should be clearly marked that it supersedes the bid originally submitted. No modification or corrections will be allowed subsequent to the bid opening.
16. By tendering a bid, a Bidder agrees to leave the bid open for acceptance by the CCWA for ninety (90) days after the date set for the opening thereof.
17. By tendering a bid, the bidder certifies that the bidder has carefully examined these instructions and the terms and specifications applicable to and made a part of the bid. The Bidder further certifies that the prices shown in any schedule of items on which the Bidder is proposing are in accordance with the conditions, terms and specifications of the bid and that they are aware that any exception taken thereto may disqualify the bid. Bidders are required to inform themselves fully as to the availability of materials and the conditions relating to construction and labor under which any work will be or is now being performed. No error or misjudgment nor any

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## **Bid Requirements**

### **Section 1: Instructions to Bidders**

lack of information on local conditions, general laws or regulations on the part of the Bidder shall merit withdrawal of the bid.

18. Copies of all communication pertaining to bids must be sent to the Contracts, Compliance and Risk Management Section.
19. The purpose of this bid is to establish contract prices. Unit price extension and net total must be shown if applicable. Cash discounts should be indicated separately. The CCWA is exempt from federal or state sales taxes; do not include such amounts in the bid. Exemption certificates are furnished upon request.
20. Bidders are hereby notified and agree by submission of a Bid Form that if additional items not listed in the Bid Form become necessary and require unit prices not established by the Bid Form, the unit prices of such items shall be negotiated and shall be directly proportional to the established unit prices of similar items in the Bid Form.
21. All prices on goods shall be for delivery, our destination, f.o.b. freight prepaid Jonesboro, Georgia, and/or Morrow, Georgia, unless otherwise shown. Any deliveries shall be made as needed and requested throughout the contract period.
22. Quantities when shown are estimates only, based on anticipated needs. The CCWA reserves the right to purchase more or less based on actual need at contract price. If a Bidder intends to offer minimum or maximum shipment quantities, such intent and such quantities should be specified on the Bid Form. Otherwise, none will be assumed.
23. The time for completion of the work is stated in the Bid Form. Failure to complete the work within this period shall result in payment to the CCWA of liquidated damages in an amount provided for by contract for each calendar day in excess of the Contract time.
24. The Bidder must employ such methods and means in carrying out the work as will not cause any interruption of or interference with any other Contractor.
25. The successful Bidder must comply with the applicable Risk Management Requirements prior to beginning performance, and during the contract period.
26. The Contract between the CCWA and the Contractor shall be executed on a form provided by CCWA and will be subject to all requirements of the contract documents (which include but may not be limited to the Contract, these

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## **Bid Requirements**

### **Section 1: Instructions to Bidders**

instructions, any Purchase Orders, and the Risk Management Requirements), and shall form a binding contract between the contracting parties.

27. Failure to execute the Contract, any required Surety Performance and Payment Bonds, or to furnish any required satisfactory proof of carriage of required insurance within ten (10) days from the date of notice of award of the Contract shall be just cause for the annulment of the award and for forfeiture of the bid guaranty to the CCWA, not as a penalty, but in liquidation of damages sustained. At the discretion of the CCWA, the award may then be made to the next lowest responsible vendor, or the work may be re-advertised or constructed by the CCWA.
28. Any Contract and Contract Bonds shall be executed in duplicate.
29. Award of this bid shall be by action of the CCWA Board at its regular monthly meeting.
30. The CCWA reserves the right, with or without notice or cause, to accept any bid regardless of the amount thereof; to reject any bid, or any number of bids; to negotiate with any Bidder for a reduction of or alterations in its bid; to reject all bids and to call for additional bids upon the same or different invitations to bid, plans or specifications; to be sole judge, in its discretion, on all questions as to whether or not a bid complies with the invitation to Bid, the plans or the specifications, and as to the solvency and sufficiency of any and all sureties on all bonds.
31. The apparent low bid for goods shall be considered to be the lowest aggregate total price of specified products at their unit prices times the estimated required quantities of these specified products.
32. Bids received from two (2) or more vendors that are identical in price, delivery and meet the requirements of the bid specifications shall be awarded on the following basis:
  - a. The bid submitted by a vendor who does not have a documented negative vendor performance record.
  - b. The bid submitted by a vendor who is located within Clayton County.
  - c. The bid submitted by a vendor who is certified by our Small Local Business Enterprise Program.
  - d. If the tie bids meet all the above criteria, and it is not in the Authority's best interest (at its sole discretion) to split the award, the bid award is based on the toss of a coin by CCWA staff in a public session. The vendors involved will be

## **Division 2**

## **Bid Requirements**

### **Section 1: Instructions to Bidders**

invited to attend the coin toss at a stated date and time. One or more witnesses from both CCWA Procurement and the Requesting Department may be present. A simple coin toss (called by the vendor listed first in the alphabet) will break the tie and decide the award.

33. While price is the prime criteria, and the CCWA intends to purchase at the lowest responsible bid available, price shall not be the sole criteria utilized by the CCWA in evaluating the bid package submitted. The following criteria shall also be utilized by the CCWA in determining the lowest responsible bid:
  - a. Ability of Bidder to perform in the time frame needed by the CCWA.
  - b. Reputation of the Bidder in its industry.
  - c. Reasonableness of the bid in relation to anticipated costs.
  - d. Ongoing relationships with the CCWA based on above-average prior performance of work with the Authority.
34. Bidders are notified that the Authority reserves the right except in the case of public works contracts to include among the factors considered in awarding the contract the proximity of each Bidder's place of business to any affected Authority facility. The Authority further reserves the right to award the contract to a Bidder other than the Bidder offering the lowest price where: (a) the difference in price between the low Bidder and the preferred Bidder is nominal; and (b) the Authority's Board determines that the preferred bid provides the most cost effective option due to the closer proximity of the preferred Bidder's place of business to the affected Authority facility or facilities. In such a situation, by responding to this bid, the Bidder waives any cause of action against the Authority for frustration of bid or under any similar legal theory; furthermore, the Bidder agrees to pay all costs and expenses, including but not limited to attorney fees, incurred by the Authority in defending against any such claim.
35. It is the policy of the Clayton County Water Authority (CCWA) to promote award of sub-agreements for goods and/or services to qualified small local, minority and women-owned businesses. Bidders are encouraged to solicit small local, minority and women-owned businesses whenever they are potential sources.
36. Bidders are encouraged to utilize the services and assistance of the U.S. Small Business Administration (SBA), and the office of the Department of Commerce Minority Business Development Agency (MBDA). These agencies can provide assistance in securing the names of qualified minority and women-owned businesses. Additionally, it is encouraged that bidders access certified Small Local

## **Division 2**

## **Bid Requirements**

### **Section 1: Instructions to Bidders**

Business Enterprise (SLBE) vendors from Clayton County, DeKalb County, and City of Atlanta.

The Georgia Department of Transportation (DOT) has established a list of qualified Disadvantaged Business Enterprises. Information is available online under the tab for "Directories", link for "UCP Directory - Excel" at:  
<http://www.dot.ga.gov/PS/Business/DBE>.

The successful Bidder will be asked to provide, along with his Request for Payment each month a list of qualified SLBE and MBE/WBE businesses utilized on this Project.

### **GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT OF 2006**

37. Pursuant to the Georgia Security and Immigration Compliance Act of 2006, the successful Contractor understands and agrees that compliance with the requirements of O.C.G.A.13-10-91 and Georgia Department of Labor Rule 300-10-02 are conditions of this bid and contract document. The Contractor further agrees that such compliance shall be attested by the Contractor and any of his Subcontractors by execution of the appropriate Affidavit and Agreement included after the Agreement Form of these documents.

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 2: Risk Management Requirements**

The Contractor will provide minimum insurance coverage and limits as per the following: The Contractor will file with the Authority Certificates of Insurance, certifying the required insurance coverages and stating that each policy has been endorsed to provide thirty (30) day notice to the Authority in the event that coverage is cancelled, non-renewed or the types of coverage or limits of liability are reduced below those required. All bonds and insurance coverage must be placed with an insurance company approved by Authority Management, admitted to do business in the State of Georgia, and rated Secure ("B+" or better) by A.M. Best Company in the latest edition of Property and Casualty Ratings, or rated by Standard & Poors Insurance Ratings, latest edition as Secure ("BBB" or better). Worker's Compensation self-insurance for individual Contractors must be approved by the Worker's Compensation Board, State of Georgia and/or Self-Insurance pools approved by the Insurance Commissioner, State of Georgia.

#### **CONTRACTS FOR UP TO \$50,000**

**Worker's Compensation** – Worker's Compensation coverage on a statutory basis for the State of Georgia with an Employer's Liability limit of \$100,000 each Accident, Disease \$100,000 each employee, \$500,000 Disease policy limit.

**Automobile Liability** – Automobile liability coverage for owned, hired and non-owned vehicles in the amount of \$500,000 combined single limit.

**Commercial General Liability** – Coverage to be provided on "occurrence" not "claims made" basis. The coverage is to include Contractual liability, Per Project Limit of Liability, losses caused by Explosion, Collapse and Underground ("xcu") perils, the "Clayton County Water Authority" is to be added as an Additional Insured and Products and Completed Operations coverage is to be maintained for three (3) years following completion of work.

#### **CONTRACTS FOR MORE THAN \$50,000**

**Worker's Compensation** – Worker's Compensation coverage on a statutory basis for the State of Georgia with an Employer's Liability limit of \$1,000,000. The increased Employer's Liability limit may be provided by an Umbrella or Excess Liability policy.

**Automobile Liability** - Automobile liability coverage for owned, hired and non-owned vehicles in the amount of \$1,000,000 combined single limit.

**Commercial General Liability** – Coverage to be provided on "occurrence" not "claims made" basis. The coverage is to include Contractual liability, Per Project Limit of Liability, losses caused by Explosion, Collapse and Underground ("xcu") perils, the "Clayton County Water Authority" is to be added as an Additional Insured and Products and Completed Operations coverage is to be maintained for three (3) years following completion of work.

**Division 2**

**Bid Requirements**

**Section 2: Risk Management Requirements**

**RISK MANAGEMENT REQUIREMENTS (Cont'd)**

**CONTRACTS FOR UP TO \$50,000**

**CONTRACTS FOR MORE THAN \$50,000**

**LIMITS OF LIABILITY:**

\$1,000,000	Per Occurrence
\$1,000,000	Personal and Advertising
\$50,000	Fire Damage*
\$5,000	Medical Payments*
\$1,000,000	General Aggregate
\$1,000,000	Products/Completed Operations per Occurrence and Aggregate

*\*These are automatic minimums*

**Owner's Protective Liability** – The Authority's Management may, in its discretion, require Owner's Protective Liability in some situations.

**Umbrella and/or Excess Liability** – The umbrella or Excess Liability Policy may be used to combine with underlying policies to obtain the limits required. The Management of the Authority may elect to require higher limits.

**Owner's Protective Liability** – The Authority's Management may, in its discretion, require Owner's Protective Liability in some situations.

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 3: Bid Submittals**

#### **3.1 Bid Submittal Requirements:**

The following items are required to be included as part of the bid submittal. Failure to include any of these items may result in the bid being deemed non-responsive:

A. Bid Form – Bidders must submit a hard copy of their completed and signed Bid Form. Additionally, due to the volume of the items on the bid form, on the date of the bid opening no bid amounts will be read out loud by the CCWA; however, copies of the paper submittals will be provided upon request.

B. Georgia Bid Bond in the amount of \$5,000.00

C. Bidder Qualification Information form.

A minimum of three references with information as indicated in Division 2, Section 7.

D. Georgia Security and Immigration Compliance Act of 2006 form.

E. Contractor Affidavit and Agreement form.

F. Subcontractor Affidavit form.

If a Contractor/Subcontractor will not be performing any services under this contract, the Contractor/company submitting the bid MUST also complete, sign, date, and have both Affidavit forms notarized and make proper notation of "N/A" - Not Applicable.

CCWA cannot consider any bid which does not include completed affidavits. It is not the intent of this notice to provide detailed information or legal advice concerning the Georgia Security & Immigration Compliance Act of 2006, as amended on May 11, 2009. All Bidders intending to do business with CCWA are responsible for independently apprising themselves and complying with the requirements of that law and its effect on CCWA procurements and their participation in those procurements.

G. SLBE Forms – Bidders must submit their completed and signed SLBE Forms.

H. Published catalog data showing the CIPP materials/products that will be provided confirming material and design specifications/standards, Material Safety Data Sheets (MSDS), storage, wet out, curing, handling and installation instructions, etc.



## **Division 2**

## **Bid Requirements**

### **Section 3: Bid Submittals**

- I. Manufacturer Certification: Submit certification from the manufacturer showing that the CIPP product meets or exceeds the reference standards and specification requirements.
- J. Manufacturer Certification: Submit certification from the manufacturer that the installer/Contractor is authorized to install the CIPP systems specified and has successfully installed a minimum of 1,000,000 linear feet and a minimum of 10 installations of 48-inch diameter or larger CIPP, as well as a total of at least five (5) years' experience.
- K. Addenda (if any).

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 4: Bid Form**

Bid of \_\_\_\_\_  
(Hereinafter "Bidder"), organized and existing under the laws of the State of \_\_\_\_\_,

doing business as \_\_\_\_\_ (insert "a corporation," "a partnership," or "an individual" or such other business entity designation as is applicable).

To the Clayton County Water Authority (hereinafter "Owner").

In compliance with the Request for Bids, Bidder hereby proposes to perform all Work for **Annual Contract for Cured-In-Place Pipe Rehabilitation** in strict accordance with the Contract Documents as enumerated in the Request for Bids, within the time set forth therein, and at the prices stated below.

By submission of this bid, Bidder certifies, and in the case of joint bid each party thereto certifies as to the party's own organization that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other Bidder or with any competitor. Bidder also certifies compliance with the Instructions to Bidders.

In submitting this bid, Bidder certifies Bidder is qualified to do business in the state of Georgia as required by laws, rules, and regulations or, if allowed by statute, covenants to obtain such qualification prior to contract award.

#### **CONTRACT EXECUTION:**

The undersigned Bidder agrees, if this bid is accepted, to enter into an Agreement with OWNER on the form included in the Documents to perform and furnish Work as specified or indicated in the Documents for the Contract Price derived from the bid and within the times indicated herein and in accordance with the other terms and conditions of the Documents.

Bidder accepts the terms and conditions of the Documents.

#### **INSURANCE:**

Bidder further agrees that bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

## **Division 2**

## **Bid Requirements**

### **Section 4: Bid Form**

BID:

The undersigned proposes to complete, in all respects, sound, complete and conformable with this Contract Document the following work for the following amounts.

CCWA guarantees no minimum or maximum quantities, and additionally reserves the right to purchase more or less at the unit price, based on actual need.

ADDENDA:

Bidder acknowledges receipt of the following Addenda:

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## Division 2

## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
1	Mobilization	N/A	%	
2	Emergency Mobilization	N/A	EA	
3	Performance and Payment Bonds	N/A	EA	
4	PE Stamped Design Calculations	N/A	EA	
5	Traffic Control County Road	Single Lane Closure	DY	
6		Road Closure	DY	
7	Traffic Control State Road	Single Lane Closure	DY	
8		Road Closure	DY	
9	Pumping 4-inch Pump	Single Pump System Up to 8 Hours	EA	
10		Redundant Pump System Up to 8 Hours	EA	
11		Single Pump System Greater than 8 to 24 Hours	EA	
12		Redundant Pump System Greater than 8 to 24 Hours	EA	
13	Pumping 6-inch Pump	Single Pump System Up to 8 Hours	EA	
14		Redundant Pump System Up to 8 Hours	EA	
15		Single Pump System Greater than 8 to 24 Hours	EA	
16		Redundant Pump System Greater than 8 to 24 Hours	EA	
17	Pumping 8-inch Pump	Single Pump System Up to 8 Hours	EA	
18		Redundant Pump System Up to 8 Hours	EA	
19		Single Pump System Greater than 8 to 24 Hours	EA	
20		Redundant Pump System Greater than 8 to 24 Hours	EA	
21	Pumping 10-inch Pump	Single Pump System Up to 8 Hours	EA	
22		Redundant Pump System Up to 8 Hours	EA	
23		Single Pump System Greater than 8 to 24 Hours	EA	
24		Redundant Pump System Greater than 8 to 24 Hours	EA	
25	Pumping 12-inch Pump	Single Pump System Up to 8 Hours	EA	
26		Redundant Pump System Up to 8 Hours	EA	
27		Single Pump System Greater than 8 to 24 Hours	EA	
28		Redundant Pump System Greater than 8 to 24 Hours	EA	
29	CCTV (Sanitary Sewer Pipe)	With PACP Assessment	LF	
30		Without PACP Assessment	LF	
31	CCTV (Stormwater Pipe)	With PACP Assessment	LF	
32		Without PACP Assessment	LF	
33	CCTV (Standby)	N/A	HR	
34	Heavy Cleaning (Sanitary Sewer Pipe) Up to 12-in Diameter	N/A	LF	
35	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 12-in to 18-in Diameter	N/A	LF	

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## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
36	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 18-in to 24-in Diameter	N/A	LF	
37	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 24-in to 36-in Diameter	N/A	LF	
38	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 36-in to 48-in Diameter	N/A	LF	
39	Heavy Cleaning (Sanitary Sewer Pipe) Larger than 48-in to 60-in Diameter	N/A	LF	
40	Cleaning (Stormwater Pipe) Up to 12-in Diameter	Up to 25% of Diameter	LF	
41		More than 25% to 50% of Diameter	LF	
42		More than 50% of Diameter	LF	
43	Cleaning (Stormwater Pipe) Larger than 12-in to 18-in Diameter	Up to 25% of Diameter	LF	
44		More than 25% to 50% of Diameter	LF	
45		More than 50% of Diameter	LF	
46	Cleaning (Stormwater Pipe) Larger than 18-in to 24-in Diameter	Up to 25% of Diameter	LF	
47		More than 25% to 50% of Diameter	LF	
48		More than 50% of Diameter	LF	
49	Cleaning (Stormwater Pipe) Larger than 24-in to 36-in Diameter	Up to 25% of Diameter	LF	
50		More than 25% to 50% of Diameter	LF	
51		More than 50% of Diameter	LF	
52	Cleaning (Stormwater Pipe) Larger than 36-in to 48-in Diameter	Up to 25% of Diameter	LF	
53		More than 25% to 50% of Diameter	LF	
54		More than 50% of Diameter	LF	
55	Cleaning (Stormwater Pipe) Larger than 48-in Diameter	N/A	HR	
56	Cleaning Structure	Up to 10 Foot Depth to Invert	CF	
57		Greater than 10 Foot Depth to Invert	CF	
58	Pre-Liner Up to 12-in Diameter	N/A	LF	
59	Pre-Liner Greater than 12-in to 18-in Diameter	N/A	LF	
60	Pre-Liner Greater than 18-in to 24-in Diameter	N/A	LF	
61	Pre-Liner Greater than 24-in to 36-in Diameter	N/A	LF	
62	Pre-Liner Greater than 36-in to 48-in Diameter	N/A	LF	
63	Pre-Liner Greater than 48-in to 60-in Diameter	N/A	LF	
64	Pre-Liner 66-in Diameter	N/A	LF	
65	Pre-Liner 72-in Diameter	N/A	LF	
66	Pre-Liner 78-in Diameter	N/A	LF	
67	Pre-Liner 84-in Diameter	N/A	LF	

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No.	Work Item	Detail	Unit	Unit Cost
68	Pre-Liner 90-in Diameter	N/A	LF	
69	Pre-Liner 96-in Diameter	N/A	LF	
70	Pre-Liner 102-in Diameter	N/A	LF	
71	Pre-Liner 108-in Diameter	N/A	LF	
72	Reinstatement of Existing Services	N/A	EA	
73	CIPP Service Lateral 4-in Diameter	connection at main and first 6 LF	EA	
74		in addition to the first 6 LF	LF	
75	CIPP Service Lateral 6-in Diameter	connection at main and first 6 LF	EA	
76		in addition to the first 6 LF	LF	
77	CIPP 8-in Diameter	6.0 mm base thickness	LF	
78		Cost change for each 1.5mm from base thickness	LF	
79	CIPP 10-in Diameter	6.0 mm base thickness	LF	
80		Cost change for each 1.5mm from base thickness	LF	
81	CIPP 12-in Diameter	7.5 mm base thickness	LF	
82		Cost change for each 1.5mm from base thickness	LF	
83	CIPP 15-in Diameter	9.0 mm base thickness	LF	
84		Cost change for each 1.5mm from base thickness	LF	
85	CIPP 16-in Diameter	9.0 mm base thickness	LF	
86		Cost change for each 1.5mm from base thickness	LF	
87	CIPP 18-in Diameter	9.0 mm base thickness	LF	
88		Cost change for each 1.5mm from base thickness	LF	
89	CIPP 21-in Diameter	10.5 mm base thickness	LF	
90		Cost change for each 1.5mm from base thickness	LF	
91	CIPP 24-in Diameter	12.0 mm base thickness	LF	
92		Cost change for each 1.5mm from base thickness	LF	
93	CIPP 27-in Diameter	12.0 mm base thickness	LF	
94		Cost change for each 1.5mm from base thickness	LF	

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No.	Work Item	Detail	Unit	Unit Cost
95	CIPP 30-in Diameter	15.0 mm base thickness	LF	
96		Cost change for each 1.5mm from base thickness	LF	
97	CIPP 36-in Diameter	15.0 mm base thickness	LF	
98		Cost change for each 1.5mm from base thickness	LF	
99	CIPP 42-in Diameter	18.0 mm base thickness	LF	
100		Cost change for each 1.5mm from base thickness	LF	
101	CIPP 48-in Diameter	21.0 mm base thickness	LF	
102		Cost change for each 1.5mm from base thickness	LF	
103	CIPP 54-in Diameter	24.0 mm base thickness	LF	
104		Cost change for each 1.5mm from base thickness	LF	
105	CIPP 60-in Diameter	28.0 mm base thickness	LF	
106		Cost change for each 1.5mm from base thickness	LF	
107	CIPP 66-in Diameter	30.0 mm base thickness	LF	
108		Cost change for each 1.5mm from base thickness	LF	
109	CIPP 72-in Diameter	32.5 mm base thickness	LF	
110		Cost change for each 1.5mm from base thickness	LF	
111	CIPP 78-in Diameter	33.0 mm base thickness	LF	
112		Cost change for each 1.5mm from base thickness	LF	
113	CIPP 84-in Diameter	33.5 mm base thickness	LF	
114		Cost change for each 1.5mm from base thickness	LF	
115	CIPP 90-in Diameter	38.0 mm base thickness	LF	
116		Cost change for each 1.5mm from base thickness	LF	
117	CIPP 96-in Diameter	40.5 mm base thickness	LF	
118		Cost change for each 1.5mm from base thickness	LF	
119	CIPP 102-in Diameter	43.0 mm base thickness	LF	
120		Cost change for each 1.5mm from base thickness	LF	
121	CIPP 108-in Diameter	46.0 mm base thickness	LF	
122		Cost change for each 1.5mm from base thickness	LF	

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No.	Work Item	Detail	Unit	Unit Cost
123	Sampling and Testing	Up to 15-in diameter	EA	
124		Greater than 15-in diameter	EA	
125		Core Sampling	EA	
126	Brush Removal	N/A	SF	
127	Tree Removal	4 inch to 6 inch diameter	EA	
128		Greater than 6 inch to 12 inch diameter	EA	
129		Greater than 12 inch to 24 inch diameter	EA	
130		Greater than 24 inch to 36 inch diameter	EA	
131	Fence Work	Chain-Link / Wire Removal	LF	
132		Chain-Link / Wire Reinstall	LF	
133		Wood Removal	LF	
134		Wood Reinstall	LF	
135	General Excavation	Up to 6 feet deep	CF	
136		Greater than 6 feet to 10 feet deep	CF	
137		Greater than 10 feet to 14 feet deep	CF	
138		Greater than 14 feet to 18 feet deep	CF	
139	General Fill / Backfill	Fill Dirt	CF	
140		Sand	CF	
141		#3, #4, #34, #5, #57 and #89 Stone	CF	
142		Surge Stone	CF	
143		Type 3 Rip Rap	CF	
144	Stone Placement	4 inch thick layer	SF	
145	Crushed Stone/Graded Aggregate Base	2 inch thick layer increment	SF	
146	Stone Placement	4 inch thick layer	SF	
147	#3, #4, #34, #5, #57 and #89	2 inch thick layer increment	SF	
148	Stone Placement	6 inch thick layer	SF	
149	Surge Stone	6 inch thick layer increment	SF	
150	Stone Placement	12 inch thick layer	SF	
151	Type 3 Rip Rap	12 inch thick layer increment	SF	
152	Stone Placement Type 1 Rip Rap	Single Layer	SF	



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No.	Work Item	Detail	Unit	Unit Cost
153	Geotextile Fabric Installation	N/A	SF	
154	Sediment Barrier	Silt Fence Type NS	LF	
155		Silt Fence Type S	LF	
156		Hay Bale	LF	
157	Sediment Barrier Removal	N/A	LF	
158	Soil Stabilization	Straw Mulching	SF	
159		Seed and Straw	SF	
160		Seed and matt Blanket	SF	
161		Sod, < 500 SF	SF	
162		Sod, 500 SF and greater	SF	
163	Remove Asphalt Pavement	Up to 4 inch thick layer	SF	
164		Greater than 4 inch to 6 inch thick layer	SF	
165		Greater than 6 inch to 8 inch thick layer	SF	
166		Greater than 8 inch to 10 inch thick layer	SF	
167		Greater than 10 inch to 12 inch thick layer	SF	
168	Remove Concrete Flat Work	Up to 4 inch thick layer	SF	
169		Greater than 4 inch to 6 inch thick layer	SF	
170		Greater than 6 inch to 8 inch thick layer	SF	
171		Greater than 8 inch to 10 inch thick layer	SF	
172		Greater than 10 inch to 12 inch thick layer	SF	
173		Curb and Gutter	LF	
174	Pavement Striping	Line Stripe Up to 6 inch wide	LF	
175	Pavement Marking	Handicap Symbol	EA	
176	Pavement Pressure Washing	N/A	SF	
177	Remove Concrete Structure	Wall Construction	SF	
178		Box / Manhole Construction	CF	
179	Remove Brick Structure	Wall Construction	SF	
180		Box / Manhole Construction	CF	

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No.	Work Item	Detail	Unit	Unit Cost
181	Steel Plate Installation	Up to 40 square foot plate	DY	
182		Greater than 40 square foot to 96 square foot plate	DY	
183		Greater than 96 square foot to 160 square foot plate	DY	
184	Asphalt Patching	3 inch thick layer	SF	
185		1 inch thick layer increment	SF	
186	Asphalt Paving	3 inch thick layer	SF	
187		1 inch thick layer increment	SF	
188	Concrete Curb and Gutter	Up to 24 inch width, square back	LF	
189		Up to 24 inch width, roll back	LF	
190	Concrete Slab-On-Grade	Up to 4 inch thick layer	SF	
191		Greater than 4 inch to 6 inch thick layer	SF	
192		Greater than 6 inch to 8 inch thick layer	SF	
193		Greater than 8 inch to 10 inch thick layer	SF	
194		Greater than 10 inch to 12 inch thick layer	SF	
195		Wire Mesh	SF	
196		Steel Reinforcement - No. 4 Steel Reinforcement	SF	
197		Steel Reinforcement - No. 5 Steel Reinforcement	SF	
198	Pipe Installation - Open Cut PVC, HDPE, CM Up to 8-in Diameter	Point Repair, up to 6 feet deep	EA	
199		Point Repair, greater than 6 feet to 10 feet deep	EA	
200		Point Repair, greater than 10 feet to 14 feet deep	EA	
201		Point Repair, greater than 14 feet to 18 feet deep	EA	
202		Additional Footage, up to 6 feet deep	LF	
203		Additional Footage, greater than 6 feet to 10 feet deep	LF	
204		Additional Footage, greater than 10 feet to 14 feet deep	LF	
205		Additional Footage, greater than 14 feet to 18 feet deep	LF	
206	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 8-in to 16-in Diameter	Point Repair, up to 6 feet deep	EA	
207		Point Repair, greater than 6 feet to 10 feet deep	EA	
208		Point Repair, greater than 10 feet to 14 feet deep	EA	
209		Point Repair, greater than 14 feet to 18 feet deep	EA	
210		Additional Footage, up to 6 feet deep	LF	
211		Additional Footage, greater than 6 feet to 10 feet deep	LF	
212		Additional Footage, greater than 10 feet to 14 feet deep	LF	
213		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
214	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 16-in to 24-in Diameter	Point Repair, up to 6 feet deep	EA	
215		Point Repair, greater than 6 feet to 10 feet deep	EA	
216		Point Repair, greater than 10 feet to 14 feet deep	EA	
217		Point Repair, greater than 14 feet to 18 feet deep	EA	
218		Additional Footage, up to 6 feet deep	LF	
219		Additional Footage, greater than 6 feet to 10 feet deep	LF	
220		Additional Footage, greater than 10 feet to 14 feet deep	LF	
221		Additional Footage, greater than 14 feet to 18 feet deep	LF	
222	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 24-in to 36-in Diameter	Point Repair, up to 6 feet deep	EA	
223		Point Repair, greater than 6 feet to 10 feet deep	EA	
224		Point Repair, greater than 10 feet to 14 feet deep	EA	
225		Point Repair, greater than 14 feet to 18 feet deep	EA	
226		Additional Footage, up to 6 feet deep	LF	
227		Additional Footage, greater than 6 feet to 10 feet deep	LF	
228		Additional Footage, greater than 10 feet to 14 feet deep	LF	
229		Additional Footage, greater than 14 feet to 18 feet deep	LF	
230	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 36-in to 48-in Diameter	Point Repair, up to 6 feet deep	EA	
231		Point Repair, greater than 6 feet to 10 feet deep	EA	
232		Point Repair, greater than 10 feet to 14 feet deep	EA	
233		Point Repair, greater than 14 feet to 18 feet deep	EA	
234		Additional Footage, up to 6 feet deep	LF	
235		Additional Footage, greater than 6 feet to 10 feet deep	LF	
236		Additional Footage, greater than 10 feet to 14 feet deep	LF	
237		Additional Footage, greater than 14 feet to 18 feet deep	LF	
238	Pipe Installation - Open Cut PVC, HDPE, CM Greater than 48-in to 60-in Diameter	Point Repair, up to 6 feet deep	EA	
239		Point Repair, greater than 6 feet to 10 feet deep	EA	
240		Point Repair, greater than 10 feet to 14 feet deep	EA	
241		Point Repair, greater than 14 feet to 18 feet deep	EA	
242		Additional Footage, up to 6 feet deep	LF	
243		Additional Footage, greater than 6 feet to 10 feet deep	LF	
244		Additional Footage, greater than 10 feet to 14 feet deep	LF	
245		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
246	Pipe Installation - Open Cut CM 66-in Diameter	Point Repair, up to 6 feet deep	EA	
247		Point Repair, greater than 6 feet to 10 feet deep	EA	
248		Point Repair, greater than 10 feet to 14 feet deep	EA	
249		Point Repair, greater than 14 feet to 18 feet deep	EA	
250		Additional Footage, up to 6 feet deep	LF	
251		Additional Footage, greater than 6 feet to 10 feet deep	LF	
252		Additional Footage, greater than 10 feet to 14 feet deep	LF	
253		Additional Footage, greater than 14 feet to 18 feet deep	LF	
254	Pipe Installation - Open Cut CM 72-in Diameter	Point Repair, up to 6 feet deep	EA	
255		Point Repair, greater than 6 feet to 10 feet deep	EA	
256		Point Repair, greater than 10 feet to 14 feet deep	EA	
257		Point Repair, greater than 14 feet to 18 feet deep	EA	
258		Additional Footage, up to 6 feet deep	LF	
259		Additional Footage, greater than 6 feet to 10 feet deep	LF	
260		Additional Footage, greater than 10 feet to 14 feet deep	LF	
261		Additional Footage, greater than 14 feet to 18 feet deep	LF	
262	Pipe Installation - Open Cut CM 78-in Diameter	Point Repair, up to 6 feet deep	EA	
263		Point Repair, greater than 6 feet to 10 feet deep	EA	
264		Point Repair, greater than 10 feet to 14 feet deep	EA	
265		Point Repair, greater than 14 feet to 18 feet deep	EA	
266		Additional Footage, up to 6 feet deep	LF	
267		Additional Footage, greater than 6 feet to 10 feet deep	LF	
268		Additional Footage, greater than 10 feet to 14 feet deep	LF	
269		Additional Footage, greater than 14 feet to 18 feet deep	LF	
270	Pipe Installation - Open Cut CM 84-in Diameter	Point Repair, up to 6 feet deep	EA	
271		Point Repair, greater than 6 feet to 10 feet deep	EA	
272		Point Repair, greater than 10 feet to 14 feet deep	EA	
273		Point Repair, greater than 14 feet to 18 feet deep	EA	
274		Additional Footage, up to 6 feet deep	LF	
275		Additional Footage, greater than 6 feet to 10 feet deep	LF	
276		Additional Footage, greater than 10 feet to 14 feet deep	LF	
277		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
278	Pipe Installation - Open Cut CM 90-in Diameter	Point Repair, up to 6 feet deep	EA	
279		Point Repair, greater than 6 feet to 10 feet deep	EA	
280		Point Repair, greater than 10 feet to 14 feet deep	EA	
281		Point Repair, greater than 14 feet to 18 feet deep	EA	
282		Additional Footage, up to 6 feet deep	LF	
283		Additional Footage, greater than 6 feet to 10 feet deep	LF	
284		Additional Footage, greater than 10 feet to 14 feet deep	LF	
285		Additional Footage, greater than 14 feet to 18 feet deep	LF	
286	Pipe Installation - Open Cut CM 96-in Diameter	Point Repair, up to 6 feet deep	EA	
287		Point Repair, greater than 6 feet to 10 feet deep	EA	
288		Point Repair, greater than 10 feet to 14 feet deep	EA	
289		Point Repair, greater than 14 feet to 18 feet deep	EA	
290		Additional Footage, up to 6 feet deep	LF	
291		Additional Footage, greater than 6 feet to 10 feet deep	LF	
292		Additional Footage, greater than 10 feet to 14 feet deep	LF	
293		Additional Footage, greater than 14 feet to 18 feet deep	LF	
294	Pipe Installation - Open Cut CM 102-in Diameter	Point Repair, up to 6 feet deep	EA	
295		Point Repair, greater than 6 feet to 10 feet deep	EA	
296		Point Repair, greater than 10 feet to 14 feet deep	EA	
297		Point Repair, greater than 14 feet to 18 feet deep	EA	
298		Additional Footage, up to 6 feet deep	LF	
299		Additional Footage, greater than 6 feet to 10 feet deep	LF	
300		Additional Footage, greater than 10 feet to 14 feet deep	LF	
301		Additional Footage, greater than 14 feet to 18 feet deep	LF	
302	Pipe Installation - Open Cut CM 108-in Diameter	Point Repair, up to 6 feet deep	EA	
303		Point Repair, greater than 6 feet to 10 feet deep	EA	
304		Point Repair, greater than 10 feet to 14 feet deep	EA	
305		Point Repair, greater than 14 feet to 18 feet deep	EA	
306		Additional Footage, up to 6 feet deep	LF	
307		Additional Footage, greater than 6 feet to 10 feet deep	LF	
308		Additional Footage, greater than 10 feet to 14 feet deep	LF	
309		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
310	Pipe Installation - Open Cut DI, RC, VC Up to 8-in Diameter	Point Repair, up to 6 feet deep	EA	
311		Point Repair, greater than 6 feet to 10 feet deep	EA	
312		Point Repair, greater than 10 feet to 14 feet deep	EA	
313		Point Repair, greater than 14 feet to 18 feet deep	EA	
314		Additional Footage, up to 6 feet deep	LF	
315		Additional Footage, greater than 6 feet to 10 feet deep	LF	
316		Additional Footage, greater than 10 feet to 14 feet deep	LF	
317		Additional Footage, greater than 14 feet to 18 feet deep	LF	
318	Pipe Installation - Open Cut DI, RC, VC Greater than 8-in to 16-in Diameter	Point Repair, up to 6 feet deep	EA	
319		Point Repair, greater than 6 feet to 10 feet deep	EA	
320		Point Repair, greater than 10 feet to 14 feet deep	EA	
321		Point Repair, greater than 14 feet to 18 feet deep	EA	
322		Additional Footage, up to 6 feet deep	LF	
323		Additional Footage, greater than 6 feet to 10 feet deep	LF	
324		Additional Footage, greater than 10 feet to 14 feet deep	LF	
325		Additional Footage, greater than 14 feet to 18 feet deep	LF	
326	Pipe Installation - Open Cut DI, RC, VC Greater than 16-in to 24-in Diameter	Point Repair, up to 6 feet deep	EA	
327		Point Repair, greater than 6 feet to 10 feet deep	EA	
328		Point Repair, greater than 10 feet to 14 feet deep	EA	
329		Point Repair, greater than 14 feet to 18 feet deep	EA	
330		Additional Footage, up to 6 feet deep	LF	
331		Additional Footage, greater than 6 feet to 10 feet deep	LF	
332		Additional Footage, greater than 10 feet to 14 feet deep	LF	
333		Additional Footage, greater than 14 feet to 18 feet deep	LF	
334	Pipe Installation - Open Cut DI, RC, VC Greater than 24-in to 36-in Diameter	Point Repair, up to 6 feet deep	EA	
335		Point Repair, greater than 6 feet to 10 feet deep	EA	
336		Point Repair, greater than 10 feet to 14 feet deep	EA	
337		Point Repair, greater than 14 feet to 18 feet deep	EA	
338		Additional Footage, up to 6 feet deep	LF	
339		Additional Footage, greater than 6 feet to 10 feet deep	LF	
340		Additional Footage, greater than 10 feet to 14 feet deep	LF	
341		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
342	Pipe Installation - Open Cut DI, RC, VC Greater than 36-in to 48-in Diameter	Point Repair, up to 6 feet deep	EA	
343		Point Repair, greater than 6 feet to 10 feet deep	EA	
344		Point Repair, greater than 10 feet to 14 feet deep	EA	
345		Point Repair, greater than 14 feet to 18 feet deep	EA	
346		Additional Footage, up to 6 feet deep	LF	
347		Additional Footage, greater than 6 feet to 10 feet deep	LF	
348		Additional Footage, greater than 10 feet to 14 feet deep	LF	
349		Additional Footage, greater than 14 feet to 18 feet deep	LF	
350	Pipe Installation - Open Cut DI, RC Greater than 48-in to 60-in Diameter	Point Repair, up to 6 feet deep	EA	
351		Point Repair, greater than 6 feet to 10 feet deep	EA	
352		Point Repair, greater than 10 feet to 14 feet deep	EA	
353		Point Repair, greater than 14 feet to 18 feet deep	EA	
354		Additional Footage, up to 6 feet deep	LF	
355		Additional Footage, greater than 6 feet to 10 feet deep	LF	
356		Additional Footage, greater than 10 feet to 14 feet deep	LF	
357		Additional Footage, greater than 14 feet to 18 feet deep	LF	
358	Pipe Installation - Open Cut RC 66-in Diameter	Point Repair, up to 6 feet deep	EA	
359		Point Repair, greater than 6 feet to 10 feet deep	EA	
360		Point Repair, greater than 10 feet to 14 feet deep	EA	
361		Point Repair, greater than 14 feet to 18 feet deep	EA	
362		Additional Footage, up to 6 feet deep	LF	
363		Additional Footage, greater than 6 feet to 10 feet deep	LF	
364		Additional Footage, greater than 10 feet to 14 feet deep	LF	
365		Additional Footage, greater than 14 feet to 18 feet deep	LF	
366	Pipe Installation - Open Cut RC 72-in Diameter	Point Repair, up to 6 feet deep	EA	
367		Point Repair, greater than 6 feet to 10 feet deep	EA	
368		Point Repair, greater than 10 feet to 14 feet deep	EA	
369		Point Repair, greater than 14 feet to 18 feet deep	EA	
370		Additional Footage, up to 6 feet deep	LF	
371		Additional Footage, greater than 6 feet to 10 feet deep	LF	
372		Additional Footage, greater than 10 feet to 14 feet deep	LF	
373		Additional Footage, greater than 14 feet to 18 feet deep	LF	

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No.	Work Item	Detail	Unit	Unit Cost
374	Pipe Installation - Open Cut RC 78-in Diameter	Point Repair, up to 6 feet deep	EA	
375		Point Repair, greater than 6 feet to 10 feet deep	EA	
376		Point Repair, greater than 10 feet to 14 feet deep	EA	
377		Point Repair, greater than 14 feet to 18 feet deep	EA	
378		Additional Footage, up to 6 feet deep	LF	
379		Additional Footage, greater than 6 feet to 10 feet deep	LF	
380		Additional Footage, greater than 10 feet to 14 feet deep	LF	
381		Additional Footage, greater than 14 feet to 18 feet deep	LF	
382	Pipe Installation - Open Cut RC 84-in Diameter	Point Repair, up to 6 feet deep	EA	
383		Point Repair, greater than 6 feet to 10 feet deep	EA	
384		Point Repair, greater than 10 feet to 14 feet deep	EA	
385		Point Repair, greater than 14 feet to 18 feet deep	EA	
386		Additional Footage, up to 6 feet deep	LF	
387		Additional Footage, greater than 6 feet to 10 feet deep	LF	
388		Additional Footage, greater than 10 feet to 14 feet deep	LF	
389		Additional Footage, greater than 14 feet to 18 feet deep	LF	
390	Pipe Installation - Open Cut RC 90-in Diameter	Point Repair, up to 6 feet deep	EA	
391		Point Repair, greater than 6 feet to 10 feet deep	EA	
392		Point Repair, greater than 10 feet to 14 feet deep	EA	
393		Point Repair, greater than 14 feet to 18 feet deep	EA	
394		Additional Footage, up to 6 feet deep	LF	
395		Additional Footage, greater than 6 feet to 10 feet deep	LF	
396		Additional Footage, greater than 10 feet to 14 feet deep	LF	
397		Additional Footage, greater than 14 feet to 18 feet deep	LF	
398	Pipe Installation - Open Cut RC 96-in Diameter	Point Repair, up to 6 feet deep	EA	
399		Point Repair, greater than 6 feet to 10 feet deep	EA	
400		Point Repair, greater than 10 feet to 14 feet deep	EA	
401		Point Repair, greater than 14 feet to 18 feet deep	EA	
402		Additional Footage, up to 6 feet deep	LF	
403		Additional Footage, greater than 6 feet to 10 feet deep	LF	
404		Additional Footage, greater than 10 feet to 14 feet deep	LF	
405		Additional Footage, greater than 14 feet to 18 feet deep	LF	



## Division 2

## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
406	Pipe Installation - Open Cut RC 102-in Diameter	Point Repair, up to 6 feet deep	EA	
407		Point Repair, greater than 6 feet to 10 feet deep	EA	
408		Point Repair, greater than 10 feet to 14 feet deep	EA	
409		Point Repair, greater than 14 feet to 18 feet deep	EA	
410		Additional Footage, up to 6 feet deep	LF	
411		Additional Footage, greater than 6 feet to 10 feet deep	LF	
412		Additional Footage, greater than 10 feet to 14 feet deep	LF	
413		Additional Footage, greater than 14 feet to 18 feet deep	LF	
414	Pipe Installation - Open Cut RC 108-in Diameter	Point Repair, up to 6 feet deep	EA	
415		Point Repair, greater than 6 feet to 10 feet deep	EA	
416		Point Repair, greater than 10 feet to 14 feet deep	EA	
417		Point Repair, greater than 14 feet to 18 feet deep	EA	
418		Additional Footage, up to 6 feet deep	LF	
419		Additional Footage, greater than 6 feet to 10 feet deep	LF	
420		Additional Footage, greater than 10 feet to 14 feet deep	LF	
421		Additional Footage, greater than 14 feet to 18 feet deep	LF	
422	Internal Point Repair	Longitudinal	EA	
423		Protruding Pipe	EA	
424	Flared End Section Installation	For Pipe up to 16-inch	EA	
425		For Pipe greater than 16-inch to 24-inch	EA	
426		For Pipe greater than 24-inch to 36-inch	EA	
427		For Pipe greater than 36-inch to 48-inch	EA	
428	Precast Headwall Installation	For Pipe up to 16 Inch	EA	
429		For Pipe greater than 16 Inch to 24 Inch	EA	
430		For Pipe greater than 24 Inch to 36 Inch	EA	
431		For Pipe greater than 36 Inch to 48 Inch	EA	
432		For Pipe greater than 48 Inch to 60 Inch	EA	
433		For Pipe 66 Inch	EA	
434		For Pipe 72 Inch	EA	
435		For Pipe 78 Inch	EA	
436		For Pipe 84 inch	EA	
437		For Pipe 90 inch	EA	
438		For Pipe 96 inch	EA	
439		For Pipe 102 inch	EA	
440		For Pipe 108 Inch	EA	

## Division 2

## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
441	Precast Manhole Installation 4-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
442		Doghouse, Up to 6-foot Constructed Height	EA	
443		Additional Height	VF	
444	Precast Manhole Installation 5-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
445		Doghouse, Up to 6-foot Constructed Height	EA	
446		Additional Height	VF	
447	Precast Manhole Installation 6-Foot Diameter	Typical, Up to 6-foot Constructed Height	EA	
448		Doghouse, Up to 6-foot Constructed Height	EA	
449		Additional Height	VF	
450	Precast Manhole Installation 7-Foot Diameter	Typical, Up to 8-foot Constructed Height	EA	
451		Doghouse, Up to 8-foot Constructed Height	EA	
452		Additional Height	VF	
453	Precast Manhole Installation 8-Foot Diameter	Typical, Up to 10-foot Constructed Height	EA	
454		Doghouse, Up to 10-foot Constructed Height	EA	
455		Additional Height	VF	
456	Concrete Catch Basin Single Wing (GA DOT)	Top Slab	EA	
457		Spillway	EA	
458	Concrete Catch Basin Double Wing (GA DOT)	Top Slab	EA	
459		Spillway	EA	
460	Concrete Catch Basin Varying Sizes	Top Slab	SF	
461		Spillway	SF	
462	Catch Basin Spillway Throat	Up to 24 inch width	LF	
463	Concrete Structure Top / Lid	6 inch thick	SF	
464		8 inch thick	SF	
465		10 inch thick	SF	
466	Concrete Core	Up to 4-inch diameter core	EA	
467		Greater than 4-inch to 12-inch diameter core	EA	
468		Greater than 12-inch to 18-inch diameter core	EA	
469		Greater than 18-inch to 24-inch diameter core	EA	

## Division 2

## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
470	Brick Work Wall Construction	1 Brick Thick	SF	
471		2 Brick Thick	SF	
472		3 Brick Thick	SF	
473		4 Brick Thick	SF	
474	Ring and Cover Installation	Installation	EA	
475		Additional Height, Per Brick Layer	EA	
476	Manhole/Structure Invert Construction	Cast-in-Place Concrete	EA	
477		Brick and Mortar	EA	
478	Cementitious Invert Lining	Grout Mixed by Hand	CF	
479		Grout Mixed by Plant	CY	
480		Pump Mobilization	EA	
481	Cementitious Grouting	Grout Mixed by Hand	CF	
482		Grout Mixed by Plant	CY	
483		Pump Mobilization	EA	
484	Chemical Grouting	Grout Application	GAL	
485		Pump Mobilization	EA	
486	Hourly Labor	Superintendent	HR	
487		Foreman	HR	
488		Operator	HR	
489		Pipe Layer	HR	
490		Laborer	HR	

## Division 2

## Bid Requirements

### Section 4: Bid Form

No.	Work Item	Detail	Unit	Unit Cost
491	Hourly Equipment	78,000 # Class Excavator	HR	
492		52,000 # Class Excavator	HR	
493		45,000 # Class Excavator	HR	
494		17,000 # Class Excavator	HR	
495		10,000 # Class Excavator	HR	
496		30,000 # Class Rubber Tired Loader	HR	
497		Rubber Tired Backhoe / Loader	HR	
498		18,000 # Class Track Dozier	HR	
499		Vibratory Soil Compactor (Ride On) Up to 66-inch compaction width	HR	
500		Vibratory Soil Compactor (Remote Controlled) Up to 48-inch compaction width	HR	
501		Utility Truck Fully Equipped with Hand Tools, Air Tools, Cutting Tools, Mudhog Pump, Generator, Air Compressor, Mechanical Tamp	HR	
502		Hydro/Vacuum Excavator (Min. 12-ft Depth Capability)	Hr	
503	Equipment Rental	N/A	%	10
504	Supplied Material	N/A	%	10
505	Specialty Services	N/A	%	10

Company Name of Bidder: \_\_\_\_\_

## **Division 2**

## **Bid Requirements**

### **Section 4: Bid Form**

**To be considered responsive, bidders are required to bid on all work items listed on the Bid Form - Pay Item Schedule.**

Submitted by:

---

COMPANY NAME OF BIDDER

---

By: OFFICER NAME

---

SIGNATURE

---

TITLE

(SEAL)

---

ATTEST

---

COMPANY ADDRESS

---

CITY, STATE, ZIP CODE

---

LICENSE NUMBER (If Applicable)

PHONE NUMBER:

FAX NUMBER:

EMAIL ADDRESS:

DATE:

**END OF SECTION**

**Division 2**

**Bid Requirements**

**Section 5: Georgia Bid Bond**

BOND NO. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that \_\_\_\_\_

\_\_\_\_\_

herein after called the PRINCIPAL, and \_\_\_\_\_

\_\_\_\_\_

a corporation duly organized under the laws of the State of \_\_\_\_\_

having its principal place of business at \_\_\_\_\_

\_\_\_\_\_ in the State of \_\_\_\_\_

and authorized to do business in the State of Georgia as SURETY, are held and firmly bound unto Clayton County Water Authority, as OWNER, hereinafter called the OBLIGEE, in the sum of FIVE THOUSAND DOLLARS (\$5,000.00) for the payment for which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT:

WHEREAS, the Principal is herewith submitting his or its Bid for the **Annual Contract for Cured-In-Place Pipe Rehabilitation** project, and said Bid, by reference thereto, being hereby made a part hereof.

WHEREAS, the PRINCIPAL contemplates submitting or has submitted a Bid to the OBLIGEE for the furnishing of all labor, materials (except those to be specifically furnished by the Owner), equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Bid and the documents, entitled: **Annual Contract for Cured-In-Place Pipe Rehabilitation**.

WHEREAS, it was a condition precedent to the submission of said Bid that a cashier's check, certified check, or Bid Bond in the amount of FIVE THOUSAND DOLLARS (\$5,000.00) be submitted with said Bid as a guarantee that the Bidder would, if awarded

## **Division 2**

## **Bid Requirements**

### **Section 5: Georgia Bid Bond**

the Contract, enter into a written Contract with the Owner for the performance of said Contract, within 10 consecutive calendar days after written notice having been given of the award of the Contract.

NOW THEREFORE, the conditions of this obligation are such that if the PRINCIPAL within 10 consecutive calendar days after written notice of such acceptance, enters into a written Contract with the OBLIGEE and furnishes a Performance Bond and Payment Bond in an amount equal to 100 percent of the contract amount, satisfactory to the Owner, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the OBLIGEE and the SURETY herein agrees to pay said sum immediately upon demand of the OBLIGEE in good and lawful money of the United States of America, as liquidated damages for failure thereof of said PRINCIPAL.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

PRINCIPAL

By \_\_\_\_\_

SURETY

By \_\_\_\_\_  
Attorney-In-Fact

**END OF SECTION**

**Division 2**

**Bid Requirements**

**Section 6: Bidder Qualification Information**

COMPANY NAME OF BIDDER: \_\_\_\_\_

NUMBER OF YEARS IN BUSINESS \_\_\_\_\_

BUSINESS ADDRESS OF COMPANY: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_

POINT OF CONTACT NAME: \_\_\_\_\_

POINT OF CONTACT EMAIL  
ADDRESS: \_\_\_\_\_

COMPANY TAX ID NUMBER: \_\_\_\_\_

COMPANY WEBSITE: \_\_\_\_\_

ENTITY TYPE:    ☐ Individual/Sole Proprietor                      ☐ Employee Owned Company  
                         ☐ Privately Held Corporation/LLC                      ☐ Partnership  
                         ☐ Publicly Owned Company                      ☐ Attorney  
                         ☐ Other (specify):

NAME OF PRINCIPAL OFFICERS: \_\_\_\_\_



**Division 2**

**Bid Requirements**

**Section 6: Bidder Qualification Information**

**REFERENCES**

**PROVIDE PROJECT REFERENCES FOR SIMILAR WORK THAT HAS BEEN COMPLETED WITHIN THE LAST 24 MONTHS. FAILURE TO PROVIDE SATISFACTORY REFERENCES WILL RESULT IN THE BID BEING DEEMED NON-RESPONSIVE.**

OWNER: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

OWNER: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

OWNER: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

OWNER: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

OWNER: \_\_\_\_\_  
CONTACT NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE NUMBER: \_\_\_\_\_

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 7: Contractor Affidavit & Agreement**

#### **GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT OF 2006**

- A. Pursuant to the Georgia Security and Immigration Compliance Act of 2006, the Contractor understands and agrees that compliance with the requirements of O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-.02 are conditions of this Agreement. The Contractor further agrees that such compliance shall be attested by the Contractor through execution of the contractor affidavit required by Georgia Department of Labor Rule 300-10-1-.07, or a substantially similar contractor affidavit. The Contractor's fully executed affidavit is attached hereto as Exhibit \_\_\_\_ and is incorporated into this Agreement by reference herein.
- B. By initialing in the appropriate line below, the Contractor certifies that the following employee-number category as identified in O.C.G.A. § 13-10-91 is applicable to the Contractor:
1. \_\_\_\_\_ 500 or more employees;
  2. \_\_\_\_\_ 100 or more employees;
  3. \_\_\_\_\_ Fewer than 100 employees.
- C. The Contractor understands and agrees that, in the event the Contractor employs or contracts with any subcontractor or subcontractors in connection with this Agreement, the Contractor shall:
1. Secure from each such subcontractor an indication of the employee-number category as identified in O.C.G.A. § 13-10-91 that is applicable to the subcontractor;
  2. Secure from each such subcontractor an attestation of the subcontractor's compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 by causing each such subcontractor to execute the subcontractor affidavit required by Georgia Department of Labor Rule 300-10-1-.08, or a substantially similar subcontractor affidavit. The Contractor further understands and agrees that the Contractor shall require the executed subcontractor affidavit to become a part of the agreement between the Contractor and each such subcontractor. The Contractor agrees to maintain records of each subcontractor attestation required hereunder for inspection by the Clayton County Water Authority at any time."

**Contractor**

**Authorized Signature:**

**Name:**

**Title:**

**Date:**

## **Division 2**

## **Bid Requirements**

### **Section 7: Contractor Affidavit & Agreement**

#### **CONTRACTOR AFFIDAVIT AND AGREEMENT**

By executing this affidavit, the undersigned contractor verifies its compliance with [O.C.G.A. 13-10-91](#), stating affirmatively that the individual, firm, or corporation which is contracting with the Clayton County Water Authority has registered with, is participating in, uses, and will continue to use for the duration of the contract, the federal work authorization program - EEV/Basic Pilot Program operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA), commonly known as E-Verify, in accordance with the applicability provisions established in [O.C.G.A. 13-10-91](#).

The undersigned further agrees that, in connection with the physical performance of services pursuant to this contract with the Clayton County Water Authority, the contractor will only employ or contract with subcontractor(s), who can present a similar affidavit verifying the subcontractor's compliance with [O.C.G.A. 13-10-91](#). Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Clayton County Water Authority within five days of the subcontractor(s) presenting such affidavit(s) to the contractor.

---

EEV / Basic Pilot Program\* User Identification Number  
***Enter four to six digit numbers***

---

Name of Contractor (Printed)

---

BY: Authorized Officer or Agent  
(Contractor Name)

---

Date

---

Title of Authorized Officer or Agent of Contractor

---

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS

THE \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_\_\_.

---

Notary Public

---

My Commission Expires

## **Division 2**

## **Bid Requirements**

### **Section 7: Contractor Affidavit & Agreement**

#### **SUBCONTRACTOR AFFIDAVIT AND AGREEMENT**

By executing this affidavit, the undersigned subcontractor verifies its compliance with [O.C.G.A. 13-10-91](#), stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with \_\_\_\_\_

\_\_\_\_\_ on behalf of the Clayton County Water Authority has registered with, is participating in, uses, and will continue to use for the duration of the contract the federal work authorization program - EEV/Basic Pilot Program operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA), commonly known as E-Verify, in accordance with the applicability provisions and deadlines established in [O.C.G.A. 13-10-91](#).

The undersigned further agrees that, in connection with the physical performance of services pursuant to this contract with \_\_\_\_\_

\_\_\_\_\_ on behalf of the Clayton County Water Authority, the subcontractor will only employ or contract with sub-subcontractor(s), who can present a similar affidavit verifying the sub-subcontractor's compliance with [O.C.G.A. 13-10-91](#). The undersigned further agrees that the Subcontractor will maintain records of such compliance and provide a copy of each such verification to the Contractor within five days of the sub-subcontractor(s) presenting such affidavit(s) to the Sub-contractor.

\_\_\_\_\_  
EEV / Basic Pilot Program\* User Identification Number  
***Enter four to six digit numbers***

\_\_\_\_\_  
Name of Sub-Contractor (Printed)

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Subcontractor Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Subcontractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

Subscribed and sworn before me on this the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
My Commission Expires

**END OF SECTION**

## **Division 2**

## **Bid Requirements**

### **Section 8: Small Local Business Enterprises (SLBE) - General Information**

#### **8.1 Program Overview**

Clayton County Water Authority (CCWA) has implemented a Small Local Business Enterprise Program to promote full and open competition in all government procurement and purchasing. Bid discounts for the use of Small Local Business Enterprises (SLBE's) are set on a contract by contract basis for each specific prime contract with subcontracting possibilities. CCWA wants to ensure that Bidders are non-discriminatory in their process of selecting sub-contractors. CCWA also wants to encourage Bidders to utilize small, minority or woman-owned businesses whenever possible. All forms included in this solicitation must be completed for Bidder to be considered responsive.

SLBE means a locally-based small business operating inside or outside of Clayton County, which meets the following criteria:

- A) Independently owned and operated business concern whose average annual gross receipts for the previous three years must not exceed (1) Construction Firms – \$18,250,000; (2) Professional Services Firms – \$5,500,000; Architectural Firms – \$3,750,000; Engineering Firms – \$7,500,000, and Goods and Services – less than 250 employees.
- B) Locally based, meaning located and operating in Clayton County or the ten (10) counties of Cherokee, Cobb, DeKalb, Douglas, Fayette, Fulton, Gwinnett, Henry, Rockdale and Spalding for at least one year prior to submitting application for certification.

If a firm is locally-based in one of the counties mentioned above, is currently certified as a small business through the DeKalb County, Clayton County, or the City of Atlanta, and can provide evidence of its certification, the firm will be provisionally accepted as a SLBE, provided that they complete the official certification application for CCWA within two (2) years following the date of provisional certification. If a firm meets these qualifications, but is not currently certified as a small business, then the firm must complete an application for certification with CCWA no later than seven (7) business days following the deadline for bid submission.

SLBE's must perform a commercially useful function, which means performance of provision of real and actual services under the contract or subcontract with CCWA. Factors such as the nature and amount of the work subcontracted; whether the SLBE has the skill and expertise to perform the work for which it has been certified; whether the SLBE actually performs, manages or supervises the

## **Division 2**

## **Bid Requirements**

### **Section 8: Small Local Business Enterprises (SLBE) - General Information**

work; and whether the SLBE intends to purchase commodities and/or services from a non-SLBE and simply resell them will be considered in determining if the SLBE is performing a commercially useful function.

Participation in the SLBE program is not a requirement to participate in contracting with CCWA. The use of an SLBE is a requirement when bid discounts are to be sought. The Bidder will be required to complete the required forms as outlined in the following section.

#### **8.2 SLBE Required Forms**

This package contains the following forms that Bidders are required to submit along with their bids (in addition to general contractor forms):

- A) SLBE-1 – Covenant of Non-Discrimination: The signed agreement stating that the firm will not discriminate on the basis of a firm's size (revenue or employee count) with regard to prime contracting, subcontracting, or partnering opportunities.
- B) SLBE-2 – Sub-Contractor Contact Form: A list of all firms contacted to participate as SLBE sub-contractors/suppliers on a contract.
- C) SLBE-3 – SLBE Sub-Contractor/Supplier Utilization Form: A list of all firms procured as SLBE sub-contractors/suppliers to be utilized on this contract.

#### **8.3 SLBE Optional Forms**

The following form is for information and tracking purposes only, to be provided post award, at the bidder's option:

- A) SLBE-4 – Post-Award-Monthly SLBE Participation Report-Bid Discount: Report detailing amount paid to SLBE sub-contractor on the contract.

#### **8.4 Overview of Bid Discount**

Bid discounts are incentives that range between 5% and 10% for the use of a certified SLBE (prime or sub-contractor) located in Clayton County or the ten (10) counties outlined in this section. Bid discounts allow an original bid amount to be discounted by a certain percentage for purposes of evaluating and determining the low responsible responsive bid. The discounted bid amount will be used in the evaluation process of awarding to the low responsive, responsible bidder. The original bid amount will be the basis for contract award.

## **Division 2**

## **Bid Requirements**

### **Section 8: Small Local Business Enterprises (SLBE) - General Information**

*Example: A \$100,000 bid with a 5% bid discount would be evaluated at \$95,000. However, \$100,000 would be paid to the successful bidder.*

The calculation of SLBE bid discounts shall be as follows:

There will be an applied tiered discount to bids based on what county the SLBE business is located.

- 10 percent for SLBE's in Clayton County.
  - 7.5 percent for SLBE's within the next surrounding 5 counties (DeKalb, Fayette, Fulton, Henry and Spalding).
  - 5 percent for SLBE's for the 5 outer counties (Cherokee, Cobb, Douglas, Gwinnett and Rockdale).
- (1) Discounts are given to Bidders who are SLBE Primes or Primes using a small local subcontractor.
  - (2) In the event of a tie bid between a discounted bidder and a non-discounted bidder, the discounted bidder (SLBE) will be recommended for the contract.

By signing the bid, the bidder is certifying that he/she has complied with the requirements of this program. Please contact Contracts, Compliance and Risk Management at [ccwa\\_slbe\\_program@ccwa.us](mailto:ccwa_slbe_program@ccwa.us) for a list of certified SLBE's. The list is also available through [www.ccwa.us](http://www.ccwa.us), under the tab for "About Us", section for "Small Local Business Program".

**Division 2**

**Bid Requirements**

**Section 8: Small Local Business Enterprises (SLBE) - General Information**

**FORM SLBE-1**

**COVENANT OF NON-DISCRIMINATION**

The undersigned understands that it is the policy of the Clayton County Water Authority (CCWA) to promote full and equal business opportunity for all persons doing business with CCWA. The undersigned covenants that we have not discriminated on the basis of a firm's revenue or employee count with regard to prime contracting, subcontracting or partnering opportunities. The undersigned further covenants that we have completed truthfully and fully the required forms SLBE-2 and SLBE-3. Set forth below is the signature of an officer of the bidding entity with CCWA to bind the entity.

I, \_\_\_\_\_ (Name, Title), on behalf of \_\_\_\_\_  
\_\_\_\_\_ (Company), by my signature below, do hereby promise:

1. To adopt the policies of Clayton County relating to equal opportunity in contracting on projects and contracts funded, in whole or in part, with funds of CCWA;
2. Not to otherwise engage in discriminatory conduct;
3. To provide a discrimination-free working environment;
4. That this Covenant of Non-Discrimination shall be continuing in nature and shall remain in full force and effect without interruption; and
5. That this Covenant of Non-Discrimination shall be incorporated by reference into any contract or portion thereof which we may hereafter obtain.

We understand that our failure to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract.

\_\_\_\_\_  
Signature of Attesting Party

\_\_\_\_\_  
Title of Attesting Party

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me appeared \_\_\_\_\_,  
the person who signed the above covenant in my presence.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
My Commission Expires

[Seal]



## FORM SLBE-2

### SUB-CONTRACTOR CONTACT FORM – BID DISCOUNT

#### INSTRUCTIONS TO CONTRACTORS

The prime contractor must complete and sign the sub-contractor contact form and submit the completed and signed form with the bid. **Failure to submit this form may result in the bid being deemed nonresponsive.**

**SLBE Prime Contractors:** If you are the prime contractor on the project AND also the SLBE on the project and will NOT use any other SLBE firms as sub constructors, check the box at the top of the form and sign the form.

1. Name of contractor/supplier: Provide name of the contractor or supplier you contacted to perform on the contract.
2. Contact Name, Address and Phone Number: Provide the contact information of the contractor/supplier you contacted.
3. County of Clayton Business License: State if the contractor/supplier you contacted is a Clayton County Licensed business.
4. Type or work solicited for: Describe the type of work for which you are soliciting from the contractor/supplier.
5. Business Ownership (SLBE/non-SLBE): State whether the contractor/supplier you contacted is an SLBE or non-SLBE.
6. Results of Contact: Describe the results of your contact.
7. Sign and date the form.

## FORM SLBE-2

### SUB-CONTRACTOR CONTACT FORM

*List all sub-contractors or suppliers (SLBE and Non-SLBE) that were contacted regarding this project.*

IF THE PRIME IS THE SLBE ON THE PROJECT CHECK THE BOX

☐

Name of Sub-Contractor/ Supplier	Contact Name, Address and Phone Number	County of Clayton Business License? (Yes or No)	Type of Work Solicited for	Business Ownership (Enter SLBE or Non SLBE)	Results of Contact
<i>Company ABC</i>	<i>123 Main Street Morrow, GA 30260 770-123-4567</i>	<i>Yes</i>	<i>Hauling</i>	<i>SLBE</i>	<i>Will perform as sub</i>

FORM SLBE-2

**SUB-CONTRACTOR CONTACT FORM – Cont'd**

*List all sub-contractors or suppliers (SLBE and Non-SLBE) that were contacted regarding this project.*

<b>Name of Sub-Contractor/ Supplier</b>	<b>Contact Name, Address and Phone Number</b>	<b>County of Clayton Business License? (Yes or No)</b>	<b>Type of Work Solicited for</b>	<b>Business Ownership</b> <i>(Enter SLBE or Non SLBE)</i>	<b>Results of Contact</b>

**Bidder's Name:** \_\_\_\_\_ **Project Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## FORM SLBE-3

### SMALL LOCAL BUSINESS ENTERPRISE PROJECT PARTICIPATION PLAN SUB-CONTRACTOR/SUPPLIER UTILIZATION INSTRUCTIONS TO CONTRACTORS

The prime contractor must complete the project participation plan for sub-contractor/supplier utilization and submit the form with the bid. **Failure to submit this form will result in being deemed nonresponsive.**

1. Name of contractor/supplier: Provide name of the contractor or supplier you contacted to perform on the contract.
2. Certified as SLBE: State if the subcontractor/supplier to be used on the project is an SLBE.
3. Which County? If you are using an SLBE on the project, state in which county the SLBE is located.
4. NAIC or NIGP code: List the NAIC/NIGP code that relates to the service or work to be performed by the subcontractor/supplier.
5. Type of work to be performed: Describe the type of proposed work to be performed by the subcontractor/supplier.
6. Certification number and expiration date: If using an SLBE, provide the SLBE certification number and expiration date.
7. Estimated dollar value of work: Provide the estimated dollar value of the work to be performed by the subcontractor/supplier on the project.
8. Percentage of Total Bid Amount: Enter the estimated % of the total bid amount for which the SLBE will be paid.

**Estimated Dollar Value of the Work / Total Bid Amount = % of Total Bid Amount**

# FORM SLBE-3

## SMALL LOCAL BUSINESS ENTERPRISE PROJECT PARTICIPATION PLAN SUB-CONTRACTOR/SUPPLIER UTILIZATION

List **all** sub-contractors and suppliers, including lower tiers, to be used on this project.

IF NO SUB-CONTRACTOR/SUPPLIERS WILL BE USED PLEASE CHECK THE BOX

☐

Name of Sub-contractor/ Supplier	Certified as Small Local Business Enterprise (SLBE)- Yes or No	If SLBE, which county-Clayton, Cherokee, Cobb, DeKalb, Douglas, Fayette, Fulton, Henry, Gwinnett, Rockdale, Spalding	NAIC or NIGP Code	Type of Work to be Performed	SLBE Certification No. and Expiration Date	Estimated Dollar (\$) Value of Work	Percentage of Total Bid Amount
Company ABC	Yes	Clayton	96239	Hauling	SLBE-125-463 5/01/2017	\$5500	11%

Total Estimated SLBE Sub-contractor % \_\_\_\_\_

Bidder's Company Name: \_\_\_\_\_ Date: \_\_\_\_\_

Bidder's Contact Number: \_\_\_\_\_ Project Name: \_\_\_\_\_

Signature: \_\_\_\_\_

**FORM SLBE-4**  
**POST AWARD – MONTHLY SLBE PARTICIPATION REPORT – BID DISCOUNT**  
**INSTRUCTIONS TO CONTRACTORS**

The prime contractor must complete and sign the participation report and submit the the completed and signed form with each pay application to the CCWA Project Manager in charge of the contract. Failure to submit this form may result in payment application being deemed incomplete.

1. Report Number: Reports must be consecutively numbered. It will only be necessary to submit a report in a period when the approved SLBE has performed a portion of the work that has been designated for the contract.
2. Date: Actual date of the report.
3. Prime SLBE: If you are the Prime Contractor and also the SLBE on the contract please check yes and insert assigned CCWA SLBE certification number. Note that %100 of SLBE dollars spent will be counted towards the SLBE contract or annual goal, if applicable.
4. Pay application end date: Reports must acknowledge the end date for the period for which is being reported.
5. Prior Earned Pay Application Amount: The amount previously submitted for payment on pay application.
6. Current Earned Pay Application Amount: The amount submitting with current payment application.
7. Earnings To-Date: The actual amount that each SLBE has earned to-date under the contract.
8. Total SLBE Earnings To-Date: The total is achieved by adding all payments to SLBE to date. (Previous payments reported + current payment reported)
9. Certification: The contractor's authorized representative must sign this form prior to submittal.

**GENERAL INFORMATION**

When the approved SLBE is to provide materials, goods or services, this completed form must be submitted to the CCWA Project Manager. The prime contractor must notify CCWA of any changes to SLBE firms.

When the prime contractor is an approved SLBE, it will only be necessary to complete the total SLBE earnings to-date. Joint ventures between non-SLBE and certified SLBE: Only that portion of the work for which the certified SLBE is responsible may be used to satisfy the requirement.

# FORM SLBE-4

## POST AWARD – MONTHLY SLBE PARTICIPATION REPORT – BID DISCOUNT

PROJECT NO. (S): \_\_\_\_\_

REPORT NO.: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

DATE: \_\_\_\_\_

CONTRACT AMOUNT: \$ \_\_\_\_\_

PAY APPLICATION PERIOD END DATE: \_\_\_\_\_

PRIME SLBE CONTRACTOR? ☐ Yes ☐ No  
If Yes, insert CCWA SLBE Certification # \_\_\_\_\_

Check if final payment >>> ☐ FINAL PAYMENT

NAME OF APPROVED SLBE	DESCRIPTION OF WORK	PRIOR EARNED PAY APPLICATION AMOUNT	CURRENT EARNED APPLICATION AMOUNT	EARNINGS TO-DATE

TOTAL SLBE EARNINGS TO-DATE: \_\_\_\_\_

I HEREBY CERTIFY THAT THE ABOVE STATEMENT IS TRUE  
AND CORRECT AND SUPPORTING DOCUMENTATION IS ON  
FILE AND IS AVAILABLE FOR INSPECTION BY CCWA AT ANY  
TIME.

SIGNED \_\_\_\_\_  
CONTRACTOR

REMARKS \_\_\_\_\_  
\_\_\_\_\_

### FOR DEPARTMENT USE ONLY:

THIS DOCUMENT HAS BEEN REVIEWED AT THAT PROJECT LEVEL BY:

SIGNED \_\_\_\_\_ TITLE \_\_\_\_\_

THIS DOCUMENT HAS BEEN REVIEWED AT THE PROGRAM LEVEL BY:

SIGNED \_\_\_\_\_ TITLE \_\_\_\_\_

**Division 3**

**Contract Forms**

**Section 1: Agreement Form**

**STATE OF GEORGIA  
COUNTY OF CLAYTON**

**AGREEMENT FOR ONGOING PROVISION  
OF GOODS AND SERVICES**

This Agreement made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for **Cured-In-Place Pipe Rehabilitation**, between the **CLAYTON COUNTY WATER AUTHORITY** (hereinafter "the Authority") and \_\_\_\_\_ (hereinafter "the Contractor"), witnesseth:

**WHEREAS**, the Authority is contracting with the Contractor for the provision of certain goods and services described below for the term specified herein;

**NOW THEREFORE**, the parties agree as follows:

1. **DESCRIPTION OF GOODS AND SERVICES**: The Contractor shall provide the goods and services to the Authority in such quantities as the Authority requires for **Cured-In-Place Pipe Rehabilitation**, as described in the Request for Bid dated February 2016.
2. **COSTS**: The Authority shall pay the Contractor the prices as stipulated in the Bid Form hereto attached as full compensation relative to the Bid dated \_\_\_\_\_, and above described goods and services. The Contractor may submit to the Authority no more than one (1) pay application per week for a project work order and the submission shall be in such a form and matter with such other supporting data and content as the Authority may require and accompanied by the Authority's waiver and release upon final payment. The Authority shall pay the Contractor net 30 days from the date the Authority approves the Contractor's work and pay application for a project work order. Each project work order shall be completed within the time period as agreed to by both parties at the time of the project work order issuance.
3. **TERM OF AGREEMENT**: The term of this Agreement shall commence on the **1<sup>st</sup> day of June, 2016**. The Agreement shall remain in effect until **May 31, 2017**.
4. **RENEWAL PROVISIONS**: The contract may be extended for a second and third 12 month period by mutual written consent by both parties within 90 days from the expiration date with no changes in terms, conditions, and bid prices.



## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

5. **WARRANTY ON SERVICES RENDERED:** The Contractor warrants its workmanship to be free from defects for a period of two (2) years from the date of final acceptance. The Contractor further warrants that its workmanship will conform to all specifications and will perform as specified. Upon receipt of written notice of a defect in workmanship, the Contractor shall repair the defect in a timely manner at no expense to the Authority.
6. **WARRANTY ON GOODS PROVIDED:** The Contractor warrants its goods for a period of two (2) years from the date of final acceptance. Furthermore, the Contractor warrants that goods ordered to specifications will conform thereto and to any drawings, samples, or other description furnished or adopted by the Authority, and will be fit and sufficient for the purpose intended; and that all goods are merchantable, of good material and workmanship, and free from defect. Such warranties, together with the Contractor's service warranties and guarantees, if any shall survive inspection, test, acceptance of, and payment for the goods and shall run to the Authority, its successors, assigns, customers at any tier, and ultimate user and joint users. Notices of any defect or nonconformity shall be given by the Authority to the Contractor within fifteen (15) months after acceptance by ultimate user; provided however that in the event the goods are designed by the Contractor, notice must be given within three (3) years after acceptance by ultimate user. The rights and remedies of the Authority concerning latent defects shall exist indefinitely, and shall not be affected in clause. The Authority may, at its option, and in addition to other remedies available at law, either (i) return for credit, (ii) require prompt correction or replacement of the defective or nonconforming goods, or (iii) have the defective items corrected or replaced at the Contractor's expense and deduct the cost thereof from any monies due the Contractor. The return to the Contractor of any defective or nonconforming goods and delivery to the Authority of any corrected or replaced goods shall be at the Contractor's expense. Goods required to be corrected or replaced shall be at the Contractor's expense. Goods required to be corrected or replaced shall be subject to the provision of this paragraph and the paragraph of this Agreement entitled "inspection" on the same manner and to the same extent as goods originally delivered under this Agreement. In addition to correcting or replacing any defective or nonconforming goods, the Contractor shall also reimburse the Authority for all costs and expenses incurred by the Authority in connection with inspection and discovery of the defects, identifying and correcting the cause of such defects and all other activities reasonably

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

undertaken by the Authority to obtain conforming goods or attempting to obtain from the ultimate user a waiver to permit the defective goods to be used with all or part of the defective conditions.

7. **INSPECTION:** The Authority shall have the right to inspect the goods supplied hereunder at any time during the manufacture or fabrication thereof at the Contractor's facilities or elsewhere. Such inspection may include, without limitation, raw materials, components, work in process, and completed products as well as drawings, specifications, and released data. Final inspection and acceptance shall be after delivery to the delivery point designated by the Authority. If any inspection or test is made by the Authority at the Contractor's facility or elsewhere, the Contractor shall provide reasonable facilities and assistance for the inspection personnel. The Authority may reject all goods supplied hereunder, which are found to be defective. Goods so rejected may be returned to the Contractor at the Contractor's expense. No inspection, examination or test, regardless of extensiveness or type, and no approval give in connection with any such inspection, examination or test, whether under this Agreement or another contract for the same or similar goods, shall relieve it, of any obligation to comply fully with all requirements of this Agreement, including the obligation to produce goods that conform to all requirements of the drawings, specifications and any other Contract Documents. At the Authority's request, the Contractor shall repair or replace defective goods at the Contractor's expense. Failure to inspect goods, failure to discover defects in goods or payment for goods shall not constitute acceptance or limit any of the Authority's rights, including without limitation those under the WARRANTY provisions of this Agreement. In the event inspection reveals a defect or defects and schedule urgency requires that the defect or defects be corrected by the Authority to support production, all cost of such correction, including without limitation installation and removal, will be charged to the Contractor; such charges will also include time and material and appropriate indirect and overhead expenses. The Contractor shall maintain in inspection system acceptable to the Authority covering the goods furnished hereunder.
8. **CONTRACTOR'S AFFIDAVITS:** The Contractor shall issue a "Standard Contractor's Affidavit Interim Waiver and Release Upon Payment" and a "Standard Contractor's Affidavit Unconditional Waiver and Release upon Final Payment" provided by the Authority before receiving any interim or final payment for any services performed.

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

9. **ASSIGNMENT AND SUBCONTRACTING:** The Contractor shall not assign this Agreement or any portion of this Agreement, nor shall the Contractor subcontract for goods or completed or substantially completed services purchased hereunder without the prior express written consent of the Authority. No assignment or subcontract by the Contractor, including any assignment or subcontract to which the Authority consents, shall in any way relieve the Contractor from complete and punctual performance of this Agreement, including without limitation all of the Contractor's obligations under the WARRANTY provisions of this Agreement.
10. **THE AUTHORITY'S ASSISTANCE AND COOPERATION:** During the Contractor's performance of this Agreement, the Authority may, but has no obligation to, provide assistance to, or cooperate with, the Contractor in activities that facilitate the proper performance and completion of this Agreement by the Contractor. Such assistance and cooperation may include without limitation: (i) providing engineering or other analysis or advice on correcting problems; (ii) refraining from strict enforcement of time schedule requirements under this Agreement; (iii) permitting use of test materials or documentation not performed or produced under this Agreement. Such assistance or cooperation by the Authority shall not be construed, and the Contractor agrees that it will not claim that any such assistance or cooperation operates, to relieve the Contractor from complete, proper and punctual performance of all the Contractor's obligations under this Agreement.
11. **WORK ON THE AUTHORITY'S DESIGNATED PREMISES:** In the event that the Contractor, the Contractor's employees or agents or the Contractor's subcontractors enter the Authority's designated premises for any reason in connection with this Agreement, the Contractor and such other parties shall observe all security requirements and all plant safety, plant protection, and traffic regulations. The Contractor shall defend, indemnify, and hold the Authority harmless from all claims, actions, demands, loss, and causes of action, arising from injury, including death, to any person, or damage to any property, when such injury or damage results in whole or in part from the acts or omissions of the Contractor, the Contractor's employees or agents or the Contractor's subcontractor, save and except damage caused by the sole negligence of the Authority. The Contractor, and any subcontractor's used by the Contractor in connection with this Agreement, shall carry Workmen's Compensation and Employees' Liability Insurance to cover the Contractor's and any subcontractor's legal liability on account of accidents to their

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

employees. The Contractor and any subcontractor shall carry adequate Comprehensive General Liability and adequate Comprehensive Automobile Liability Insurance covering accidents to their employees. The Contractor and any subcontractor shall carry adequate Comprehensive General Liability and adequate Comprehensive Automobile Liability Insurance covering legal liability of the Contractor and any subcontractor on account of accidents arising out of the operations of the Contractor or any subcontractor and resulting in bodily injury, including death, being sustained by any person or persons, or in any damage to property. At the Authority's request, the Contractor shall furnish to the Authority certificates from the Contractor's insurers showing such coverage in effect and agreeing to give the Authority thirty (30) days prior written notice of cancellation of the coverage.

12. **RISK MANAGEMENT REQUIREMENTS:** The Contractor shall abide by the Authority's applicable Risk Management Requirements, attached to this Agreement as Exhibit A and hereby incorporated into this Agreement.
13. **TERMINATION FOR DEFAULT:**
  - (a) The Authority may, subject to the provisions of subparagraph (c) below, by written notice of default to the Contractor, terminate the whole or any part of this Agreement in any one of the following circumstances; (i) if the Contractor fails to perform this Agreement within the time specified herein or any extension thereof; or (ii) if the Contractor fails to perform any of the other provisions of this Agreement, or so fails to make progress as to endanger performance of this Agreement in accordance with its terms, and does not cure such failure within a period of ten (10) days or longer period (as the Authority may authorize in writing) after receipt of notice from the Authority specifying such failure.
  - (b) In the event the Authority terminates this Agreement in whole or in part as provided in subparagraph (a) above, the Authority may procure, upon such terms and in such manner as the Authority may deem appropriate, services, similar to those so terminated, and the Contractor shall be liable to the Authority for any Excess costs for the same, including without limitation all cost and expenses of the type specified in the "WARRANTY" paragraph of this Agreement; provided, that the Contractor shall continue the performance of this Agreement to the extent not terminated hereunder.
  - (c) Except with regard to defaults of subcontractors, the Contractor shall not be liable for any excess costs if the failure to perform this Agreement arises out of causes beyond the control and without the fault

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

of negligence of the Contractor such causes may include, but are not limited to, acts of God, or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, flood, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

If the failure to perform is caused by the default of a subcontractor, and if such default arises out of causes beyond the control of both the Contractor and the subcontractor, and without the fault of negligence of either of them, the Contractor shall not be liable for any excess costs for failure to perform, unless the services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Contractor to meet the required delivery schedule. The term "subcontractor" shall mean subcontractor at any tier.

- (d) If, after notice of termination of this Agreement under the provisions of this paragraph, it is determined for any reason that the Contractor was not in default under the provisions above or that the default was excusable under the provisions of this paragraph, the rights and obligations of the parties shall be the same as if the notice of termination has been issued pursuant to the "Termination for Convenience" paragraph of this Agreement.
- (e) The rights and remedies of the Authority provided in this paragraph shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

- 14. **TERMINATION FOR CONVENIENCE:** The Authority may at any time by written notice terminate all or any part of this Agreement for the Authority's convenience. If this Agreement is terminated, in whole or in part, for the Authority's convenience, the Contractor shall be paid an amount, to be mutually agreed upon, which shall be adequate to cover the actual and reasonable cost paid by the Contractor for the actual goods and labor reasonably used by the Contractor to perform the work under this Agreement to the effective date of termination, plus a reasonable profit thereon; provided that no amount shall be paid to the Contractor for (i) any anticipatory profits related to work under this Agreement not yet performed, or (ii) costs incurred due to the Contractor's failure to terminate work as ordered on the effective date of termination. In no event shall the total amount paid under the provisions of this paragraph exceed the prices set forth in this Agreement for the work terminated.

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

15. **DISPUTES**: Pending resolution of any dispute hereunder, the Contractor shall proceed diligently with the performance of work in accordance with the Authority's direction.
16. **NOTICES**: All notices required or permitted to be given hereunder shall be deemed to be properly given if delivered in writing personally or sent by United States certified or registered mail addressed to the Contractor or the Authority, as the case may be, with postage thereon fully prepaid. The effective time shall be at the time of mailing.
17. **ATTORNEYS' FEES**: The Contractor shall pay reasonable attorneys' fees to the Authority should the Authority be required to incur attorneys' fees in enforcing the provisions of this Agreement or in the collection of any monies herein required to be paid by the Contractor to the Authority.

**SIGNATURES ON NEXT PAGE**

**Division 3**

**Contract Forms**

**Section 1: Agreement Form**

**IN WITNESS WHEREOF** this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_\_, said parties have hereunto set their seals the day and year above first written.  
Executed on behalf of:

**CLAYTON COUNTY WATER AUTHORITY**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

[Corporate Seal]

ATTEST: \_\_\_\_\_

DATE: \_\_\_\_\_

**CONTRACTOR**

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

[Corporate Seal]

ATTEST: \_\_\_\_\_

Corporate Secretary

DATE: \_\_\_\_\_

## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

#### **RISK MANAGEMENT REQUIREMENTS**

The Contractor will provide minimum insurance coverage and limits as per the following: The Contractor will file with the Authority Certificates of Insurance, certifying the required insurance coverage and stating that each policy has been endorsed to provide thirty (30) day notice to the Authority in the event that coverage is cancelled, non-renewed or the types of coverage or limits of liability are reduced below those required. All bonds and insurance coverage must be placed with an insurance company approved by Authority Management, admitted to do business in the State of Georgia, and rated Secure ("B+" or better) by A.M. Best Company in the latest edition of Property and Casualty Ratings, or rated by Standard & Poors Insurance Ratings, latest edition as Secure ("BBB" or better). Worker's Compensation self-insurance for individual Contractors must be approved by the Worker's Compensation Board, State of Georgia and/or Self-Insurance pools approved by the Insurance Commissioner, State of Georgia.

#### **CONTRACTS FOR UP TO \$50,000**

**Worker's Compensation** – Worker's Compensation coverage on a statutory basis for the State of Georgia with an Employer's Liability limit of \$100,000 each Accident, Disease \$100,000 each employee, \$500,000 Disease policy limit.

**Automobile Liability** – Automobile liability coverage for owned, hired and non-owned vehicles in the amount of \$500,000 combined single limit.

**Commercial General Liability** – Coverage to be provided on "occurrence" not "claims made" basis. The coverage is to include Contractual liability, Per Project Limit of Liability, losses caused by Explosion, Collapse and Underground ("xcu") perils, the "Clayton County Water Authority" is to be added as an Additional Insured and Products and Completed Operations coverage is to be maintained for three (3) years following completion of work.

#### **CONTRACTS FOR MORE THAN \$50,000**

**Worker's Compensation** – Worker's Compensation coverage on a statutory basis for the State of Georgia with an Employer's Liability limit of \$1,000,000. The increased Employer's Liability limit may be provided by an Umbrella or Excess Liability policy.

**Automobile Liability** - Automobile liability coverage for owned, hired and non-owned vehicles in the amount of \$1,000,000 combined single limit.

**Commercial General Liability** – Coverage to be provided on "occurrence" not "claims made" basis. The coverage is to include Contractual liability, Per Project Limit of Liability, losses caused by Explosion, Collapse and Underground ("xcu") perils, the "Clayton County Water Authority" is to be added as an Additional Insured and Products and Completed Operations coverage is to be maintained for three (3) years following completion of work.



## **Division 3**

## **Contract Forms**

### **Section 1: Agreement Form**

#### **RISK MANAGEMENT REQUIREMENTS (Cont'd)**

##### **CONTRACTS FOR UP TO \$50,000**

##### **CONTRACTS FOR MORE THAN \$50,000**

#### **LIMITS OF LIABILITY:**

\$1,000,000	Per Occurrence
\$1,000,000	Personal and Advertising
\$50,000	Fire Damage*
\$5,000	Medical Payments*
\$1,000,000	General Aggregate
\$1,000,000	Products/Completed Operations per Occurrence and Aggregate

*\*These are automatic minimums*

**Owner's Protective Liability** – The Authority Management may, in its discretion, require Owner's Protective Liability in some situations.

**Umbrella and/or Excess Liability** – The umbrella or Excess Liability Policy may be used to combine with underlying policies to obtain the limits required. The Management of the Authority may elect to require higher limits.

**Owner's Protective Liability** – The Authority Management may, in its discretion, require Owner's Protective Liability in some situations.

**END OF SECTION**

## **Division 3**

## **Contract Forms**

### **Section 2: Performance Bond**

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_  
\_\_\_\_\_ (as CONTRACTOR, hereinafter referred to as the  
“Principal”), and \_\_\_\_\_ (as SURETY COMPANY),  
hereinafter referred to as the “CONTRACTOR’S SURETY”), are held and firmly bound unto  
the Clayton County Water Authority (as OWNER, hereinafter referred to as the “Authority”),  
for the use and benefit of any “Claimant” as hereinafter defined in the sum  
of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) lawful  
money of the United States of America, for the payment of which the Principal and the  
Contractor’s Surety bind themselves, their heirs, executors, administrators, successors and  
assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered, or is about to enter, into a certain written  
agreement with the Authority, dated \_\_\_\_\_, which is incorporated  
herein by reference in its entirety (hereinafter referred to as the “CONTRACT”), for the  
construction of a project known as **Annual Contract for Cured-In-Place Pipe  
Rehabilitation**, (hereinafter referred to as “the PROJECT”).

**NOW THEREFORE**, the conditions of this obligation are as follows:

1. That if the Principal shall fully and completely perform each and all of the  
terms, provisions and requirements of the Contract, including and during the  
period of any warranties or guarantees required thereunder, and all  
modifications, amendments, changes, deletions, additions, and alterations  
thereto that may hereafter be made; and if the Principal and the Contractor’s  
Surety shall indemnify and hold harmless the Authority from any and all  
losses, liability and damages, claims, judgments, liens, costs and fees of  
every description, including but not limited to, any damages for delay, which  
the Authority may incur, sustain or suffer by reason of the failure or default  
on the part of the Principal in the performance of any and all of the terms,  
provisions and requirements of the Contract, including all modifications,  
amendments, changes, deletions, additions, and alterations thereto and any

## **Division 3**

## **Contract Forms**

### **Section 2: Performance Bond**

warranties or guarantees required thereunder, then this obligation shall be void; otherwise to remain in full force and effect;

2. In the event of a failure of performance of the Contract by the Principal, which shall include, but not be limited to, any breach of default of the Contract;
  - a. The Contractor's Surety shall commence performance of its obligations and undertakings under this Bond no later than thirty (30) days after written notice from the Authority to the Contractor's Surety;
  - b. The means, method or procedure by which the Contractor's Surety undertakes to perform its obligations under this Bond shall be subject to the advance written approval of the Authority.

The Contractor's Surety hereby waives notice of any and all modifications, omissions, additions, changes and advance payments or deferred payments in or about the Contract, and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, and advance payments or deferred payments. The Parties further expressly agree that any action on this Bond may be brought within the time allowed by Georgia law for suit on contracts under seal.

**SIGNATURES ON NEXT PAGE**

**Division 3**

**Contract Forms**

**Section 2: Performance Bond**

**IN WITNESS WHEREOF**, the principal and Contractor's Surety have hereunto affixed their corporate seals and caused this obligation to be signed by their duly authorized officers or attorneys-in-fact, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

**(Name of Principal)**

\_\_\_\_\_

By:

Name Printed:

Title:

*Corporate Seal*

Attested:

Date:

**(Name of Contractor's Surety)**

\_\_\_\_\_

By:

Name Printed:

Title:

*Corporate Seal*

Attested:

Date:

(ATTACH SURETY'S POWER OF ATTORNEY)

**END OF SECTION**

**Division 3**

**Contract Forms**

**Section 3: Payment Bond**

**KNOW ALL MEN BY THESE PRESENTS THAT** \_\_\_\_\_  
\_\_\_\_\_ (as CONTRACTOR, hereinafter referred to as the “Principal”), and \_\_\_\_\_  
(as SURETY COMPANY, hereinafter referred to as the “CONTRACTOR’S SURETY”), are held and firmly bound unto the Clayton County Water Authority (as OWNER, hereinafter referred to as the “Authority”), for the use and benefit of any “Claimant” as hereinafter defined in the sum of \_\_\_\_\_ Dollars(\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which the Principal and the Contractor’s Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered, or is about to enter, into a certain written agreement with the Authority, dated \_\_\_\_\_, which is incorporated herein by reference in its entirety (hereinafter referred to as the “CONTRACT”), for the construction of a project known as **Annual Contract for Cured-In-Place Pipe Rehabilitation**, (hereinafter referred to as “the PROJECT”).

**NOW THEREFORE**, the condition of this obligation is such, that if the Principal shall promptly make payment to any Claimant, as hereinafter defined, for all labor, services and materials used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise to remain in full force and effect.

A “Claimant” shall be defined herein as any Subcontractor, person, Party, partnership, corporation or other entity furnishing labor, services or materials used or reasonably required for use in the performance of the Contract, without regard to whether such labor, services or materials were sold, leased or rented, and without regard to whether such Claimant is or is not in privity of the Contract with the Principal or any Subcontractor performing Work on the Project.

In the event of any claim made by the Claimant against the Authority, or the filing of a Lien against the property of the Authority affected by the Contract, the Contractor’s Surety shall either settle or resolve the Claim and shall remove any such Lien by bond or otherwise as provided in the Contract.

The Parties further expressly agree that any action on this Bond may be brought within the time allowed by Georgia law for suit on contracts under seal.

**Division 3**

**Contract Forms**

**Section 3: Payment Bond**

**IN WITNESS WHEREOF**, the Principal and Contractor's Surety have hereunto affixed their corporate seals and caused this obligation to be signed by their duly authorized officers on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

**(Name of Principal)**

\_\_\_\_\_

By: \_\_\_\_\_

Name Printed: \_\_\_\_\_

Title: \_\_\_\_\_

*Corporate Seal*

Attested: \_\_\_\_\_

Date: \_\_\_\_\_

**(Name of Contractor's Surety)**

\_\_\_\_\_

By: \_\_\_\_\_

Name Printed: \_\_\_\_\_

Title: \_\_\_\_\_

*Corporate Seal*

Attested: \_\_\_\_\_

Date: \_\_\_\_\_

(ATTACH SURETY'S POWER OF ATTORNEY)

**END OF SECTION**

**Division 3**

**Contract Forms**

**Section 4: Non-Collusion Certificate**

STATE OF \_\_\_\_\_, COUNTY OF \_\_\_\_\_

Personally appeared before the undersigned officer duly authorized by law to administer oaths

\_\_\_\_\_  
\_\_\_\_\_  
who, after being first duly sworn, depose and say that they are all the officers, agents, persons or employees who have acted for or represented

\_\_\_\_\_, and that said

in proposing or procuring the Contract with the Clayton County Water Authority on the following project: \_\_\_\_\_

\_\_\_\_\_  
has not by (himself, themselves) or through any persons, officers, agents or employees prevented or attempted to prevent by any means whatsoever competition in such bidding; or by any means whatsoever prevented or endeavored to prevent anyone from making a proposal therefore, or induced or attempted to induce another to withdraw a bid for said work.

ATTEST:

By: \_\_\_\_\_  
Bidder

By: \_\_\_\_\_  
Name

By: \_\_\_\_\_  
Name

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Notary Public: \_\_\_\_\_ My Commission expires: \_\_\_\_\_

**END OF SECTION**

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

#### **1.1 General**

- A. This Section describes how work is to be assigned and the basis that will be used for processing applications for payment. These provisions will apply to all work of the Contract Documents in addition to specific instructions provided within the individual specification sections.
- B. The basis for payment will be the bid unit cost amounts included in the Pay Item Schedule and the actual quantities of work completed by the Contractor and approved by the CCWA. The CCWA reserves the right to adjust the quantities up or down as necessary to address needs.
- C. Nothing in this Section shall be construed as providing for additional payment beyond the Work Items. No payment will be made for partially completed Work Items. No payment will be made for the completion of excessive quantities of a Work Item as determined by the CCWA.

#### **1.2 Work Assignment**

- A. Work to be performed under this annual contract will be assigned on an as needed when needed basis as determined by the CCWA in the form of a Project Work Order.

##### Project Set-Up for Non-Emergency Work

- 1. CCWA shall prepare draft work items and quantities for Contractor review.
- 2. Contractor shall provide comments on the draft work items and quantities to CCWA within 7 calendar days of issuance by CCWA in order that a Project Work Order can be issued.
- 3. Contractor shall commence work on-site within 7 calendar days of receipt of a Project Work Order.

##### Project Set-Up for Emergency Work

- 1. CCWA shall prepare draft work items and quantities for Contractor review.
- 2. Contractor shall provide comments on the draft work items and quantities to CCWA within 24 hours of notice of emergency mobilization by CCWA in order that a Project Work Order can be issued.
- 3. Contractor shall commence work on-site within 24 hours of notice of emergency mobilization by CCWA. CCWA shall issue Project Work Order prior to or concurrently with the start of work.



## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

- B. A Project Work Order will be for work items that are in a common geographic location. A common geographic location may be considered a sanitary sewer drainage basin, business/industrial park, city block or residential subdivision.
- C. Work of a Project Work Order shall be completed within the number of consecutive work days mutually agreed to by the Contractor and the CCWA prior to the start of the work. Unless approved by the CCWA in advance, the Contractor shall not leave the work site to complete work for others.

#### **1.3 Work Items and Measurement**

- A. The following descriptions explain the work that is to be completed as part of each Work Item and how work will be quantified.
- B. The Contractor shall provide all labor, equipment, tools, materials (unless indicated otherwise) and incidental items to complete the Work Items in accordance with specifications of the Contract Documents.
- C. The following Work Items correspond to the Work Items and Details listed on the "Pay Item Schedule" of the Bid Form.

**Work Item 1. Mobilization:** Defined as the Contractor's administrative and preparatory operations which are necessary to initiate and start work on a project site within 7 calendar days of issuance of a Project Work Order. The Work Item will be paid at (2%) two percent of the total value of Work Items completed for a Project Work Order as authorized/approved by CCWA with a not to exceed amount of \$2,000.00 for any Project Work Order. The costs for demobilization, and re-mobilizations due to shut downs or suspensions of the work caused by the Contractor shall not be compensated. When the Contractor expends administrative and preparatory labor time to assess a project at the request of the CCWA and no subsequent Project Work Order is authorized by CCWA, the Contractor will be entitled to receive compensation for said hourly labor only in accordance with Hourly Labor Work Items.

**Work Item 2. Emergency Mobilization:** Defined as the Contractor's administrative and preparatory operations which are necessary to arrive on-site and initiate and start work on a project site within 24 hours of a notice of an Emergency Mobilization request. The Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail when authorized/approved by CCWA. The costs for demobilization, and re-

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

mobilizations due to shut downs or suspensions of the work caused by the Contractor shall not be compensated. When the Contractor expends administrative and preparatory labor time to assess a project at the request of the CCWA and no subsequent Project Work Order is authorized by CCWA, the Contractor will be entitled to receive compensation for said hourly labor only in accordance with Hourly Labor Work Items.

**Work Item 3. Performance and Payment Bonds:** Defined as the Contractor obtaining and providing to the CCWA Performance and Payment Bonds in the required amounts for a Public Works project costing \$100,000 or more in value. This Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 4. PE Stamped Design Calculations:** Defined as all the Contractor's cost which are necessary to provide CIPP design calculations in accordance with the reference standards prepared and stamped by an independent, third party, licensed professional engineer experienced with the work. The Work Item will be paid for a Project Work Order in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 5 - 6. Traffic Control (County Road):** Defined as the Contractor preparing, securing and implementing an approved Clayton County Transportation and Development Department traffic control plan and utilizing all equipment and signs required by the MUTCD manual including a minimum of two (2) fulltime flagmen to close lanes of traffic or a road for a day or portion thereof while actively performing work in lanes of traffic.. Traffic Control does not apply to accel/decel lanes or turning lanes. Traffic Control shall not be considered for loading/unloading equipment or loading/unloading material. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 7 - 8. Traffic Control (State Road):** Defined as the Contractor preparing, securing and implementing an approved Georgia Department of Transportation traffic control plan and utilizing all equipment and signs required by the MUTCD manual including a minimum of two (2) fulltime flagmen to close lanes of traffic or a road for a day or portion thereof while actively performing work in lanes of traffic. Traffic Control does not apply to accel/decel lanes or turning lanes. Traffic Control shall not be considered for loading/unloading equipment or loading/unloading material. The Work Items will be paid in

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 9 – 28. Pumping:** Defined as the Contractor providing, operating and maintaining a complete pumping system that includes pumps, suction/discharge piping, pipe plugs, coffer dams, fuel, etc. of the minimum size to meet peak flow conditions for by-pass flow purposes. Where Single is indicated, one pumping system is to be provided. Where Redundant is indicated, one additional pumping system of the same size and equipped with automatic calling features is to be provided and integrated with the Single Pump. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 29 - 30. CCTV (Sanitary Sewer Pipe):** Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing a CCTV inspection of sanitary sewer pipe using Pipeline Assessment and Certification Program® (PACP) practices, or view the pipe using only video. The Work Item includes the removal and proper disposal of all soil, silt, rocks, other granular material, grease, roots, scale, as well as other foreign debris from the pipeline using three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 pounds per square inch (psi) at 80 gallons per minute (gpm). The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew using either the "With PACP Assessment" or using the "Without PACP Assessment" as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

**Work Items 31 - 32. CCTV (Stormwater Pipe):** Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing a CCTV inspection of stormwater pipe using Pipeline Assessment and Certification Program® (PACP) practices, or view the pipe using only video. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew using either the "With PACP Assessment" or using the "Without PACP Assessment" as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

**Work Item 33. CCTV (Standby):** Defined as the Contractor remaining on-site idle in order to complete CCTV inspection work. Remaining on-site idle shall only be performed at the request of the CCWA. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on time remaining on-site idle and as accepted/approved by CCWA.

**Work Items 34 - 39. Heavy Cleaning (Sanitary Sewer Pipe) – Up to 60-inch Diameter:** Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, grease, roots, scale and as well as other foreign debris from the pipe that remains in the pipe after completing three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 psi at 80 gpm. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where Heavy Cleaning starts to where Heavy Cleaning stops inside the pipe and as accepted/approved by CCWA. Heavy cleaning shall only be performed at the request of the CCWA.

**Work Items 40 - 54. Cleaning (Stormwater Pipe) – Up to 48-inch Diameter:** Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and as well as other debris from the pipe. The complete removal will include a final water rinse of the pipe. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with percent (%) of diameter determined by measuring the depth of soil/debris in the pipe as compared to pipe's diameter prior to the start of cleaning and linear footage as measured in the pipe horizontally from where cleaning starts to where cleaning stops in the pipe and as accepted/approved by CCWA. The percent (%) of pipe diameter selected to be cleaned for a particular pipe shall be effective throughout the length of that pipe segment without adjustment after cleaning has commenced.

**Work Item 55. Cleaning (Stormwater Pipe) – Larger than 48-Inch Diameter:** Defined as the Contractor removing and re-installing (at surface grade) existing

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and all other debris from the pipe. The complete removal will include a final water rinse of the pipe. The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail with cost based on a minimum two man crew removing debris from the pipe and as accepted/approved by CCWA.

**Work Items 56 - 57. Cleaning Structure:** Defined as the Contractor removing and re-installing (at surface grade) existing structures' ring and covers, catch basin tops or solid tops as necessary, completing the removal and proper disposal of all soil, silt, rocks, other granular material, roots and all other debris from the structure. The work will be completed prior to initiation of any work upstream of the structure being cleaned. Work shall be completed so that no materials are allowed to pass downstream of the structure being cleaned. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail with depth being measured from the top of structure to structure invert and quantity of soil/debris removed based on the total in-place cubic footage of material as measured in the structure and as accepted/approved by CCWA.

**Work Items 58 - 71. Pre-Liner:** Defined as the Contractor installing a pre liner to properly prepare the host pipe for CIPP installation. Pre liners may also be used as recommended by the Contractor and as approved by the CCWA to control leakage and allow installation of the CIPP. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to where the pipe ends and as accepted/approved by CCWA.

**Work Item 72. Reinstatement of Existing Services:** Defined as the Contractor locating, cutting, trimming and reconnecting an existing service connection after the completion of CIPP. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 73 – 76. Cured-In-Place Pipe Service Laterals:** Defined as the Contractor installing and curing the CIPP service lateral, inspecting and returning the pipe line to service. The Work Item will be paid for the connection to the sewer main and first six linear feet of lateral CIPP in accordance with the Pay

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

Item Schedule and applicable Detail as authorized/approved by CCWA. The Work Items will be paid for additional linear footage beyond six linear feet in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 77 – 122. Cured-In-Place Pipe:** Defined as the Contractor completing the following work:

- a) Provide CIPP design calculations prepared under the supervision of a licensed Professional Engineer in accordance with the reference standards.
- b) Remove and re-install ring and covers, catch basin tops or solid tops as necessary.
- c) Cut and prepare ends of pipe within structures as necessary to successfully install required materials.
- d) Remove and properly dispose of all soil, silt, rocks, other granular material, grease, roots, scale, as well as other foreign debris from the pipeline using three (3) passes of appropriate water jet cleaning nozzles that produce a maximum pressure of 2,500 pounds per square inch (psi) at 80 gallons per minute (gpm). The work will be completed so that no materials are allowed to pass beyond the downstream structure of the authorized work and complete pre CCTV for documentation.
- e) Plug upstream pipes as necessary when flow bypass pumping is not utilized.
- f) Install and cure the CIPP.
- g) Complete post CCTV inspections of the work.
- h) Collect and deliver samples for testing as directed by CCWA, provide submittals and return the pipeline to service.
- i) Remove from site and dispose of all associated waste material.

The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to the where the pipe ends and as accepted/approved by CCWA. Where design calculations indicate a change in thickness from the base thickness, then the per linear foot cost of the base thickness will be modified on a per “linear foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as measured in the pipe horizontally from where the pipe starts to the where the pipe ends and as accepted/approved by CCWA.

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

**Work Items 123 - 125. Sampling and Testing:** Defined as the Contractor preparing samples, delivering samples to the independent testing laboratory and providing certified report results for material, structural/flexural, thickness, etc. properties in accordance with the reference standards. For pipelines up to 15-inches in diameter, field samples shall be based on taking a restrained sample of the actual CIPP as installed and cured in situ with the new CIPP. Samples for CIPP larger than 15-inch diameter shall be based on taking plate samples. Thickness testing for CIPP larger than 15-inch diameter and supplemental thickness testing as directed by CCWA shall be based on core drilling a minimum 2-inch diameter test coupon in the installed CIPP; repair of the core drilling shall be included in the Pay Item cost. Field sampling and third party independent laboratory testing shall be provided as directed by the CCWA. The Work Items will be in accordance with the Pay Item Schedule and applicable Detail and as accepted/approved by CCWA. No payment will be made for samples for work that is not accepted/approved by CCWA.

**Work Items 126. Brush Removal:** Defined as the Contractor removing from the work site and disposing brush, undergrowth, small trees, limbs, stumps, tap roots and other roots exceeding 1-inch in diameter to a depth of at least 18 inches. A small tree is considered any tree or plant growth less than 4 inches in diameter as measured 54 inches up from adjacent bare ground surface. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 127 - 130. Tree Removal:** Defined as the Contractor removing from the work site and disposing, trees, limbs, stumps, tap roots and other roots exceeding 1-inch in diameter to a depth of at least 18 inches. A tree is considered a tree when its diameter is 4 inches or greater as measured 54 inches up from adjacent bare ground surface. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 131 – 134. Fence Work:** Defined as the Contractor removing chain-linked fencing, wired fencing, wood privacy fencing and posts and disposing or subsequent reinstallation. Where reinstallation is required, Contractor shall provide necessary fasteners to match existing to complete the work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

**Work Items 135 - 138. General Excavation:** Defined as the Contractor completing the excavation of soils and/or removal of structures, pipe and/or removal of debris to a required grade, dewatering as necessary and stockpiling or disposing. The Work Items may only be used when work cannot be completed through other Work Items of the Contract. The depth of work shall be determined by measuring from original ground surface to bottom of excavation. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 139 – 143. General Fill/Backfill:** Defined as the Contractor placing soil and/or stone of varying sizes as listed in the Pay Item Schedule in excavations or other areas and dewatering as necessary. When placing soil, soil will be compacted to 95% of its maximum dry density as determined by a Standard Proctor Analysis. The Work Items may only be used when work cannot be completed through other Work Items of the Contract. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 144 - 152. Stone Placement:** Defined as the Contractor placing stone of varying sizes as listed in the Pay Item Schedule to construct and/or add to sloped grade, access road or parking area at requested layer thickness. Stone shall be compacted using vibratory equipment. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 153. Geotextile Fabric Installation:** Defined as the Contractor installing and anchoring geotextile fabric at a requested location. Geotextile Fabric shall be of woven or nonwoven fabric materials used to reinforce or separate soil and other materials. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 154 - 156. Sediment Barrier:** Defined as the Contractor installing silt fence or hay bales as requested in accordance with “The Manual for Erosion and Sediment Control in Georgia”, latest Edition. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.



## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

**Work Item 157. Sediment Barrier Removal:** Defined as the Contractor removing and disposing sediment barriers and stabilizing any subsequent disturbed soil in accordance with Work Items “Soil Stabilization”, as applicable. The Work Item will be paid in accordance with the Pay Item Schedule and applicable as authorized/approved by CCWA.

**Work Items 158 - 162. Soil Stabilization:** Defined as the Contractor returning the disturbed soil grade to match existing conditions, removing and disposing all rocks and dirt clogs 3/4-inch in size and larger and installing straw mulch, seed and straw mulch, seed and matt blanket or sod to match existing grass type. Soil stabilization measures shall include lime and fertilizer and shall be installed in accordance with “The Manual for Erosion and Sediment Control in Georgia”, latest Edition. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 163 - 167. Remove Asphalt Pavement:** Defined as the Contractor saw cutting through asphalt surfaces, removing asphalt pavement from work site and disposing. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 168 - 173. Remove Concrete Flat Work:** Defined as the Contractor saw cutting through concrete surfaces, removing concrete from work site and disposing. The Work Items shall be used where asphalt material is found to be over concrete material. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 174. Pavement Striping:** Defined as the Contractor installing painted line of the appropriate color to asphalt and concrete surfaces of parking lots and roads. The Contractor shall provide a water-based paint, fast dry, formulated for pavement application; dry to the touch in 5 minutes, ready for traffic in 15 minutes. Sufficient paint shall be applied so that no asphalt or concrete color is visible through paint. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 175. Pavement Marking:** Defined as the Contractor installing painted handicap symbol, complying with Figure 3B-22 of the Manual on Uniform Traffic Control Devices, of the appropriate color to asphalt and concrete surfaces of parking lots. The Contractor shall provide a water-based paint, fast dry,

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

formulated for pavement application; dry to the touch in 5 minutes, ready for traffic in 15 minutes. Sufficient paint shall be applied so that no asphalt or concrete color is visible through paint. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 176. Pressure Washing:** Defined as the Contractor using a minimum 3,500 psi pressure washer and removing soil / mud and stains from asphalt and concrete surfaces. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 177 - 178. Remove Concrete Structure:** Defined as the Contractor removing a subgrade concrete structure from work site and disposing. The Work Items will be paid on a per “in-place cubic foot” (CF) unit cost or on a per “square foot” (SF) unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 179 - 180. Remove Brick Structure:** Defined as the Contractor removing a subgrade brick structure from work site and disposing. The Work Items will be paid on a per “in-place cubic foot” (CF) unit cost or on a per square foot (SF) unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 181 - 183. Steel Plate Installation:** Defined as the Contractor installing steel plates of varying sizes and thicknesses over excavations, installing pavement anchors and/or cold asphalt patch as required and removing plates upon completion of work. Steel Plate thickness for the applicable clear span shall be based on AASHTO H20-44 loading. Comply with “Steel Traffic Plate Installation” Detail. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 184 – 185. Asphalt Patching:** Defined as the Contractor preparing and compacting existing stone base and installing/compacting to a final 3-inch thick layer of Type E asphalt. Where a more or less than 3-inch thick layer of asphalt is required, layer shall be added or reduced in 1-inch thick increments. Comply with “Typical Asphalt Replacement” Detail. The Work Item will be paid in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. Where more or less asphalt is required the Work

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

Item will be paid on a per “square foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 186 – 187. Asphalt Paving:** Defined as the Contractor preparing and compacting existing stone base and using a mechanical/hydraulic spreader machine and vibratory roller to install/compact to a final 3-inch thick layer of Type E asphalt. Where a more or less than 3-inch thick layer of asphalt is required, layer shall be added or reduced in 1-inch thick increments. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. Where more or less asphalt is required the Work Item will be paid on a per “square foot” unit cost in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 188 – 189. Concrete Curb and Gutter:** Defined as the Contractor preparing ground surface, installing necessary formwork and placing commercial grade 3,000 psi concrete. Control joints shall be installed at interval spacing not to exceed 10 feet. Control joints shall be installed by hand tooling during finishing. Concrete shall be finished with a brush finish parallel to road direction. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Comply with “Slab-On-Grade” Detail. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 190 – 197. Concrete Slab-On-Grade:** Defined as the Contractor excavating to grade where necessary, preparing ground surface, installing necessary formwork, installing wire mesh or steel reinforcing as requested by CCWA and placing commercial grade 3,000 psi concrete of varying thickness and area to a required grade. Placed concrete shall be vibratory consolidated prior to finishing. Control joints shall be installed at interval spacing of 1-1/2 times slab width or at maximum spacing of 10 feet, whichever is closer. Control joints, 1/4 of slab thickness, shall be installed by hand tooling during finishing or saw cut within 24 hours of initial placement. Concrete exposed to walking traffic shall be finished with a brush finish perpendicular to walking direction. Concrete not exposed to walking traffic shall be finished with a smooth steel trowel finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. The “Wire Mesh” description is for 4x4 – W2.1xW2.1 wire mesh. The “Steel Reinforcement” description is for No. 4 or No. 5, Grade 60 bars spaced at 6 inches on-center each way supported on chairs

## **Division 4**

## **Specifications**

### **Section 1: Work Assignment and Measurement**

and secured using tie wire. Install reinforcement in accordance with the Concrete Reinforcement Steel Institute (CRSI) manual for placing reinforcing bars, latest edition. Comply with "Slab-On-Grade" Detail. The Work Items for concrete will be paid on a per "square foot" (SF) unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 198 – 421. Pipe Installation - Open Cut:** (CCWA Provides Pipe, Gaskets and Necessary Fittings and Contractor Delivers to Site) Defined as the Contractor completing excavation work to the required depth, cutting and removing existing pipe of various types from excavation and disposing as necessary, installing required bedding, installing PVC, DI, RC, HDPE, or CM pipe, solid sleeves / couplings or fittings of requested size at necessary grade, making all necessary connections and completing excavation backfill to original grade with soil compacted to 95% of its maximum dry density. Comply with "Pipe Installation on Grade – PVC and HDPE" Detail, "Pipe Installation on Grade – DI, RC, CM" Detail and "Lateral Connection" Detail. Gaskets for piping shall be standard rubber or Field-Lock®. Where Point Repair is indicated, up to 20 feet (length) of pipe and/or including a service connection at a single location is to be installed. Where Additional Footage is indicated, pipe is installed at a linear footage beyond 20 feet. The depth of work shall be determined by measuring from original ground surface to bottom of excavation and along the length of the excavation. Linear foot shall refer to the length of pipe installed including connecting couplings. The Work Items detailed as "Point Repair" will be paid on a per "each" unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA. The Work Item "Additional Footage" will be paid on a per "linear foot" unit cost in accordance with the Pay Item Schedule and applicable depth Detail as authorized/approved by CCWA.

**Work Items 422 - 423. Internal Point Repair:** Defined as the Contractor completing the reshaping of pipe (up to ten feet per repair as measured longitudinally, upstream to downstream) or the removal of a protruding pipe from another pipe and disposing of debris. The Work Items will be in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 424 – 427. Flared End Section Installation:** (CCWA Provides Material and the Contractor Delivers to Site) Defined as the Contractor

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### **Section 1: Work Assignment and Measurement**

completing excavation to grade and removing existing flared end section as may be required and disposing, installing a new flared end section or repositioning an existing flared end of RC, HDPE or Metal and of the indicated size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 428 – 440. Precast Headwall Installation:** (CCWA Provides Precast Headwall Material and Contractor Delivers to Site) Defined as the Contractor completing excavation to grade and removing existing headwall as may be required and disposing, installing a new precast concrete headwall or repositioning an existing precast concrete headwall of the indicated size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Where a double barrel headwall is to be installed, this Work Item may be used and the work will be considered as two installations. Contractor shall provide and install brick and mortar to seal annular space between headwall and piping and/or space between adjacent headwall sections. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 441 – 455. Precast Manhole Installation:** (CCWA Provides Precast Manhole and Contractor Delivers to Site) Defined as the Contractor completing excavation to required grade, dewatering as necessary, installing precast concrete manhole of requested size and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Contractor shall provide and install mortar to seal lift holes and sectional joints. Where applicable, Contractor shall provide and install brick and mortar to seal annular space between manhole and piping and/or space between adjacent headwall sections. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. This Work Item may also be used to excavate and install additional riser sections or remove / replace riser sections. Comply with “Manhole Sections” Detail and “Dog House Manhole” Detail. Where Constructed Height is indicated, height is measured from top of structure to structure’s invert. For the first 6 Feet of completed structure, the Work Items will be paid on a per “each” unit cost in accordance with the Pay Item Schedule and applicable Detail as accepted/approved by CCWA. For additional height over 6 feet, the Work

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Items will be paid on a per “vertical foot” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Items 456 – 459. Concrete Catch Basin Single and Double Wing Top Slabs and Spillways (GA DOT):** (CCWA Provides Ring and Cover and Contractor Delivers to Site) Defined as the Contractor excavating to grade where necessary and preparing ground surface for a spillway, installing necessary formwork, ring and cover, steel reinforcement and placing commercial grade 4,000 psi concrete to sizes in accordance with Georgia Department of Transportation (GA DOT) standards for a basin top slab and a basin spillway. Placed concrete shall be vibratory consolidated prior to finishing. Concrete for spill way shall be finished smooth. Concrete for top slab shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Steel reinforcement shall be No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire; other No. 3 bar reinforcement as required. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply with “GA DOT 1033D” and “GA DOT 1034D” Details; catch basin top slab and spillway with protruded back is not applicable. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 460 – 461. Concrete Catch Basin Top Slabs and Spillways Varying Sizes:** (CCWA Provides Ring and Cover and Contractor Delivers to Site) Defined as the Contractor excavating to grade where necessary and preparing ground surface for a spillway, installing necessary formwork, ring and cover, steel reinforcement and placing commercial grade 4,000 psi concrete to varying sizes in general accordance with GA DOT standards for a basin spillway and a basin top. Placed concrete shall be vibratory consolidated prior to finishing. Concrete for spill way shall be finished smooth. Concrete for top slab shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposed. Steel reinforcement shall be No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire; other No. 3 bar reinforcement as required. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply in general with “GA DOT 1033D” and “GA DOT 1034D” Details. The Work Items will be paid in

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accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 462. Catch Basin Spillway Throat:** Defined as the Contractor excavating to grade where necessary, preparing ground surface, installing necessary formwork and placing commercial grade 3,000 psi concrete. Concrete shall be finished with a brush finish perpendicular to road direction. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and disposing. Comply with “GA DOT 1033D” and “GA DOT 1034D” Details. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 463 – 465. Concrete Structure Top / Lid:** (CCWA Provides Ring and Cover or Hatch and Contractor Delivers to Site) Defined as the Contractor installing necessary formwork, steel reinforcing, ring and cover or hatch and placing commercial grade 4,000 psi concrete of varying thickness and sizes over an existing structure. Placed concrete shall be vibratory consolidated prior to finishing. Concrete shall be finished with a brush finish. Upon completion, formwork, wasted concrete and other debris shall be removed from the work site and loaded for disposal. Steel reinforcement shall be No. 4 or No. 5, Grade 60 bars spaced at 6 inches on-center each way, supported on wire chairs and secured using annealed tie wire. Install reinforcement in accordance with the CRSI manual for placing reinforcing bars, latest edition. Comply with “Concrete Structure Top / Lid” Detail, “Reinforcement in Top / Lid at Circular Opening” and “Reinforcement in Top / Lid at Rectangular Opening”. The area of a ring and cover or hatch is not deducted from the overall square footage. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 466 - 469. Concrete Core:** Defined as the Contractor coring a hole of a requested size through existing concrete / steel reinforced concrete of varying thicknesses, removing concrete core piece and disposing and installing a Kor-N-Seal manhole to pipe connector or other seal required for the work. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 470 – 473. Brick Work Wall Construction:** Defined as the Contractor installing brick and mortar to form walls of varying thickness and constructing boxes / vaults of requested sizes. Brick shall conform to ASTM

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C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The “Brick Deep Wall Construction” description indicates the number of bricks used to construct the depth of the wall. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 474 - 475. Ring and Cover Installation:** (CCWA Provides Ring and Cover and Contractor delivers to Site) Defined as the Contractor installing traffic rated or non-traffic rated cast iron ring and cover, setting ring to grade in formwork or with brick and mortar on structure as required, grouting ring to structure or brick work and backfilling excavation to original grade with soil compacted to 95% of its maximum dry density. Brick shall conform to ASTM C32-11, Grade MS and MM, plain textured surface. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 476 – 477. Manhole/Structure Invert Construction:** Defined as the Contractor installing concrete or brick and mortar channels of the necessary shape and size in manholes to direct flow. Concrete shall be commercial grade 3,000 psi compressive strength. Brick shall conform to ASTM C32-11, Grade SS and SM, smooth surface on both ends and face side. Mortar shall conform to ASTM C270, Type S. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 478 – 480. Cementitious Invert Lining:** Defined as the Contractor placing minimum 5,000 psi (24-hour compressive strength) grout, filling voids and lining pipe invert with a consistent grout cross-section to stabilize pipe’s structural capacity such that pipe may still receive CIPP, removing and disposing any waste material. The “Grout Mixed By Hand” description is where mixture is provided in a sack, water is added at the work site and mixture and water are combined and mixed together using hand tools; cubic foot quantity is indicated on the sack. The “Grout Mixed By Plant” description is where mixture and water are combined at a plant and mixed in a cement truck. The “Pump Mobilization” description is where a pump is utilized to place grout. The Work Item Detail “Grout Mixed By Hand” will be paid on a per “cubic foot” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Grout By Plant Mixing” will be paid on a per “cubic yard” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The



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Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order on a per “each” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Items 481 – 483. Cementitious Grouting:** Defined as the Contractor installing necessary piping and/or bulk heads to facilitate the work, placing minimum 200 psi grout and completely filling pipe, repairing pipe invert, swiping joints, swiping annular space between host pipe and structure or other work as may be necessary and disposing any waste material. The “Grout Mixed By Hand” description is where mixture is provided in a sack, water is added at the work site and mixture and water are combined and mixed together using hand tools; cubic foot quantity is indicated on the sack. The “Grout Mixed By Plant” description is where mixture and water are combined at a plant and mixed in a cement truck. The “Pump Mobilization” description is where a pump is utilized to place grout. The Work Item Detail “Grout Mixed By Hand” will be paid on a per “cubic foot” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Grout By Plant Mixing” will be paid on a per “cubic yard” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order on a per “each” unit cost in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Items 484 – 485. Chemical Grouting:** Defined as the Contractor installing necessary fittings, placing chemical grout to stop infiltration in concrete structures and/or fill voids in soil or other work as may be necessary and removing and disposing any waste material. The Work Item Detail “Grout Application” will be paid on a per “gallon” unit cost in accordance with the Pay Item Schedule as accepted/approved by CCWA. The Work Item Detail “Pump Mobilization” will be paid once for a Project Work Order in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Items 486 - 490. Hourly Labor:** Work Items shall be utilized on a case-by-case basis only when work cannot be completed using other Work Items. Defined as the Contractor providing and utilizing the indicated labor position to complete work as requested for a certain amount of time. Only the time the labor position is on the work site and working will be considered for payment. The hourly rate shall be the Contractor’s total expense per hour for the indicated labor position. Contractor shall provide documentation showing Project hourly costs.

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The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Items 491 - 502. Hourly Equipment:** Work Items shall be utilized on a case-by-case basis. Defined as the Contractor providing and utilizing the indicated piece of equipment to complete work as requested for a certain amount of time. Only the time the piece of equipment is in operation will be considered for payment. The hourly rate shall be the Contractor's total expense per hour for the indicated piece of equipment. Contractor shall provide documentation showing Project hourly costs. The Work Items will be paid in accordance with the Pay Item Schedule and applicable Detail as authorized/approved by CCWA.

**Work Item 503. Equipment Rental:** Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing equipment not included as part of other Work Items or listed in the Work Item "Hourly Equipment", to complete work. The Contractor may furnish equipment through a rental company or through the Contractor's company. Where the Contractor furnishes the equipment through the Contractor's company, industry standard rental rates for equivalent equipment shall apply. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Item 504. Special Material:** Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing material, not included as part of other Work Items, needed to complete the work. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**Work Item 505. Special Services:** Work Item shall be utilized on a case-by-case basis. Defined as the Contractor furnishing services through another firm, for work related to this Contract, that is not included on the Pay Item Schedule that is needed to complete the work. Contractor shall provide invoice from Vendor showing Project costs. The Work Item will be paid at invoice cost plus a Contractor's 10% percent markup in accordance with the Pay Item Schedule as authorized/approved by CCWA.

**END OF SECTION**

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#### **2.1 Project Submittals**

- A. Contractor shall submit, to the CCWA for approval to use, product information on all materials required to be provided by the Contractor unless noted otherwise.
  - 1. Where a material manufacturer is not specified, Contractor shall submit for use domestically manufactured materials.
  - 2. Materials provided by the Contractor, not approved by the CCWA, shall be subject to rejection without further justification.
  - 3. The Contractor shall schedule and make submissions as to cause no delay in work.
  - 4. Upon receipt of a submittal, the CCWA shall complete its review and return CCWA comments to Contractor within 10 business days.
- B. Submittals to be provided after award:
  - 1. Manufacturer's Quality Control Plan. Provide a detailed description of materials, manufacturing and field procedures, sampling and testing schedules and documentation that are used to maintain product quality.
  - 2. Sample warranty certification.
  - 3. Curing schedule for each CIPP cure method.
  - 4. Use of CIPP preliner justification.
  - 5. Provide name and contact information for at least 2 and up to 3 firms for Independent Testing Laboratory that will be used.
  - 6. Provide a description of the procedures used to remove defective products and/or remedy defects.
  - 7. Provide a description of the equipment and procedures used to take and repair liners where thickness coupons are provided using core drilling methods.
  - 8. Published catalog data for the CIPP lateral methods/products to be used.
  - 9. Published catalog data for pre liner material/products to be used.
  - 10. CCTV equipment and software formats to be used.
  - 11. PACP certifications (current) for CCTV personnel.
  - 12. Overflow/Spill Response Plan.
  - 13. Confined Space Entry training certifications (current), as needed.

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14. Safety plan (for information only)
  15. Specifications of materials being supplied (as necessary).
  16. List of Subcontractor(s) and their role to be used with Annual Contract.
- C. Submittals to be provided with each individual Project Work Order:
1. Design calculations and reference standards documenting the required liner thickness and governing design criteria and basis.
  2. Plan for controlling the release of materials and discharges downstream (as necessary).
  3. Traffic Control Plan (as necessary).
  4. Flow Bypass Plan (as necessary).
  5. Pre CCTV data.
- D. Submittals to be provided with each Application for Payment.
1. Document(s) to support requested payment.
  2. Waiver and Release Upon Payment Affidavit. Provide one (1) copy with original signatures.
  3. Manufacturer's warranty.
  4. Post CIPP CCTV data.
  5. Field and lab test data, as authorized.
  6. Cure logs (Typed).
  7. SLBE Participation Report (Form SLBE-5).

### **2.2 Weather Delays**

- A. When no installation work can be performed on a particular day due to measurable precipitation, freezing temperatures or frozen ground surface conditions, then the Project Work Order is subject to a time extension of one (1) day only. CCWA shall not compensate Contractor for labor, equipment or incidental expenses due to a weather delay.
- B. When any installation is performed on a particular day and measurable precipitation, freezing temperatures or frozen ground surface conditions do occur, then the Contract shall not be subject to a time extension.
- C. Weather recording devices shall be situated on the Project site.

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- D. Contractor shall deliver a written Project Work Order time extension request to CCWA for a weather delay within 24 hours of measuring the weather event. A time extension shall not be granted should a written request not be received by CCWA as indicated.

#### **2.3 Site Access and Work Times**

- A. The work may require access to private property. The CCWA shall be responsible for coordinating and providing access to the area(s) of work. The Contractor shall contain work within area designated by CCWA.
- B. The work may be accessed on paved surfaces or non-paved surfaces. Contractor shall provide equipment capable of maneuvering all surfaces. CCWA shall not be responsible for Contractor's equipment that becomes un-maneuverable due to site conditions.
- C. Work on a site shall be allowed Monday through Friday from 7:30 a.m. to 6:00 p.m.; other times may be allowed by CCWA permission only. CCWA shall not compensate Contractor for labor, equipment or incidental expenses should work be required to be completed during times other than Monday through Friday from 7:30 a.m. to 6:00 p.m.
- D. No work shall be allowed on the following CCWA recognized Holidays:
  - 1. Memorial Day
  - 2. Independence Day
  - 3. Labor Day
  - 4. Thanksgiving Day and the following Friday.
  - 5. Christmas Eve and Christmas Day
  - 6. New Year's Day
  - 7. Martin Luther King Jr. Day

#### **2.4 Site Safety and Precaution**

- A. Construction shall comply with the Department of Labor, Occupational Safety and Health Administration (OSHA), 29 Code of Federal Regulations Part 1926, latest revision.
- B. The Contractor shall be responsible for providing and maintaining a safe work site as necessary to protect the workers and the public at all times.
- C. The Contractor shall be responsible for locating existing utilities in accordance with state and local regulations.

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- D. The Contractor shall be responsible for preparing and implementing a Confined Space Entry Plan in accordance with OSHA's Permit Required Confined Space standard, contained in 29 Code of Federal Regulations (CFR) 1910.146. The CCWA reserves that right to have this document submitted at any time.
- E. The Contractor shall provide all staff with photo identification and use vehicles with permanent company logos/markings/identification that are prominently displayed and clearly visible at all times.
- F. The Contractor shall provide an experienced supervisor in charge of field operations and subcontractors. The field supervisor shall be responsible for the safety of all site workers and site conditions, as well as ensuring that all work is conducted in conformance with these Specifications and to the level of quality specified. The field supervisor shall be responsible for reporting any safety or regulatory issue of concern immediately to CCWA. The Contractor shall be on-site or within Clayton County at all times during work is being performed by their subcontractor.
- G. The Contractor shall be responsible for site security. Contractor shall remove as necessary fences and gates and/or other controls to facilitate work. Removed fences shall be reinstalled no later than at the end of that day the fence was removed.
- H. The Contractor shall use special care in work methods and take all necessary precautions against improper use of equipment to avoid damaging pipe and/or structures or CCWA, public and private property. If, in CCWA's opinion, the Contractor's work has caused damage, the Contractor shall repair the damage timely and to the complete satisfaction of CCWA at no additional cost. In the event that funds are expended by CCWA related to these activities the Contractor shall reimburse CCWA for any and all such costs.
- I. The CCWA shall not be responsible or compensate the Contractor for the damage to and/or loss of Contractor's equipment as result of the work.
- J. Note that Project site areas are sometimes situated within a 100-year flood zone. Take precautions to protect work, equipment and materials.

### **2.5 Traffic Control**

- A. CCWA operates as an agency within Clayton County and in coordination with other agencies including Clayton County and incorporated cities. The CCWA shall be responsible for coordinating the work in accordance with the

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requirements of local, state and federal authorities and jurisdictions as required; this includes fire, police, school, traffic, and other public safety authorities.

- B. When required, the Contractor shall provide and maintain traffic control. Prior to a lane closure or road closure, the Contractor shall prepare and provide the CCWA a copy of the traffic control plan for local/state approval. Traffic safety devices including cones, signs, flashing lights, and other necessary safety equipment must be used to comply with local jurisdiction requirements and standard industry practices.
- C. A minimum of two Department of Transportation (D.O.T.) certified Flaggers will be required when directing traffic and/or closing any lane or road.

#### **2.6 Construction Facilities and House Keeping**

- A. The Contractor or any other worker may not establish quarters for the purpose of overnight stay or temporary residency on a Project site or other CCWA property.
- B. The Contractor shall employ the “best practicable means” to minimize and mitigate noise as well as disturbance resulting from operations. Mitigation measures shall include the utilization of sound suppression devices on all equipment and machinery, particularly in residential areas and in the near vicinity of hospitals and schools and especially at night.
- C. The Contractor shall remove and dispose of papers, plastics, tin cans and general garbage from the site on a daily basis. Keep the Project site clean.
- D. The burning of materials is not permitted on a Project site or other CCWA property.

#### **2.7 Temporary Utilities**

- A. CCWA shall provide the Contractor a meter/backflow device to collect potable water from a nearby fire hydrant at no cost to the Contractor. The Contractor shall be responsible for and return the meter/backflow device to CCWA in the same condition as received. Should the Contractor damage or lose the meter/backflow device, then the Contractor shall be responsible for compensating CCWA for the damages. The Contractor shall be responsible for moving water to Project site area.
- B. The Contractor shall provide and maintain sanitary sewer facilities for Contractor’s employees, subcontractors and all other on-site employees. Service, clean and maintain facilities and enclosures.

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- C. Contractor shall provide any necessary electrical power.

#### **2.8 Material Handling and Storage**

- A. CCWA intends for all material (supplied by CCWA) to be delivered to the CCWA Warehouse Building “B” located at 7340 Southlake Parkway in Morrow, Clayton County. Material delivered to the Warehouse Building “B” location will require Contractor pickup.
- B. In some cases, material may be delivered to the Project site area.
- C. Prior to accepting (unloading) any material on a Project site, the Contractor shall complete a thorough inspection of the material for contract compliance and damages.
  - 1. Once an unloading process has started, the Contractor is responsible for storage and protection of the material until Final Acceptance by CCWA.
  - 2. Any material found to be out of compliance with contract conditions or damaged shall be immediately reported to CCWA and its manufacturer for further inspection.
  - 3. Should CCWA agree to accept a material that is out of compliance with contract conditions or damaged, then the Contractor shall not be responsible for the material.
- D. The Contractor shall furnish equipment and facilities for loading, unloading and material distribution on a Project site.
  - 1. The Contractor shall handle the material in accordance with the manufacturer’s instructions.
  - 2. Any pipe, piping component or material dropped, dumped or damaged by the Contractor during handling procedures shall be subject to rejection by the CCWA without further justification and replaced at the expense of the Contractor.

#### **2.9 Material Testing Services**

- A. CCWA shall contract with a materials testing laboratory and provide soil compaction and concrete strength material testing services.
  - 1. Testing shall be performed at intervals selected by CCWA.
  - 2. The Contractor shall cooperate and facilitate material testing services’ work.



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- B. Testing and reporting shall be performed in accordance with applicable ASTM standards.
  - 1. Testing services shall promptly notify CCWA of irregularities or deficiencies in the work.
  - 2. Testing services shall provide CCWA and the Contractor copies of field reports and test results.

#### **2.10 Flow Interruption/Bypass**

- A. When flow interruption of any type is to be utilized, the Contractor shall submit a plan for approval. The plan shall indicate flow interruption method and include a map that shows manholes/structures affected; this includes plugging/suction points, flow discharge points, space required for pump(s) set up and route for discharge piping. The plan shall indicate pump and piping size; pumping capacity shall be capable of handling peak flows. The Contractor shall assume the pipes flow full and can surcharge to ground level during wet weather conditions. The plan shall include an emergency response plan to be followed in the event of a failure of the system.
- B. Furnish, install and maintain redundant pumps, automated emergency call services, appurtenances, bypass piping and fuel required to maintain existing flows and services. All pumps used shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. The pumps may be electric or diesel powered. All pumps used must be capable of running dry. Bypass pumping systems will be equipped to be operated continuously 24 hours per day. No more than two (2) pump discharge hoses shall be used for the bypass/diversion. If the flow exceeds the capacity of 2 hoses, then rigid piping shall be used. The rigid piping shall consist of HDPE or steel pipes with suitably pressure rated couplings to withstand twice the maximum system pressure or 50 psi, whichever is greater. Under no circumstances will aluminum irrigation type piping or glued PVC pipe be allowed. Pumped sewage shall be in an enclosed hose or pipe that is adequately protected from traffic.
- C. A bypass pumping "drill" shall be performed by the Contractor to demonstrate system readiness if requested by CCWA. The drill shall demonstrate the incorporation of all standby equipment to handle flows when the main pump set is switched off. Provisions to accommodate any of the CCWA's review comments following the drill shall be adhered to in full at no additional cost.

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- D. The Contractor shall take all necessary steps to eliminate the overflow of sewerage. In the event of an overflow of sewerage, the Contractor shall be responsible for cleanup of the area and all other pertinent activities as required by the Georgia Environmental Protection Division (GAEPD). All costs of these restoration/cleanup activities shall be the responsibility of the Contractor. In the event that funds are expended by the CCWA related to these activities the Contractor shall reimburse the CCWA for any and all such costs including but not limited to the costs expended by the CCWA for fines levied by the GAEPD.
- E. The Contractor shall be responsible for damage to public or private property due to flow interruption. All costs of restoration/cleanup activities shall be the responsibility of the Contractor. In the event that funds are expended by the CCWA related to these activities the Contractor shall reimburse the CCWA for any and all such.
- F. The Contractor will indemnify and hold harmless the CCWA for any fines or third-party claims for personal or property damage arising from flow interruption that is the responsibility of the Contractor. Should fines subsequently be imposed as a result of any flow interruption for which the Contractor is fully or partially responsible, the Contractor shall pay all such fines and all of the legal, engineering, and administrative costs in defending such fines and claims associated with flow interruption.

#### **2.11 CCTV Inspections**

- A. As requested, the Contractor shall perform spot or continuous length inspections of pipe using CCTV. The Contractor shall be capable of providing all-terrain CCTV equipment that can access non paved areas.
- B. Continuous length inspection shall include a condition assessment in accordance with ASTM and NAASCO standards and best practices, PACP format.
- C. The CCTV system shall provide a color pan and tilt camera(s) to facilitate the survey and inspection of sewers and laterals. A 360° rotational scan indicating general conditions must be implemented at every 50 feet interval (min.) along sewers, and at manholes and any notable or defect features. In the case of bellies in the line, the pipe shall be cleared of any standing water to provide continuous visibility during the inspection.
- D. CCTV equipment shall be self-propelled and capable of surveying/inspecting a length of sewer up to 1,000 feet with access from one manhole only.

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- Transponder accessory shall be available to locate CCTV equipment from ground surface. The speed of the CCTV camera shall be limited to 40 feet per minute for surveys to enable the inspection to record adequate details. The Contractor shall use a suitable metering device, which enables the cable length to be accurately measured; this shall be accurate to  $\pm 1\%$  or 3 inches, whichever is the greater. The Contractor shall demonstrate compliance with the accuracy tolerance at the start of each day or as required by the CCWA. Correct adjustment of the recording apparatus and monitor shall be demonstrated by use of the test tape or other device approved by the CCWA.
- E. At the start of each pipe length being surveyed or inspected and each reverse set-up, the length of pipeline from the entrance to the pipe shall be recorded and reported in order to obtain a full record of the sewer length. Only one survey shall be indicated on a final report. All reverse set-ups, blind manholes, and buried manholes shall be recorded on a separate report. Video shall be recorded so that every recorded feature has a correct tape elapsed time stamp. Each report shall make reference to a start (ST) and finish (FM) manhole/structure, unless abandonment took place because of blockage. Manhole/structure number shall be indicated in the remark's column of the detail report. A data generator shall electronically generate and clearly display on the viewing monitor and subsequently on the recording a record of data in alpha-numeric form containing the following minimum information:
1. Project name/location.
  2. Date of survey.
  3. Time of start of survey.
  4. Pipe/manhole/structure ID reference numbers.
  5. Material of construction of the pipe.
  6. Pipe dimensions.
  7. Automatic update of the camera's footage position from the opening of the pipe from adjusted zero.
  8. Direction of survey and direction of sewer flow.
- F. CCTV recordings shall be in PACP 4.4 file format and require that the contractors use televising software that is current NASSCO certified and listed on the NASSCO website. All deliverables shall be such that the CCWA can read these reports and codes using CCWA's current software (Cues Granite XP and NASSCO PACP Coding). The Contractor shall have the sole responsibility of insuring compatibility with CCWA formats.

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1. Each inspection shall be saved as an individual file in an electronic format using a "Facility Identification Number \_ yymmdd.file type" naming convention. Facility Identification Numbers will be as assigned by CCWA.
2. Data shall be provided to CCWA on a flash drive labeled with the Contractor's Company Name and Job Name.

### **2.12 Cured-In-Place Pipe**

#### **2.12.1 General**

Cured-in-place pipe (CIPP) shall stabilize structural defects and remove leakage in existing sanitary sewer and stormwater sewer host pipes. CIPP shall be smooth, continuous, jointless without leaks from structure to structure, chemically inert and shall tightly fit the contours of the host pipe providing a leak tight connection at structures and service connections.

#### **2.12.2 Reference Standards**

The following documents form a part of this specification to the extent stated herein and shall be the latest editions thereof. Where differences exist between codes and standards, the requirements of these specifications shall apply.

1. ASTM - F1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.
2. ASTM - F1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull in and inflate and Curing of a Resin-Impregnated Tube.
3. ASTM - D790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
4. ASTM - D2122 - 98(2004) Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings.
5. ASTM - D5813 Standard Specification for Cured-in Place Thermosetting Resin Sewer Pipe.

#### **2.12.3 Material Requirements**

All materials, shipped to the project site, shall be accompanied by test reports certifying that the material conforms to the ASTM standards

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

listed herein. Materials shall be shipped, stored, and handled in a manner consistent with written recommendations of the CIPP system manufacturer to avoid damage. Damage includes, but is not limited to, gouging, abrasion, flattening, cutting, puncturing, or environmental exposure/degradation. On site storage locations, shall be approved by the CCWA. All damaged materials shall be promptly removed from the project site at the Contractor's expense and disposed of in accordance with all current applicable agency regulations.

#### **A. FABRIC TUBE**

1. The fabric tube shall consist of one or more layers of absorbent non-woven felt fabric, felt/fiberglass or fiberglass and meet the requirements of ASTM F 1216, ASTM F 1743 and ASTM D 5813. The fabric tube shall be capable of absorbing and carrying resins, constructed to withstand installation pressures and curing temperatures and have sufficient strength to bridge missing pipe segments, and stretch to fit irregular pipe sections. The contractor shall submit certified information from the felt manufacturer on the nominal void volume in the felt fabric that will be filled with resin.
2. The wet-out fabric tube shall have a uniform thickness and excess resin distribution that when compressed at installation pressures will meet or exceed the design thickness after cure.
3. The fabric tube shall be manufactured to a size and length that when installed will tightly fit the internal circumference, meeting applicable ASTM standards or better, of the original pipe. Allowance shall be made for circumferential stretching during installation. The tube shall be properly sized to the diameter of the existing pipe and the length to be rehabilitated and be able to stretch to fit irregular pipe sections and negotiate bends. The Contractor shall determine the minimum tube length necessary to effectively span the designated run between manholes. The Contractor shall verify the lengths in the field prior to ordering and prior to impregnation of the tube with resin, to ensure that the tube will have sufficient length to extend the entire length of the run. The Contractor shall also measure the inside diameter of the existing pipelines in the field prior to ordering liner so that the liner can be installed in a tight-fitted condition.
4. The outside and/or inside layer of the fabric tube (before inversion/pull-in, as applicable) shall be coated with an

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

impermeable, flexible membrane that will contain the resin and facilitate, if applicable, vacuum impregnation and monitoring of the resin saturation during the resin impregnation (wetout) procedure.

5. No material shall be included in the fabric tube that may cause de-lamination in the cured CIPP. No dry or unsaturated layers shall be acceptable upon visual inspection as evident by color contrast between the felt fabric and the activated resin containing a colorant.
6. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made. The hue of the color shall be dark enough to distinguish a contrast between the fully resin saturated felt fabric and dry or resin lean areas.
7. Seams in the fabric tube, if applicable, shall meet the requirements of ASTM D5813.
8. The outside of the fabric tube shall be marked every 5 feet with the name of the manufacturer or CIPP system, manufacturing lot and production footage.
9. The minimum length of the fabric tube shall be that deemed necessary by the installer to effectively span the distance from the starting manhole to the terminating manhole or access point, plus that amount required to run-in and run-out for the installation process.
10. The nominal fabric tube wall thickness shall be constructed, as a minimum, to the nearest 0.5 mm increment, rounded up from the design thickness for that section of installed CIPP. Wall thickness transitions, in 0.5 mm increments or greater as appropriate, may be fabricated into the fabric tube between installation entrance and exit access points. The quantity of resin used in the impregnation shall be sufficient to fill all of the felt voids for the nominal felt thickness.

#### **B. RESIN**

1. The resin shall be a corrosion resistant polyester or vinyl ester resin and catalyst system that when properly cured within the tube

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

composite meets the requirements of ASTM F1216 and/or ASTM F1743, the physical properties herein, and those, which are to be utilized in the design of the CIPP for this project. The resin shall produce CIPP which will comply with or exceed the structural and chemical resistance requirements of this specification.

#### **2.12.4 Structural Requirements and Hydraulic Capacity**

The physical properties and characteristics of the finished liner can vary considerably, depending on the types and mixing proportions of the materials used, and the degree of cure executed. It shall be the responsibility of the Contractor to control these variables and to provide a consistent quality CIPP system which meets or exceeds the minimum properties specified herein:

- A. The CIPP shall be designed as per ASTM standards. The CIPP design shall assume no bonding to the original pipe wall.
- B. The design engineer shall set the long term (50 year extrapolated) Creep Retention Factor at 50% of the initial design flexural modulus as determined by ASTM D-790 test method.
- C. The cured pipe material (CIPP) shall, at a minimum, meet or exceed the structural properties, as listed below.

#### **MINIMUM STRUCTURAL PROPERTIES**

<b>Property</b>	<b>Test Method</b>	<b>Cured Composite Per ASTM F1216</b>
Flexural Modulus of Elasticity (Short Term)	ASTM D-790	250,000 psi
Flexural Strength (Short Term)	ASTM D-790	4,500 psi

- D. The required structural CIPP wall thickness shall be based, as a minimum, on the physical properties of the cured composite and per the design of the manufacturer and in accordance with the Design Equations contained in the appendix of the ASTM standards, and the following design parameters:

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

Design Safety Factor	2.0 (1.5 for pipes 36" or larger)
Creep Retention Factor	50%
Ovality	2% or as measured by field inspection
Constrained Soil Modulus	Per AASHTO LRFD Section 12 and AWWA Manual M45
Groundwater Depth	As specified or indicated on the Plans
Soil Depth (above the crown)	As specified or indicated on the Plans
Live Load	Highway, railroad or airport as applicable
Soil Load (assumed)	120 lb/cu. Ft.
Minimum service life	50 years

- E. The Contractor shall submit, prior to installation of the lining materials, certification of compliance with these specifications. At the CCWA's direction, partially or fully deteriorated host pipe conditions shall be used as the basis of design. Certified material test results shall be included that confirm that all materials conform to these specification and/or the pre-approved system. Materials not complying with these requirements will be rejected. The design soil modulus may be adjusted based on data determined from project soil testing results as provided by the CCWA in the contract documents.
- F. The hydraulic capacity shall be maintained as large as possible. The installed CIPP shall at a minimum be equal to the full flow capacity of the original pipe before rehabilitation. In those cases where full capacity cannot be achieved after liner installation, the Contractor shall submit a request to waive this requirement, together with the reasons for the waiver request. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

#### **2.12.5 Installation**

- A. Installation preparation shall include cleaning, inspection, flow diversion/by-passing, notification and all other related work necessary to allow a successful CIPP installation. Remedies, materials, point repairs implemented as a part of preparing the host pipe shall be compatible with the CIPP installation.



## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

1. Flow By-passing: The Contractor shall provide for the control of flow around the section or sections of pipe designated for CIPP installation. Intermediate connections may be plugged only after proper notification to the affected customers and may not remain plugged overnight. The Contractor shall coordinate all installation activities with CCWA to accommodate traffic, business/resident operations, weather and other site constraints. Installation of the liner shall not begin until the Contractor has installed the flow controls and received CCWA approval to begin the lining process. Once the lining process has begun, existing flow control shall be maintained, until the resin/felt tube composite is fully cured, cooled down, fully televised and the CIPP ends finished. The Contractor shall coordinate flow control operations with the CCWA, property owners and businesses in advance. Flow control measures shall be of adequate capacity and size to handle peak flows.
  2. Cleaning of Pipe Lines -The Contractor shall remove all internal debris from the pipe line that will interfere with the installation and the final product delivery of the CIPP as required in these specifications. Solid debris and deposits shall be removed from the system and disposed of properly by the Contractor. As applicable the contractor shall either plug, divert or install a flow bypass pumping system to properly clean the pipe lines. Precaution shall be taken, by the Contractor in the use of cleaning equipment to avoid damage to the existing pipe. The repair of any damage, caused by the cleaning equipment, shall be the responsibility of the Contractor. Water for the purposes of cleaning can be provided to the Contractor at no charge at locations provided by CCWA.
  3. Contractor shall perform post-cleaning video and post CIPP installation video inspections of the pipelines in accordance with NASSCO and PACP guidelines and specifications herein.
- B. The CIPP shall be installed and cured in the host pipe in a single day or working shift per the manufacturer's specifications, as approved and in accordance with the applicable ASTM standards with the following modifications:

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

1. The wet-out tube shall be positioned in the pipeline using the method specified by the manufacturer. Care should be exercised not to damage the tube as a result of installation. The tube should be pulled-in or inverted through an existing structure or approved access point and fully extend to the next designated structure or termination point.
2. A seal, consisting of a resin mixture or hydrophilic seal compatible with the installed CIPP shall be applied at host pipe's ends in accordance with the CIPP System manufacturer's recommendations to prevent any annular space leakage.
3. Prior to installation and as recommended by the manufacturer remote temperature gauges or sensors shall be placed inside the host pipe to monitor the temperatures during the cure cycle. Liner and/or host pipe interface temperature shall be monitored and logged during curing of the liner.
4. Curing shall be accomplished by utilizing hot water or steam in accordance with the manufacturer's recommended cure schedule. The curing source and in and output temperatures shall be monitored and logged during the cure cycles. The manufacturer's recommended cure schedule shall be used for each line segment installed, and the liner wall thickness and the existing ground conditions with regard to temperature, moisture level, and thermal conductivity of soil, per ASTM as applicable, shall be taken into account by the Contractor and documented.
5. The Contractor shall cool the CIPP in accordance with the approved CIPP manufacturer's recommendations.
6. Temperatures and curing data shall be monitored and recorded, by the Contractor, throughout the installation process to ensure that each phase of the process is achieved as approved in accordance with the CIPP System manufacturer's requirements.
7. The Contractor shall manage the curing/cool down process so that no water/liquid/steam/resin/work debris shall be released downstream.
8. Additional cooling shall be provided as necessary by the Contractor to comply with all regulatory requirements for thermal releases to receiving streams. Under no conditions shall water

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

exceeding 90 degrees Fahrenheit be released downstream of the work.

- C. Complete connections at structures and reinstate existing service connections.
  - 1. Reconnections of existing connections shall be made after the CIPP has been installed, fully cured, and cooled down. It is the CONTRACTOR'S responsibility to make sure that all active connections are reconnected.
  - 2. At structures, the CIPP shall be cut flush with the ends of the host pipe.
  - 3. A CCTV camera and remote cutting tool shall be used for internal reconnections. The machined opening shall be at least 95 percent of the service connection opening and the bottom of both openings must match. The opening shall not be more than 100 percent of the service connection opening. The edges of the opening shall not have pipe fragments or liner fragments, which may obstruct flow or snag debris.
  - 4. In the event that connection reinstatements result in openings that are greater than 100 percent of the service connection opening, the Contractor shall install a CIPP type repair, sufficiently in size to completely cover the over-cut service connection. No additional compensation will be paid for the repair of over-cut service connections.
  - 5. Coupons of pipe material resulting from service tap cutting shall be collected at the next structure downstream of the pipe rehabilitation operation prior to leaving the site. Coupons may not be allowed to pass through the system.

#### **2.12.6 Testing**

- A. The physical properties of the installed CIPP shall be verified through field sampling and laboratory testing. All samples for testing shall be prepared and delivered to the laboratory by the Contractor. All materials testing shall be performed by an independent third party laboratory selected by the CCWA and as recommended by the CIPP manufacturer. All tests shall be in accordance with applicable ASTM

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

test methods to confirm compliance with the requirements specified in these contract documents.

- B. The Contractor shall take samples from the actual installed CIPP liner. The sample shall be cut from a section of cured CIPP that has been inverted or pulled through a like diameter pipe which has been held in place by a suitable heat sink, such as sandbags. All curing, cutting and identification of samples will be witnessed by the CCWA. On pipelines greater in diameter than 15-inches, the CCWA may at its discretion, require plate samples cured with the CIPP or designate a location in the newly installed CIPP where the Contractor shall take a sample. Destructive sampling shall be repaired in accordance with manufacturers recommended procedures.
- C. The laboratory results shall identify the test sample location as referenced to the nearest manhole and station. Final payment for the project shall be withheld pending receipt and approval of the test results. If properties tested do not meet minimum requirements, the CIPP shall be repaired or replaced by the Contractor, at no additional cost to the CCWA.
- D. Chemical resistance -The CIPP system installed shall meet the chemical resistance requirements of ASTM standards. CIPP samples tested shall be of fabric tube and the specific resin proposed for actual construction. It is required that CIPP samples without plastic coating meet these chemical testing requirements.
- E. The installed CIPP thickness shall be sampled and measured as directed by CCWA. Thickness measurements shall be taken from non-destructive, restrained samples and/or by core drilling 2-inch diameter test coupons at locations selected by the CCWA. The liner thickness shall have a tolerance of minus 5% plus 10%. Where liner thickness does not meet the tolerances of the approved design, additional samples may be taken at the Contractor's expense and averaged to determine thickness. If the CIPP thickness does not meet the approved design, the deficiency shall be resolved to the satisfaction of the owner or the liner shall be removed. Liners installed that are thicker than designed will not be approved for additional payment.

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

#### **2.12.7 Final Acceptance**

- A. All CIPP sample testing and repairs to the installed CIPP, as applicable, shall be completed, before final acceptance, meeting the requirements of these specifications and documented in written form.
- B. The Contractor shall perform a detailed closed-circuit television inspection in accordance with ASTM standards, in the presence of the CCWA after installation of the CIPP liner and reconnection of the existing services. A radial view (pan and tilt) TV camera shall be used. The camera shall be panned 360 degrees around the circumference of the pipe and along the wall of the finished pipe at 10 foot intervals. The finished liner shall be continuous over the entire length of the installation and shall be free of significant visual defects, damage, deflection, holes, leaks and other defects. Unedited digital documentation of the inspection shall be provided to the CCWA within ten (10) working days of the liner installation. The data shall note the inspection date, location of all reconnected side sewers, debris, as well as any other defects in the liner, including, but not limited to, gouges, cracks, bumps, or bulges. Immediately prior to conducting the closed circuit television inspection, the Contractor shall thoroughly clean the newly installed liner removing all debris and buildup that may have accumulated.
- C. Flow control shall be provided to minimize flow from entering the line during the inspection. In the case of bellies in the line, the pipe shall be cleared of any standing water to provide continuous visibility during the inspection.
- D. Where leakage is observed through the wall of the pipe, the contractor shall complete repairs/replacement, institute additional testing including but not limited to air testing, localized testing and any other testing that will verify the leak-proof integrity of the installed CIPP to the satisfaction of the CCWA.

#### **2.13 Project Acceptance**

- A. A CCWA Inspector shall inspect all components of work for compliance with the Contract. The Contractor shall, at all times, permit and facilitate inspection of work by the CCWA. The presence of a CCWA Inspector or other CCWA staff on the site of work shall not be construed to, in any manner, relieve the Contractor of their responsibility for strict compliance with the Contract. The CCWA Inspector shall inform the Contractor when work is deficient from the

## **Division 4**

## **Specifications**

### **Section 2: General Requirements**

Contract. Deficiencies shall be addressed in a timely manner as determined by the CCWA Inspector.

- B. Final Acceptance of the work by the CCWA shall be when the Contractor has met all terms and conditions as set forth by the Contract. The date of Final Acceptance shall be no later than the date the CCWA approves the Contractor's final request for payment for a particular Project. Where applicable, Final Acceptance shall be written, signed and dated by the CCWA.

**END OF SECTION**

**STATE OF GEORGIA  
COUNTY OF CLAYTON**

**WAIVER AND RELEASE UPON FINAL PAYMENT**

The undersigned mechanic and/or materialman has been employed by the Clayton County Water Authority to furnish:

\_\_\_\_\_ [describe materials  
and/or labor];

for the construction of improvements known as:

\_\_\_\_\_ [title of the project or building];

which is owned by the Clayton County Water Authority at the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

and more particularly described by the following metes and bounds description, land lot district, or block and lot number:

See Attachment: ☐ yes ☐ no

Upon the receipt of the sum of: \$ \_\_\_\_\_;

the mechanic and/or materialman waives and releases any and all liens or claims of liens or any right against any labor and/or material bond it has upon the foregoing described property.

THE MECHANIC AND/OR MATERIALMAN WAIVES AND RELEASES ANY AND ALL LIENS OR CLAIMS OF LIENS IT HAS UPON THE FOREGOING DESCRIBED PROPERTY OR ANY RIGHTS AGAINST ANY LABOR AND/OR MATERIAL BOND ON ACCOUNT OF LABOR OR MATERIALS, OR BOTH, FURNISHED BY THE UNDERSIGNED TO OR ON ACCOUNT OF SAID CONTRACTOR FOR SAID PROPERTY.

**NOTICE: WHEN YOU EXECUTE AND SUBMIT THIS DOCUMENT, YOU SHALL BE CONCLUSIVELY DEEMED TO HAVE BEEN PAID IN FULL THE AMOUNT STATED ABOVE, EVEN IF YOU HAVE NOT ACTUALLY RECEIVED SUCH PAYMENT, 60 DAYS AFTER THE DATE STATED ABOVE UNLESS YOU FILE EITHER AN AFFIDAVIT OF NONPAYMENT OR A CLAIM OF LIEN PRIOR TO THE EXPIRATION OF SUCH 60 DAY PERIOD.**

**PERSONALLY APPEARED BEFORE ME**, the undersigned attesting officer, duly authorized by law to administer oaths (the "Deponent"), who being duly sworn according to law, deposes and says on oath:

1. That Deponent is the duly authorized agent and duly elected and acting officer of \_\_\_\_\_ (the "Contractor"), and is duly authorized to execute this Final Contractor's Affidavit, Lien Waiver and Indemnification (this "Affidavit") in a representative capacity on behalf of Contractor, as well as in Deponent's individual capacity, and Deponent has made diligent inquiry into and is personally familiar with and has full knowledge of all facts set forth herein.

2. That Contractor acted as the sole general contractor in charge of and directly responsible for the building and construction of all improvements (the "Work") located as reflected above (the "Property"), all of which Work was performed pursuant to the terms of that certain agreement dated \_\_\_\_\_ (the "Agreement") by and between Contractor and the Clayton County Water Authority as the owner or agent of the owner of the Property (the "Owner"). The Work includes, without limitation, all Work under or related to the Agreement and all change orders to the Agreement, and all supplemental contracts and subcontracts, whether oral or written, for any extra, additional or replacement labor or materials. Contractor is, and performed the Work as, an independent general contractor and Contractor is not an agent of Owner, and all of the Work was furnished and performed at the instance of Contractor as general contractor.

3. That the Work has been fully and finally completed in strict accordance with the terms of the Agreement, and Contractor has at all times since the commencement of the Work been in direct charge of all aspects of the Work, and Contractor has obtained a current valid permanent certificate of occupancy for the Property and the Work, and the Work has been completed within the boundary lines of the Property.

4. Upon receipt of the sum reflected above, Contractor acknowledges that Owner has paid in full to Contractor the full contract price under the Agreement (the "Contract Price"), which Contract Price includes, without limitation, all amounts and bills for all labor, materials, fixtures and supplies of any type whatsoever used in the Work. Upon receipt of these monies, all contractors, subcontractors, subcontractors of subcontractors, materialmen, suppliers and laborers will be paid in full the agreed price or reasonable value for all materials and supplies ordered, used or furnished and services and labor rendered in connection with or as a part of the Work, and none of such parties have or will have any claim, demand or lien against the Property, and all of the amounts paid by Owner to Contractor under the Agreement have been and will be used to pay for labor or materials used in the Work when no liens or claims of lien were filed or outstanding. There are no disputes regarding the Agreement or any other contracts or subcontracts with respect to the Work or the Property, and, except for bills associated with these final monies, there are no amounts due or unpaid bills of any nature, either for labor or services related to the Work or the Property or any materials which have been or may have been placed upon, or



applied or delivered to the Property, and Contractor does hereby unconditionally agree to hold harmless and indemnify Owner from and against all claims for mechanic's or materialman's liens or claims of lien, including, without limitation, any attempted foreclosure thereof, which in any way arise out of or are related to the Work or the Property, including, without limitation, any attorney's fees incurred in connection therewith.

5. That Contractor does hereby for itself, and its employees, suppliers, subcontractors, mechanics and materialmen and all other persons acting for, through, or under Contractor, waive, remise, relinquish and release all right to file or to have filed or to maintain any materialman's or mechanic's lien or liens or claim or claims against the Property or arising out of or related to the Work. This Affidavit is executed and given in favor of and for the benefit of, and may be relied upon by, Owner and each and every party legally or equitably, now or hereafter, owning or holding any interest in the Property.

6. That this Affidavit is a sworn statement made under the provisions of Official Code of Georgia Annotated Section 44-14-361.2, and is made for the purpose of inducing Owner to pay to Contractor the balance of the Contract Price pursuant to the terms of the Agreement.

\_\_\_\_\_  
(Signature of Deponent) (L.S.)

\_\_\_\_\_  
(Printed/Typed Name and Title)

Deponent, individually, and as duly authorized agent and duly elected and acting officer of Contractor

\_\_\_\_\_  
(Company Name)

**PERSONALLY APPEARED BEFORE ME**, a Notary Public in and for said State and County, the Deponent, who, being personally known to the undersigned and being duly sworn and on oath deposed and said that the within and foregoing statements are true and correct this day of \_\_\_\_\_, 20\_\_\_\_.

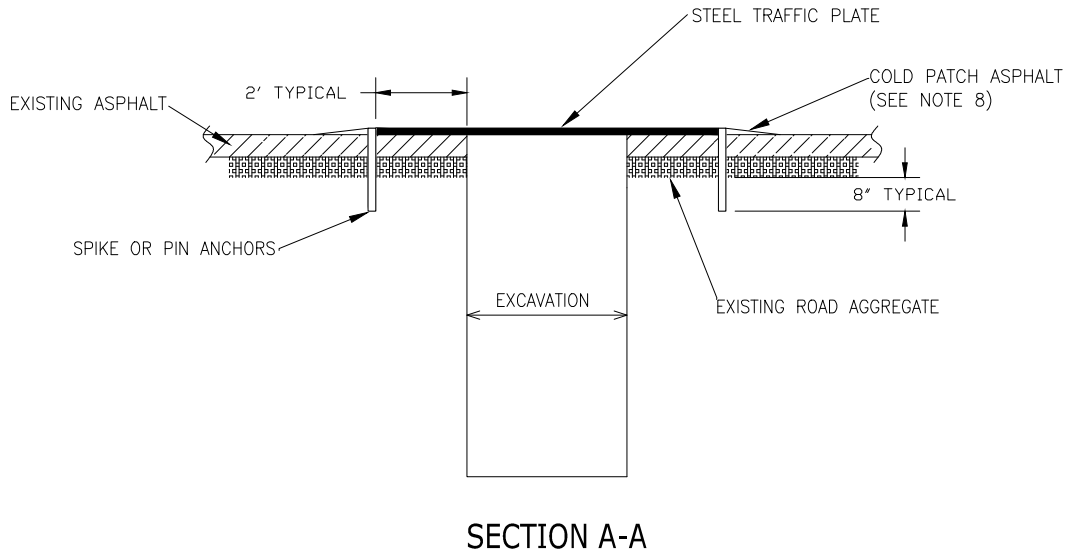
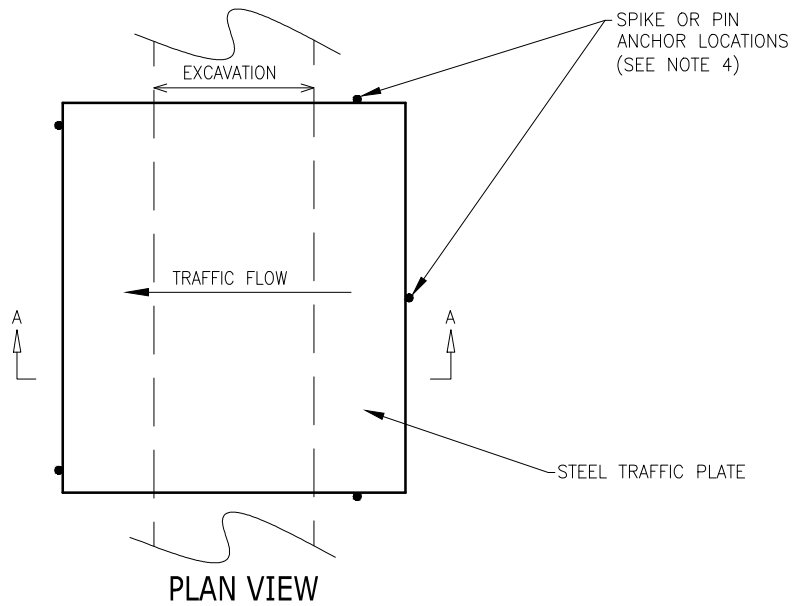
Notary Public \_\_\_\_\_

Commission Expiration Date: \_\_\_\_\_

(NOTARY SEAL)

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Address)

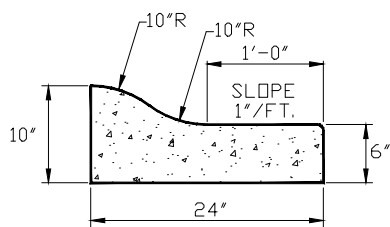
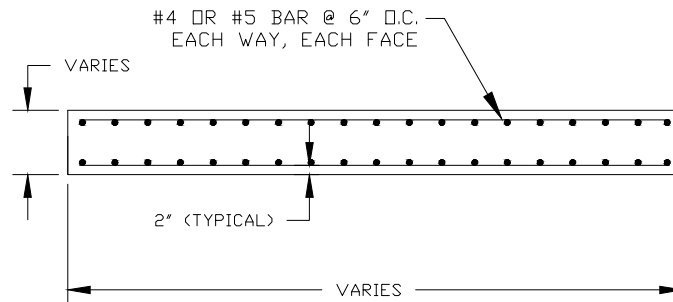
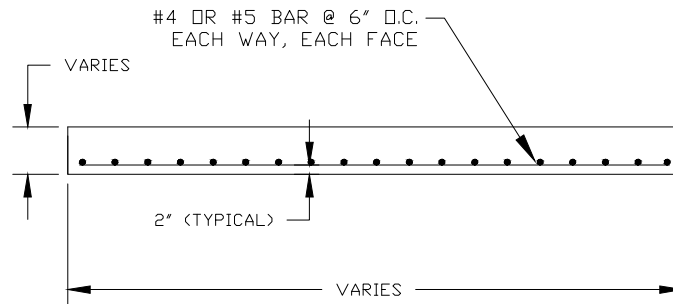
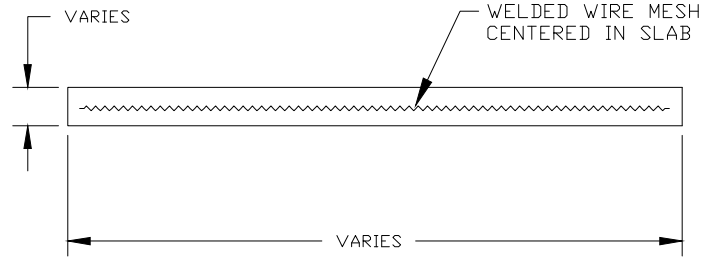


### NOTES

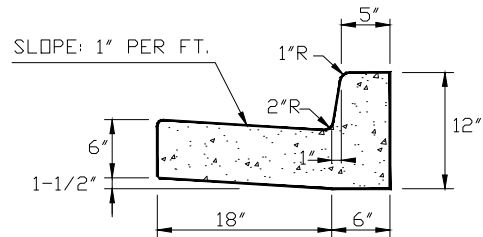
1. TRAFFIC BASED ON H20-44 (SINGLE TIRE/PLATE). HAVING A UNIFORM LOAD OF 640lb. PER LINEAL FOOT ON LOAD LANE.
2. PLATE ARE TO BE UNIFORMLY SUPPORTED AND CENTERED OVER TRENCH.
3. TRENCH WALLS UNDER THE PLATES SHALL BE UNIFORMLY SUPPORTED FROM TOP TO BOTTOM.
4. PLATES SHOULD BE ANCHORED TO PREVENT LATERAL MOVEMENT.
5. SUPPORTING SURFACE ON EACH SIDE OF THE TRENCH SHALL BE SMOOTH AND HARD (CONCRETE, ASPHALT SURFACES OR EQUAL).
6. STEEL TRAFFIC PLATES SHALL BE A MINIMUM OF ONE INCH THICK.
7. TACK WELD PLATES TOGETHER AS NECESSARY TO PREVENT MOVEMENT BETWEEN ADJACENT PLATES.
8. USE COLD PATCH ASPHALT ALONG ALL EDGES OF PLATES TO ENSURE SMOOTH TRANSITION FOR TRAFFIC.

### CLAYTON COUNTY WATER AUTHORITY

DATE:	16 MAY 2013	DETAIL TITLE:
SCALE:	N.T.S.	STEEL TRAFFIC PLATE
DRAWN BY:	WWB	INSTALLATION



ROLLED TYPE CURB AND GUTTER



24" VERTICAL CURB AND GUTTER

## CLAYTON COUNTY WATER AUTHORITY

DATE: 12 AUGUST 2013

DETAIL TITLE:

SCALE: N.T.S.

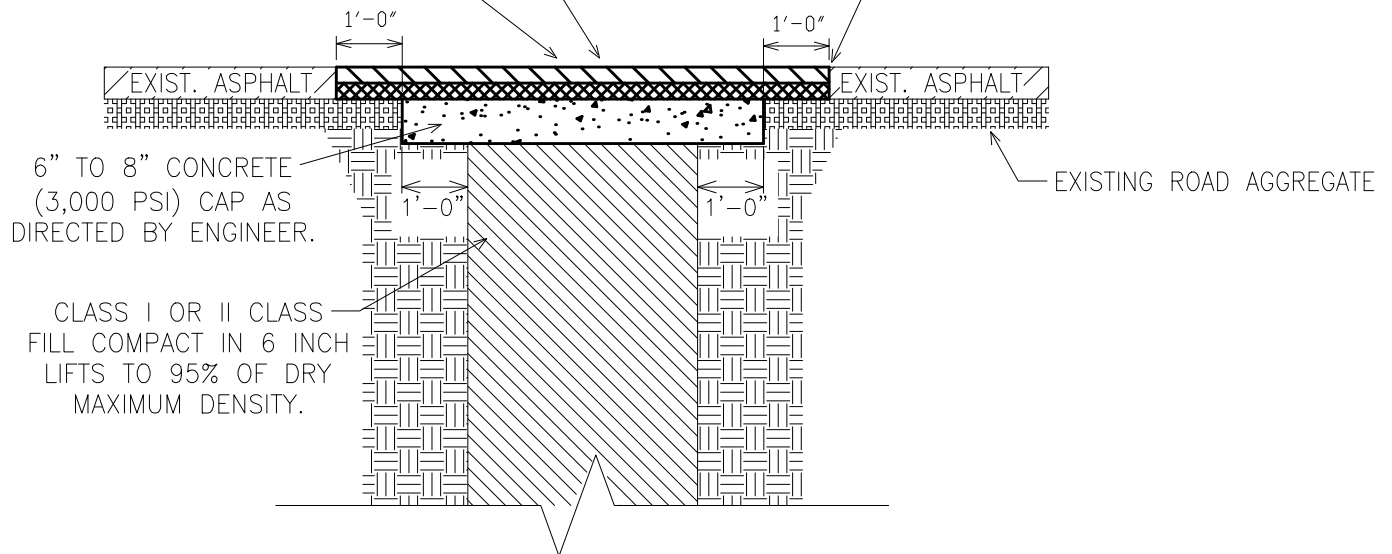
SLAB ON GRADE

DRAWN BY: WWB

NEW ASPHALT BINDER COURSE  
AS DIRECTED BY ENGINEER.

TYPE "E" OR "F" ASPHALT TO  
1 ½" MAXIMUM THICKNESS.

SAW-CUT ASPHALT PAVEMENT TO  
BE REMOVED. 1' OFFSET BETWEEN  
CONCRETE CAP AND ASPHALT  
JOINT AS DIRECTED BY ENGINEER.



## CLAYTON COUNTY WATER AUTHORITY

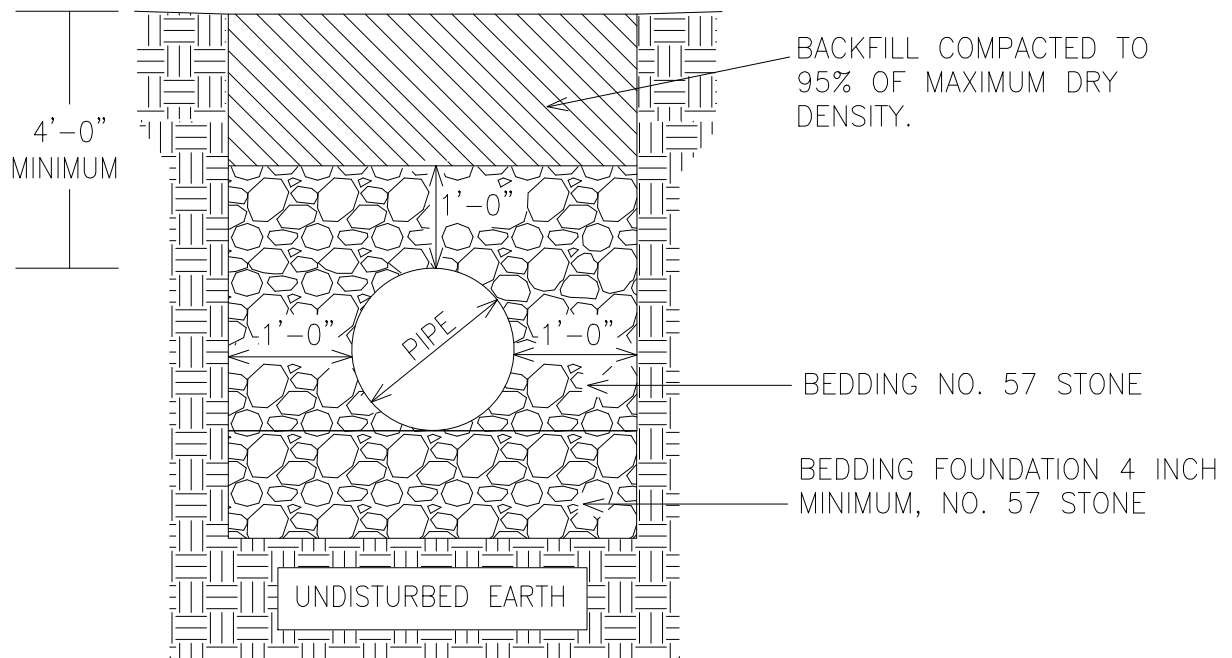
DATE: 06 DECEMBER 2016

DETAIL TITLE:

SCALE: N.T.S.

DRAWN BY: WWB

TYPICAL ASPHALT REPLACEMENT



# CLAYTON COUNTY WATER AUTHORITY

DATE: 16 MAY 2013

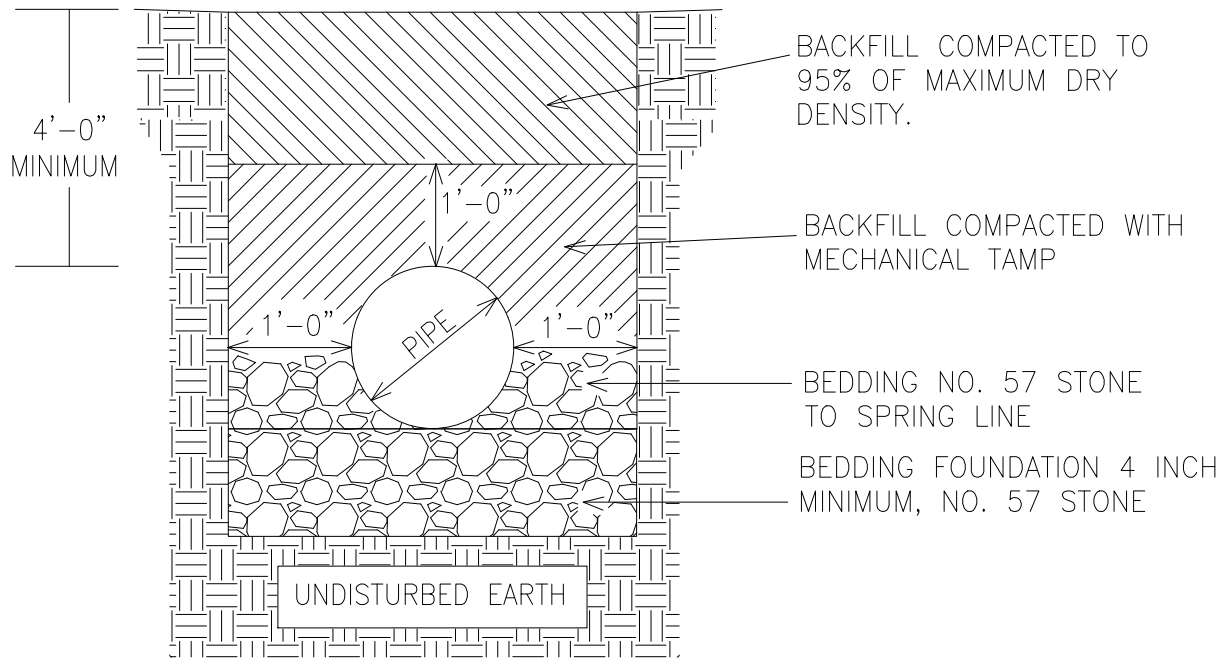
DETAIL TITLE:

SCALE: N.T.S.

PIPE INSTALLATION ON GRADE

DRAWN BY: WWB

PVC, HDPE,CM

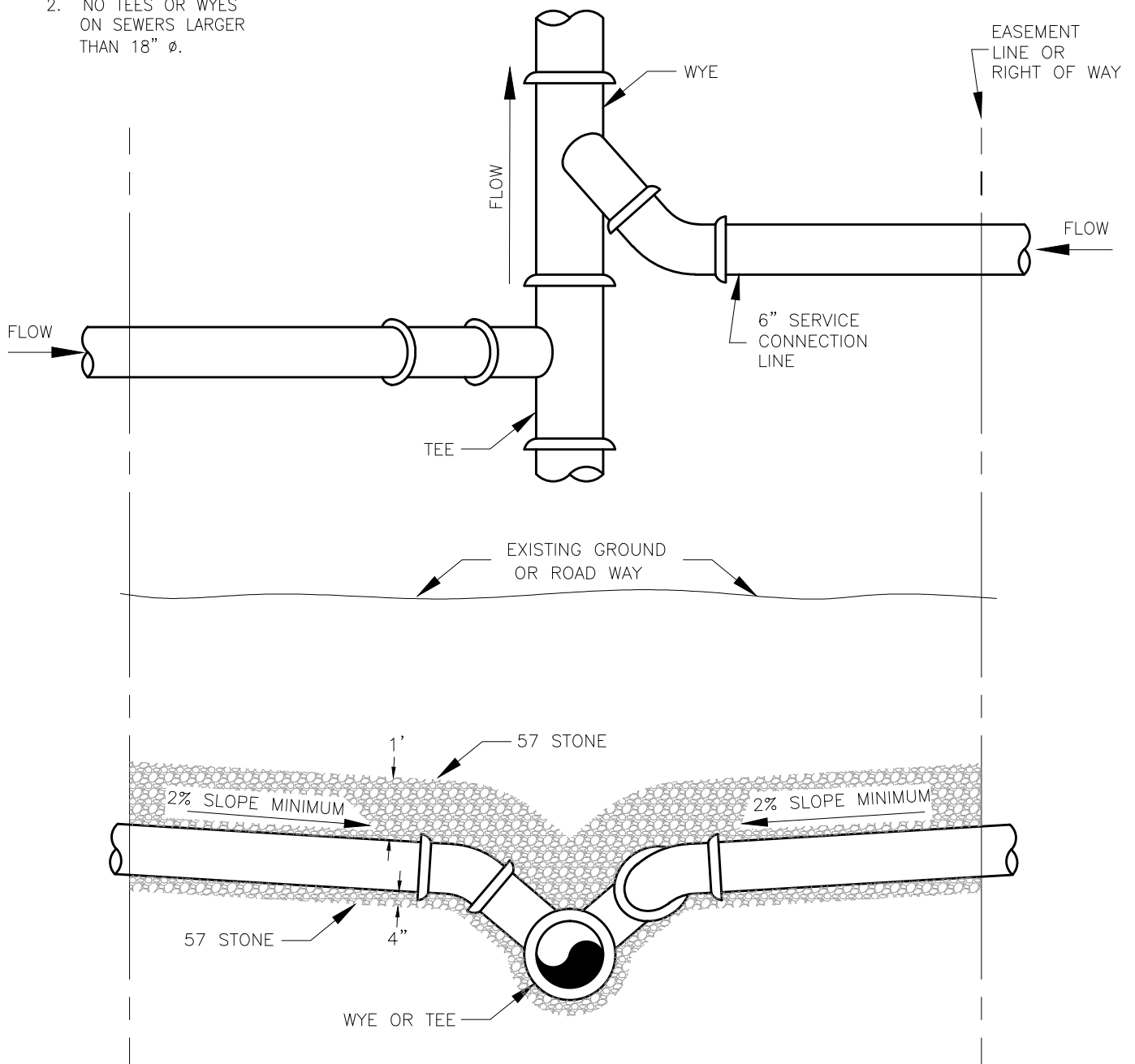


### CLAYTON COUNTY WATER AUTHORITY

DATE:	16 MAY 2013	DETAIL TITLE:
SCALE:	N.T.S.	PIPE INSTALLATION ON GRADE
DRAWN BY:	WWB	DI, RC, VC

NOTES:

1. CONNECTION TO NEW SEWER SHALL BE WITH TEE OR WYE.
2. NO TEES OR WYES ON SEWERS LARGER THAN 18" Ø.



CLAYTON COUNTY WATER AUTHORITY

DATE: 06 DECEMBER 2016

SCALE: N.T.S.

DRAWN BY: WWB

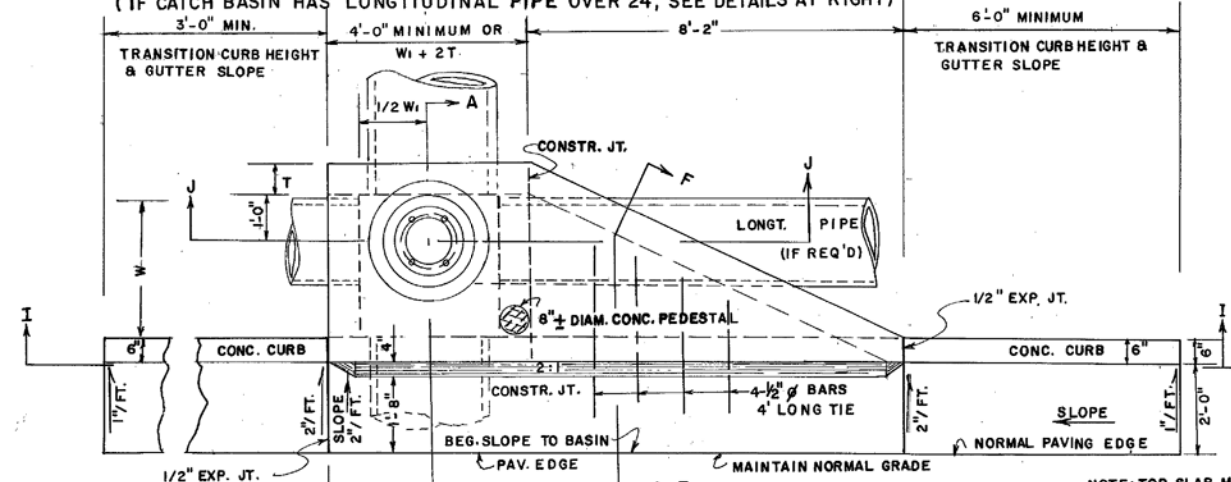
DETAIL TITLE:

LATERAL CONNECTION

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA			

## CATCH BASIN

(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)

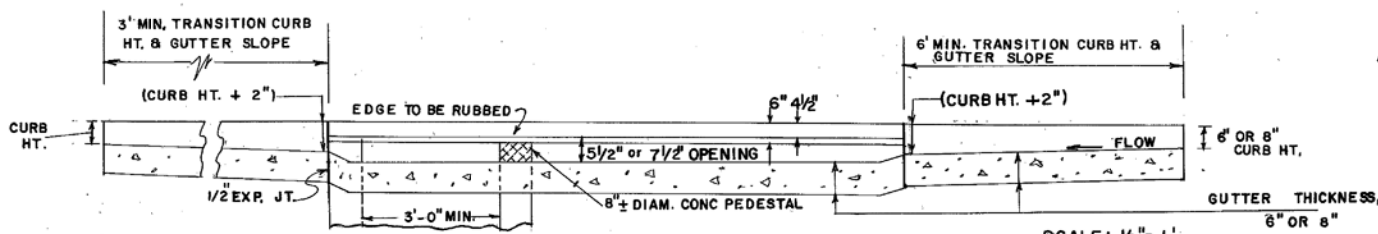


NOTE: 12'-0" (MIN.) PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES BETWEEN THESE LINES EXCEPT ADDITIONAL DEPTH (UNLESS OTHERWISE NOTED IN THE PLANS)

PLAN

SCALE: 1/2" = 1'

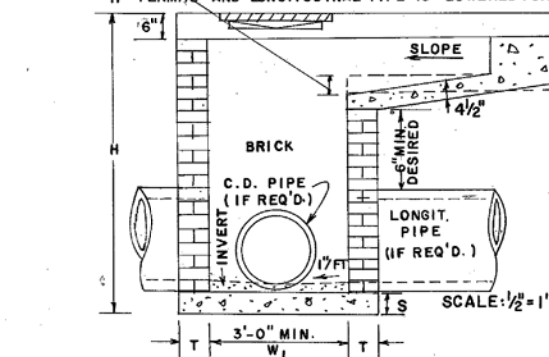
NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.



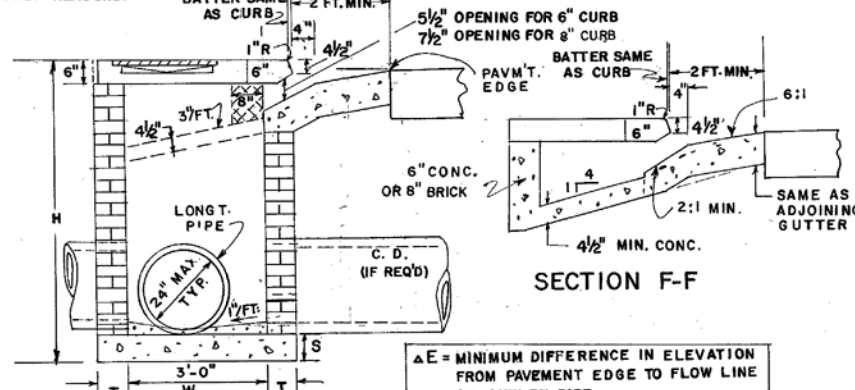
SECTION I-I

SCALE: 1/2" = 1'

NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.



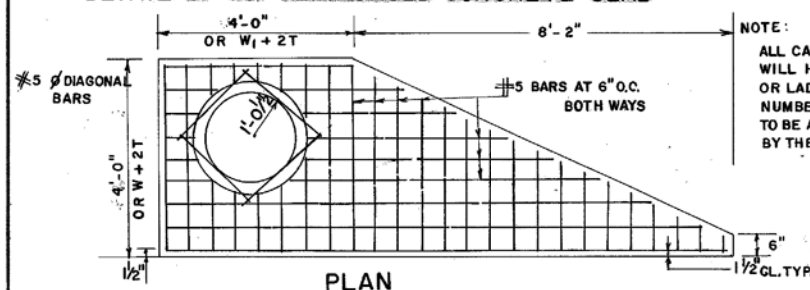
SECTION J-J



SECTION A-A

ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

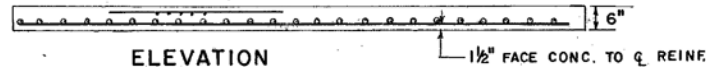
## DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.



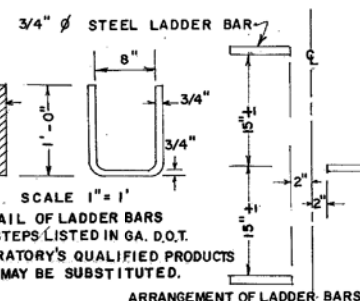
ELEVATION

NOTE:

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS, NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.

NOTE:

DETAIL OF LADDER BARS M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

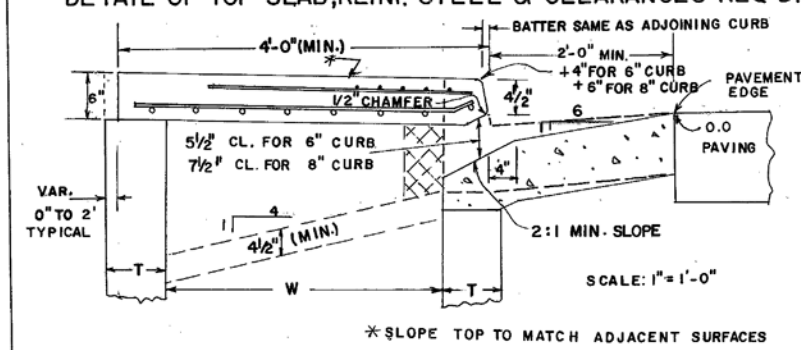


W OR W <sub>1</sub> (MAX.)	BOTTOM SLAB MATERIALS	S
TO 4'-6"	NON-REINF. CONCRETE	6"
OR BRICK		8"
OVER 4'-6"	CONC. REINF. W/ #4 BARS 12" O.C. BOTH WAYS 2' CL. FROM SLAB TOP	8"

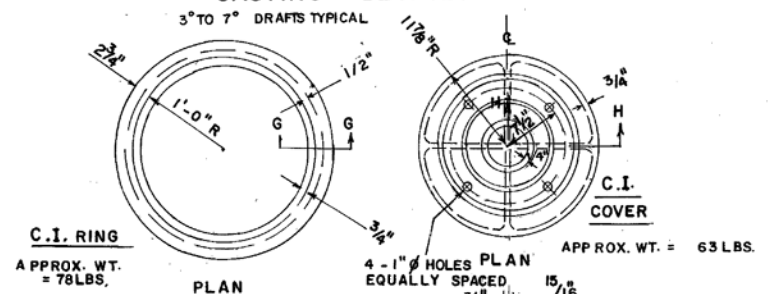
NOTE:

THE MIN. R & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W & W<sub>1</sub> DIMENSIONS DO NOT HAVE TO BE EQUAL.

## DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.



## CASTING DETAILS



PLAN

ELEVATION

SCALE: 1" = 1'

SECTION G-G

SCALE: 3" = 1'

SECTION H-H

SCALE: 3" = 1'

SECTION I-I

SCALE: 3" = 1'

SECTION J-J

SCALE: 3" = 1'

SECTION K-K

SCALE: 3" = 1'

SECTION L-L

SCALE: 3" = 1'

SECTION M-M

SCALE: 3" = 1'

SECTION N-N

SCALE: 3" = 1'

SECTION O-O

SCALE: 3" = 1'

SECTION P-P

SCALE: 3" = 1'

SECTION Q-Q

SCALE: 3" = 1'

SECTION R-R

SCALE: 3" = 1'

SECTION S-S

SCALE: 3" = 1'

SECTION T-T

SCALE: 3" = 1'

SECTION U-U

SCALE: 3" = 1'

SECTION V-V

SCALE: 3" = 1'

SECTION W-W

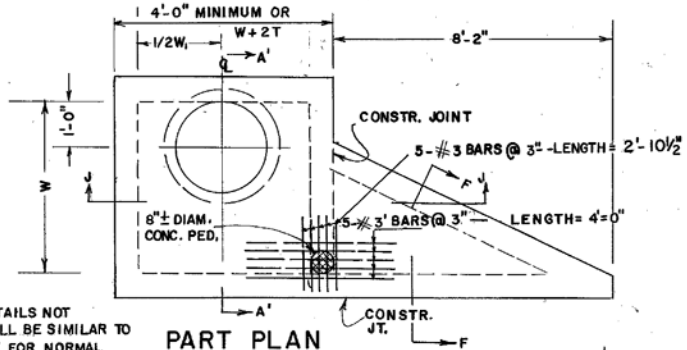
SCALE: 3" = 1'

SECTION X-X

SCALE: 3" = 1'

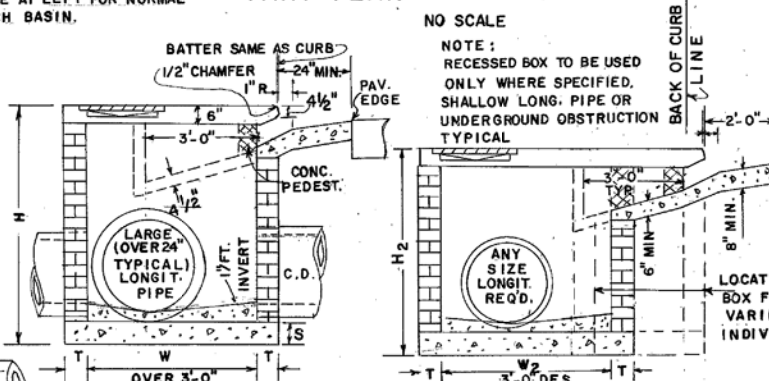
(TYPICAL FOR CATCH BASIN WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)

## CATCH BASIN - (WITH PROTRUDED BACK)



PART PLAN

NOTE: CATCH BASIN DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT LEFT FOR NORMAL CATCH BASIN.



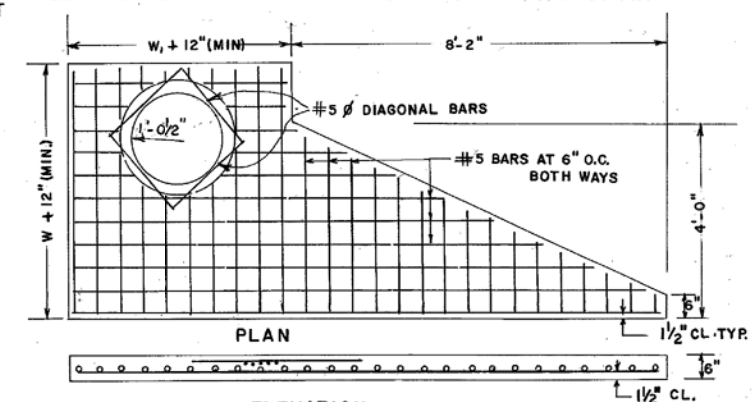
SECTION A-A

(WITH LARGE LONGITUDINAL PIPE)

SECTION A-A

(WITH RECESSED BOX)

## DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

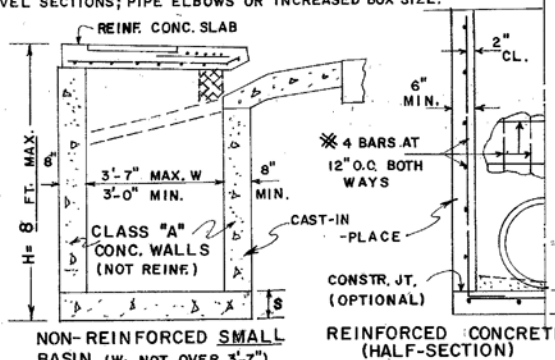
ELEVATION

NOTE: PIPE SIZES, NUMBER, ALIGNMENT, AND INVERT SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE PLANS.

## PRECAST BOX ON BRICK

(HALF-SECTION)

NOTE: TYPICAL TREATMENT FOR SKEWED PIPE ARE: CIRCULAR PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZE.



NON-REINFORCED SMALL BASIN (W. NOT OVER 3'-7")

REINFORCED CONCRETE (HALF-SECTION)

## CONSTRUCTION ALTERNATES

NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS. SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

## DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

## STANDARD CATCH BASINS

FOR USE WITH CURB (6" HT. OR 8" HT.) & GUTTER

SCALE AS SHOWN

RED. & REDR. AUGUST, 1982

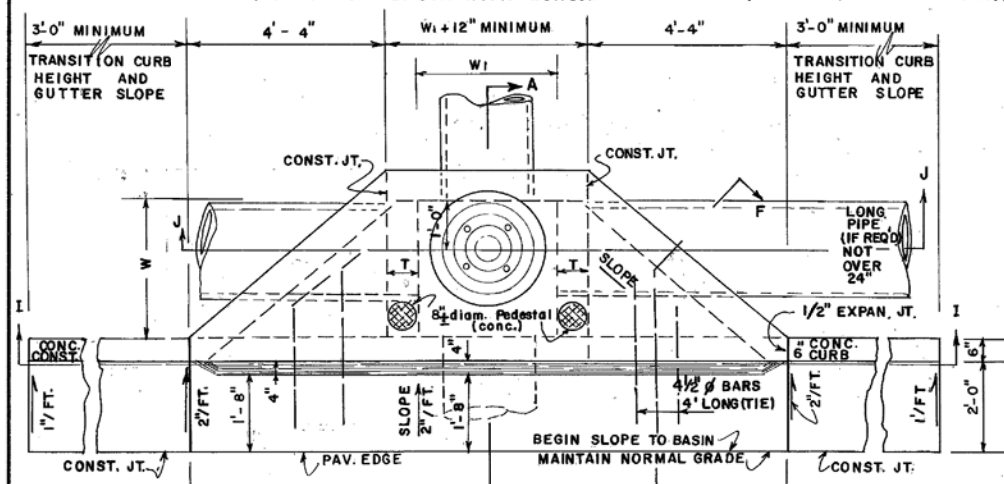
REV. & REDR.	BY	DATE	REASON	APPROVED	DATE
1	RMU	10/1/82	STATE ROAD & AIRPORT DESIGN ENGR.	THOMAS D. HANLEY	10/1/82
2	GME	10/1/82	STATE HIGHWAY ENGINEER	THOMAS D. HANLEY	10/1/82
3	RKC	10/1/82	STATE HIGHWAY ENGINEER	THOMAS D. HANLEY	10/1/82

NUMBER 1033 D

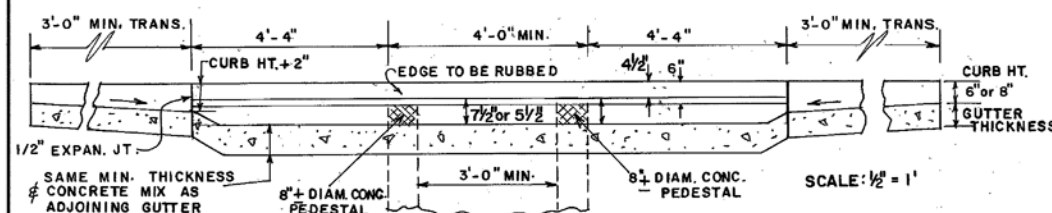


**CATCH BASIN**

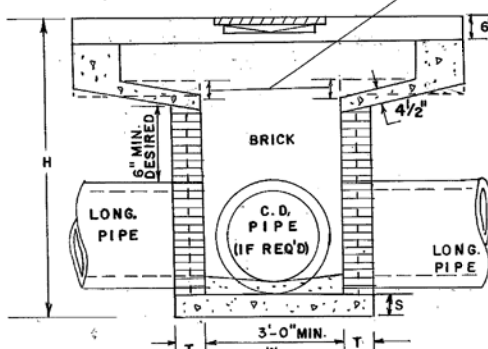
(FOR CATCH BASIN WITH LONGIT. PIPE OVER 24" SEE DETAILS AT RIGHT.)



NOTE: 12'-8" (MIN.) - PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES BETWEEN THESE LINES EXCEPT ADDITIONAL DEPTH FOR BASIN (UNLESS OTHERWISE NOTED IN THE PLANS)

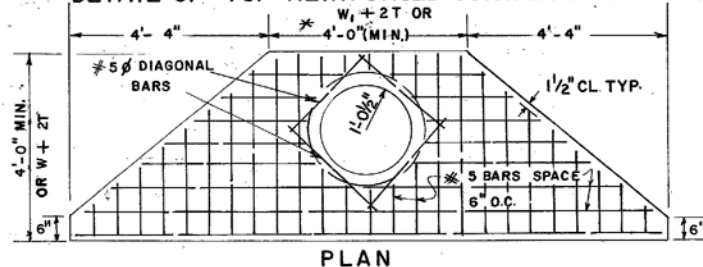
**SECTION I-I**

NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED UP TO 8" TOTAL WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.

**SECTION J-J**

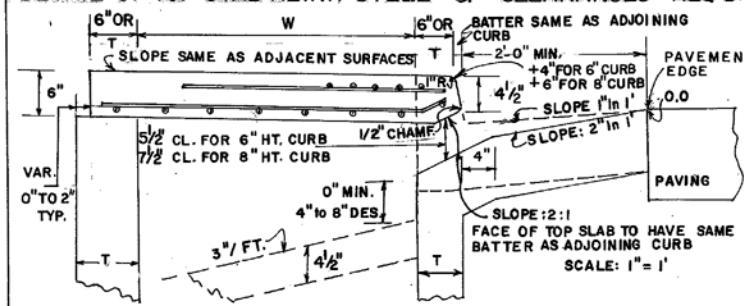
SCALE: 1/2" = 1'

NOTE: PIPE SIZES, NUMBER, ALIGNMENT AND INVERTS SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONC. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

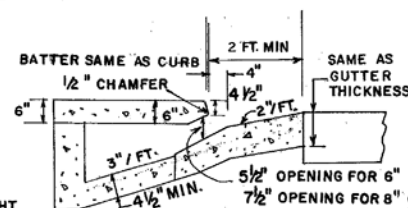
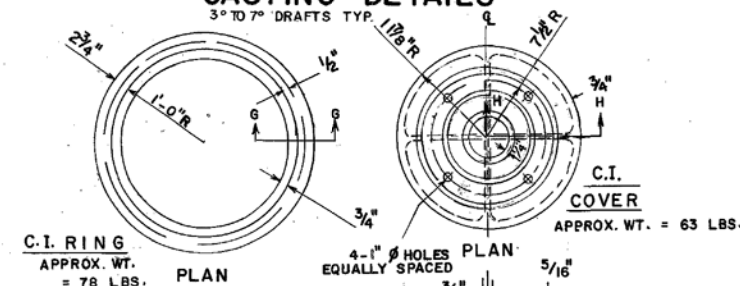
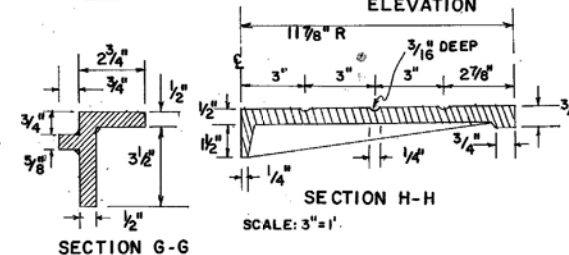
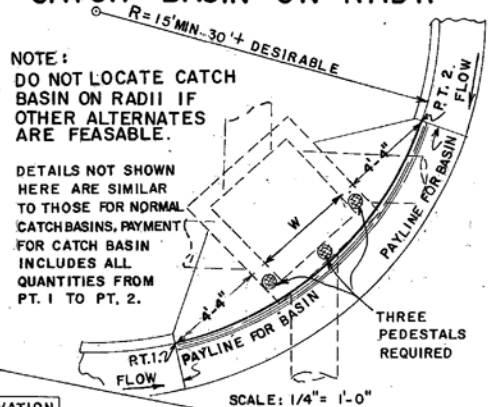
**DETAIL OF TOP REINFORCED CONCRETE SLAB**

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C. NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF CAST IN PLACE, BUILDER'S PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.

**DETAIL OF TOP STAB REINF. STEEL & CLEARANCES REQ'D.**

DEPTH LIMITS FOR INCREASING "T"

**SECTION F-F****CASTING DETAILS****ELEVATION****SECTION G-G****CATCH BASIN ON RADII**

SCALE: 1/4" = 1'-0"

ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

**TYPICAL MIN. DIMENSIONS**

PIPE DIA.	H (MIN.)	W or W <sub>1</sub>	MIN. ΔE
12	4'-4"	3'-0"	3'-3"
15	4'-7"	3'-0"	3'-6"
18	4'-10"	3'-0"	3'-9"
24	5'-6"	3'-0"	4'-4"
30	6'-2"	3'-7"	5'-0"
36	6'-10"	4'-6"	5'-7"
42	7'-4"	5'-3"	5'-11"
48	8'-0"	6'-0"	6'-6"
54	8'-6"	6'-8"	7'-0"
60	9'-2"	7'-4"	7'-7"

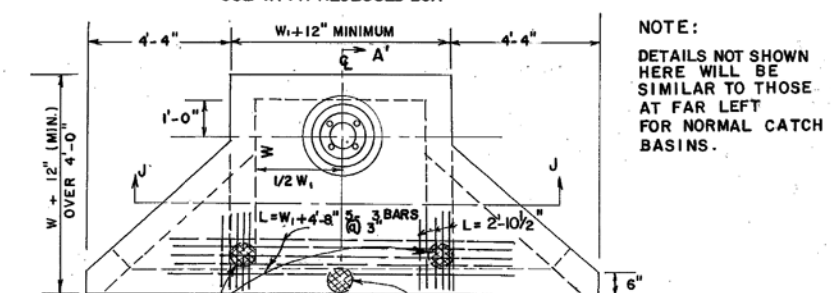
NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED, IF CONDITIONS PERMIT, WITH VARIOUS DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W & W. DIMENSIONS DO NOT HAVE TO BE EQUAL.

**NON REINFORCED SMALL BASIN (W<sub>1</sub> NOT OVER 3'-7")**

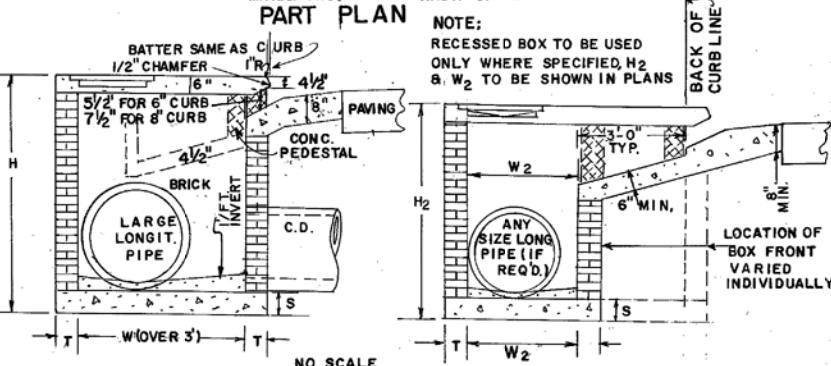
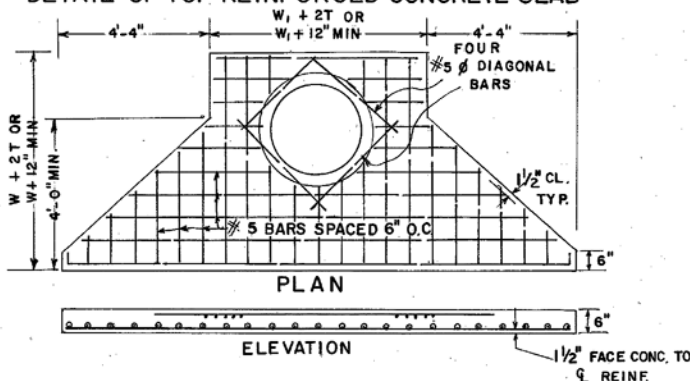
NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

**CONSTRUCTION ALTERNATES****CATCH BASIN (WITH PROTRUDED BACK)**

FOR USE WITH LONGITUDINAL PIPE OVER 24" OR FOR USE WITH RECESSED BOX



NOTE: DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT FAR LEFT FOR NORMAL CATCH BASINS.

**THIRD PEDESTAL REQ'D. FOR C.B. ON RADII OR FOR RECESSED BOX****SECTION A'-A' (FOR LONGIT. PIPE OVER 24")****SECTION A'-A' (FOR RECESSED BOX)****DETAIL OF TOP REINFORCED CONCRETE SLAB**

NOTE: TYPICAL TREATMENT FOR SKEWED PIPES ARE: CIRCULAR PRECAST UNITS; PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO ACCOMMODATE THE SKEWS. SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA****STANDARD  
CATCH BASINS**

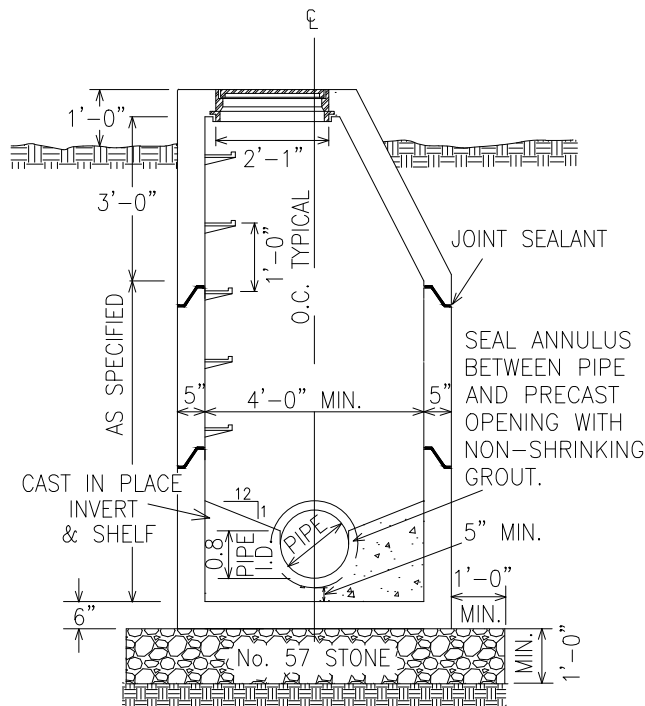
FOR USE WITH CURB (6" OR 8" HT.) &amp; GUTTER (IN SAGS OR LOW POINTS)

SCALE AS SHOWN

REV. &amp; RED. AUGUST, 1982

REV. & RED. R.M.U. (SUBMITTED) *David E. Hardy*  
STATE ROAD & AIRPORT DESIGN ENGR.  
TRA. G.M.E. (APPROVED) *James S. Hardy*  
CHK. R.K.C. STATE HIGHWAY ENGINEER

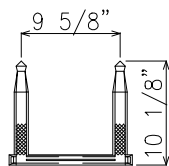
NUMBER  
**1034D**



**NOTES:**

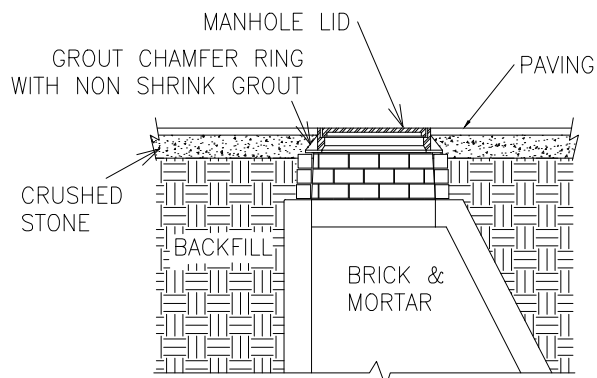
1. SHELF AND INVERT SHALL BE TROWEL FINISHED.
2. WHEN BRICK IS USED AS A FILLER, PROVIDE MINIMUM 1/2 INCH GROUT OVER BRICK.
3. LINE MANHOLE IN ACCORDANCE WITH DIVISION III, SECTION 9 OF THE SPECIFICATIONS.

**MANHOLE SECTION**



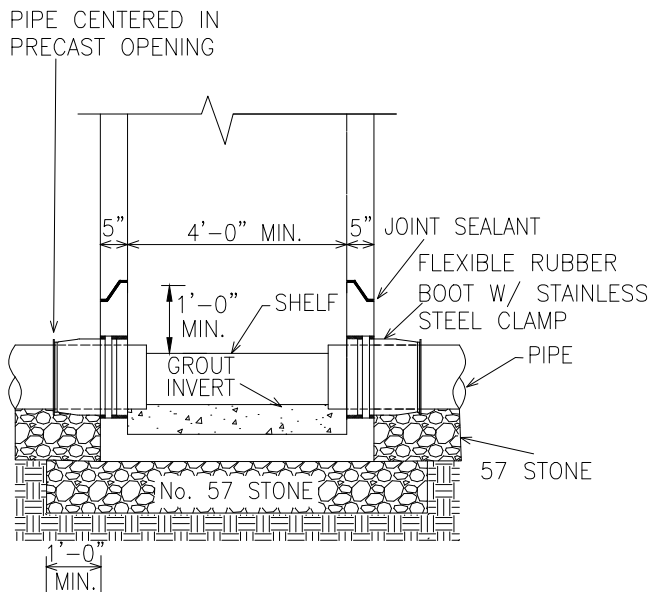
**MANHOLE STEP DETAIL**  
SCALE: N.T.S.

SOLID CAST IRON OR  
POLYPROPYLENE PLASTIC  
COATED STEEL 12" WIDE  
INTEGRALLY CAST IN CONCRETE



- NOTES:**
1. BRICKS SHALL BE STACKED NO MORE THAN FIVE COARSE.
  2. BRICKS SHALL BE BEDDED AND JOINTED IN MORTAR PER CCWA SPECIFICATIONS.
  3. CONTRACTOR SHALL APPLY A MINIMUM 1/2" THICK MORTAR COATING (SMOOTH FINISH) TO INTERIOR FACE OF BRICK.

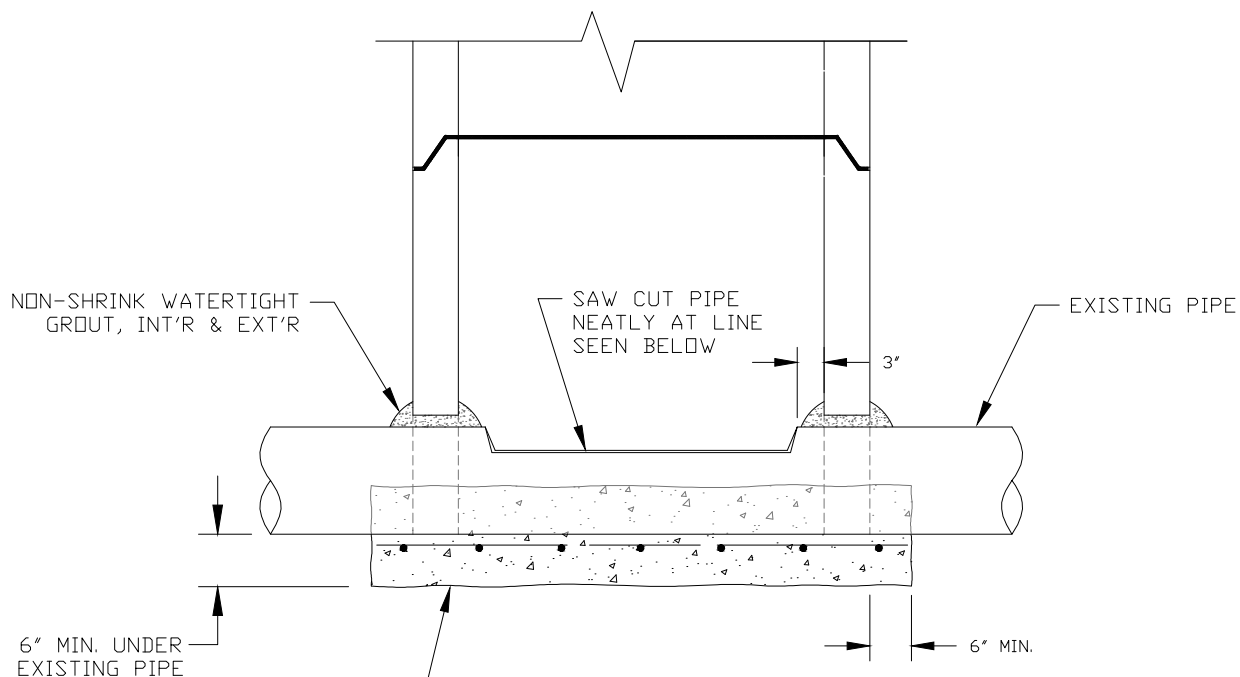
**TYPICAL MANHOLE IN PAVEMENT  
DETAIL**



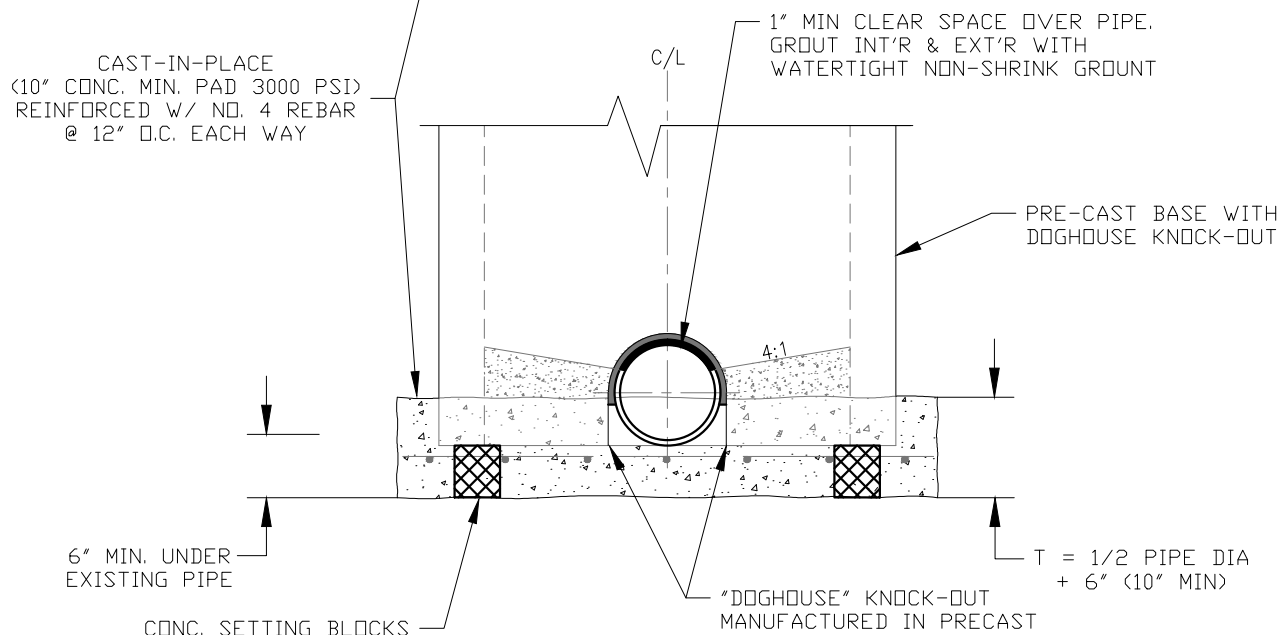
**MANHOLE SECTION**

**CLAYTON COUNTY WATER AUTHORITY**

DATE:	16 MAY 2013	DETAIL TITLE:
SCALE:	N.T.S.	MANHOLE SECTIONS
DRAWN BY:	WWB	



### SECTION



### ROTATED SECTION

## CLAYTON COUNTY WATER AUTHORITY

DATE: 16 MAY 2013

DETAIL TITLE:

SCALE: N.T.S.

DOG HOUSE MANHOLE

DRAWN BY: WWB