

**SECTION 00 91 13**

**ADDENDUM NO. 4**

**NOTICE is hereby given to prospective Bidders** of the following information, clarifications, and modifications to the Bidding Documents. The Bidding Documents remain unchanged except as indicated below. Bidders must acknowledge receipt of this Addendum in the Bid Form and comply with the requirements for submission of Bids as set forth in the Bidding Documents.

**The following replacement sections are reissued herewith in their entirety**, have an Issue Date of June 15, 2015, contain reference to “ADDENDUM NO. 4” in the footer, and text changes are identified by double-underline for additions and ~~Strikeout~~ for deletions.

Section 00 11 16 Invitation to Bid, consisting of 2 pages  
Section 00 41 01 Bid Form, consisting of 14 pages  
Section 01 11 00 Summary of Work, consisting of 3 pages  
Section 01 20 25 Measurement and Payment, consisting of 8 pages  
Section 33 31 15 Sanitary Utility Sewerage Piping and Cleaning and Inspection, 8 pages

**Drawings are hereby modified as follows.** Replacement pages/sheets are not being issued.

Drawing No. C-001 Key Plan: Remove “C-106: Dysart Street” and associated area.

Drawing No. C-103 Mallard Rd to Post Island Rd: Service Lateral Grouting & Lining: Revise footnote 2 to read “2) *Service lateral rehabilitation on Mallard Road is Bid Alternate 2.*”

Drawing No. C-105 Blacks Creek/Furnace Brook Pkwy: CIPP Lining: Add footnote below table “1) *CIPP Lining of sewer line and laterals is Bid Alternate 3.*”

**Delete Drawing C-106 Dysart St: CIPP Lining** in its entirety.

**Prepared and Issued by Woodard & Curran (Engineer) on behalf of:**

The City of Quincy  
1305 Hancock Street  
Quincy, MA 02169

This page intentionally left blank

SECTION 00 11 16

INVITATION TO BID

The City of Quincy, MA (Owner) invites Bidders to submit Bids for the Phase IIB Coastal Structures I/I Reduction Project, which includes, but is not limited to cleaning and CCTV inspecting approximately 13,~~500~~710 LF of sewer and approximately ~~10342~~ service laterals, cured-in-place pipe (CIPP) lining of approximately ~~10,1306,870~~ LF of sewer, CIPP lateral lining of approximately ~~112~~66 service laterals, and all materials and equipment, services and construction inherent to the Work. Bid Alternate 1 includes, but is not limited to, testing and sealing joints. Bid Alternate 2 includes, but is not limited to, grouting and CIPP lining of approximately 28 service laterals from a 24-inch main line. Bid Alternate 3 includes, but is not limited to, CIPP lining of approximately 3,000 LF of 15-inch sewer and CIPP lateral lining of approximately 9 service laterals.

The Work shall be substantially complete within 180 calendar days from the commencement of Contract Time, Post Substantial Completion Punchlist complete (all Work except Warranty Inspection) within 210 calendar days from the commencement of Contract Time, and Warranty Inspection complete (ready for final payment) 14 calendar days prior to expiration of the Warranty Period (351 days from Substantial Completion).

The Project being bid is subject to Massachusetts General Laws, Chapter 30, Section 39M and is to be funded in part under the Massachusetts Water Resource Authority (MWRA) I/I Local Assistance Program and is subject to program requirements described under Section 00 73 10 Project Specific Requirements.

A non-mandatory pre bid conference will be held at 10:00 a.m. local time on Thursday, May 28, 2015 in the Quincy City Hall Council Chambers. Bidders are encouraged to attend and participate in the conference.

Bids will be received until 11:00 a.m. local time on Thursday, June 18, 2015 at the offices of the Purchasing Agent, City Hall, 1305 Hancock Street, Quincy, Massachusetts 02169. Bids will then and there be publicly opened and read aloud. Bids received after the time of announced opening will not be accepted.

Sets of Bidding Documents may be examined at the Issuing Office beginning on Wednesday, May 20, 2015 from 8:30 a.m. to 4:30 p.m., Monday through Friday.

Issuing Office:  
Office of the Purchasing Agent  
Quincy City Hall  
1305 Hancock Street  
Quincy, MA 02169

Sets of Bidding Documents may be obtained:

**electronically at no cost** by registering at:  
<http://www.quincyma.gov/Government/PPD/PurchasingBidPage.cfm>

Bidders shall send a confirming email to “purchasing@quincyma.gov” to allow Owner to maintain a plan holders list. If Bidding Documents are downloaded and/or printed from Owner’s website, it is Bidder’s responsibility to check the website for any addenda before submitting a Bid. The Owner will not be responsible for any Bid that omits addenda acknowledgement.

and

**in hardcopy from Issuing Office**, beginning on Wednesday, May 20, 2015, 8:30 a.m. to 4:30 p.m. Mondays through Friday.

Non-refundable printing price for each set of Bidding Documents: \$100 payable by certified check, treasurer's or cashier's check, or money order to the City of Quincy.

Bidders requesting delivery of hardcopy may provide a Federal Express or UPS account number for delivery.

Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of the incomplete sets of Bidding Documents or for modifications to the Bidding Documents including electronic conversion.

Bid security in the amount of 5 percent of the Bid must accompany the Bid in accordance with the Instructions to Bidders.

Minimum wage rates as issued by the Executive Office of Labor and Workforce Development, Department of Labor Standards under the provisions of Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this Project. It is the responsibility of the Bidders, before Bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed Work under the resulting Contract.

Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be eligible or responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project or the public to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

**END OF SECTION**

**SECTION 00 41 01**

**BID FORM**

**ARTICLE 1 – DEFINED TERMS**

- 1.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the Standard General and Supplementary Conditions, and the Additional Supplementary Conditions, if any.

**ARTICLE 2 – BID RECIPIENT**

- 2.01 This Bid is submitted to:

City of Quincy Massachusetts  
Purchasing Department  
Quincy City Hall  
1305 Hancock Street  
Quincy, MA 02169

- 2.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 3 – BIDDER’S ACKNOWLEDGEMENTS**

- 3.01 Bidder accepts all of the terms and conditions of the Bidding Documents including, without limitation:
- A. those dealing with disposition of Bid security;
  - B. those included in the Supplementary Instructions to Bidders;
  - C. insurance and bonding requirements (Payment Bond and Performance Bond each equal to 100% of the total Contract Price) set forth in the Standard General and Supplementary Conditions and Additional Supplementary Conditions, if any;
  - D. Contract Times as set forth in the Agreement; and
  - E. provisions for liquidated damages as set forth in the Agreement.
- 3.02 This Bid will remain subject to acceptance for 90 days after the Bid opening or for such longer period of time that Bidder may agree to in writing upon request of Owner.

3.03 Bidder acknowledges receipt of the following Addenda.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3.04 Bidder acknowledges the representations and certifications included in Section 00 45 05 are made a condition of the Bid.

**ARTICLE 4 – BASIS OF BID**

4.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s) based on unit prices included below.

Bidder shall submit Bids for the base Bid and all Alternates. However, a single Contract, if awarded, will be awarded for the base Bid OR base Bid plus Alternate 1, OR base Bid plus Alternative 1 and Alternative 2 OR base Bid plus Alternative 1, Alternative 2 and Alternative 3 at the Owner's option.

**BID PRICES SHALL EXCLUDE SALES AND USE TAX.**

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
1	Mobilization / Demobilization (not to exceed 5% of items 2 through 5, excludes item 6 and 7) @ _____ _____ Dollars and _____Cents PER LUMP SUM	1 LS				
2a	Clean and CCTV Inspect 8-inch Pipe @ _____ _____ Dollars and _____Cents PER LINEAR FOOT	1,370 LF				
2b	Clean and CCTV Inspect 10-inch to 12-inch Pipe @ _____ _____ Dollars and _____Cents PER LINEAR FOOT	<del>5,890</del> 5,630 LF				
2c	Clean and CCTV Inspect 14-inch to 24-inch Pipe @ _____ _____ Dollars and _____Cents PER LINEAR FOOT	6,710 LF				

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
3a	8-inch Cured-In-Place Pipe (CIPP) Liner @ _____ _____ Dollars and _____ Cents PER LINEAR FOOT	1,000				
		LF				
3b	10-inch Cured-In-Place Pipe (CIPP) Liner @ _____ _____ Dollars and _____ Cents PER LINEAR FOOT	1,700				
		LF				
3c	12-inch Cured-In-Place Pipe (CIPP) Liner @ _____ _____ Dollars and _____ Cents PER LINEAR FOOT	<del>2,030</del> 1,770				
		LF				
		<del>LF</del>				
3de	18-inch Cured-In-Place Pipe (CIPP) Liner @ _____ _____ Dollars and _____ Cents PER LINEAR FOOT	2,400				
		LF				

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
4a	Clean and CCTV Inspect Service Lateral @ _____ Dollars and _____ Cents PER EACH	<del>112</del> <u>103</u> Ea.				
4b	CIPP Lateral Liner (5 ft) in 8-inch Main Line @ _____ Dollars and _____ Cents PER EACH	1 Ea.				
4c	CIPP Lateral Liner (5 ft) in 10-inch to 12-inch Main Line @ _____ Dollars and _____ Cents PER EACH	<del>25</del> <u>16</u> Ea.				
4d	CIPP Lateral Liner (5 ft) in 14 inch to 18-inch Main Line @ _____ Dollars and _____ Cents PER EACH	<del>58</del> <u>49</u> Ea.				
4e	CIPP Lateral Liner (All Sizes) Additional Length Beyond 5 feet @ _____ Dollars and _____ Cents PER LINEAR FOOT	500 LF				
5	Test Pits @ _____ Dollars and _____ Cents PER CUBIC YARD	20 CY				

Item No.	Item Description with Unit Price in Written Words	Estimated Quantity & Unit	Unit Bid Price		Total Bid Item Price	
			Dollars	Cents	Dollars	Cents
6	Owner's Contingency Allowance for Traffic Control / Police Details  @ FORTY TWO _____ Dollars and ZERO Cents PER HOUR	756	\$42.00		\$31,752.00	
		Hours				
7	Owner's Contingency Allowance for Materials Escalation Price Adjustment (statutory requirement)  @ FIVE THOUSAND _____ Dollars and ZERO Cents	1	\$5,000.00		\$5,000.00	
		NTE				

**TOTAL BASE BID PRICE (based on Unit Price Schedule above)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents  
 (Use words)

\$ \_\_\_\_\_  
 (Use figures)

**ALTERNATE 1 BID SCHEDULE – Testing and Sealing Joints**

**BID PRICES SHALL EXCLUDE SALES AND USE TAX.**

<u>Item No.</u>	<u>Item Description with Unit Price in Written Words</u>	<u>Estimated Quantity &amp; Unit</u>	<u>Unit Bid Price</u>		<u>Total Bid Item Price</u>	
			<u>Dollars</u>	<u>Cents</u>	<u>Dollars</u>	<u>Cents</u>
<u>A1</u>	<u>Testing and Sealing Joints</u>  <u>@ _____</u>  <u>Dollars and _____ Cents PER EACHGALLON</u>	<u>1,000</u>  <u>gal</u>				

**TOTAL ALTERNATE 1 BID PRICE (based on Alternate 1 Unit Price Schedule above)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents \$ \_\_\_\_\_  
(Use words) (Use figures)



**ALTERNATE 3 BID SCHEDULE – CIPP Liner and CIPP Lateral Liner – 15-inch Main Line**

**BID PRICES SHALL EXCLUDE SALES AND USE TAX.**

<u>Item No.</u>	<u>Item Description with Unit Price in Written Words</u>	<u>Estimated Quantity &amp; Unit</u>	<u>Unit Bid Price</u>		<u>Total Bid Item Price</u>	
			<u>Dollars</u>	<u>Cents</u>	<u>Dollars</u>	<u>Cents</u>
<u>A3-1</u>	<u>15-inch Cured in Place (CIPP) Liner</u>  <u>@ _____</u> <u>Dollars and _____ Cents PER EACH</u>	<u>3,000</u>  <u>LF</u>				
<u>A3-2</u>	<u>CIPP Lateral Liner (5 ft) in 15-inch Main Line</u>  <u>@ _____</u> <u>Dollars and _____ Cents PER EACH</u>	<u>9</u>  <u>Ea.</u>				

**TOTAL ALTERNATE 3 BID PRICE (based on Alternate 3 Unit Price Schedule above)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents \$ \_\_\_\_\_

*(Use words)* *(Use figures)*

- 4.02 Unit Prices have been computed in accordance with Paragraph 11.03.A of the Standard General and Supplementary Conditions and Additional Supplementary Conditions, if any.
- 4.03 Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for unit price items will be based on actual quantities determined and based on the unit prices included above, as provided in the Standard General and Supplementary Conditions and Additional Supplementary Conditions, if any.
- 4.04 Contract Price Adjustments: Per MGL c30s38A, Base Prices for diesel fuel, gasoline, liquid asphalt, and portland cement in cast-in-place concrete to be used for Contract Price Adjustments are established in Section 00 73 73, SC-12.01.

**ARTICLE 5 – TIME OF COMPLETION**

- 5.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the Standard General and Supplementary Conditions and Additional Supplementary Conditions, if any, on or before the dates or within the number of calendar days indicated in the Agreement.
- 5.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 6 – ATTACHMENTS TO THIS BID**

- 6.01 The following documents are submitted with and made a condition of this Bid:

Proposed Project Schedule

00 41 01 Bid Form

Bid Security Form

OR

Required Bid security in the form of \_\_\_\_\_

Supplements:

00 43 93 Bid Submittal Checklist

00 45 05 Bidder's Representations and Certifications including required submittals

00 45 13 Bidder's Qualifications

00 45 19 Non-collusion Affidavit

**ARTICLE 8 – BID SUBMITTAL**

8.01 This Bid is submitted by:

**A Corporation**

Corporation Name: \_\_\_\_\_

State of incorporation: \_\_\_\_\_

Type: \_\_\_\_\_  
*(General Business, Professional, Service, other)*

By: \_\_\_\_\_  
*(Signature – attach evidence of authority to sign)*

Name *(typed or printed)*: \_\_\_\_\_

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

(CORPORATE SEAL)

Attest: \_\_\_\_\_  
*(Signature of Corporate Secretary)*

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

Date of qualification to do business as out-of-state corporation: \_\_\_\_\_

**A Limited Liability Company (LLC)**

LLC Name: \_\_\_\_\_

State in which organized: \_\_\_\_\_

By: \_\_\_\_\_  
*(Signature – attach evidence of authority to sign)*

Name *(typed or printed)*: \_\_\_\_\_

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

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

**A Joint Venture**

First Joint Venturer Name: \_\_\_\_\_

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

*(Signature – attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

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

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

Second Joint Venturer Name: \_\_\_\_\_

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

*(Signature – attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

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

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

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

**A Partnership**

Partnership Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Signature of general partner – attach evidence of authority to sign)*

Name *(typed or printed)*: \_\_\_\_\_

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

**An Individual**

Name *(typed or printed)*: \_\_\_\_\_

By: \_\_\_\_\_  
*(Individual's signature)*

Doing business as: \_\_\_\_\_

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

SUBMITTED ON:
EIN/FEIN:

Communications concerning this Bid shall be addressed to:

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

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

Business Address: \_\_\_\_\_

\_\_\_\_\_

Phone & Facsimile Nos: \_\_\_\_\_

Email address: \_\_\_\_\_

**END OF SECTION**

## SECTION 01 11 00

### SUMMARY OF WORK

#### PART 1 – GENERAL

##### 1.01 SECTION INCLUDES

- A. Project Description
- B. Description of the Work
- C. Work Sequence and Coordination
- D. Special Requirements
- E. Attachments

##### 1.02 PROJECT DESCRIPTION

- A. The Phase IIB Coastal Structures I/I Reduction Project includes cleaning and CCTV inspecting approximately 13,~~500~~710 LF of sewer and ~~112~~103 approximately service laterals, cured-in-place pipe (CIPP) lining of approximately 1,000 LF of 8-inch sewer, 1,700 LF of 10-inch sewer, ~~2,030~~1,770 LF of 12-inch sewer, ~~3,000 LF of 15-inch sewer~~, 2,400 LF of 18-inch sewer, and CIPP lateral lining of approximately ~~11266~~ service laterals. Bid Alternate 1 includes testing and sealing joints. Bid Alternate 2 includes grouting and CIPP lining of approximately 28 service laterals from a 24-inch main line. Bid Alternate 3 includes CIPP lining of approximately 3,000 LF of 15-inch sewer and CIPP lateral lining of approximately 9 service laterals.

##### 1.03 DESCRIPTION OF THE WORK

- A. The Work includes labor, material and equipment, services required for construction, testing, and commissioning of the Project in accordance with the Contract Documents and as more specifically described in the Specifications and Drawings and includes, but is not limited to, the following principal features:
  - 1. Clean and CCTV inspect sewer lines and laterals that are scheduled to be CIPP lined prior to lining activities.
  - 2. Testing and sealing joints is included as needed as Bid Alternate 1.
  - 3. Provide temporary sewage bypass pumping during all components of the Work. See Section 01 51 40 on Temporary Sewage Bypass.
  - 4. The CIPP lining of 8, 10, 12, ~~15~~, and 18-inch sewers as shown on the Drawings.

- ~~5. The CIPP lining of all sewer lateral connections to CIPP lined pipes as shown on the Drawings. ~~and section of Mallard Road as shown on the Drawings.~~~~
  - ~~6. Grouting and CIPP lining of sewer lateral connections on Mallard Road as shown on the Drawings are included as Bid Alternate 2.~~
  - ~~7. The CIPP lining of 15-inch sewers as shown on the Drawings as Bid Alternate 3-1.~~
  - ~~8. CIPP lining of all sewer lateral connections along Blacks Creek/Furnace Brook Parkway as Bid Alternate 3-2.~~
  - ~~1. Provide temporary sewage bypass pumping during all components of the Work. See Section 01 51 40 on Temporary Sewage Bypass.~~
- B. Work Site locations: generally as shown on the Drawings.
- C. Existing conditions and Site data: per the Drawings, Sections 00 31 00, and 01 15 00.

#### 1.04 WORK SEQUENCE AND COORDINATION

- A. Construction Shut down: Work will not be allowed during the following time frames:
- Memorial Day  
July 4th  
Labor Day  
The Day of or after Thanksgiving  
Christmas  
December 29<sup>th</sup> – January 1<sup>st</sup>
- B. Access to businesses and residences must be maintained during prosecution of the Work.
- C. Provide a PE-stamped temporary bypass plan for each stage of the Work prior to construction per Section 01 51 40. Work is not allowed without a previously approved bypass plan.
- D. Due to I/I, flows within the sewer system may increase during high tide. Verify all flows and plan Work accordingly.
- E. If access to private property is required; provide a list of manholes for the Owner to obtain permission from the private property owner prior to performing Work on the private property.

## 1.05 SPECIAL PROJECT REQUIREMENTS

- A. Portions of the Work are located in a resource area. The extent of disturbance in the resource area must be limited to man-access to existing manholes. Equipment must remain in the buffer zones temporarily during the workday and will be removed at the end of each day.
- ~~B. Dysart Street is a one-way street. Coordinate traffic control and/or detour with Police Details during the preconstruction conference.~~
- ~~C.B.~~ Submit a Traffic Management Plan for each work location. See Section 01 00 10.
- ~~D.C.~~ Certain sections of the CIPP lining Work will have to be scheduled around the tide cycle during the lower high tide versus the moon high tide. The moon high tide tends to reach the sewer manhole bases and the lower high tides do not. Work shall not be interrupted due to high tide water interfering with construction or bypass equipment and/or materials. Main line and lateral TV Inspection Work shall be completed within 4 hours before and 6 hours after high tide.
- ~~E.D.~~ The Black's Creek / Furnace Brook Parkway lining Work shall be scheduled as the last main line CIPP lining work to be complete if awarded.
- ~~F.E.~~ Coordinate access to Black's Creek and Moritz Pond with the Department of Conservation and Recreation (DCR) per Section 00 73 10 Paragraph SC 4.01 Availability of Lands.
- ~~G.F.~~ The Work includes Warranty Inspection which commence 45 calendar days prior to expiration of the Correction Period or within 10 days of receipt of notice from Owner to commence Warranty Inspection. The Warranty Inspection must be complete in order for Final Completion to be achieved.
1. All Work completed except for Warranty Inspection is referred to as "Completion of Post Substantial Completion Punchlist".

## PART 2 PRODUCTS - NOT USED

## PART 3 EXECUTION - NOT USED

**END OF SECTION**

This page left blank intentionally.

## SECTION 01 20 25

### MEASUREMENT AND PAYMENT

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION

- A. This Section describes the measurement and payment for the Work to be completed under each item in Section 00 41 01 Bid Form.
- B. Payment procedures are in accordance with the Agreement, Article 14 of the Standard General and Supplementary Conditions, the Additional Supplementary Conditions (if any), and the General Requirements.
- C. Measurement: as determined, verified, or approved by Engineer in accordance with Paragraph 11.03 of the Standard General and Supplementary Conditions, the Additional Supplementary Conditions (if any), and the General Requirements, except as otherwise specified.
- D. The Work described in each item shall be as described in the Specifications and shown on the Drawings and not included in other pay items.
  - 1. Pay item descriptions are general and may not specifically describe all associated Work or elements thereof, do not constitute Specifications, and do not supersede the content of the Specifications and Drawings.
  - 2. Review the Specifications and Drawings for Work associated with each pay item. Claims for being unfamiliar with the content of the Specifications and Drawings will not be considered.
- E. The following Work is not specifically described or designated as a pay item, is considered incidental to all pay items, and shall not be measured separately for payment.
  - 1. General Requirements specified in Sections 01 00 10 and 01 15 00 except for items that may be included in Mobilization/Demobilization and those included as a separate pay items
    - a. Handling temporary bypass and plugging of existing flows.
    - b. Removal, storage and legal disposal of excavated materials and any material retrieved from cleaning and inspection processes.
    - c. Unsuitable materials.
  - 2. Coordination with the local Conservation Commission for access to manholes in buffer zones.

3. Clearing, grubbing, and erosion control, including but not limited to marsh mats, siltation fences, and mulch netting as required by the local Conservation Commission.
  4. Restoration of all areas disturbed by the Contractor within the limits of Work.
  5. Field and laboratory testing and reporting by independent laboratory, including but not limited to compaction of backfill materials; aggregate gradation; and concrete testing
  6. Labor, materials, and equipment necessary to conduct test pits to verify existing field conditions and the location, size, type, material, and orientation of existing pipes and utilities shown on the Drawings.
- F. No compensation will be paid for areas disturbed by the Contractor outside the limits of Work.
- G. Payment shall only be made for those utility services, including water and fire services, specifically identified for replacement on the Drawings. Relocation or replacement for the Contractor's convenience or due to breakage by the Contractor of any other utility services shown on the Drawings, or at locations which could reasonably be assumed, shall be at no cost to Owner.
- H. Design, installation and removal of excavation support systems, utility/structure support systems temporary and permanent utility/structure support systems be associated with an item of Work shall be considered incidental to that item.
- I. Additional dewatering and erosion control (including installation, operation, maintenance, removal and off Site disposal of erosion control devices) associated with an item of Work shall be considered incidental to that item.
- J. Provide daily detail slips for Police details to the Engineer. Police details scheduled and not used by the Contractor will be back-charged to Contractor and shall not be reimbursed. No Administration Fee for Police Details shall be included as the Work is being performed for a City Department. Contractor shall coordinate with the Police Department accordingly. Administration Fees and markup WILL NOT be covered under this Contract.
- K. Pay items identified as an Owner's Contingency Allowance will be processed per Article 11.02 of the General Conditions.

**1.02 MEASUREMENT AND PAYMENT BASIS FOR EACH BID ITEM**

<b>ITEM 1: MOBILIZATION/DEMOBILIZATION</b>	
<b>Measurement</b>	Portion of Work completed and accepted
<b>Payment</b>	Percent of Total Contract Price based on Schedule of Values not to exceed 5% of items 2 through 5 (excludes item 6 and 7)
<b>Schedule of Payment</b>	50% at Project commencement – 25% at Substantial Completion- 25% at Final Completion
Includes delivery to and removal of equipment from the Project Site, temporary utilities, facilities and controls, obtaining necessary permits including associated fees, insurance and bond costs, signage, development of pre-construction schedules and plans required by the General and Supplementary Conditions and General Requirements; necessary pre-construction investigations, verifying existing field conditions, coordination, and Site clean-up, restoration and closeout.	

<b>ITEM 2a: Clean and CCTV Inspect 8-inch Pipe                      ITEM 2b: Clean and CCTV Inspect 10-inch to 12-inch Pipe                      ITEM 2c: Clean and CCTV Inspect 14-inch to 24-inch Pipe</b>	
<b>Measurement</b>	Actual number of linear feet of each pipe size cleaned and inspected as determined by the Engineer, measured from the interior walls of the manholes. Note: If reverse setups are required during television inspection, measurement of the actual number of linear feet shall be made from the wall of the manhole to the point where the survey was abandoned from each direction.
<b>Payment</b>	Unit price per Linear Foot (LF) cleaned and inspected
<b>Schedule of Payment</b>	Monthly based on progress
Material and equipment, services, installation, construction and testing associated with the pre-cleaning and pre-inspecting of sewer pipe prior to lining activities as specified in Section 33 31 15, including reporting and other incidental Work. Additional expenses related to alternative hours worked to perform Work during low sewer flow; the storage, testing, and disposal of any material retrieved from the cleaning and inspection process, digital video disks (DVD), external hard drives, by-pass pumping, and the plugging or blocking of sewer flow shall be considered incidental to the Work and shall not be measured separately for payment. Excludes post CCTV inspections following lining activities which shall be measured separately for payment under a different item.	

<b>ITEM 3a: 8-inch Cured-In-Place Pipe (CIPP) Liner</b> <b>ITEM 3b: 10-inch Cured-In-Place Pipe (CIPP) Liner</b> <b>ITEM 3c: 12-inch Cured-In-Place Pipe (CIPP) Liner</b> <b>ITEM 3d: 15-inch Cured-In-Place Pipe (CIPP) Liner</b> <b>ITEM 3<u>d</u>: 18-inch Cured-In-Place Pipe (CIPP) Liner</b>	
<b>Measurement</b>	Actual number of linear feet of each pipe size lined as determined by the Engineer, measured from the interior walls of the manholes
<b>Payment</b>	Unit price per Linear Foot (LF)
<b>Schedule of Payment</b>	Monthly based on progress
Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.72, including reinstating and of service connections, removal and resetting of frame and cover and top portion of manhole, creating access paths, providing erosion controls, providing access mats, selective tree removal, coordination with Conservation Commission, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the work and shall not be measured separately for payment.	

<b>ITEM 4a: Clean and CCTV Inspect Service Lateral</b>	
<b>Measurement</b>	Actual number of lateral liners placed in lateral services as determined by the Engineer.
<b>Payment</b>	Unit price per lateral service
<b>Schedule of Payment</b>	Monthly based on progress
Material and equipment, services, installation, construction and testing associated with the pre-cleaning and pre-inspecting of sewer service lateral prior to lining activities as specified in Section 33 31 15, including reporting and other incidental Work. Additional expenses related to alternative hours worked to perform Work during low sewer flow; the storage, testing, and disposal of any material retrieved from the cleaning and inspection process, digital video disks (DVD), external hard drives, by-pass pumping, and the plugging or blocking of sewer flow shall be considered incidental to the Work and shall not be measured separately for payment. Excludes post CCTV inspections following lining activities which shall be measured separately for payment under a different item.	

<b>ITEM 4b: CIPP Lateral Liner (5 ft) in 8-inch Main Line</b> <b>ITEM 4c: CIPP Lateral Liner (5 ft) in 10-inch to 12-inch Main Line</b> <b>ITEM 4d: CIPP Lateral Liner (5 ft) in 14-inch to 18-inch Main Line</b>	
<b>Measurement</b>	Actual number of lateral liners placed in lateral services as determined by the Engineer.
<b>Payment</b>	Unit price per lateral service
<b>Schedule of Payment</b>	Monthly based on progress
Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.73, including reinstating and of service connections, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the Work and shall not be measured separately for payment.	

<b>ITEM 4e: CIPP Lateral Liner (All Sizes)</b> <b>Additional Length Beyond 5 feet</b>	
<b>Measurement</b>	Actual number of linear feet of CIPP lateral liner beyond 5 feet as determined by the Engineer, measured in place.
<b>Payment</b>	Unit price per linear foot
<b>Schedule of Payment</b>	Monthly based on progress
Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.73 beyond 5 feet into the service lateral, including reinstating and of service connections, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the Work and shall not be measured separately for payment.	

<b>ITEM 5: Test Pits</b>	
<b>Measurement</b>	Actual number of cubic yards of test pits excavated as determined by the Engineer, measured in place
<b>Payment</b>	Unit price per cubic yard
<b>Schedule of Payment</b>	Monthly based on progress
Includes all labor, equipment, tools, and materials to determine location, depth, diameter and material type for uncharted utilities at locations noted on the Drawings or as directed by the Owner. Includes excavation, removal and legal disposal of unsuitable materials, replacement of unsuitable materials with select backfill, backfilling, and compacting in accordance with the Contract Documents, loam and seed, removing and resetting granite and bituminous curb, temporary and permanent pavement restoration as specified, infrared treatment, restoring pavement markings, and other incidental Work necessary to complete test pits.	

<b>ITEM 6: Owner's Contingency Allowance for Traffic Control / Police Details</b>	
<b>Measurement</b>	Portion of Owner's contingency allowance amount authorized per Paragraph 11.02 of the General Conditions and Supplementary Conditions based <del>on</del> <sup>in</sup> invoices and/or payroll records excluding Administration Fees and markups
<b>Payment</b>	Based upon direct costs incurred for Police Details after confirmation of Police Department payment.
<b>Schedule of Payment</b>	Monthly based on progress
For Police Details excluding markup and/or administration fees. Excludes charges for police details scheduled and not used by the Contractor and police details not <del>cancelled</del> <sup>per</sup> <del>cancelled</del> <u>per</u> Police Department policies. Contractor shall not receive payment for any unused portion of the contingency allowance for Materials Escalation.	

<b>ITEM 7: Owner's Contingency Allowance for Materials Escalation Price Adjustment (Statutory)</b>	
<b>Measurement</b>	Portion of Owner's contingency allowance amount authorized per Paragraph 11.02 of the General Conditions and Supplementary Conditions
<b>Payment</b>	Percent of not to exceed contingency amount authorized by Change Order
<b>Schedule of Payment</b>	Monthly as authorized by Change Order see Section 00 73 73
For price adjustments for materials escalation of Liquid Asphalt, Diesel Fuel, Gasoline, and Portland Cement per statutory requirements in accordance with Section 00 73 73. Contractor shall not receive payment for any unused portion of the contingency allowance for Materials Escalation.	

**ALTERNATE 1 – Testing and Sealing Joints (if awarded)**

<b><u>ITEM A1: Testing and Sealing Joints</u></b>	
<b><u>Measurement</u></b>	<u>Actual number of gallons of grout used for sealing joints</u>
<b><u>Payment</u></b>	<u>Unit price per gallon of grout</u>
<b><u>Schedule of Payment</u></b>	<u>Monthly based on progress</u>
<u>Material and equipment, services, installation, construction and testing associated with two part chemical grouting of joints as specified in Section 33 01 30.61 including inspection, monitoring, and recording pressure in voids. Bypass pumping and plugging or blocking of sewer flow shall be considered incidental to the Work and shall be not be measured separately for payment.</u>	

**ALTERNATE 21 - CIPP Lateral Liner – 24-inch Main Line (if awarded)**

<b><u>ITEM A1: Lateral Grouting and CIPP Lateral Liner (5 ft) in 24-inch Main Line</u></b>	
<b><u>Measurement</u></b>	<u>Actual number of laterals grouted and lined in 24-inch lateral services determined by the Engineer.</u>
<b><u>Payment</u></b>	<u>Unit price per lateral service</u>
<b><u>Schedule of Payment</u></b>	<u>Monthly based on progress</u>
<u>Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.73, including reinstating and of service connections, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the Work and shall not be measured separately for payment.</u>	

**ALTERNATE 3 - CIPP Liner and CIPP Lateral Liner – 15-inch Main Line (if awarded)**

<b><u>ITEM A3-1: 15-inch Cured in Place (CIPP) Lateral Liner</u></b>	
<b><u>Measurement</u></b>	<u>Actual number of linear feet of each pipe size lined as determined by the Engineer, measured from the interior walls of the manholes</u>
<b><u>Payment</u></b>	<u>Unit price per Linear Foot (LF)</u>
<b><u>Schedule of Payment</u></b>	<u>Monthly based on progress</u>
<u>Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.72, including reinstating and of service connections, removal and resetting of frame and cover and top portion of manhole, creating access paths, providing erosion controls, providing access mats, selective tree removal, coordination with Conservation Commission, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the work and shall not be measured separately for payment.</u>	

<b><u>ITEM A3-2: CIPP Lateral Liner (5 ft) in 15-inch Main Line</u></b>	
<b><u>Measurement</u></b>	<u>Actual number of laterals lined in 15-inch lateral services as determined by the Engineer.</u>
<b><u>Payment</u></b>	<u>Unit price per lateral service</u>
<b><u>Schedule of Payment</u></b>	<u>Monthly based on progress</u>
<u>Material and equipment, services, installation, construction and testing associated with the placement of cured-in-place pipe (CIPP) as specified in Section 33 01 30.73, including reinstating and of service connections, reporting, and other incidental Work. Bypass pumping and plugging or blocking of flow, post CCTV inspection following lining activities, and television inspection of relined pipes shall be considered incidental to the Work and shall not be measured separately for payment.</u>	

**PART 2 - PRODUCTS (not used)**

**PART 3 – EXECUTION (not used)**

**END OF SECTION**

## SECTION 33 31 15

### SANITARY UTILITY SEWERAGE PIPING CLEANING AND INSPECTION

#### PART 1 – GENERAL

##### 1.01 SUMMARY

A. Section Includes

1. Provide all labor, equipment, materials, tools, and incidentals to perform cleaning and closed circuit television (CCTV) inspection of sanitary and combined sewer lines, service laterals, including hydraulic root cutting and cleaning, grinding protruding break-in service connections, and remote televising and recording of the sewer, in accordance with this Section, the Drawings, and applicable reference standards listed in Article 1.03.

~~1.2.~~ CCTV inspection of service laterals should not exceed the limit of the Right-of-Way nor should it exceed 25 linear feet (LF).

##### 1.02 PRICE AND PAYMENT PROCURES

A. Measurement and payment requirements: per Division 01 General Requirements.

##### 1.03 REFERENCES

A. Reference Standards

1. National Association of Sewer Service Companies (NASSCO)
  - a. Jetter Code of Practice
  - b. Performance Specification Guideline for Pipe Condition Assessment Using CCTV
  - c. Performance Specification Guideline for Sewer Pipe Cleaning
  - d. Pipeline Assessment and Certification Program (PACP) Standards

##### 1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination, Sequencing, and Scheduling: per Division 01 General Requirements.

##### 1.05 SUBMITTALS

A. Submit in accordance with Division 01 General Requirements

B. Product Data

1. Description of system and equipment proposed for pipe cleaning

2. Description of system and equipment proposed for CCTV inspection after cleaning
  3. Documentation of PACP certification for CCTV software
  4. Sample inspection data and CCTV video of at least three (3) pipe segments to verify compatibility with the Owner's PACP database
- C. Qualifications Statements
1. Qualifications of the firm/personnel performing the Work including at least 5 similar reference projects with equipment specified herein and experience with CIPP technology
  2. Current PACP certifications for all CCTV operators
- D. Description of proposed procedures for removal of existing blockages in the pipeline that may be encountered during the cleaning process
- E. Closeout and Maintenance Material Submittals per Division 01 General Requirements and as follows.
1. Provide CCTV inspection data and video recordings in digital format on a portable USB hard drive and two bound hard copies.
  2. CCTV inspection reports for inspected sewer lines that include the following fields in addition to the mandatory PACP header fields.
    - a. Pipe segment reference number
    - b. Upstream and downstream manhole rim-to-invert depths
    - c. Pipe joint length
    - d. Total pipe length
    - e. Length surveyed
    - f. Still-capture photographs of significant defects
  3. A single PACP Certified Access database containing report information and defect coding for all inspected sewer lines

## 1.06 QUALITY ASSURANCE

- A. Provide in accordance with Division 01 General Requirements.
- B. Qualifications per Division 01 General Requirements and as follows:
  1. Provide that the Work specified be performed by a firm with a minimum of 10 years of experience in providing the required services. Provide that supervisory personnel have a minimum of 5 of experience in providing the

required services and with the CIPP technology and will be present at the Site during performance of services specified.

- C. If inspection videos are to be coded separately from the actual recording, both the onsite operator and the individual performing the PACP coding shall be PACP certified.

### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Provide in accordance with Division 01 General Requirements.
- B. Discharge, bypass, or flooding of sewage, cleaning water, or debris to public or private property, including ground, surrounding residences, and downstream sewer lines, is prohibited. Immediately and completely clean and repair any damage resulting from cleaning and inspection activities to the satisfaction of the Owner and Engineer.
- C. Waste Management and Disposal
  1. Store and dispose of sludge, dirt, sand, roots, rocks, grease, and other solid or semisolid materials (debris) resulting from sewer pipe cleaning and inspection in accordance with Division 01 General Requirements and applicable Laws and Regulations.
  2. Under no circumstances shall sewage solids be dumped onto the surface, street, or into ditches, inlets, or storm drains.
  3. Notify Owner and Engineer if debris accumulated during cleaning contains hazardous materials. Comply with the requirements of Paragraph 4.06 of the Standard General and Supplementary Conditions and Additional Supplementary Conditions, if any, and the General Requirements. If mutually agreed, legally dispose of hazardous material in accordance with Laws and Regulations.

### **1.08 SITE CONDITIONS**

- A. Existing Conditions: per Division 01 General Requirements.
- B. Notify the Owner immediately if the Site conditions prevent access to manholes or pipes identified as part of the Work.

## **PART 2 – PRODUCTS**

### **2.01 EQUIPMENT**

- A. Furnish and maintain, in good condition, all cleaning and televising equipment necessary for proper execution of the Work.

- B. Use the manufacturer's recommended size tools for the various size pipes. Equipment recommended by the manufacturer to protect the manhole and pipe, such as pull-in slant jack rollers and roller and yoke assembly, roller manhole jacks, etc. shall be utilized.
- C. Cleaning
1. Use either high velocity jet or mechanically powered equipment selected based on NASSCO's Jetter Code of Practice (Current Edition) and field conditions, including but not limited to: access to manholes, quantity of debris, size of sewer, and depth of flow.
  2. Use a vactor truck or other mechanical means for removal of all sludge, dirt, sand, roots, rocks, grease, and other solid or semisolid material resulting from the cleaning operation.
  3. Provide that remote grinding/cutting devices used to remove protruding service connections are specifically designed to cut/grind service connections, and capable of removing concrete, vitrified clay, PVC and other types of pipe material without damaging the service connection.
- D. TV Inspection
1. Utilize CCTV camera, monitor, and other video system components specifically designed and constructed for sewer inspection.
    - a. Lighting: suitable to allow a clear picture, with minimal reflective glare for the entire periphery of the pipe.
    - b. Operability: in 100% humidity conditions.
    - c. Video picture: high resolution in color.
  2. Provide that equipment displays and records the following data, at a minimum, for each sewer inspected.
    - a. Project identification
    - b. Date recorded
    - c. Company and personnel conducting the inspection
    - d. Sewer pipe identification (i.e. MHID# - MHID#)
    - e. Size of pipe and material
    - f. Footage counter
    - g. Location (station and clock position) of laterals
    - g-h. Location address of laterals
    - i. Location, severity and rate of observed infiltration or defects

h-j. Lateral CCTV camera should have longitude capabilities.

3. Camera: remote controlled, color pan and tilt type lens with lighting system capable of turning perpendicular to the direction of flow and rotating 360 degrees while inside the pipe, and capable of viewing a minimum service connection length of 4 feet in order to determine whether the connection is active or inactive.

## 2.02 SOURCE QUALITY CONTROL

- A. Provide in accordance with Division 01 General Requirements.

## PART 3 – EXECUTION

### 3.01 PREPARATION

- A. Remove standing water within the pipe to allow adequate cleaning and inspection. Provide that pipe flow is no more than ¼ full during cleaning and the bottom of the pipe is visible during inspection.
- B. Manage flows in the system at all times. Provide and maintain sufficient flow at all times to pass any flash of storm flow of drainage ditches and prevent any backwater flooding due to obstruction caused by cleaning and inspection equipment.

### 3.02 PIPE CLEANING

- A. Perform pipe cleaning in advance of CCTV inspection.
- B. Review previous inspection logs, if available, to identify areas that may require additional effort to cleaning
- C. Immediately notify the Owner if it is believed that the required cleaning activities will cause damage due to the existing deterioration of the host pipe. The Owner's determination whether to continue or stop work is final.
- D. Maintain detailed documentation of cleaning efforts made to remove all deposits, grease, debris, sticks, etc. that will reduce the hydraulic capacity of the sewer. Keep records of types of debris removed from each segment of pipe. Such documentation shall be made available to the Owner at any time.
- E. Acceptance by the Engineer of the cleaning results will be based on the results of CCTV inspection. If the results are unsatisfactory, repeat cleaning until accepted by the Engineer at no additional cost to the Owner.

F. Cleaning

1. Removal of Obstructions (OB) and Deposits Settled (DS). This also includes Deposits Attached Grease (DAGS) if able to remove with rotating nozzle or other mechanical means; not to include saws or cutters.
2. All debris must be removed from the sewer, including any debris that may have been washed up into any service connections (does not include known pre-existing conditions in service connections), drop connections or the bench wall of the manholes. This includes all grease, rocks, debris, sticks, etc. that will reduce the hydraulic capacity of the sewer and limit future maintenance access of remote equipment. Heaving cleaning includes an unlimited number of passes by high velocity hydro-cleaning equipment. A mechanical/hydraulic Spinner Nozzle may be used where necessary at no additional cost to the Owner; however, the Contractor shall be responsible for any damage to the sewer or any service connections. Heavy cleaning does not include cutting/grinding protruding break-in connections.

G. Root Cut

1. Root Cut Medium - Removal of Roots Medium (RM), and Root Balls (RB) in one or two joints either by pressure washing or by cutting with a remote cutter.
2. Root Cut Ball – Removal of Root Balls (RB) removed in at least 3 joints either by pressure washing or by cutting with a remote cutter.
3. The Owner shall determine if the sewer segment requires root cut cleaning. All roots must be screened, collected, and removed from the sewer for proper disposal.

H. Deposit Cut

1. Removal of Deposits Attached Encrustation (DAE) and Deposits Attached Grease (DAGS) that require a cutter to remove.
2. All debris must be removed from the sewer, including any debris that may have been washed up into any service connections (does not include known pre-existing conditions in service connections), drop connections or the bench wall of the manholes. This includes all grease, rocks, debris, sticks, etc. that will reduce the hydraulic capacity of the sewer and limit future maintenance access of remote equipment. Deposit cut cleaning includes an adequate number of passes using high velocity hydro-cleaning equipment required to produce a clean pipe suitable for televising. A mechanical/hydraulic root, chain cutter, etc. may be used where necessary at no additional cost to the Owner; however, the Contractor shall be responsible for any damage to the sewer or any service connections. Deposit

cut cleaning does not include cutting/grinding protruding break-in connections.

3. Deposit cut cleaning requires substantial effort towards cleaning, chipping, cutting, grinding, etc. to remove hardened deposits and grease. The Contractor shall use remote CCTV equipment to monitor the progress of the Work and ensure that the sewer is not damaged.
4. If attached deposits cannot be removed by tools normally used in the industry, the Owner should be consulted immediately. The Owner and the Contractor should discuss whether to cancel work on that segment.

#### I. Protruding Lateral Cut

1. Removal of protruding laterals, excludes DIP, SP, CAS etc.
2. The Owner shall determine when break-in service connections will require grinding based on review of the initial survey television inspection.
3. The protruding break-in service connection shall be cut/ground flush to the main sewer pipe without scouring or damaging the main sewer or service connection. All cuttings must be screened, collected, and removed from the sewer for proper disposal.
4. The Contractor shall use remote CCTV equipment to monitor the progress of the Work and ensure that the service connection is not damaged. Upon completion of lateral cut, the Contractor shall slowly pan the entire circumference of the trimmed connection to verify the quality of the Work.
5. Immediately notify the Owner if it is believed the pipe is not structurally sound. The Contractor and Owner should discuss the severity and risk of cutting/grinding the lateral.
6. If other than typical lateral materials are encountered, the Contractor shall notify the Owner and the Owner and Contractor should discuss the ability, costs and risks associated with cutting/grinding the lateral.

### 3.03 TELEVISION INSPECTION

- A. Perform all CCTV inspection in accordance with current PACP standards.
- B. Visually inspect pipe by means of remote CCTV and record inspection in digital format. Pause, pan, and visually inspect all service connections, pipe ends, and maintenance or structural defects. The camera must be centered in the pipe to provide accurate distance measurements to locations of features in the pipe. Identify all PACP observations via audio commentary and on PACP log.

- C. Move the camera through the pipe in either direction at a uniform rate, pausing when necessary to ensure proper identification of the pipe condition. Use manual winches, power winches, TV cable and powered rewinds or other devices to move the camera through the pipe; do not obstruct the camera view or interfere with proper documentation of the pipe condition. The speed of travel shall be slow enough to inspect each pipe joint, tee connection, structural deterioration, infiltration and inflow sources, and deposits, but should not, at any time, be faster than 30 feet per minute.
- D. If a blockage cannot be removed and hampers the inspection of the sewer in one direction, then attempt to complete the section by televising from the other manhole to complete the section. This reversal should immediately follow the initial direction. Immediately report the obstruction to the Owner and Engineer.
- E. CCTV inspections will be delivered entirely in electronic format. The entire survey shall be recorded in an approved electronic format submitted with electronic links between the data and the video. All television inspection reports shall be within two (2) feet of the measured linear footage between manholes along the existing sewer centerline from the start of the pipe to the end of the pipe. All Owner and PACP-required header information must be fully and accurately entered on all CCTV reports.

### 3.04 CLOSEOUT ACTIVITIES

- A. Provide in accordance with Division 01 General Requirements.

**END OF SECTION**