

**ADDENDUM RECEIPT**

**Addendum No:** 2

**Date:** January 3, 2019

**Project:** Gravity Sewer Rehab (2019)

**ITB WS 20-19**

**Pages to Follow:** 221

**Bidders must acknowledge receipt of all issued addenda  
by signing and dating this receipt and faxing to (850) 689-5970  
or scanning and emailing to [dmason@myokaloosa.com](mailto:dmason@myokaloosa.com)**

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
AUTHORIZED SIGNATURE

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
DATE

**It shall be the responsibility of Prime Bidders to insure that Subcontractors and/or Suppliers receive addenda which could impact their respective portions of the project. Additional instructions for addenda acknowledgement can be found in the contract documents.**

## ADDENDUM NO. 2

**TO: ALL BIDDERS**

**PROJECT: ITB WS 20-19 Gravity Sewer Rehab (2019)**

**BID TIME AND DATE: 3:00 PM CST, February 13, 2019**

**OWNER: OKALOOSA COUNTY WATER AND SEWER SYSTEM**

**January 3, 2019**

The following items are hereby incorporated into the project contract documents, plans and specifications:

### **ITEM NO. 1 – Bidding Documents**

To avoid any confusion, **only** the following documents should be used in the preparation of your bid submittal:

- The complete PDF attached to this addendum, beginning with cover page through final technical specification Section 02595 (total of 220 pages)
- Please disregard the original ITB as well as Addendum No. 1 contents as several sections are missing from the original documents. The attached document includes all sections necessary for bidding of the project and subsequent contract.

**RECEIPT OF THIS ADDENDUM SHALL BE ACKNOWLEDGED BY WRITING THIS ADDENDUM NO. AND DATE IN THE SPACE PROVIDED ON PAGE 00300-9 OF THE BID PROPOSAL.**

*DeRita Mason*  
\_\_\_\_\_  
**DeRita Mason**  
**Okaloosa County Purchasing Department**

## GRAVITY SEWER REHAB PROJECT (2019)



**BID #: ITB WS 20-19**

**BID OPENS: February 13, 2019**

## TABLE OF CONTENTS

### **DIVISION 0 - CONTRACT & BIDDING REQUIREMENTS**

00001	Invitation to Bid & Respondents Acknowledgement
00002	Notice to Respondents
00003	Bid Requirements
00004	Cooperative Pricing
00100	General Services Bid Conditions
00300	Bid Schedule
00430	Bid Bond
00451	Qualifications Statement
00520	Agreement
00550	Notice to Proceed
00625	Certificate of Substantial Completion
00700	General Conditions
00800	Supplementary Conditions
00941	Change Order
00950	Special Conditions

### **DIVISION 1 - GENERAL REQUIREMENTS**

01010	Summary of Work
01060	Regulatory Requirements
01150	Measurement and Payment
01300	Submittals
01700	Contract Closeout
01711	Clean Up
01740	Warranties & Bonds

### **DIVISION 2 - SITEWORK**

02565	Bypass Pumping
02566	Cleaning of Sewers
02567	TV Inspection of Sewers
02570	Chemical Grouting
02580	Rehabilitation of Sewers by Cured-In-Place Pipe (CIPP) Methods
02590	Manhole Lining System
02595	Installation Practice for Rehabilitation of a Sewer Service Lateral Pipe



---

INVITATION TO BID (ITB) & RESPONDENT'S ACKNOWLEDGEMENT

---

**ITB TITLE: GRAVITY SEWER REHAB  
PROJECT (2019)**

**ITB NUMBER:  
ITB WS 20-19**

---

**ISSUE DATE:**

December 26, 2018 8:00 AM CST

**MANDATORY-PRE BID MEETING:**

January 23, 2019 2:00 PM CST

**LAST DAY FOR QUESTIONS:**

January 31, 2019 3:00 PM CST

**ITB OPENING DATE & TIME:**

February 13, 2019 3:00 P.M. CT

---

**NOTE: BIDS RECEIVED AFTER THE BID OPENING DATE & TIME WILL NOT BE CONSIDERED.**

---

Okaloosa County, Florida solicits your company to submit a bid on the above referenced goods or services. All terms, specifications and conditions set forth in this ITB are incorporated into your response. A bid will not be accepted unless all conditions have been met. All bids must have an authorized signature in the space provided below. All bids must be sealed and received by the Okaloosa County Clerk of Court by the "ITB Opening Date & Time" referenced above. "ITB Number" and the "ITB Opening Date & Time". Okaloosa County is not responsible for lost or late delivery of bids by the U.S. Postal Service or other delivery services used by the respondent. Neither faxed nor electronically submitted bids will be accepted. Bids may not be withdrawn for a period of ninety (90) days after the bid opening unless otherwise specified

---

**RESPONDENT ACKNOWLEDGEMENT FORM BELOW MUST BE COMPLETED, SIGNED, AND RETURNED AS PART OF YOUR BID. BIDS WILL NOT BE ACCEPTED WITHOUT THIS FORM, SIGNED BY AN AUTHORIZED AGENT OF THE RESPONDENT.**

COMPANY NAME \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

FEDERAL EMPLOYER'S IDENTIFICATION NUMBER (FEIN): \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_ EXT: \_\_\_\_\_ FAX: \_\_\_\_\_

EMAIL: \_\_\_\_\_

---

I CERTIFY THAT THIS BID IS MADE WITHOUT PRIOR UNDERSTANDING, AGREEMENT, OR CONNECTION WITH ANY OTHER RESPONDENT SUBMITTING A BID FOR THE SAME MATERIALS, SUPPLIES, EQUIPMENT OR SERVICES, AND IS IN ALL RESPECTS FAIR AND WITHOUT COLLUSION OR FRAUD. I AGREE TO ABIDE BY ALL TERMS AND CONDITIONS OF THIS BID AND CERTIFY THAT I AM AUTHORIZED TO SIGN THIS BID FOR THE RESPONDENT.

AUTHORIZED SIGNATURE: \_\_\_\_\_ TYPED OR PRINTED NAME \_\_\_\_\_

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

---

**SECTION 00002  
NOTICE TO RESPONDENTS  
ITB WS 20-19**

Notice is hereby given that the Board of County Commissioners of Okaloosa County, FL, will accept sealed bids until **February 13, 2019, 3:00 p.m. (CST)**, for **Gravity Sewer Rehab Project (2019)**. Interested respondents desiring consideration shall provide an original and two (2) copies (total three (3)) of their Invitation to Bids (ITB) response with the respondent's areas of expertise identified. Submissions shall be portrait orientation, unbound, and 8 ½" x 11" where practical. **All originals must have original signatures in blue ink.**

**Bid Documents can be viewed at <https://www.bidnetdirect.com/florida> or at <http://www.myokaloosa.com/purchasing/home> then accessing the link "View Current Solicitations"**

A mandatory pre-bid conference is scheduled for 2:00 p.m. (CST), January 23, 2019. The conference will be held at the Okaloosa County Water & Sewer Administration Building, Small Conference Room, 1804 Lewis Turner Blvd, #300, Fort Walton Beach, Florida, 32547. You must attend this pre-bid conference in order to submit a bid.

At **3:00 p.m. (CST), February 13, 2019**, all bids will be opened and read aloud. All bids must be in sealed envelopes reflecting on the outside thereof the Respondent's name and "**Gravity Sewer Rehab Project (2019)**". The Board of County Commissioners will consider all bids properly submitted at its scheduled bid opening in the **Okaloosa County Courthouse** located at 101 E James Lee Boulevard, Room 282, Crestview, FL 32536. Bids may be submitted in the Crestview Courthouse prior to bid opening or delivered to the Okaloosa County Courthouse, 101 James Lee Boulevard, Room 282, Crestview, FL 32536. **\*\*NOTE: MUST RING DOORBELL TO GAIN ENTRANCE INTO ROOM 288. THE CLERK WILL COME ACCEPT YOUR PACKAGE OR SHOW YOU TO THE CONFERENCE ROOM FOR THE SCHEDULED BID OPENING\*\***

**NOTE: THE NEW CRESTVIEW COURTHOUSE HAS SECURITY AT ENTRY POINT-PLEASE ALLOW FOR TIME TO GET THROUGH SECURITY WHEN ARRIVING FOR THE BID OPENING.**

**NOTE: Crestview, FL is not a next day guaranteed delivery location by most delivery services.** Respondents using mail or delivery services assume all risks of late or non-delivery.

The County reserves the right to award the bid to the lowest responsive respondent and to waive any irregularity or technicality in bids received. Okaloosa County shall be the sole judge of the bid and the resulting negotiated agreement that is in its best interest and its decision shall be final.

Any Respondent failing to mark outside of the envelope as set forth herein may not be entitled to have their bid considered.

All bids should be addressed as follows:

**Gravity Sewer Rehab Project (2019)**

Clerk of Court  
BCC Records  
101 East James Lee Boulevard  
Room 288  
Crestview, FL 32536

\_\_\_\_\_  
Jeff Hyde  
Purchasing Manager

\_\_\_\_\_  
Date

OKALOOSA COUNTY  
BOARD OF COUNTY COMMISSIONERS

Graham W. Fountain  
Chairman

## **BID REQUIREMENTS**

**BID #: ITB WS 20-19**

**BID ITEM: GRAVITY SEWER REHAB PROJECT (2019)**

### **SCOPE**

This ITB includes the material, equipment, and labor services for GRAVITY SEWER REHAB PROJECT (2019) specified herein. All materials shall be manufactured within the continental United States. No substitutions will be accepted unless approved by the Purchasing and the Water & Sewer Departments.

**Note:** A list of quantities of items, outlined after the Bid Schedule, shall be used to evaluate bidder's proposal based on the unit prices provided in the official Bid Schedule. All work allocated under this Contract shall be based on the unit prices established in the Bid Schedule and Contractor will be compensated for actual work performed only. No guarantee of quantities of Work required during this Contract or Work allocated to individual Contractor(s) during the life of the Contract is provided.

Price shall be guaranteed for 90 days after the bids are read and received. Price shall include delivery of all equipment and appurtenances to the following location:

**1804 LEWIS TURNER BLVD. FORT WALTON BEACH, FL 32547**

OWNER Delivery Contact:

Mark Griffin, Okaloosa County Water & Sewer  
850-651-7176 or [mgriffin@myokaloosa.com](mailto:mgriffin@myokaloosa.com)

THE FOLLOWING MUST BE SUBMITTED WITH THE BID:

- A list of any and all exceptions to the Contract Documents.
- Any additional information requested by the OWNER.

### **TERM OF CONTRACT:**

The contract will begin when fully executed by all parties and continue for three (3) years with the option of two (2) one (1) year renewals upon mutual agreement by both parties.

## COOPERATIVE PRICING

By submitting this bid, the vendor acknowledges that their pricing shall be honored for all governmental entities located within Okaloosa County, Florida. Each entity will be allowed to independently place orders, accept delivery and arrange payment under their agency guidelines. The successful vendor understands that failure to offer pricing to all Okaloosa County governmental agencies could result in cancellation of this contract.

Coordinators for agency orders shall be:

Okaloosa County BCC	Jeff Hyde, Purchasing Manager 850-689-5960; <a href="mailto:jhyde@myokaloosa.com">jhyde@myokaloosa.com</a>
City of Ft. Walton Beach	Giuliana F. Scott, Purchasing Agent 850-833-9523; <a href="mailto:gscott@fwb.org">gscott@fwb.org</a>
City of Mary Esther	Heather Day, Finance Director 850-243-3566 x18; <a href="mailto:findir@cityofmaryesther.com">findir@cityofmaryesther.com</a>
City of Destin	Bragg Farmer, Finance Director 850-837-4242 x3146; <a href="mailto:bfarmer@cityofdestin.com">bfarmer@cityofdestin.com</a>
City of Niceville	Chad D. Morris, Purchasing/GIS Director 850-974-3833; <a href="mailto:cmorris@niceville.org">cmorris@niceville.org</a>
City of Valparaiso	Tammy Johnson, City Clerk 850-729-5402; <a href="mailto:cityclerk@valp.org">cityclerk@valp.org</a>
City of Crestview	Betsy Roy, City Clerk 850-682-1560; <a href="mailto:elizabethroy@cityofcrestview.org">elizabethroy@cityofcrestview.org</a>

## **SECTION 00100 GENERAL SERVICES BID CONDITIONS**

### **1. PRE-BID ACTIVITY -**

**Addendum** - Except as provided in this section, respondents are prohibited from contacting or lobbying the County, County Administrator, Commissioners, County staff, and Review Committee members, or any other person authorized on behalf of the County related or involved with the solicitation. All inquiries on the scope of work, specifications, additional requirements, attachments, terms and general conditions or instructions, or any issue must be directed in writing, by US mail or email to:

DeRita Mason  
Contracts and Lease Coordinator  
Okaloosa County Purchasing Department  
5479A Old Bethel Road  
Crestview, FL 32536  
(850) 689-5960  
[dmason@myokaloosa.com](mailto:dmason@myokaloosa.com)  
[vtaravella@myokaloosa.com](mailto:vtaravella@myokaloosa.com)

All questions or inquiries must be received no later than the last day for questions (reference ITB & Respondent's Acknowledgement form). Any addenda or other modification to the bid documents will be issued by the County five (5) days prior to the date and time of bid closing, as written addenda, and will be posted to <http://www.bidnetdirect.com/florida> and the Okaloosa County website at <http://www.myokaloosa.com/purchasing/home>, then accessing the link "View Current Solicitations".

Such written addenda or modification shall be part of the bid documents and shall be binding upon each respondent. Each respondent is required to acknowledge receipt of any and all addenda in writing and submit with their bid. No respondent may rely upon any verbal modification or interpretation.

- 2. PREPARATION OF BID** – The bid form is included with the bid documents. Additional copies may be obtained from the County. The respondent shall submit an original and two (2) copies {total three (3)} of the bid documents.

All blanks in the bid documents shall be completed by printing in ink or by typewriter in both words and numbers with the amounts extended, totaled and the bid signed. A bid price shall be indicated for each section, bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Bid", "No Change", or "Not Applicable" entered. No changes shall be made to the phraseology of the form or in the items mentioned therein. In case of any discrepancy between the written amount and the numerical figures, the written amount shall govern. Any bid which contains any

omissions, erasures, alterations, additions, irregularities of any kind, or items not called for which shall in any manner fail to conform to the conditions of public notice inviting bids may be rejected.

A bid submitted by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature). The official address of the partnership shall be shown below the signature.

A bid submitted by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.

A bid submitted by an individual shall show the respondent's name and official address.

A bid submitted by a joint venture shall be executed by each joint venture in the manner indicated on the bid form. The official address of the joint venture must be shown below the signature.

It is preferred that all signatures be in blue ink with the names type or printed below the signature. Okaloosa County does not accept electronic signatures.

The bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the form. The address and telephone # for communications regarding the bid shall be shown.

If the respondent is an out-of-state corporation, the bid shall contain evidence of respondent's authority and qualification to do business as an out-of-state corporation in the State of Florida in accordance with Article 3. A state contractor license # for the State of Florida shall also be included on the bid form. Respondent shall be licensed in accordance with the requirements of Chapter 489, Florida Statutes.

- 3. INTEGRITY OF BID DOCUMENTS** - Respondents shall use the original Bid documents provided by the Purchasing Department and enter information only in the spaces where a response is requested. Respondents may use an attachment as an addendum to the Bid documents if sufficient space is not available. Any modifications or alterations to the original bid documents by the respondent, whether intentional or otherwise, will constitute grounds for rejection of a bid. Any such modification or alteration that a respondent wishes to propose must be clearly stated in the respondent's response in the form of an addendum to the original bid documents.
- 4. SUBMITTAL OF BID** – A bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in an opaque sealed envelope plainly marked with the project title (and, if applicable, the designated portion of the project for which the bid is submitted), the name and address of the respondent, and shall be accompanied by the bid security and other required documents. It is the respondent's responsibility to assure that its bid is delivered

at the proper time and place. Offers by telegram, facsimile, or telephone will **NOT** be accepted.

**Note: Crestview is not a next day delivery site for overnight carriers.**

- 5. MODIFICATION & WITHDRAWAL OF BID** - A bid may be modified or withdrawn by an appropriate document duly executed in the manner that a bid must be executed and delivered to the place where bids are to be submitted prior to the date and time for the opening of bids.

If within 24 hours after bids are opened any respondent files a duly signed written notice with the County and promptly thereafter demonstrates to the reasonable satisfaction of the County that there was a material substantial mistake in the preparation of its bid, that respondent may withdraw its bid, and the bid security may be returned. Thereafter, if the work is rebid, that respondent will be disqualified from 1) further bidding on the work, and 2) doing any work on the contract, either as a subcontractor or in any other capacity.

- 6. BIDS TO REMAIN SUBJECT TO ACCEPTANCE** – All bids will remain subject to acceptance or rejection for ninety (90) calendar days after the day of the bid opening, but the County may, in its sole discretion, release any bid and return the bid security prior to the end of this period.
- 7. IDENTICAL TIE BIDS** - In case of identical procurement responses, the award shall be determined either by lot or on the basis of factors deemed to serve the interest of the County. In the case of the latter, there must be adequate documentation to support such a decision
- 8. CONDITIONAL & INCOMPLETE BIDS** - Okaloosa County specifically reserves the right to reject any conditional bid and bids which make it impossible to determine the true amount of the bid.
- 9. BID PRICE** – The bid price shall include all equipment, labor, materials, permit(s), freight, taxes, required insurance, Public Liability, Property Damage and Workers' Compensation, etc. to cover the finished work called for.
- 10. ADDITION/DELETION OF ITEM** – The County reserves the right to add or delete any item from this bid or resulting contract when deemed to be in the County's best interest.
- 11. SPECIFICATION EXCEPTIONS** – Specifications are based on the most current literature available. Respondent shall clearly list any change in the manufacturer's specifications which conflict with the bid specifications. Respondent must also explain any deviation from the bid specification in writing, as a foot note on the applicable bid page and enclose a copy of the manufacturer's specifications data detailing the changed item(s) with their bid. Failure of the respondent to comply with these provisions will result in respondents being held responsible for all costs required to bring the equipment in compliance with bid specifications.

**12. APPLICABLE LAWS & REGULATIONS** – All applicable Federal and State laws, County and municipal ordinances, orders, rules and regulations of all authorities having jurisdiction over the project shall apply to the bid throughout, and they will be deemed to be included in the contract the same as though they were written in full therein.

**13. DISQUALIFICATION OF RESPONDENTS** - Any of the following reasons may be considered as sufficient for the disqualification of a respondent and the rejection of its bid:

- a. Submission of more than one proposal for the same work from an individual, firm or corporation under the same or different name.
- b. Evidence that the respondent has a financial interest in the firm of another respondent for the same work.
- c. Evidence of collusion among respondents. Participants in such collusion will receive no recognition as respondents for any future work of the County until such participant has been reinstated as a qualified respondent.
- d. Uncompleted work which in the judgment of the County might hinder or prevent the prompt completion of additional work if awarded.
- e. Failure to pay or satisfactorily settle all bills due for labor and material on former contracts in force at the time of advertisement of proposals.
- f. Default under previous contract.
- g. Listing of the respondent by any Local, State or Federal Government on its barred/suspended vendor list.

**14. AWARD OF BID**

- A. **Okaloosa County Review** - Okaloosa County designated Staff will review all bids and will participate in the Recommendation to Award.
- B. The County will award the bid to the lowest respondent, and the County reserves the right to award the bid to the respondent submitting a responsive bid with a resulting negotiated agreement which is most advantageous and in the best interest of the County, and to reject any and all bids or to waive any irregularity or technicality in bids received. Okaloosa County shall be the sole judge of the bid and the resulting negotiated agreement that is in its best interest and its decision shall be final.
- C. Okaloosa County reserves the right to waive any informalities or reject any and all bids, in whole or part, to utilize any applicable state contracts in lieu of or in

addition to this bid and to accept the bid that in its judgment will best serve the interest of the County.

- D. Okaloosa County specifically reserves the right to reject any conditional bids and will normally reject those which made it impossible to determine the true amount of the bid. Each item must be bid separately and no attempt is to be made to tie any item or items to any other item or items.
- 15. WARRANTY** – (The warranty will be in the name of Okaloosa County) Warranty work specified herein is for defects in materials and in labor and workmanship. State the manufacturer’s warranty with your bid.
- 16. PAYMENTS** – The respondent shall be paid upon submission of invoices and approval of acceptance by Okaloosa County Board of County Commissioners, Finance Office, 302 N. Wilson St., #203, Crestview FL 32536, for the prices stipulated herein for articles delivered and accepted. Invoices must show Contract #.
- 17. DISCRIMINATION** - An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.
- 18. PUBLIC ENTITY CRIME INFORMATION** - Pursuant to Florida Statute 287.133, a respondent may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. [287.017](#) for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.
- 19. CONFLICT OF INTEREST** - The award hereunder is subject to the provisions of Chapter 112, Florida Statutes. All respondents must disclose with their bids the name of any officer, director, or agent who is also a public officer or an employee of the Okaloosa Board of County Commissioners, or any of its agencies. Furthermore, all respondents must disclose the name of any County officer or employee who owns, directly or indirectly, an interest of five percent (5%) or more in the firm or any of its branches.
- Note: For respondent’s convenience, this certification form is enclosed and is made a part of the bid package.**
- 20. REORGANIZATION OR BANKRUPTCY PROCEEDINGS** – Bids will not be considered from respondents who are currently involved in official financial reorganization or bankruptcy proceedings.

**21. INVESTIGATION OF RESPONDENT** – The County may make such investigations, as it deems necessary to determine the stability of the respondent to perform the work and that there is no conflict of interest as it relates to the project. The respondent shall furnish to the Owner any additional information and financial data for this purpose as the County may request.

**22. AUTHORITY TO PIGGYBACK** - All respondents submitting a response to this Request for Bid agree that such response also constitutes a bid to all governmental agencies under the same conditions, for the same contract price, and for the same effective period as this bid, should the respondent feel it is in their best interest to do so.

Each governmental agency desiring to accept these bids and make an award thereof shall do so independently of any other governmental agency. Each agency shall be responsible for its own purchases and each shall be liable only for materials and/or services ordered and received by it, and no agency assumes any liability by virtue of this bid.

This agreement in no way restricts or interferes with the right of any governmental agency to bid any or all items.

**23. CONE OF SILENCE** - The Okaloosa County Board of County Commissioners has established a solicitation silence policy (**Cone of Silence**) that prohibits oral and written communication regarding all formal solicitations for goods and services (formal proposals, Request for Proposals, Requests for Qualifications) issued by the Board through the County Purchasing Department. The period commences from the date of advertisement until award of contract.

**Note: For respondent's convenience, this certification form is enclosed and is made a part of the bid package.**

**24. REVIEW OF PROCUREMENT DOCUMENTS** - Per Florida Statute 119.071(1)(b) 2 sealed bids, proposals, or replies received by the County pursuant to a competitive solicitation are exempt from public disclosure until such time as the County provides notice of an intended decision or until 30 days after opening the bids, proposals, or final replies, whichever is earlier.

**25. COMPLIANCE WITH FLORIDA STATUTE 119.0701** - The Respondent shall comply with all the provisions of section 119.0701, Florida Statutes relating to the public records which requires, among other things, that the Respondent: (a) Keep and maintain public records; (b) Provide the public with access to public records on the same terms and conditions that the public agency would provide the records; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) Meet all requirements for retaining public records and transfer, at no cost, to the public agency all public records in possession of the respondent upon termination of the contract.

**26. PROTECTION OF RESIDENT WORKERS** – The Okaloosa County Board of County Commissioners actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verifications, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verifications. The respondent shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment. Okaloosa County reserves the right to request documentation showing compliance with the requirements.

Respondents doing construction business with Okaloosa County are required to use the Federal Government Department of Homeland Security's website and use the E-Verify Employment Eligibility Verifications System to confirm eligibility of all employees to work in the United States.

**27. SUSPENSION OR TERMINATION FOR CONVENIENCE** - The County may, at any time, without cause, order Respondent in writing to suspend, delay or interrupt the work in whole or in part for such period of time as the County may determine, or to terminate all or a portion of the Contract for the County's convenience. Upon such termination, the Contract Price earned to the date of termination shall be paid to Respondent, but Respondent waives any claim for damages, including loss of profits arising out of or related to the early termination. Those Contract provisions which by their nature survive final acceptance shall remain in full force and effect. If the County orders a suspension, the Contract price and Contract time may be adjusted for increases in the cost and time caused by suspension, delay or interruption. No adjustment shall be made to the extent that performance is, was or would have been so suspended, delayed or interrupted by reason for which Respondent is responsible; or that an equitable adjustment is made or denied under another provision of this Contract.

**28. FAILURE OF PERFORMANCE/DELIVERY** - In case of default by the respondent, the County after due notice (oral or written) may procure the necessary supplies or services from other sources and hold the respondent responsible for difference in cost incurred. Continuous instances of default shall result in cancellation of the award and removal of the respondent from the bid list for duration of one (1) year, at the option of the County.

**29. AUDIT** - If requested, respondent shall permit the County or an authorized, independent audit agency to inspect all data and records of respondent relating to its performance and its subcontracts under this bid from the date of the award through and until the expiration of contract.

**30. EQUAL EMPLOYMENT OPPORTUNITY; NON DISCRIMINATION** – Respondent will not discriminate against any employee or an applicant for employment

because of race, color, religion, gender, sexual orientation, national origin, age, familial status or handicap.

**31. NON-COLLUSION** – Respondent certifies that it has entered into no agreement to commit a fraudulent, deceitful, unlawful or wrongful act, or any act which may result in an unfair advantage over other respondents. See Florida Statute 838.22.

**32. UNAUTHORIZED ALIENS/PATRIOT’S ACT** – The knowing employment by respondent or its subcontractors of any alien not authorized to work by the immigration laws is prohibited and shall be a default of the contract. In the event that the respondent is notified or becomes aware of such default, the respondent shall take steps as are necessary to terminate said employment with 24 hours of notification or actual knowledge that an alien is being employed. Respondent’s failure to take such steps as are necessary to terminate the employment of any said alien within 24 hours of notification or actual knowledge that an alien is being employed shall be grounds for immediate termination of the contract. Respondent shall take all commercially reasonable precautions to ensure that it and its subcontractors do not employ persons who are not authorized to work by the immigration laws.

**33. BID DOCUMENTS - The following documents are to be submitted with the proposal packet. Failure to submit all required documents might result in your submittal being deemed non-responsive:**

- A. Exhibit “B”-General Grant Funding Special Proposal Conditions
- B. Drug-Free Workplace Certification Form
- C. Conflict of Interest
- D. Federal E-Verify
- E. Cone of Silence
- F. Indemnification and Hold Harmless
- G. Certification Regarding Lobbying Proposal Sheet
- H. Company Data
- I. System of Awards Management
- J. List of Subcontractors
- K. Bid Schedule/Bid Evaluation
- L. Addendum Acknowledgement (pg 00300-10)
- M. Bid Bond
- N. Qualifications Statement
- O. Schedule A, B and C

## **EXHIBIT B**

### **GENERAL GRANT FUNDING SPECIAL PROPOSAL CONDITIONS**

This solicitation may be fully or partially Grant funded. Respondents shall comply with the clauses as enumerated below.

1. **Drug Free Workplace Requirements:** Drug-free workplace requirements in accordance with Drug Free Workplace Act of 1988 (Pub l 100-690, Title V, Subtitle D) All contractors entering into Federal funded contracts over \$100,000 must comply with Federal Drug Free workplace requirements as Drug Free Workplace Act of 1988.
2. **Contractor Compliance:** The contractor shall comply with all uniform administrative requirements, cost principles, and audit requirements for federal awards.
3. **Conflict of Interest:** The contractor must disclose in writing any potential conflict of interest to the County or pass-through entity in accordance with applicable Federal policy.
4. **Mandatory Disclosures:** The contractor must disclose in writing all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award.
5. **Utilization of Minority and Women Firms (M/WBE):** The contractor must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible, in accordance with 2CFR 200.321. If subcontracts are to be let, prime contractor will require compliance by all sub-contractors. Prior to contract award, the contractor shall document efforts to utilize M/WBE firms including what firms were solicited as suppliers and/or subcontractors as applicable and submit this information with their bid submittal. Information regarding certified M/WBE firms can be obtained from:
  - Florida Department of Management Services (Office of Supplier Diversity)
  - Florida Department of Transportation
  - Minority Business Development Center in most large cities and
  - Local Government M/DBE programs in many large counties and cities
6. **Equal Employment Opportunity:** (As per Executive Order 11246) The contractor may not discriminate against any employee or applicant for employment because of age, race, color, creed, sex, disability or national origin. The contractor agrees to take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their age, race, color, creed, sex, disability or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship.
7. **Davis-Bacon Act:** If applicable to this contract, the contractor agrees to comply with all provisions of the Davis Bacon Act as amended (40 U.S.C. 3141-3148). Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. If the grant award contains Davis Bacon provisions, the County will place a copy of the

current prevailing wage determination issued by the Department of Labor in the solicitation document. The decision to award a contract shall be conditioned upon the acceptance of the wage determination.

8. **Copeland Anti Kick Back Act**: If applicable to this contract, contractors shall comply with all the requirements of 18 U.S.C. § 874, 40 U.S.C. § 3145, 29 CFR Part 3 which are incorporated by reference to this contract. Contractors are prohibited from inducing by any means any person employed in the construction, completion or repair of public work to give up any part of the compensation to which he or she is otherwise entitled.
9. **Contract Work Hours and Safety Standards Act** (40 U.S.C. 3701–3708): Where applicable, all contracts awarded in excess of \$100,000 that involve the employment of mechanics or laborers must be in compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor is required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.
10. **Clean Air Act (42 U.S.C. 7401–7671q.)** and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387): as amended—The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
11. **Debarment and Suspension** (Executive Orders 12549 and 12689): A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension. SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The contractor shall certify compliance. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions and subcontracts.
12. **Byrd Anti-Lobbying Amendment** (31 U.S.C. 1352): Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. The contractor shall certify compliance.

13. **Rights to Inventions Made Under a Contract or Agreement:** If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

14. **Procurement of Recovered Materials:** Contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

15. **Access to Records and Reports:**

Contractor will make available to the County’s granting agency, the granting agency’s Office of Inspector General, the Government Accountability Office, the Comptroller General of the United States, Okaloosa County, Okaloosa County Clerk of Court’s Inspector General, or any of their duly authorized representatives any books, documents, papers or other records, including electronic records, of the contractor that are pertinent to the County’s grant award, in order to make audits, investigations, examinations, excerpts, transcripts, and copies of such documents. The right also includes timely and reasonable access to the contractor’s personnel during normal business hours for the purpose of interview and discussion related to such documents. This right of access shall continue as long as records are retained.

16. **Record Retention:**

Contractor will retain of all required records pertinent to this contract for a period of three years, beginning on a date as described in 2 C.F.R. §200.333 and retained in compliance with 2 C.F.R. §200.333.

17. **Federal Changes:** Contractor shall comply with all applicable Federal agency regulations, policies, procedures and directives, including without limitation those listed directly or by reference, as they may be amended or promulgated from time to time during the term of the contract.

18. **Termination for Default (Breach or Cause):**

Contracts in excess of \$10,000 – If Contractor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services, the Contractor fails to perform in the manner called for in the contract, or if the Contractor fails to comply with any other provisions of the contract, the County may terminate the contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Contractor is in default. The contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

19. **Safeguarding Personal Identifiable Information**

Contractor will take reasonable measures to safeguard protected personally identifiable information and other information designated as sensitive by the awarding agency or is considered sensitive consistent with applicable Federal, state and/or local laws regarding privacy and obligations of confidentiality.

20. **Prohibition on utilization of cost plus a percentage of cost contracts:** The County will not award contracts containing Federal funding on a cost plus percentage of cost basis.

21. **Prohibition on utilization of time and material type contracts:** The County will not award contracts based on a time and material basis if the contract contains Federal funding.

22. **Disputes:** Any dispute arising under this Agreement which is not settled by Agreement of the parties may be settled by mediation, arbitration, or other appropriate legal proceedings. Pending any decision, appeal or judgment in such proceedings or the settlement of any dispute arising under this Agreement, shall proceed diligently with the performance of this Agreement in accordance with the decision of the County. This Agreement shall be construed under the laws of the State of Florida, and venue for any actions arising out of this Agreement shall be in the Circuit Court of Okaloosa County.

23. **Energy Policy and Conservation Act (43 U.S.C.§6201)**

All contracts except micro-purchases (\$3000 or less, except for construction contracts over \$2000). Contracts shall comply with mandatory standards and policies relating to energy efficiency, stating in the state energy conservation plan issued in compliance with the Energy Policy and Conservation act. (Pub. L. 94-163, 89 Stat. 871) [53 FR 8078, 8087, Mar. 11, 1988, as amended at 60 FR 19639, 19645, Apr. 19, 1995].

---

---

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above requirements.

DATE \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

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

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

E-MAIL: \_\_\_\_\_

PHONE NO. \_\_\_\_\_

**Exhibit "C"**

**Standard Contract Clauses**

**Title VI Clauses for Compliance with Nondiscrimination Requirements**

**Compliance with Nondiscrimination Requirements**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts And Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Nondiscrimination Acts And Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts And Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
  - a. Withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

## **Title VI List of Pertinent Nondiscrimination Acts and Authorities**

### **Title VI List of Pertinent Nondiscrimination Acts and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;

- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

**FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)**

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.

The [*contractor / consultant*] has full responsibility to monitor compliance to the referenced statute or regulation. The [*contractor / consultant*] must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division

**OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

**E-VERIFY**

Enrollment and verification requirements.

- (1) If the Contractor is not enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall-
  - a. Enroll. Enroll as a Federal Contractor in the E-Verify Program within thirty (30) calendar days of contract award;

- b. Verify all new employees. Within ninety (90) calendar days of enrollment in the E-Verify program, begin to use E-Verify to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); and,
  - c. Verify employees assigned to the contract. For each employee assigned to the contract, initiate verification within ninety (90) calendar days after date of enrollment or within thirty (30) calendar days of the employee's assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section.)
- (2) If the Contractor is enrolled as a Federal Contractor in E-Verify at time of contract award, the Contractor shall use E-Verify to initiate verification of employment eligibility of
- a. All new employees.
    - i. Enrolled ninety (90) calendar days or more. The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); or
    - b. Enrolled less than ninety (90) calendar days. Within ninety (90) calendar days after enrollment as a Federal Contractor in E-Verify, the Contractor shall initiate verification of all new hires of the contractor, who are working in the United States, whether or not assigned to the contract, within three (3) business days after the date of hire (but see paragraph (b)(3) of this section); or
      - ii. Employees assigned to the contract. For each employee assigned to the contract, the Contractor shall initiate verification within ninety (90) calendar days after date of contract award or within thirty (30) days after assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section.)
- (3) If the Contractor is an institution of higher education (as defined at 20 U.S.C. 1001(a)); a State of local government or the government of a Federally recognized Indian tribe, or a surety performing under a takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements of (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.
- (4) Option to verify employment eligibility of all employees. The Contractor may elect to verify all existing employees hired after November 6, 2986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986 (after November 27, 2009, in the Commonwealth of the Northern Mariana Islands), within one hundred eighty (180) calendar days of-

- i. Enrollment in the E-Verify program; or
  - ii. Notification to E-Verify Operations of the Contractor's decision to exercise this option, using the contract information provided in the E-Verify program Memorandum of Understanding (MOU)
- (5) The Contractor shall comply, for the period of performance of this contract, with the requirements of the E-Verify program MOU.

i. The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the E-Verify system in accordance with the terms of the MOU. In such case, the Contractor, will be referred to a suspension or debarment official.

ii. During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in E-Verify.

iii. Web site. Information on registration for and use of the E-Verify program can be obtained via the Internet at the Department of Homeland Security Web site: <http://www.dhs.gov/E-Verify>.

Individuals previously verified. The Contractor is not required by this clause to perform additional employment verification using E-Verify for any employee-

- (a) Whose employment eligibility was previously verified by the Contractor through the E-Verify program;
- (b) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or
- (c) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD)-12. Policy for a Common Identification Standard for Federal Employees and Contractors.

Subcontracts. The Contractor shall include the requirements of this clause, including this paragraph € (appropriately modified for identification of the parties in each subcontract that-

- (1) Is for-(i) Commercial and noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or
- (ii) Construction;
- (2) Has a value of more than \$3,500; and
- (3) Includes work performed in the United States.

**DRUG-FREE WORKPLACE CERTIFICATION**

THE BELOW SIGNED RESPONDENT CERTIFIES that it has implemented a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under quote a copy of the statement specified in subsection 1.
4. In the statement specified in subsection 1, notify the employees that, as a condition of working on the commodities or contractual services that are under quote, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893, Florida Statutes, or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in, drug abuse assistance or rehabilitation program if such is available in employee's community, by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

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

SIGNATURE: \_\_\_\_\_

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

NAME: \_\_\_\_\_  
(Typed or Printed)

ADDRESS: \_\_\_\_\_

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

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

E-MAIL: \_\_\_\_\_

PHONE NO.: \_\_\_\_\_

## CONFLICT OF INTEREST DISCLOSURE FORM

For purposes of determining any possible conflict of interest, all respondents, must disclose if any Okaloosa Board of County Commissioner, employee(s), elected officials(s), or if any of its agencies is also an owner, corporate officer, agency, employee, etc., of their business.

Indicate either “yes” (a county employee, elected official, or agency is also associated with your business), or “no”. If yes, give person(s) name(s) and position(s) with your business.

YES \_\_\_\_\_

NO \_\_\_\_\_

**NAME(S)**

**POSITION(S)**

---

---

---

---

FIRM NAME: \_\_\_\_\_

BY (PRINTED): \_\_\_\_\_

BY (SIGNATURE): \_\_\_\_\_

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

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

PHONE NO. \_\_\_\_\_

E-MAIL \_\_\_\_\_

DATE \_\_\_\_\_

**FEDERAL E-VERIFY COMPLIANCE CERTIFICATION**

In accordance with Okaloosa County Policy and Executive Order Number 11-116 from the office of the Governor of the State of Florida, Respondent hereby certifies that the U.S. Department of Homeland Security’s E-Verify system will be used to verify the employment eligibility of all new employees hired by the respondent during the contract term, and shall expressly require any subcontractors performing work or providing services pursuant to the contact to likewise utilize the U.S. Department of Homeland Securities E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term; and shall provide documentation such verification to the COUNTY upon request.

---

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above requirements.

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

SIGNATURE: \_\_\_\_\_

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

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

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

\_\_\_\_\_

E-MAIL: \_\_\_\_\_

PHONE NO.: \_\_\_\_\_



## **INDEMNIFICATION AND HOLD HARMLESS**

Respondent shall indemnify and hold harmless the County, its officers and employees from liabilities, damages, losses, and costs including but not limited to reasonable attorney fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Respondent and other persons employed or utilized by the Respondent in the performance of this Agreement.

\_\_\_\_\_  
Respondent's Company Name

\_\_\_\_\_  
Authorized Signature – Manual

\_\_\_\_\_  
Physical Address

\_\_\_\_\_  
Authorized Signature – Typed

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
Title

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
FAX Number

\_\_\_\_\_  
Cellular Number

\_\_\_\_\_  
After-Hours Number(s)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Email

**LOBBYING**

**31 U.S.C. 1352, 49 CFR Part 19, 49 CFR Part 20**

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

*(To be submitted with each bid or offer exceeding \$100,000)*

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*.)]
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, \_\_\_\_\_, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

\_\_\_\_\_ Signature of Contractor's Authorized Official

\_\_\_\_\_ Name and Title of Contractor's Authorized Official

\_\_\_\_\_ Date

**COMPANY DATA**

Respondent's Company Name: \_\_\_\_\_

Physical Address & Phone #: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contact Person (Typed-Printed): \_\_\_\_\_

Phone #: \_\_\_\_\_

Cell #: \_\_\_\_\_

Federal ID or SS #: \_\_\_\_\_

DUNNS/SAM #: \_\_\_\_\_

Respondent's License #: \_\_\_\_\_

Fax #: \_\_\_\_\_

Emergency #'s After Hours,  
Weekends & Holidays: \_\_\_\_\_

## System for Award Management (Oct 2016)

(a) Definitions. As used in this provision.

“Electronic Funds Transfer (EFT) indicator” means a four-character suffix to the unique entity identifier. The suffix is assigned at the discretion of the commercial, nonprofit, or Government entity to establish additional System for Award Management records for identifying alternative EFT accounts (see [subpart 32.11](#)) for the same entity.

“Registered in the System for Award Management (SAM) database” means that:

(1) The Offeror has entered all mandatory information, including the unique entity identifier and the EFT indicator, if applicable, the Commercial and Government Entity (CAGE) code, as well as data required by the Federal Funding Accountability and Transparency Act of 2006 (see [subpart 4.14](#)) into the SAM database;

(2) The offeror has completed the Core, Assertions, and Representations and Certifications, and Points of Contact sections of the registration in the SAM database;

(3) The Government has validated all mandatory data fields, to include validation of the Taxpayer Identification Number (TIN) with the Internal Revenue Service (IRS). The offeror will be required to provide consent for TIN validation to the Government as a part of the SAM registration process; and

(4) The Government has marked the record “Active”.

“Unique entity identifier” means a number or other identifier used to identify a specific commercial, nonprofit, or Government entity. See [www.sam.gov](http://www.sam.gov) for the designated entity for establishing unique entity identifiers.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee shall be registered in the SAM database prior to award, during performance, and through final payment of any contract, basic agreement, basic ordering agreement, or blanket purchasing agreement resulting from this solicitation.

(2) The Offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation “Unique Entity Identifier” followed by the unique entity identifier that identifies the Offeror’s name and address exactly as stated in the offer. The Offeror also shall enter its EFT indicator, if applicable. The unique entity identifier will be used by the Contracting Officer to verify that the Offeror is registered in the SAM database.

(c) If the Offeror does not have a unique entity identifier, it should contact the entity designated at [www.sam.gov](http://www.sam.gov) for establishment of the unique entity identifier directly to obtain one. The Offeror should be prepared to provide the following information:

- (1) Company legal business name.
- (2) Tradestyle, doing business, or other name by which your entity is commonly recognized.
- (3) Company Physical Street Address, City, State, and Zip Code.
- (4) Company Mailing Address, City, State and Zip Code (if separate from physical).
- (5) Company telephone number.
- (6) Date the company was started.
- (7) Number of employees at your location.
- (8) Chief executive officer/key manager.
- (9) Line of business (industry).
- (10) Company Headquarters name and address (reporting relationship within your entity).

(d) If the Offeror does not become registered in the SAM database in timely manner, the Contracting Officer may proceed to award to the next otherwise successful registered Offeror.

(e) Processing time, which normally takes 48 hours, should be taken into consideration when registering. Offerors who are not registered should consider applying for registration immediately upon receipt of this solicitation.

(f) Offerors may obtain information on registration at <https://www.acquisition.gov> .

Offerors SAM information:

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

Entity Address: \_\_\_\_\_

Duns Number: \_\_\_\_\_

CAGE Code: \_\_\_\_\_

## **LIST OF SUBCONTRACTORS**

The BIDDER expressly agrees that:

1. If awarded the contract as a result of the proposal, the subcontractors used in the prosecution of the work will be those listed below.
2. The following list includes all subcontractors who will perform work on this project.
3. The subcontractors listed below are financially responsible and are qualified to do the work required.
4. Use of any of the subcontractors is subject to the approval of the County and Engineer.

<b>CATEGORY</b>	<b>NAME OF SUBCONTRACTOR</b>	<b>ADDRESS</b>

\_\_\_\_\_  
CONTRACTOR'S NAME

\_\_\_\_\_  
AUTHORIZED SIGNATURE

\_\_\_\_\_  
TITLE

## Section 00300 BID SCHEDULE

**BID #: ITB WS 20-19**

**BASE BID (Item 1-104) – GRAVITY SEWER REHAB PROJECT (2019)**

Item #		Unit	UNIT PRICE
	<b>Mobilization Services - Pipe Lining/Grouting</b>		
1	Up to \$30,000 per Work Order	EA	
2	\$30,001 to \$60,000 per Work Order	EA	
3	\$60,001 and Up per Work Order	EA	
	<b>Mobilization Services - WW Structure Lining or CCTV</b>		
4	Up to \$30,000 per Work Order	EA	
5	\$30,001 to \$60,000 per Work Order	EA	
6	\$60,001 and Up per Work Order	EA	
7	Flagmen	Per Hour	
	<b>Cured in Place Pipe</b>		
8	8" x 6mm, Up to 26' Deep	LF	
9	10" x 6mm, Up to 26' Deep	LF	
10	12" x 6 mm, Up to 16' Deep	LF	
11	12" x 7.5mm, 16'-26' Deep	LF	
12	15" x 6mm, Up to 8' Deep	LF	
13	15" x 7.5mm, 8'-12' Deep	LF	
14	15" x 9mm, 12'-26' Deep	LF	
15	18" x 7.5mm, Up to 12' Deep	LF	
16	18" x 9mm, 12'-20' Deep	LF	
17	18" x 10.5mm, 20'-26' Deep	LF	
18	21" x 9mm, Up to 12' Deep	LF	
19	21" x 10.5mm, 12'-20' Deep	LF	
20	21" x 12mm, 20'-26' Deep	LF	
21	24" x 9mm, Up to 12' Deep	LF	
22	24" x 12mm, 12'-20' Deep	LF	
23	24" x 13.5mm, 20'-26' Deep	LF	
24	27" x 10.5mm, Up to 12' Deep	LF	
25	27" x 13.5mm, 12'-20' Deep	LF	
26	27" x 15mm, 20'-26' Deep	LF	
27	30" x 12mm, Up to 12' Deep	LF	
28	30" x 15mm, 12'-20' Deep	LF	
29	30" x 16.5mm, 20'-26' Deep	LF	

30	36" x 12mm, Up to 12' Deep	LF	
31	36" x 13.5mm, 12'-20' Deep	LF	
32	36" x 15mm, 20'-26' Deep	LF	
33	Remote Cutting of Branch Sewer Service Connection	EA	
34	Remote Removal of Protruding Service Lateral	EA	
	<b>CCTV and Cleaning</b>		
35	Root Removal in 8" and 10" WW or SW Sewers	LF	
36	Root Removal in 12" and 15" WW or SW Sewers	LF	
37	Root Removal in 18" and 21" WW or SW Sewers	LF	
38	Root Removal in 24" WW or SW Sewers	LF	
39	Root Removal in 27" WW or SW Sewers	LF	
40	Root Removal in 30" WW or SW Sewers	LF	
41	Root Removal in 36" WW or SW Sewers	LF	
42	TV Inspection of 6"-12" WW or SW Sewers	LF	
43	TV Inspection of 15"-21" WW or SW Sewers	LF	
44	TV Inspection of 24"-36" WW or SW Sewers	LF	
45	Additional Setup for TV Inspection	EA	
46	Normal Cleaning, 8" and 10" WW or SW Sewers	LF	
47	Heavy Cleaning, 8" and 10" WW or SW Sewers	LF	
48	Normal Cleaning, 12" and 15" WW or SW Sewers	LF	
49	Heavy Cleaning, 12" and 15" WW or SW Sewers	LF	
50	Normal Cleaning, 18" and 21" WW or SW Sewers	LF	
51	Heavy Cleaning, 18" and 21" WW or SW Sewers	LF	
52	Normal Cleaning, 24" WW or SW Sewers	LF	
53	Heavy Cleaning, 24" WW or SW Sewers	LF	
54	Normal Cleaning, 27" WW or SW Sewers	LF	
55	Heavy Cleaning, 27" WW or SW Sewers	LF	
56	Normal Cleaning 30" WW or SW Sewers	LF	
57	Heavy Cleaning 30" WW or SW Sewers	LF	
58	Normal Cleaning, 36" WW or SW Sewers	LF	
59	Heavy Cleaning, 36" WW or SW Sewers	LF	
	<b>Bypass Pumping</b>		
60	Bypassing Setup for Each 3" Pump	EA	
61	Bypassing Setup for Each 4" Pump	EA	
62	Bypassing Setup for Each 6" Pump	EA	
63	Bypassing Setup for Each 8" Pump	EA	
64	Bypassing Setup for Each 3" Pump	Per Hour	
65	Bypassing Setup for Each 4" Pump	Per Hour	
66	Bypassing Setup for Each 6" Pump	Per Hour	
67	Bypassing Setup for Each 8" Pump	Per Hour	

	<b>Manhole/Wet Well Rehabilitation</b>		
68	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs 6' or less deep	VF	
69	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 6' up to 8' deep or less	VF	
70	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 8' up to 10' deep or less	VF	
71	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 10' up to 12' deep or less	VF	
72	Cementitious Underlayment (1/2" increments) for Structural Rehab of greater than 4' Diameter MHs and WWs	SF	
73	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) 6' deep or less	VF	
74	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) greater than 6' up to 8' deep or less	VF	
75	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) greater than 8' up to 10' deep or less	VF	
76	Polymer/Epoxy System Lining of 4' Diameter MHs (250 mil minimum) greater than 10' up to 12' deep or less	VF	
77	Polymer/Epoxy System Lining of greater than 4' Diameter (250 mil minimum) MHs and WWs	SF	
78	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) 6' deep or less	VF	
79	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 6' up to 8' deep or less	VF	
80	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 8' up to 10' deep or less	VF	
81	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 10' up to 12' deep or less	VF	

82	Additional Cost for Polymer/Epoxy System Lining of greater than 4' diameter (Additional 100 mils) MHs and WWs	SF	
83	Concrete for rebuilding of Existing bench and invert of MHs	CY	
84	Removal of Existing HDPE Lining of MHs or WWs	SF	
85	Removal of Existing Polymer/Epoxy Lining of MHs or WWs	SF	
86	Bench and Invert Repair 48" MH	EA	
87	Bench and Invert Repair 60" MH	EA	
88	Bench and Invert Repair 72" MH	EA	
89	Soil Stabilization of Manhole Exterior - Grout	GAL	
<b>Grouting</b>			
90	8" Mainline Grout (up to 5 gal)	EA	
91	10" Mainline Grout (up to 5 gal)	EA	
92	12" Mainline Grout (up to 5 gal)	EA	
93	15" Mainline Grout (up to 5 gal)	EA	
94	18" Mainline Grout (up to 5 gal)	EA	
95	Lateral Connection Grout on 8" main (up to 5 gal)	EA	
96	Lateral Connection Grout on 10" main (up to 5 gal)	EA	
97	Lateral Connection Grout on 12" main (up to 5 gal)	EA	
98	Lateral Connection Grout on 15" main (up to 5 gal)	EA	
99	Lateral Connection Grout on 18" main (up to 5 gal)	EA	
100	Cost/Gallon of grout in excess of 5 gal	GAL	
<b>Lateral Lining</b>			
101	Lateral Liner up to 3' long (ASTM 2561) 8" main	EA	
102	Lateral Liner up to 3' long (ASTM 2561) 10" main	EA	
103	Lateral Liner up to 3' long (ASTM 2561) 12" main	EA	
104	Cost/Additional Length of lateral liner (4 or 6" service)	LF	

**Proposal Evaluation** - The following list of quantities of items shall be used to evaluate bidder's proposal based on the unit prices provided in the bid schedule above. All work allocated under this Contract shall be based on the unit prices established in the bid schedule and Contractor will be compensated for actual work performed only. No guarantee of quantities of Work required during this Contract or Work allocated to individual Contractor(s) during the life of the Contract is provided.

Item #	QUANTITIES FOR BID EVALUATION	Unit	QUANTITY
	<b>Mobilization Services - Pipe Lining/Grouting</b>		
1	Up to \$30,000 per Work Order	EA	1
2	\$30,001 to \$60,000 per Work Order	EA	1
3	\$60,001 and Up per Work Order	EA	3
	<b>Mobilization Services - WW Structure Lining or CCTV</b>		
4	Up to \$30,000 per Work Order	EA	1
5	\$30,001 to \$60,000 per Work Order	EA	1
6	\$60,001 and Up per Work Order	EA	2
7	Flagmen	Per Hour	40
	<b>Cured in Place Pipe</b>		
8	8" x 6mm, Up to 26' Deep	LF	29000
9	10" x 6mm, Up to 26' Deep	LF	6100
10	12" x 6 mm, Up to 16' Deep	LF	600
11	12" x 7.5mm, 16'-26' Deep	LF	1
12	15" x 6mm, Up to 8' Deep	LF	300
13	15" x 7.5mm, 8'-12' Deep	LF	1
14	15" x 9mm, 12'-26' Deep	LF	1
15	18" x 7.5mm, Up to 12' Deep	LF	300
16	18" x 9mm, 12'-20' Deep	LF	1
17	18" x 10.5mm, 20'-26' Deep	LF	1
18	21" x 9mm, Up to 12' Deep	LF	200
19	21" x 10.5mm, 12'-20' Deep	LF	1
20	21" x 12mm, 20'-26' Deep	LF	1
21	24" x 9mm, Up to 12' Deep	LF	200
22	24" x 12mm, 12'-20' Deep	LF	1
23	24" x 13.5mm, 20'-26' Deep	LF	1
24	27" x 10.5mm, Up to 12' Deep	LF	1
25	27" x 13.5mm, 12'-20' Deep	LF	1
26	27" x 15mm, 20'-26' Deep	LF	1
27	30" x 12mm, Up to 12' Deep	LF	1
28	30" x 15mm, 12'-20' Deep	LF	1
29	30" x 16.5mm, 20'-26' Deep	LF	1
30	36" x 12mm, Up to 12' Deep	LF	1

31	36" x 13.5mm, 12'-20' Deep	LF	1
32	36" x 15mm, 20'-26' Deep	LF	1
33	Remote Cutting of Branch Sewer Service Connection	EA	200
34	Remote Removal of Protruding Service Lateral	EA	20
	<b>CCTV and Cleaning</b>		
35	Root Removal in 8" and 10" WW or SW Sewers	LF	3000
36	Root Removal in 12" and 15" WW or SW Sewers	LF	300
37	Root Removal in 18" and 21" WW or SW Sewers	LF	1
38	Root Removal in 24" WW or SW Sewers	LF	1
39	Root Removal in 27" WW or SW Sewers	LF	1
40	Root Removal in 30" WW or SW Sewers	LF	1
41	Root Removal in 36" WW or SW Sewers	LF	1
42	TV Inspection of 6"-12" WW or SW Sewers	LF	35000
43	TV Inspection of 15"-21" WW or SW Sewers	LF	350
44	TV Inspection of 24"-36" WW or SW Sewers	LF	1
45	Additional Setup for TV Inspection	EA	3
46	Normal Cleaning, 8" and 10" WW or SW Sewers	LF	30000
47	Heavy Cleaning, 8" and 10" WW or SW Sewers	LF	5000
48	Normal Cleaning, 12" and 15" WW or SW Sewers	LF	350
49	Heavy Cleaning, 12" and 15" WW or SW Sewers	LF	1
50	Normal Cleaning, 18" and 21" WW or SW Sewers	LF	1
51	Heavy Cleaning, 18" and 21" WW or SW Sewers	LF	1
52	Normal Cleaning, 24" WW or SW Sewers	LF	1
53	Heavy Cleaning, 24" WW or SW Sewers	LF	1
54	Normal Cleaning, 27" WW or SW Sewers	LF	1
55	Heavy Cleaning, 27" WW or SW Sewers	LF	1
56	Normal Cleaning 30" WW or SW Sewers	LF	1
57	Heavy Cleaning 30" WW or SW Sewers	LF	1
58	Normal Cleaning, 36" WW or SW Sewers	LF	1
59	Heavy Cleaning, 36" WW or SW Sewers	LF	1
	<b>Bypass Pumping</b>		
60	Bypassing Setup for Each 3" Pump	EA	0.5
61	Bypassing Setup for Each 4" Pump	EA	1
62	Bypassing Setup for Each 6" Pump	EA	0.5
63	Bypassing Setup for Each 8" Pump	EA	0.5
64	Bypassing Setup for Each 3" Pump	Per Hour	1
65	Bypassing Setup for Each 4" Pump	Per Hour	10
66	Bypassing Setup for Each 6" Pump	Per Hour	1

67	Bypassing Setup for Each 8" Pump	Per Hour	1
<b>Manhole/Wet Well Rehabilitation</b>			
68	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs 6' or less deep	VF	12
69	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 6' up to 8' deep or less	VF	8
70	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 8' up to 10' deep or less	VF	10
71	Cementitious Underlayment (1/2" increments) for Structural Rehab of 4' diameter MHs greater than 10' up to 12' deep or less	VF	1
72	Cementitious Underlayment (1/2" increments) for Structural Rehab of greater than 4' Diameter MHs and WWs	SF	200
73	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) 6' deep or less	VF	600
74	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) greater than 6' up to 8' deep or less	VF	80
75	Polymer/Epoxy System Lining of 4' diameter MHs (250 mil minimum) greater than 8' up to 10' deep or less	VF	20
76	Polymer/Epoxy System Lining of 4' Diameter MHs (250 mil minimum) greater than 10' up to 12' deep or less	VF	24
77	Polymer/Epoxy System Lining of greater than 4' Diameter (250 mil minimum) MHs and WWs	SF	250
78	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) 6' deep or less	VF	1
79	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 6' up to 8' deep or less	VF	1
80	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 8' up to 10' deep or less	VF	1
81	Additional Cost for Polymer/Epoxy System Lining of 4' Diameter MHs (Additional 100 mils) greater than 10' up to 12' deep or less	VF	1

82	Additional Cost for Polymer/Epoxy System Lining of greater than 4' diameter (Additional 100 mils) MHs and WWs	SF	1
83	Concrete for rebuilding of Existing bench and invert of MHs	CY	3
84	Removal of Existing HDPE Lining of MHs or WWs	SF	200
85	Removal of Existing Polymer/Epoxy Lining of MHs or WWs	SF	50
86	Bench and Invert Repair 48" MH	EA	3
87	Bench and Invert Repair 60" MH	EA	1
88	Bench and Invert Repair 72" MH	EA	1
89	Soil Stabilization of Manhole Exterior - Grout	GAL	10
<b>Grouting</b>			
90	8" Mainline Grout (up to 5 gal)	EA	3
91	10" Mainline Grout (up to 5 gal)	EA	2
92	12" Mainline Grout (up to 5 gal)	EA	1
93	15" Mainline Grout (up to 5 gal)	EA	1
94	18" Mainline Grout (up to 5 gal)	EA	1
95	Lateral Connection Grout on 8" main (up to 5 gal)	EA	5
96	Lateral Connection Grout on 10" main (up to 5 gal)	EA	2
97	Lateral Connection Grout on 12" main (up to 5 gal)	EA	1
98	Lateral Connection Grout on 15" main (up to 5 gal)	EA	1
99	Lateral Connection Grout on 18" main (up to 5 gal)	EA	1
100	Cost/Gallon of grout in excess of 5 gal	GAL	3
<b>Lateral Lining</b>			
101	Lateral Liner up to 3' long (ASTM 2561) 8" main	EA	190
102	Lateral Liner up to 3' long (ASTM 2561) 10" main	EA	40
103	Lateral Liner up to 3' long (ASTM 2561) 12" main	EA	3
104	Cost/Additional Length of lateral liner (4 or 6" service)	LF	10

**ADDENDUM ACKNOWLEDGEMENT**

**ITB WS 20-19**

Acknowledgment is hereby made of the following addenda (identified by number) received since issuance of solicitation:

**ADDENDUM NO.** \_\_\_\_\_ **DATE** \_\_\_\_\_

---

---

---

---

---

---

---

---

NOTE: Prior to submitting the response to this solicitation, it is the responsibility of the respondent to confirm if any addenda have been issued. If such addenda have been issued, acknowledge receipt by noting number(s) and date(s) above.

**SECTION 00430**

**BID BOND**

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

Okaloosa County Board of County Commissioners  
1250 Eglin Pkwy  
Fort Walton Beach, FL 32547

BID

Bid Due Date:  
Project Title – Specification Division

BOND

Bond Number:  
Date:  
Penal sum \_\_\_\_\_

\_\_\_\_\_ \$ \_\_\_\_\_  
(Words) (Figures)

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

**BIDDER**

**SURETY**

\_\_\_\_\_  
Bidder's Name and Corporate Seal (Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal (Seal)

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

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature  
Title

Attest: \_\_\_\_\_  
Signature  
Title

*Note: Addresses are to be used for giving any required notice.*

*Provide execution by any additional parties, such as joint venturers, if necessary.*

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the

penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

This obligation shall be null and void if:

Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

All Bids are rejected by Owner, or

Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**SECTION 00451**

**QUALIFICATIONS STATEMENT**

**THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT PERMITTED BY LAWS AND REGULATIONS**

**1. SUBMITTED BY:**

Official Name of Firm: \_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

**2. SUBMITTED TO:**

\_\_\_\_\_

**3. SUBMITTED FOR:**

\_\_\_\_\_

Owner: \_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**TYPE OF WORK:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**4. CONTRACTOR'S CONTACT INFORMATION**

Contact Person: \_\_\_\_\_

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

Phone: \_\_\_\_\_

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

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

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

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

**6. TYPE OF ORGANIZATION:**

SOLE PROPRIETORSHIP

Name of Owner: \_\_\_\_\_

Doing Business As: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

PARTNERSHIP

Date of Organization: \_\_\_\_\_

Type of Partnership: \_\_\_\_\_

Name of General Partner(s): \_\_\_\_\_

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

CORPORATION

State of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Executive Officers:

- President: \_\_\_\_\_

- Vice President(s): \_\_\_\_\_

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

- Treasurer: \_\_\_\_\_

- Secretary: \_\_\_\_\_

LIMITED LIABILITY COMPANY

State of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Members: \_\_\_\_\_

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

JOINT VENTURE

Sate of Organization: \_\_\_\_\_

Date of Organization: \_\_\_\_\_

Form of Organization: \_\_\_\_\_

Joint Venture Managing Partner

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

- Address: \_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

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

- Address: \_\_\_\_\_

\_\_\_\_\_

Joint Venture Managing Partner

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

- Address: \_\_\_\_\_

\_\_\_\_\_

**7. LICENSING**

Jurisdiction: \_\_\_\_\_

Type of License: \_\_\_\_\_

License Number: \_\_\_\_\_

Jurisdiction: \_\_\_\_\_

Type of License: \_\_\_\_\_

License Number: \_\_\_\_\_

**8. CERTIFICATIONS**

CERTIFIED BY:

Disadvantage Business Enterprise: \_\_\_\_\_

Minority Business Enterprise: \_\_\_\_\_

Woman Owned Enterprise: \_\_\_\_\_

Small Business Enterprise: \_\_\_\_\_

Other ( \_\_\_\_\_ ): \_\_\_\_\_

**9. BONDING INFORMATION**

Bonding Company: \_\_\_\_\_

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

Bonding Agent: \_\_\_\_\_

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

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

Phone: \_\_\_\_\_

Aggregate Bonding Capacity: \_\_\_\_\_

Available Bonding Capacity as of date of this submittal: \_\_\_\_\_

**10. FINANCIAL INFORMATION**

Financial Institution: \_\_\_\_\_

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

Account Manager: \_\_\_\_\_

Phone: \_\_\_\_\_

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE  
LAST 3 YEARS

**11. CONSTRUCTION EXPERIENCE:**

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

YES  NO

If YES, attach as an Attachment details including Project Owner's contact information.

**12. SAFETY PROGRAM:**

Name of Contractor's Safety Officer: \_\_\_\_\_

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total

amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

**13. EQUIPMENT:**

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HERewith, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: \_\_\_\_\_

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

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

DATED: \_\_\_\_\_

SUBSCRIBED AND SWORN TO BEFORE ME

THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

NOTARY PUBLIC - STATE OF \_\_\_\_\_

MY COMMISSION EXPIRES: \_\_\_\_\_

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

**SCHEDULE A**

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

**SCHEDULE B**

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

**SCHEDULE B**

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				



SECTION 00520  
AGREEMENT  
BETWEEN OWNER AND CONTRACTOR  
FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between Okaloosa County Board of County Commissioners (“Owner”) and \_\_\_\_\_ (“Contractor”).

Owner and Contractor hereby agree as follows:

**ARTICLE 1 – WORK**

1.01 *Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:*

**ARTICLE 2 – THE PROJECT**

2.01 *The Project, of which the Work under the Contract Documents is a part, is generally described as follows:  
Project Title – Specification Division.*

**ARTICLE 3 – ENGINEER**

3.01 *The part of the Project that pertains to the Work has been designed by Consultant.*

3.02 *The Owner has retained (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.*

**ARTICLE 4 – CONTRACT TIMES**

4.01 *Total Contract Term*

The contract will begin when fully executed by all parties and last for three (3) years with the option of two (2) one (1) year renewals upon mutual agreement by both parties

4.02 *Time of the Essence*

All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Days*

Substantial completion and final completion dates **for each Task Order** issued under this Contract shall be established in said Task Order. The Work will be substantially completed within the number of days set up per Task Order to run as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within number of days established per Task Order.

4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. Substantial Completion: Contractor shall pay Owner \$500 for each day that expires after the time (as duly adjusted pursuant to the Contract) established **in each Task Order** specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.

**ARTICLE 5 – CONTRACT PRICE**

5.01 *Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:*

Fixed Rate Unit Prices \$\_\_\_\_\_.

**ARTICLE 6 – PAYMENT PROCEDURES**

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment during performance of the Work **for each Task Order** as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion **for each Task Order**, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract

90 percent of Work completed (with the balance being retainage). If the Work **for each Task Order** has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion **for each Task Order**, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent

of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

Upon final completion and acceptance of the Work **for each Task Order** in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price **for each Task Order** as recommended by Engineer as provided in said Paragraph 15.06.

**ARTICLE 7 – CONTRACTOR'S REPRESENTATIONS**

7.01 *In order to induce Owner to enter into this Contract, Contractor makes the following representations:*

- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
- B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
- E. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- F. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- G. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- I. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

**ARTICLE 8 – CONTRACT DOCUMENTS**

8.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 1 to [redacted], inclusive).
  - 2. General Conditions (pages [redacted] to [redacted], inclusive).

3. Supplementary Conditions (pages █ to █, inclusive).
  4. Special Conditions (pages \_\_\_ to \_\_\_, inclusive)
  5. Specifications as listed in the table of contents of the Project Manual.
  6. Addenda (numbers █ to █, inclusive).
  7. Exhibits to this Agreement (enumerated as follows):
    - Contractor's Bid (pages █ to █, inclusive).
  8. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - Notice to Proceed.
    - Work Change Directives.
    - Change Orders.
    - Field Orders.
- B. The documents listed in Paragraph 8.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 8.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

## **ARTICLE 9 – MISCELLANEOUS**

### 9.01 *Terms*

Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### 9.02 *Assignment of Contract*

Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

### 9.03 *Successors and Assigns*

Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

### 9.04 *Severability*

Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to

replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph.
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
  - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

9.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

OWNER:

CONTRACTOR:

Okaloosa County Board of County Commissioners

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

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

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

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

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

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

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

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

License No.: \_\_\_\_\_

*(where applicable)*

*(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*

**SECTION 00550**  
**NOTICE TO PROCEED**

---

Owner: Okaloosa County Board of County Commissioners      Owner's Contract No.:

Contractor:      Contractor's Project No.:

Engineer:      Engineer's Project No.:

Project: Project Title – Specification Division      Contract Name:

   Effective Date of Contract:

---

**TO CONTRACTOR:**

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [\_\_\_\_\_, 2019].

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, the number of days to achieve Substantial Completion will be established **per Task Order**, and the number of days to achieve readiness for final payment is established **per Task Order**.

---

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

**SECTION 00625**  
**CERTIFICATE OF SUBSTANTIAL COMPLETION**

Owner: Okaloosa County Board of County Commissioners	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project: Gravity Sewer Rehab (2019)	Contract Name:

**This [preliminary] [final] Certificate of Substantial Completion applies to:**

- All Work  The following specified portions of the Work:

**Date of Substantial Completion**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities:  None  
 As follows

Amendments to Contractor's responsibilities:  None  
 As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

**SECTION 00700**  
**STANDARD GENERAL CONDITIONS OF THE**  
**CONSTRUCTION CONTRACT**

**TABLE OF CONTENTS**

	<b>Page</b>
<u>Article 1 – Definitions and Terminology</u> .....	6
<u>1.01 Defined Terms</u> .....	6
<u>1.02 Terminology</u> .....	10
<u>Article 2 – Preliminary Matters</u> .....	11
<u>2.01 Delivery of Bonds and Evidence of Insurance</u> .....	11
<u>2.02 Copies of Documents</u> .....	11
<u>2.03 Before Starting Construction</u> .....	11
<u>2.04 Preconstruction Conference; Designation of Authorized Representatives</u> .....	12
<u>2.05 Initial Acceptance of Schedules</u> .....	12
<u>2.06 Electronic Transmittals</u> .....	12
<u>Article 3 – Documents: Intent, Requirements, Reuse</u> .....	13
<u>3.01 Intent</u> .....	13
<u>3.02 Reference Standards</u> .....	13
<u>3.03 Reporting and Resolving Discrepancies</u> .....	13
<u>3.04 Requirements of the Contract Documents</u> .....	14
<u>3.05 Reuse of Documents</u> .....	15
<u>Article 4 – Commencement and Progress of the Work</u> .....	15
<u>4.01 Commencement of Contract Times; Notice to Proceed</u> .....	15
<u>4.02 Starting the Work</u> .....	15
<u>4.03 Reference Points</u> .....	15
<u>4.04 Progress Schedule</u> .....	15
<u>4.05 Delays in Contractor’s Progress</u> .....	16
<u>Article 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions</u> .....	17
<u>5.01 Availability of Lands</u> .....	17
<u>5.02 Use of Site and Other Areas</u> .....	17
<u>5.03 Subsurface and Physical Conditions</u> .....	18
<u>5.04 Differing Subsurface or Physical Conditions</u> .....	18

5.05	<a href="#">Underground Facilities</a>	20
5.06	<a href="#">Hazardous Environmental Conditions at Site</a>	21
<a href="#">Article 6 – Bonds and Insurance</a>		23
6.01	<a href="#">Performance, Payment, and Other Bonds</a>	23
6.02	<a href="#">Insurance—General Provisions</a>	24
6.03	<a href="#">Contractor’s Insurance</a>	25
6.04	<a href="#">Owner’s Liability Insurance</a>	27
6.05	<a href="#">Property Insurance</a>	28
6.06	<a href="#">Waiver of Rights</a>	29
6.07	<a href="#">Receipt and Application of Property Insurance Proceeds</a>	30
<a href="#">Article 7 – Contractor’s Responsibilities</a>		31
7.01	<a href="#">Supervision and Superintendence</a>	31
7.02	<a href="#">Labor; Working Hours</a>	31
7.03	<a href="#">Services, Materials, and Equipment</a>	31
7.04	<a href="#">“Or Equals”</a>	31
7.05	<a href="#">Substitutes</a>	33
7.06	<a href="#">Concerning Subcontractors, Suppliers, and Others</a>	34
7.07	<a href="#">Patent Fees and Royalties</a>	35
7.08	<a href="#">Permits</a>	36
7.09	<a href="#">Taxes</a>	36
7.10	<a href="#">Laws and Regulations</a>	36
7.11	<a href="#">Record Documents</a>	37
7.12	<a href="#">Safety and Protection</a>	37
7.13	<a href="#">Safety Representative</a>	38
7.14	<a href="#">Hazard Communication Programs</a>	38
7.15	<a href="#">Emergencies</a>	38
7.16	<a href="#">Shop Drawings, Samples, and Other Submittals</a>	38
7.17	<a href="#">Contractor’s General Warranty and Guarantee</a>	41
7.18	<a href="#">Indemnification</a>	41
7.19	<a href="#">Delegation of Professional Design Services</a>	42
<a href="#">Article 8 – Other Work at the Site</a>		43
8.01	<a href="#">Other Work</a>	43
8.02	<a href="#">Coordination</a>	43
8.03	<a href="#">Legal Relationships</a>	43

<u>Article 9 – Owner’s Responsibilities</u> .....	45
<u>9.01 Communications to Contractor</u> .....	45
<u>9.02 Replacement of Engineer</u> .....	45
<u>9.03 Furnish Data</u> .....	45
<u>9.04 Pay When Due</u> .....	45
<u>9.05 Lands and Easements; Reports, Tests, and Drawings</u> .....	45
<u>9.06 Insurance</u> .....	45
<u>9.07 Change Orders</u> .....	45
<u>9.08 Inspections, Tests, and Approvals</u> .....	45
<u>9.09 Limitations on Owner’s Responsibilities</u> .....	45
<u>9.10 Undisclosed Hazardous Environmental Condition</u> .....	45
<u>9.11 Evidence of Financial Arrangements</u> .....	46
<u>9.12 Safety Programs</u> .....	46
<u>Article 10 – Engineer’s Status During Construction</u> .....	46
<u>10.01 Owner’s Representative</u> .....	46
<u>10.02 Visits to Site</u> .....	46
<u>10.03 Project Representative</u> .....	46
<u>10.04 Rejecting Defective Work</u> .....	47
<u>10.05 Shop Drawings, Change Orders and Payments</u> .....	47
<u>10.06 Determinations for Unit Price Work</u> .....	47
<u>10.07 Decisions on Requirements of Contract Documents and Acceptability of Work</u> .....	47
<u>10.08 Limitations on Engineer’s Authority and Responsibilities</u> .....	47
<u>10.09 Compliance with Safety Program</u> .....	48
<u>Article 11 – Amending the Contract Documents; Changes in the Work</u> .....	48
<u>11.01 Amending and Supplementing Contract Documents</u> .....	48
<u>11.02 Owner-Authorized Changes in the Work</u> .....	49
<u>11.03 Unauthorized Changes in the Work</u> .....	49
<u>11.04 Change of Contract Price</u> .....	49
<u>11.05 Change of Contract Times</u> .....	50
<u>11.06 Change Proposals</u> .....	50
<u>11.07 Execution of Change Orders</u> .....	51
<u>11.08 Notification to Surety</u> .....	51
<u>Article 12 – Claims</u> .....	52

<u>12.01</u> <u>Claims</u> .....	52
<u>Article 13 – Cost of the Work; ; Unit Price Work</u> .....	53
<u>13.01</u> <u>Cost of the Work</u> .....	53
<u>13.03</u> <u>Unit Price Work</u> .....	55
<u>Article 14 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work</u> .....	56
<u>14.01</u> <u>Access to Work</u> .....	56
<u>14.02</u> <u>Tests, Inspections, and Approvals</u> .....	56
<u>14.03</u> <u>Defective Work</u> .....	57
<u>14.04</u> <u>Acceptance of Defective Work</u> .....	58
<u>14.05</u> <u>Uncovering Work</u> .....	58
<u>14.06</u> <u>Owner May Stop the Work</u> .....	58
<u>14.07</u> <u>Owner May Correct Defective Work</u> .....	59
<u>Article 15 – Payments to Contractor; Set-Offs; Completion; Correction Period</u> .....	59
<u>15.01</u> <u>Progress Payments</u> .....	59
<u>15.02</u> <u>Contractor’s Warranty of Title</u> .....	62
<u>15.03</u> <u>Substantial Completion</u> .....	62
<u>15.04</u> <u>Partial Use or Occupancy</u> .....	63
<u>15.05</u> <u>Final Inspection</u> .....	64
<u>15.06</u> <u>Final Payment</u> .....	64
<u>15.07</u> <u>Waiver of Claims</u> .....	65
<u>15.08</u> <u>Correction Period</u> .....	65
<u>Article 16 – Suspension of Work and Termination</u> .....	66
<u>16.01</u> <u>Owner May Suspend Work</u> .....	66
<u>16.02</u> <u>Owner May Terminate for Cause</u> .....	67
<u>16.03</u> <u>Owner May Terminate For Convenience</u> .....	68
<u>16.04</u> <u>Contractor May Stop Work or Terminate</u> .....	68
<u>Article 17 – Final Resolution of Disputes</u> .....	68
<u>17.01</u> <u>Methods and Procedures</u> .....	68
<u>Article 18 – Miscellaneous</u> .....	69
<u>18.01</u> <u>Giving Notice</u> .....	69
<u>18.02</u> <u>Computation of Times</u> .....	69
<u>18.03</u> <u>Cumulative Remedies</u> .....	69
<u>18.04</u> <u>Limitation of Damages</u> .....	69

<a href="#">18.05</a>	<a href="#">No Waiver</a>	69
<a href="#">18.06</a>	<a href="#">Survival of Obligations</a>	69
<a href="#">18.07</a>	<a href="#">Controlling Law</a>	70
<a href="#">18.08</a>	<a href="#">Headings</a>	70

## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the

procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.

38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. Intent of Certain Terms or Adjectives:
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. Day:
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. Defective:
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
    - a. does not conform to the Contract Documents; or
    - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
    - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. Furnish, Install, Perform, Provide:
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### **2.01 *Delivery of Bonds and Evidence of Insurance***

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  2. a preliminary Schedule of Submittals; and
  3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

### **ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE**

#### **3.01 *Intent***

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

#### **3.02 *Reference Standards***

- A. Standards Specifications, Codes, Laws and Regulations
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

#### **3.03 *Reporting and Resolving Discrepancies***

- A. Reporting Discrepancies:
  - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity,

or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
  3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.
- B. Resolving Discrepancies:
1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
    - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
    - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If

Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

**ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. ~~In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.~~

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  2. abnormal weather conditions;
  3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
  4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

**ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

- A. Limitation on Use of Site and Other Areas:
  - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
  - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
  - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
  - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
  - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
  2. is of such a nature as to require a change in the Drawings or Specifications; or
  3. differs materially from that shown or indicated in the Contract Documents; or
  4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. Possible Price and Times Adjustments:
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
    - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
    - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
  - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
  - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
  1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
    - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
    - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
    - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by

Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. Possible Price and Times Adjustments:
  - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
    - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
    - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
    - d. Contractor gave the notice required in Paragraph 5.05.B.
  - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
  - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

~~5.06 — Hazardous Environmental Conditions at Site~~

~~A. — Reports and Drawings: The Supplementary Conditions identify:~~

- ~~1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and~~
  - ~~2. Technical Data contained in such reports and drawings.~~
- ~~B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:~~
- ~~1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or~~
  - ~~2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or~~
  - ~~3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.~~
- ~~C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.~~
- ~~D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.~~
- ~~E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.~~

- ~~F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.~~
- ~~G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set off.~~
- ~~H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.~~
- ~~I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~
- ~~J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~
- ~~K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.~~

## ARTICLE 6 – BONDS AND INSURANCE

- A. Contractor shall furnish a bid bond, in an amount of five (5) percent of the Bid Price.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the

policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
  - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
  - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
  - 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
  - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.

2. claims for damages insured by reasonably available personal injury liability coverage.
  3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor’s commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
    - a. Such insurance shall be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.
  3. Broad form property damage coverage.
  4. Severability of interest.
  5. Underground, explosion, and collapse coverage.
  6. Personal injury coverage.
  7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
  8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. ~~*Contractor’s pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance shall be maintained for no less than three years after final completion.~~
- G. *Additional insureds:* The Contractor’s commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional

insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.

- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
  2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
  4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
  5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
  2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
  3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
  4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
  5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
  6. extend to cover damage or loss to insured property while in transit.
  7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
  8. allow for the waiver of the insurer's subrogation rights, as set forth below.

9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
  10. not include a co-insurance clause.
  11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
  12. include performance/hot testing and start-up.
  13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities

identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

**6.07** *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

**ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES**

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner’s written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 *“Or Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that:
      - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
      - 3) it has a proven record of performance and availability of responsive service; and
      - 4) it is not objectionable to Owner.
    - b. Contractor certifies that, if approved and incorporated into the Work:
      - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
      - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
    - a. shall certify that the proposed substitute item will:
      - 1) perform adequately the functions and achieve the results called for by the general design,
      - 2) be similar in substance to that specified, and
      - 3) be suited to the same use as that specified.
    - b. will state:
      - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
      - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
      - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    - c. will identify:
      - 1) all variations of the proposed substitute item from that specified, and
      - 2) available engineering, sales, maintenance, repair, and replacement services.
    - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute

item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any

such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.

- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
  - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
  - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers,

directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

#### 7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

- A. Shop Drawing and Sample Submittal Requirements:
  - 1. Before submitting a Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
  - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
  3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. Shop Drawings:
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
  2. Samples:
    - a. Contractor shall submit the number of Samples required in the Specifications.
    - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
  3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may

impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
  - 1. observations by Engineer;
  - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
  - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  - 4. use or occupancy of the Work or any part thereof by Owner;
  - 5. any review and approval of a Shop Drawing or Sample submittal;
  - 6. the issuance of a notice of acceptability by Engineer;
  - 7. any inspection, test, or approval by others; or
  - 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity

directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
  - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

**ARTICLE 8 – OTHER WORK AT THE SITE**

**8.01 Other Work**

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

**8.02 Coordination**

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

**8.03 Legal Relationships**

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

**ARTICLE 9 – OWNER’S RESPONSIBILITIES**

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner’s Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor’s failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations

thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by

Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

**ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK**

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
  - 1. Change Orders:
    - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
    - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
  - 2. *Work Change Directives*: A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
  - 3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be

binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
  - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
  - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
  - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
  - 1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
  - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
  - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
  - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
  - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
  - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
  - f. When both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

#### 11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

#### 11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
  1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed

change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
  3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

#### 11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
  4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

#### 11.08 *Notification to Surety*

If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

## **ARTICLE 12 – CLAIMS**

### **12.01 Claims**

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
  - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
  - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
  - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
  - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
  - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13 – COST OF THE WORK; UNIT PRICE WORK**

### 13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
  - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  - 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
  - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
  - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No

such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

### 13.02 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
  - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
  - 2. there is no corresponding adjustment with respect to any other item of Work; and
  - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

#### **ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

##### *14.01 Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

##### *14.02 Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. ~~Owner~~ **Contractor** shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by ~~Owner~~ **Contractor**, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging

and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  3. by manufacturers of equipment furnished under the Contract Documents;
  4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines

levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

**ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. Applications for Payments:
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the

basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    - a. to supervise, direct, or control the Work, or
    - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
    - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
    - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
    - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
  5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
  6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
    - a. the Work is defective, requiring correction or replacement;
    - b. the Contract Price has been reduced by Change Orders;
    - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
    - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
    - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
- D. Payment Becomes Due:
1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- E. Reductions in Payment by Owner:
1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
    - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
    - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

- c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. the Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. the Contract Price has been reduced by Change Orders;
  - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
  - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
  - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor,

Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.

2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. Application for Payment:
  1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
  2. The final Application for Payment shall be accompanied (except as previously delivered) by:
    - a. all documentation called for in the Contract Documents;
    - b. consent of the surety, if any, to final payment;
    - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
    - d. a list of all disputes that Contractor believes are unsettled; and
    - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. Engineer's Review of Application and Acceptance:
49. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

#### 15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. Correct the defective repairs to the Site or such other adjacent areas;
  - 2. Correct such defective Work;
  - 3. If the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. Satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  - 50. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
  - 51. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 52. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 53. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
  - 1. Declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
  - 2. Enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  3. Other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

**ARTICLE 17 – FINAL RESOLUTION OF DISPUTES**

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
54. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
  55. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.

- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. Elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
  2. Agree with the other party to submit the dispute to another dispute resolution process; or
  3. If no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18 – MISCELLANEOUS**

### **18.01 *Giving Notice***

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
56. Delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
  57. Delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

### **18.02 *Computation of Times***

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

### **18.03 *Cumulative Remedies***

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

### **18.04 *Limitation of Damages***

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

### **18.05 *No Waiver***

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

### **18.06 *Survival of Obligations***

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

**SECTION 00800**  
**SUPPLEMENTARY CONDITIONS**

**ARTICLE 2 – PRELIMINARY MATTERS**

*SC -2.01 Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

A. Owner shall furnish to Contractor four copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

**ARTICLE 6 – BONDS AND INSURANCE**

*SC - 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:*

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>

Employer's Liability: \$ 1,000,000

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate \$ 2,000,000

Products - Completed Operations \$ 2,000,000

Aggregate

Personal and Advertising Injury \$ 1,000,000

Each Occurrence (Bodily Injury and  
Property Damage) \$ 1,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person 1,000,000

Each accident 1,000,000

Property Damage:

Each accident 500,000

[or]

Combined Single Limit of 2,000,000

4. Excess or Umbrella Liability:

Per Occurrence \$ 1,000,000

General Aggregate \$ 1,000,000

SC-6.05 Property Insurance

SC-6.05 Add the following to the list of requirements in Paragraph 6.05.A, as a numbered item:

13. be subject to a deductible amount of no more than \$1,000 for direct physical loss in any one occurrence.

**ARTICLE 8 – OTHER WORK AT THE SITE**

*SC-8.02 Coordination*

SC-8.02 Delete Paragraph 8.02.A in its entirety and replace with the following:

A. Owner intends to contract with others for the performance of other work at or adjacent to the Site.

1. The Owner shall have authority and responsibility for coordination of the various contractors and work forces at the Site;
2. The following specific matters are to be covered by such authority and responsibility:

--The Owner to coordinate activities with contractors.

**ARTICLE 9 – OWNER’S RESPONSIBILITIES**

*SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:*

SC-9.13 Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative will be Mark Wise.-Deputy Director.

**ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION**

*SC-10.03 Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

4. Liaison:
  - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
  - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
  - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
  - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
  - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
  - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
  - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. Inspections, Tests, and System Start-ups:

- a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these

documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

**ARTICLE 17 – FINAL RESOLUTION OF DISPUTES**

The arbitration option is as follows:

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 Arbitration

A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of State of Florida, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any

other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. The demand f will be filed in writing with the other party to the Contract and with the selected arbitrator provider, and a copy will be sent to Engineer for information. The demand f will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand f should include specific reference to Paragraph SC-17.02.D below.

C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.

D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.

E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.

F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

**SECTION C-00941  
CHANGE ORDER**

Change Order No. \_\_\_\_\_

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ___ to No. ___: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:

ACCEPTED:

ACCEPTED:

By: \_\_\_\_\_  
Engineer (if required)

By: \_\_\_\_\_  
Owner (Authorized Signature)

By: \_\_\_\_\_  
Contractor (Authorized Signature)

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

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

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

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

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

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

Approved by Funding Agency (if applicable)

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

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

SECTION 00950

SPECIAL CONDITIONS

1. PERFORMANCE AND PAYMENT BONDS

The Contractor shall, along with the executed Contract, furnish the Owner with a Performance Bond and a Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the Contract Documents, and upon the prompt payment by the Contractor to all persons supplying labor and materials in the prosecution of the work provided by the Contractor and a corporated bonding company licensed to transact such business in the state in which the work is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the Contractor. If at any time a surety on any such Bond is declared a bankrupt or loses its rights to do business in the state in which the work is to be performed or is removed from the list of Surety Companies accepted on Federal Bonds, Contractor shall within ten (10) days after notice from the Owner to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Owner. The premiums on such bond shall not be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the Owner.

2. INSPECTION FACILITIES

The Contractor shall at all times provide access to, and all means necessary to provide for inspection of all parts of the work by the Engineer.

3. UTILITIES

The Contractor shall be responsible for any damage done by him or any of his subcontractors to all utilities within the limits of the work. It shall be his responsibility to locate and determine the depth of the existing utilities and manholes as far ahead of his operations as practicable and shall keep the Engineer informed of possible vertical and horizontal conflicts. The Engineer shall adjust the alignment and/or profile of the proposed facilities insofar as practically feasible to eliminate potential conflicts. Unavoidable conflicts will be eliminated as described below. Should any utilities or appurtenances be damaged by the Contractor's activities and operations under this contract, the Contractor shall cause the necessary repairs to be made and shall pay the entire cost thereof without compensation. Temporary repairs may be made by the Contractor to utilities damaged by his operations when such utilities are to be relocated, provided such temporary repairs are adequate to maintain the utility in service until the permanent relocation or adjustment is made.

No separate compensation shall be allowed the Contractor for any work required by this paragraph due to conflicts with lines and appurtenances or as a result of grade revisions.

- a. High Pressure Gas Lines: Where they interfere with work, high-pressure gas lines and appurtenances will be moved by the Okaloosa Gas Distric. The Contractor shall pay any charges made by the Gas District.
- b. Low Pressure Gas Lines: Where they interfere with work, low pressure gas lines and appurtenances will be moved by the Contractor at no expense to the Owner.
- c. Sanitary Sewers: Where they interfere with the work, existing sanitary sewer lines and laterals will be moved by the Contractor. The Contractor shall notify the Director of the Water and Sewer System at least twenty-four (24) hours prior to the initiation of any such relocation work.
- d. Water Lines: Where water lines interfere with the work they will be relocated by the Contractor. The Contractor shall notify the Director of the Water and Sewer System at least twenty-four (24) hours prior to the initiation of any such relocation work.
- e. Storm Drainage Pipe: The Contractor shall excavate a sufficient distance ahead of his work to allow the Engineer time and space to resolve conflicts with any storm drainage pipes which are not shown on the plans. It is the Contractor's responsibility to protect all existing storm drainage pipes which interfere with his operations. When the plans do not indicate the conflict and the Engineer finds that the conflict creates an undue hardship on the Contractor or calls for work outside the scope of the contract, the Engineer will determine the most appropriate method for resolving the conflict which is satisfactory to both the Owner and the Contractor. This additional work shall be handled by contract change order or field instructions by the Engineer or his representative depending upon the extent and cost of said additional work.

#### 4. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until final acceptance of the work by the Owner, the work shall be in the custody and under the charge and care of the Contractor and he shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from execution or from the non-execution of the work, unless otherwise provided for elsewhere in the Contract Documents. The Contractor shall rebuild, repair, restore, and make good, without extra compensation, all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance, and shall bear the expenses thereof. In case of suspension of the work from any cause whatever, the Contractor shall be responsible for all materials and equipment and shall properly store them, if necessary, and shall provide suitable shelter from damage and shall erect temporary structures where necessary.

5. EXTRA CHARGES

Upon receiving a change order or field order, the Contractor shall notify the Engineer of any additional charges the Contractor feels he is due prior to initiating the work under consideration.

6. EXAMINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTARY CONDITIONS, AND SITE WORK

Before submitting a proposal, bidders shall examine carefully the site of the proposed work, the general and local conditions, the proposal form, standard specifications, supplemental specifications, provisions, and the contract and bond forms, and it is mutually agreed that the submission of a proposal shall be prima facie evidence that the bidder has made such examination and has judged for and satisfied himself as to the surface and subsurface conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of plans, standard specifications, supplemental specifications, special provision contract, and bonds. No adjustments or compensation will be allowed for losses caused by failure to comply with this requirement.

Bidders are advised that the Owner disclaims responsibility for any opinions, conclusions, interpretations, or deductions that may be expressed or implied in any of the information presented or made available to bidders; it being expressly understood that the making of deductions, interpretations, and conclusions from all of the accessible factual information is the bidder's sole responsibility.

7. SUBSURFACE CONDITIONS

The Contractor shall check all subsurface conditions and satisfy himself on those conditions before submitting a bid. Subsurface conditions discovered during construction shall not be a basis for extra compensation.

8. ENVIRONMENTAL CONTROL

The Contractor shall insure that good environmental protection practices and methods are instituted to protect surface waters from excessive silt, sediments and nutrients caused by his construction operations.

Storm drainage facilities and temporary dikes, checks, channelization, grassing and any other prudent control shall be installed in the initial stages and as necessary in order to fulfill the requirements set forth in the above regulations. The Contractor shall be responsible for all environmental damages caused by his operations.

Cost for complying with these regulations shall be considered incidental to the work on the bid schedule and no separate payment will be made.

9. PROSECUTION OF WORK

- a. All the work shall be prosecuted in a manner which according to local conditions shall be best calculated to promote rapidity in construction, to secure safety to life and property and also to reduce to a minimum any interference with abutting property or public travel.
- b. The Contractor shall conduct his operations diligently in all parts of the work, coordinating his part so that the completion of the work shall not be unnecessarily delayed.

10. USE OF ADJOINING PROPERTY

Whenever it is necessary for the Contractor to occupy or otherwise use land adjacent to the work which is not the property of the Owner or for use of which no permit has been granted, the Contractor must make his own arrangements with the Owner of such property.

11. SAFETY AND HEALTH REGULATIONS

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54).

12. OBSERVANCE OF LAWS AND REGULATIONS

The Contractor shall keep himself informed of all laws, ordinances, and regulations in any manner affecting those employed on the work, or the materials used in the work, or in any way affecting the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. He shall at all times himself observe and comply with, and shall require all his agents, employees and subcontractors to observe and comply with all such applicable laws, ordinances, regulations, orders and decrees in effect or which may become effective before completion of this contract; and shall protect and indemnify the Owner against any claim of liability arising from or based upon the violation of any such law, ordinance, regulation, order, or decree, whether by himself, his employees or his subcontractors. When local or state laws or ordinances conflict with federal laws or regulations, federal laws or regulations shall take precedence.

13. FINAL CONSTRUCTION INSPECTION

Whenever the Contractor considers the work required by the contract is nearing completion and ready for use, he shall notify the Engineer and request an inspection of substantial completion. Within five (5) days after receiving the notification by the Contractor, the Engineer will inspect all work in the contract. If the Engineer finds that the work has been substantially completed, he will issue a letter of substantial

completion. If the Engineer finds that the work has not been substantially completed at the time of such inspection, he will advise the Contractor in writing as to the work to be done or the particular defects in the construction discovered during the inspection. After such work has been completed satisfactorily, the Engineer will re-inspect the work for substantial completion.

When the Contractor considers the work completed, he shall notify the Engineer and request a final inspection. Within five (5) days after receiving the notification by the Contractor, the Engineer shall conduct a final inspection. If the Engineer finds the work has been completed, he will issue a letter stating that the project is complete. If the Engineer finds that the work has not been completed at the time of the inspection, he will advise the Contractor in writing as to the work to be done to complete the project. After such work has been satisfactorily completed, the Engineer will re-inspect the work. When the Engineer considers the work complete, he will issue a letter of final completion.

14. EQUIPMENT AND MATERIALS REMOVED

All equipment and materials removed and/or replaced in the contract which the Owner wants shall become the property of the Owner and shall be placed at a location on the site designated by the Owner. All other equipment and materials which the Owner does not want shall be disposed of off-site at the expense of the Contractor. The Owner shall be final judge of what is salvageable.

15. REMOVAL OF DEBRIS

The Contractor shall frequently clean up all refuse, rubbish, scrap materials and debris caused by his operations, so that at all times the site of the work shall present a neat, orderly and workmanlike appearance.

16. TEMPORARY ROADS, DETOURS AND MAINTENANCE OF ACCESS

- a. Detours and temporary structures necessary for travel during the prosecutions of the work will be at the expense of the Contractor.
- b. No section of the work shall be closed to traffic unless approved by the Engineer. Suitable signs indicating "Road Closed" or "Detour" shall be erected by the Contractor as ordered by the Engineer at no expense.
- c. If in the opinion of the Engineer the Contractor does not comply with the above requirements such work as the Engineer may deem necessary may be performed by others at the direction of the Engineer and the charges therefor held from any money due or to become due to the Contractor on this or any other Contract.

17. RESTORATION OF THE GROUNDS

As the work progresses and whenever so directed by the Engineer, the Contractor is to remove all surplus material and completely restore to good condition, all surface, disturbed, destroyed or removed by the Contractor, or his agent, or on account of construction. When the Contractor fails to promptly restore the streets or other property, the Engineer, after having given three (3) days notice to the Contractor shall have the work shut down until the streets and other property have been restored. Loss of time due to such shut-down will not entitle the Contractor to any extension of time or extra compensation.

Before final inspection is made, all surfaces disturbed on account of this construction shall be leveled up and all surplus material and rubbish incident to the construction must be removed and disposed of and streets, gutters, ditches, sidewalks, crossings, railroads, grass plots and other property affected by the Construction shall be left in good and acceptable condition.

#### 18. UNDERGROUND UTILITIES AND SERVICES

The plans show certain features of the topography and certain underground utilities, but they do not purport to show in detail all such lines or obstructions. Such topography and notes on the plans were inserted from records available and are for the Contractor's convenience only, and shall not be used as basis for any claims of extra compensation.

All pipes or other underground utilities shall be maintained in continuous service where possible and shall be properly protected and supported. In no case shall interruptions to utilities be allowed to exist outside of working hours.

Prior to starting the work, the proper authorities of all utilities shall be notified by the Contractor and the Contractor shall cooperate in every way possible with these authorities. Whenever necessary to determine the location of existing pipes, valves or other underground structures, the Contractor shall examine all available records and shall make all explorations and excavations necessary for such purpose.

#### 19. CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or other classification, must show approval of either EPA or USDA. Use of such chemicals and disposal of residues shall be in strict conformance with manufacturer's instructions.

#### 20. COOPERATION BETWEEN CONTRACTORS

Contractor shall cooperate to the fullest extent in order to expedite the completion of the entire project. Any contractor deemed by the Engineer to be in violation of this clause can be subject to disciplinary action including but not limited to fines to be paid to the Owner or direct payment to other contractors.

21. DAMAGE BETWEEN CONTRACTORS

If a Contractor damages any of the work performed by another contractor, that contractor causing the damage shall replace, repair, or make any other compensation deemed appropriate by the Engineer to the Contractor who did the original work.

22. PROJECT WARRANTY

The five-year warranty period provided under this contract shall begin on the date of the final inspection when the Engineer certifies the project substantially complete. In accordance with Section 29 of the General Conditions, this warranty shall cover defects in all material, equipment, and labor furnished under this contract.

All manufacturers of equipment furnished under this contract shall, as a minimum, provide separate warranties to both the Owner and the Contractor covering all parts, labor, shipping and handling charges for repairing or replacing equipment which proves defective during normal use for

1. Five years from date of shipment, or
2. Five years from date of substantial completion, whichever occurs earlier regardless of the date the equipment is placed in interim service.

Included in each equipment manufacturer's submittal data shall be a certified statement that the manufacturer will comply with the above warranty provisions. In the event that the manufacturer's warranty expires prior to the Contractor's warranty, the Contractor shall assume full responsibility for all equipment warranties to the Owner for the remainder of the contract warranty period.

23. DEPOSITS AND WATER USAGE ON A HYDRANT METER

1. For any construction water utilized via a hydrant meter, the contractor shall setup an account with OCWS' Customer Service office and provide contract information.
2. The account shall be setup in the contractor's name with a deposit and service fee paid by the contractor. The deposit will be refunded when the account terminates if the meter has not been damaged or lost.
3. OCWS will be responsible for setting the hydrant meter, along with the monthly reading. If the hydrant meter needs to be relocated, contractor to coordinate this with OCWS Maintenance.
4. Water usage will not be charged to the contractor, provided that the above conditions are met.

END OF SECTION 00950.

## SECTION 01010

### SUMMARY OF WORK

#### PART 1 - GENERAL

##### 1.1 WORK COVERED BY CONTRACT DOCUMENTS

Work includes the rehabilitation of gravity sewer lines including service connections via in-situ point repairs or in-situ relining, as well as stormwater piping. Also included will be the rehabilitation of sanitary sewer manholes, wetwells and other wastewater structures as needed.

##### 1.2 WORK SEQUENCE

Work sequence shall be determined by the contractor.

##### 1.3 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit his use of the premises for work and for storage.
- B. Contractor shall coordinate use of premises under direction of Owner.
- C. Contractor shall assume full responsibility for the protection and safekeeping of products under this contract, stored on the site.
- D. Contractor shall move any stored products, under Contractor's control, which interfere with operations of the Owner.

##### 1.4 OWNER OCCUPANCY

Owner will occupy the premises during the entire period of construction for the conduct of his normal operations. Cooperate with Owner's Representative in all construction operations to minimize conflict, and to facilitate Owner usage.

##### 1.5 SUBSTITUTION OF EQUIPMENT AND MATERIALS

In the Plans and Specifications, certain equipment and materials are identified by manufacturer in order to establish the quality expected by the Owner and Engineer. Equipment of equal or better quality may be substituted for those named at the

Contractor's option with the stipulations described below. If this equipment is subsequently disapproved, the Contractor shall resubmit until the equipment he proposes is approved. The Engineer shall be the final authority on equality.

This substitution paragraph does not apply to those pieces of equipment identified by a manufacturer followed by the words "to match existing."

Where equipment is identified by manufacturer, the first name appearing on the Plans is the name of the manufacturer around which the facility was designed. The second name is a manufacturer known to the Engineer to produce a similar piece of equipment of equal quality. As described above, the Contractor may choose to install another manufacturer's equipment. If the Contractor chooses to install any piece of equipment other than the first named, any modifications or additional components required to provide a complete and satisfactory installation shall be provided by the Contractor at no additional expense to the Owner.

END OF SECTION 01010

SECTION 01060

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Permits and Responsibilities.

The Contractor shall, without additional expense to the Owner, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State and municipal laws, codes, ordinances and regulations, in connection with the prosecution of the Work. The Contractor shall take proper safety and health precautions to protect the Work, the workers, the public and the property of others. They shall also be responsible for all materials delivered and work performed until completion and acceptance of the Work, except for any completed unit of construction thereof which may heretofore have been accepted.

END OF SECTION 01060

## SECTION 01150

### MEASUREMENT AND PAYMENT

#### PART 1 - GENERAL

##### 1.1 SCOPE

This section describes the methods by which measurement will be made of the quantities for which payment will be made for the project.

It is the intention of this specification that payment will be made for those items listed in the Bid Schedule only. All items of work not specifically listed in the Bid Schedule shall be considered incidental to the construction, and the cost of all such work and material shall be included in the prices bid for the various items listed.

##### 1.2 STORED MATERIALS

Partial payment shall be made for approved materials stored at the project site at the presentation of material invoices in the proper manner.

##### 1.3 SECTION 02565 BYPASS PUMPING

###### A. Measurement

1. Bypass pumping shall be measured in manhole to manhole sections within the limits of the installation work performed under these Contracts, for record keeping purposes only.
2. Measurement for the work specified shall be by lump sum for each set up, based on minimum pump size required for each set up, and by the hour for actual pumping during cleaning, inspection or repair/relining as required by the Contract Documents.

###### B. Payment

1. For payment of the Lump Sum (EA) for each size pump outlined in the Bid Schedule, the pumping equipment must be set up, used successfully during operations outlined in this contract (cleaning, relining, etc.) and all components removed from the work site. No partial payment will be made for bypass pumping that is set up and not used for contracted operations.
2. Any damages, repairs, etc. to private or public property will not be considered for any additional payment. Any necessary repairs to existing mains and service lines damaged during performance of work under these Contracts shall be made at the Contractor's expense and no reimbursement will be made for any labor, materials, equipment or other costs involved in such repairs. Materials furnished by the Owner shall not be used for such

repairs unless approved by the Owner and the Contractor compensates the Owner for the cost of such materials so used.

3. The number of hours to be billed for each setup shall be agreed upon between the Contractor and Owner/Engineer at the conclusion of each section that employed bypass pumping.

#### 1.4 SECTION 02566, CLEANING OF SANITARY SEWER LINES

##### A. Measurement:

1. Cleaning of sanitary sewer lines shall be measured at ground level in linear feet along the centerline of the manhole section, from the center of the initial manhole to the center of the terminal manhole, within the limits of the work performed under this Contract.
2. Any necessary repairs to existing mains and service lines damaged during performance of work under these Contracts shall be made at the Contractor's expense and no reimbursement will be made for any labor, materials, equipment or other costs involved in such repairs. Materials furnished by the Owner shall not be used for such repairs unless approved by the Owner and the Contractor compensates the Owner for the cost of such materials so used.

##### B. Payments:

1. Payment for sewer line cleaning constructed under these Specifications shall be made for the quantities determined in the manner specified above at the contract price per linear foot for each size of mainline as listed in the Bid Schedule. Payment shall include all materials, tools, labor, equipment, services, and other expense in connection with cleaning sewer lines and furnishing and installing all items of work herein specified.
2. Payment for sewer lines defined as requiring "Light" or "Medium" cleaning in the specifications shall be paid for at the Normal Cleaning bid item rate. Lines requiring "Heavy" cleaning as defined in the specifications shall be paid as such.
3. Root removal shall be paid at the bid item price for the section of pipeline in which roots were actually removed (nor for an entire section of pipeline if roots not present in entire section), regardless of the quantity of roots. No differentiation between light, medium, or heavy root intrusion.

#### 1.5 SECTION 02567, TELEVISION INSPECTION OF SANITARY SEWERLINES

##### A. Measurement:

1. Television inspection of sanitary sewer lines shall be measured in linear feet along the centerline of the inspected line within the limits of the

installation work performed under these Contracts.

2. Any necessary repairs to existing mains and service lines damaged during performance of work under these Contracts shall be made at the Contractor's expense and no reimbursement will be made for any labor, materials, equipment or other costs involved in such repairs. Materials furnished by the Owner shall not be used for such repairs unless approved by the Owner and the Contractor compensates the Owner for the cost of such materials so used.

B. Payments:

Payment for television inspection of sanitary sewer lines conducted under these Specifications shall be made for the quantities determined in the manner specified above at the contract price per linear foot for each size of mainline as listed in the Bid Schedule. Payment shall include all materials, tools, labor, equipment, services, and other expense in connection with inspecting sanitary sewer lines and furnishing and installing all items of work herein specified.

1.6 SECTION 2570 CHEMICAL GROUTING

- A. Chemical grouting of defects in pipelines shall be paid for on an EACH basis as established in the bid schedule for each defect corrected via grouting and shall include the first five gallons of grout used at each unique location and all other materials, equipment, cleaning, inspection, etc. to complete the repair at said location.
- B. Chemical grouting of lateral connection of relined pipelines shall be paid on an EACH basis as established in the bid schedule for each mainline size and shall include the first five gallons of grout used at each lateral connection and all materials, equipment, cleaning, inspection etc. to complete the repair at said connection.
- C. Grout used at each location beyond the first five gallons shall be paid for at the per gallon price established in the bid schedule.
- D. Any necessary repairs to existing mains and service lines damaged during performance of work under these Contract shall be made at the Contractor's expense and no reimbursement will be made for any labor, materials, equipment or other costs involved in such repairs. Materials furnished by the Owner shall not be used for such repairs unless approved by the Owner and the Contractor compensates the Owner for the cost of such materials so used.

1.7 SECTION 2580 CIPP LINING

- A. Pipe lining shall be measured in linear feet along the centerline of the installed liner within the limits of the installation work performed under these Contracts.
- B. Any necessary repairs to existing mains and service lines damaged during performance of work under these Contracts shall be made at the Contractor's

expense and no reimbursement will be made for any labor, materials, equipment or other costs involved in such repairs. Materials furnished by the Owner shall not be used for such repairs unless approved by the Owner and the Contractor compensates the Owner for the cost of such materials so used.

- C. Payment so made shall constitute full compensation to the Contractor for material, and installation including all labor, materials, tools, equipment and services necessary to complete the work as specified herein.

#### 1.8 SECTION 2590 MANHOLE LINING SYSTEM

- A. Manhole lining shall be measured as the actual depth of each manhole, measured to the nearest ½ foot from the manhole invert to the manhole frame.
- B. Manholes larger than 4' in diameter or wetwells (and other wastewater structures) shall be measured in SF of area covered, within the nearest ½ SF of area.
- C. Invert and bench repairs shall be measured before repair work and again post repair and the difference shall be recorded within the nearest 1/10<sup>th</sup> CY of new material for payment purposes.
- D. Removal of existing manhole or other structure lining prior to rehabilitation shall be measured in SF of area removed, within the nearest ½ SF of area.
- E. Payment shall be made for all items in this section according to the unit prices established in the bid schedule. Payment so made shall constitute full compensation to the Contractor for material, and installation including all labor, materials, tools, equipment and services necessary to complete the work as specified herein.

#### 1.9 SECTION 2590 SEWER SERVICE LATERAL PIPE

- A. Sewer service lateral piping shall be measured from the intersection with the mainline pipe to the end of the CIPP lateral liner.
- B. Payment for each sized main line lateral shall be on an EACH basis which includes the first 3' of lateral liner.
- C. Payment shall be made by the LF for additional lining of laterals beyond the 3' included in base price if agreed upon by the Owner/Engineer after examination of the pre-construction inspection video of said connection. Agreement must be established prior to installation of over-sized lateral liner for additional LF payment to be approved.
- D. Payment shall be made for all items in this section according to the unit prices established in the bid schedule. Payment so made shall constitute full compensation to the Contractor for material, and installation including all labor, materials, tools, equipment and services (including pre and post-installation inspection) necessary to complete the work as specified herein.

END OF SECTION 01150.

SECTION 01300

SUBMITTALS

1PART - GENERAL

.1 DESCRIPTION AND REQUIREMENTS

- A. Type of Submittals. This Section of the Specifications describes the procedures for submittals of Schedule of Submittals, Schedule of Construction, Insurance Certificates, List of Subcontractors, Anticipated Payment Schedules, Shop Drawings, Product Data, Samples, and miscellaneous work-related submittals.
- B. Related Work Specified Elsewhere:
  - 1. Definitions and Additional Responsibilities of Parties:
    - a. Section 00700: General Conditions
    - b. Section 00800: Supplementary Conditions.
- C. Submittal Contents. The submittal contents required are specified in each section and in this specification.
- D. Definitions. Submittals are categorized as follows:
  - 1. Shop Drawings:
    - a. Shop drawings shall include technical data, drawings, diagrams, performance curves, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information as applicable to the specific item for which the shop drawing is prepared.
    - b. Provide newly-prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated) or appropriate number of prints hereof, with name of preparer (firm name) indicated. The Contract Drawings shall not be traced or reproduced by any method for use as or in lieu of detail shop drawings. Show dimensions and note which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by the Engineer to be used in connection with the Work.
  - 2. Product Data:
    - a. Product data includes standard printed information on materials, products and systems, not specially prepared for this project, other than the designation of selections from among available choices printed therein.
    - b. Collect required data into one submittal for each unit of work or system, and clearly mark each copy to show which choices and options are

- applicable to project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and special coordination requirements.
- c. Show all performance characteristics, capacities, clearances required, and wiring or piping diagrams. Supplement standard information to provide all information specifically applicable to work.
3. Samples:
- a. Samples include both fabricated and unfabricated physical examples of materials, products and units of work, both as complete units and as smaller portions of units of work, either for limited visual inspection or (where indicated) for more detailed testing and analysis.
  - b. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples (not less than three (3) units) where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where the Engineer's selection is required. Prepare samples to match the Engineer's sample where indicated. Include information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards. Samples are submitted for review and confirmation of "kind" by the Engineer. Engineer will not "test" samples (except as otherwise indicated) for other requirements, which are the exclusive responsibility of the Contractor.
  - c. Samples shall be of sufficient size to clearly indicate functional characteristics of the products and full range of color, texture, and pattern.
4. Miscellaneous submittals related directly to the work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, statements of applicability, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, and similar information, devices and materials applicable to the Work but not processed as shop drawings, product data or samples.

E. List of Required Submittals:

<u>No.</u>	<u>Description</u>	<u>Section No.</u>
1.	List of Subcontractors	00100
2.	Insurance Certificates	00700
3.	Schedule of Construction	00700
5.	Anticipated Payment Schedules	00700
6.	Advertisement of Completion (Affidavit)	00800
7.	Contractor's Release of Liens	00800

.1 GENERAL SUBMITTAL REQUIREMENTS

- A. Scheduling. Where appropriate in various required administrative submittals (listings of products, manufacturers, supplier and subcontractors, and in job progress schedule), show principle work-related submittal requirements and time schedules for coordination and integration of submittal activity with related work in each instance.
- B. Coordination of Submittal Times. Prepare and transmit each submittal to the Engineer sufficiently in advance of performing related work or other applicable activities, so the installation will not be delayed or improperly sequenced by processing times, including non-approval and resubmittal (if required). Coordinate with other submittals, testing, purchasing, delivery and similar sequenced activities. No extension of time will be authorized because of Contractor's failure to transmit submittals to the Engineer sufficiently in advance of the work.
- C. Sequencing Requirements. As applicable in each instance, do not proceed with a unit of work until submittal procedures have been sequenced with related units of work, in a manner which will ensure that the action will not need to be later modified or rescinded by reason of a subsequent submittal which should have been processed earlier or concurrently for coordination.
- D. Preparation of Submittals. Provide permanent marking on each submittal to identify project, date, Contractor, subcontractor, submittal name and similar information to distinguish it from other submittals. Show Contractor's executed review and approval marking and provide space for the Engineer's "Action" marking. Package each submittal appropriately for transmittal and handling. Submittals which are received from sources other than through the Contractor's office will be returned "without action".
- E. Transmittal Identification.
  - 1. Number transmittals in sequence for each Division of the Specifications. The number before the dash indicates the Section of the Specifications, and the number after the dash is the sequence number of the transmittal (15140-1 would be the first transmittal applicable to Section 15140 of the Specifications. 15140-2 would be the second transmittal for Section 15140, etc.).
  - 2. Identify resubmittals with a letter of the alphabet following the original number, using A for the first resubmittal, B for the second resubmittal, etc. A resubmittal affecting transmittal 15140-1 would then be numbered 15140-1A. The 15140-1 would then be entered in the space "Previous Transmittal Number", which is left blank except on resubmittals.

.2 SPECIFIC CATEGORY REQUIREMENTS

- A. General. Except as otherwise indicated in the individual work sections, comply with general requirements specified herein for each indicated category of submittal.

1. Submittals shall be accompanied by a cover sheet which shall contain:
  - a. The date of submission and the dates of any previous submissions.
  - b. The Project title and number.
  - c. Date.
  - d. Contract No.
  - e. The names of the:
    - 1) Contractor
    - 2) Supplier
    - 3) Manufacturer
  - f. Identification of the product, with the Specification Section number.
  - g. A list of all the sheets included in the submittal.
  - h. Field dimensions, clearly identified as such.
  - i. Relation to adjacent or critical features of the work or materials.
  - j. Applicable standards, such as ASTM or Federal Specification numbers.
  - k. Notification to the Engineer in writing, at time of submission, of any deviations on the submittals from requirements of the Contract Documents.
  - l. Identification of revisions on resubmittals.
  - m. An 8" x 3" blank space for Contractor and Engineer stamps.
  - n. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and of Contract Documents.
  - o. Submittal sheets or drawings showing more than the particular item under consideration shall have all but the pertinent description of the item for which review is requested crossed out.

### .3 CONTRACTOR RESPONSIBILITIES

- A. In addition to any other requirements of this section, the Contractor shall be responsible to:
  1. Review shop drawings, product data and samples prior to submission.
  2. Determine and verify:
    - a. Field measurements.
    - b. Field construction criteria and required clearances.
    - c. Catalog numbers and similar data.
    - d. Conformance with specifications.
  3. Coordinate each submittal with requirements of the work and of the Contract Documents.
  4. Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents.
  5. Begin no fabrication or work which requires submittals until return of submittals with Engineer approval.

### .4 ROUTING OF SUBMITTALS

A. Submittals and routine correspondence shall be routed as follows:

1. Supplier to Contractor (through representative if applicable) for detailed review.
2. Contractor to Consulting Engineer for review or comment.
3. Consulting Engineer to Contractor.
4. Contractor to Field Office and Supplier.

.5 SUBMITTAL COPIES REQUIRED

A. Shop Drawings, Product Data, and Miscellaneous Submittals. All released submittals will be distributed as follows:

- |                   |                 |
|-------------------|-----------------|
| 1. For Poly, Inc. | 2 copies        |
| 2. For Owner      | 2 copies        |
| 3. For Contractor | <u>3 copies</u> |
| TOTAL             | 7 copies        |

B. To the above number may be added additional copies as required by the Contractor.

C. The Engineer will mark all copies of each shop drawing. One will be retained in the Engineer's office, one sent to the Field Inspection office (if applicable), one will be retained for the Owner and the remaining copies sent to the Contractor for his records and distribution.

D. For non-approval items, such as parts lists, five (5) copies are required, unless specified otherwise:

- |  |               |
|--|---------------|
| 1. For Poly, Inc. File                 | 2 copies      |
| 2. For Owner Maintenance Division File | 2 copies      |
| 3. For Owner Operating Division File   | <u>1 copy</u> |
| TOTAL                                  | 5 copies      |

E. Samples:

1. Submittal. At Contractor's option, provide preliminary submittal of a single set of samples for the Engineer's review and "action." Otherwise, initial submittal is final submittal unless returned with "action" which requires resubmittal. Submit two (2) sets of samples in final submittal; one set will be returned.
2. Quality Control Set. Maintain returned final set of samples at project site, in suitable condition and available for quality control comparisons by Engineer and by others.

.6 REVIEW OF SUBMITTALS

- A. Review Time. Allow a minimum of two (2) weeks for the Engineer's initial processing of each submittal requiring review and response, except allow longer periods where processing must be delayed for coordination with subsequent submittals or when a sufficiently large number of submittals are sent during a short period. The Engineer will advise the Contractor promptly when it is determined that a submittal being processed must be delayed. Allow two weeks for reprocessing each submittal. Advise the Engineer on each submittal as to whether processing time is critical to progress of the work, and therefore the work would be expedited if processing time could be foreshortened.
  
- B. Engineer's Action.
  - 1. Final Unrestricted Release. Work may proceed, provided it complies with contract documents, when submittal is returned with the following:
    - a. Marking: "A" - No Exceptions Taken.
  - 2. Final-But-Restricted Release. Work may proceed, provided it complies with notations and corrections on submittal and with contract documents, when submittal is returned with the following:
    - a. Marking: "B" - Exceptions Taken as Noted.
  - 3. Returned for Resubmittal. Do not proceed with Work. Revise submittal in accordance with notations thereon, and resubmit without delay to obtain a different action marking. Do not allow submittals with the following marking (or unmarked submittals where a marking is required) to be used in connection with performance of the work.
    - a. Marking: "C" - Revise and resubmit.
    - b. Marking: "D" - Rejected - Does Not Comply with Project Requirements.
  - 4. Only three (3) copies of items marked "C" or "D" will be reviewed and marked. One copy will be retained in the Polyengineering, Inc. office, one copy will be sent to the Polyengineering, Inc. field office, and the other copy with all remaining unmarked copies will be returned to the contractor for resubmittal.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01700  
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Comply with requirements stated in General, Supplemental and Special Conditions and in Specifications for administrative procedures in closing out the work.
- B. Related requirements in other parts of the Project Manual:
  - (1) Fiscal provisions, legal submittals and additional administrative requirements: General, Supplementary, and Special Conditions.
- C. Related requirements specified in other sections:
  - (1) Section 01711: Cleanup

1.2 SUBSTANTIAL COMPLETION

- A. When Contractor considers the work is substantially complete, he shall submit to Engineer:
  - (1) A written notice that the work, or designated portion thereof, is substantially complete.
  - (2) A list of items to be completed or corrected.
- B. Within a reasonable time after receipt of such notice, Engineer will make an inspection to determine the status of completion.
- C. Should Engineer determine that the work is not substantially complete:
  - (1) Engineer will promptly notify the Contractor in writing, giving the reasons therefor.
  - (2) Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion to the Engineer.
  - (3) Engineer will reinspect the work.
- D. When Engineer finds that the work is substantially complete, he will:

- (1) Prepare and deliver to Owner a tentative letter of Substantial Completion with a tentative list of items to be completed or corrected before final payment.
- (2) After consideration of any objections made by the Owner as provided in General, Supplemental and Special Conditions, and when Engineer considers the work substantially complete, he will execute and deliver to the Owner and the Contractor a definite Letter of Substantial Completion with a revised tentative list of items to be completed or corrected.

### 1.3 FINAL INSPECTION

- A. When Contractor considers the work is complete, he shall submit written certification that:
  - (1) Contract Documents have been reviewed.
  - (2) Work has been inspected for compliance with Contract Documents.
  - (3) Work has been completed in accordance with Contract Documents.
  - (4) Equipment and systems have been tested in the presence of the Owner's representative and are operational.
  - (5) Work is completed and ready for final inspection.
- B. Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Engineer consider that the work is incomplete or defective:
  - (1) Engineer will promptly notify the Contractor in writing, listing the incomplete or defective work.
  - (2) Contractor shall take immediate steps to remedy the stated deficiencies and send a second written certification to Engineer that the work is complete.
  - (3) Engineer will reinspect the work.
- D. When the Engineer finds that the work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals and begin project Advertisement of Completion.

### 1.4 REINSPECTION FEES

- A. Should the Engineer perform re-inspections due to failure of the work to comply

with the claims of status of completion made by the Contractor:

- (1) Owner will compensate Engineer for such additional services.
- (2) Owner will deduct the amount of such compensation from the final payment to the Contractor.

#### 1.5 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ENGINEER

- A. Warranties and Bonds as required, including a letter from the Surety Company giving consent of final payment and assuring the Owner that the Performance and Payment Bonds will remain in effect for at least one (1) year from the date final payment to the Contractor becomes due.
- B. Release of Liens - A certified letter from the Contractor to release and discharge the Owner, its officers, agents and employees of and from all liabilities, obligations, and claims under or arising out of said contract.
- C. Completed Operations Insurance - Contractor shall provide a signed statement agreeing to continue Commercial General Liability including Completed Operations and Product Liability coverage for two years following acceptance of project. Contractor will attach a Certificate of Insurance as evidence of such insurance and will provide Certificates in the future until the two-year period expires.
- D. Contractor's Advertisement of Completion - The Contractor immediately after being notified by the Engineer that all other requirements of his contract have been completed shall give notice of said completion by an advertisement for a period of 4 successive weeks in the Northwest Florida Daily News. Proof of publication of said notice shall be made by the Contractor to the Owner, by affidavit of the publisher and a printed copy of the published notice.

#### 1.6 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final settlement of accounting to Engineer.
- B. Statement shall reflect all adjustments to the Contract Sum:
  - (1) The Original Contract Sum.
  - (2) Additions and deductions resulting from:
    - (a) Previous Change Orders
    - (b) Unit Prices
    - (c) Deductions for uncorrected work

- (d) Penalties and Bonuses
  - (e) Deductions for liquidated damages
  - (f) Deductions for reinspection payments
  - (g) Other adjustments
- (3) Total Contract Sum, as adjusted.
  - (4) Previous Payments
  - (5) Sum remaining due
- C. Engineer will prepare a final change order, reflecting approval adjustments to the Contract Sum which were not previously made by Change Orders.

#### 1.7 FINAL APPLICATION FOR PAYMENT

Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract. Included in the Final Application For Payment shall be the affidavit of the Advertisement For Completion, Release of Liens, Proof of Completed Operations Insurance and Assurance Letter from Surety Company as outlined in Section 1.5 (A-F) above.

Sample - ADVERTISEMENT OF COMPLETION

\_\_\_\_\_  
(Contractor)

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

give notice of completion of \_\_\_\_\_

\_\_\_\_\_  
(Project)

and sets \_\_\_\_\_ as the date of final settlement. All persons and firms

should file all claims for payment to the below address prior to the settlement date:

Okaloosa Board of County Commissioners (Owner)  
c/o Poly, Inc.  
P. O. Box 841  
Shalimar, FL 32579

By: \_\_\_\_\_ (Name)

\_\_\_\_\_ (Title)

Leg: \_\_\_\_\_ (Publication Dates)

Sample - CONTRACTOR'S RELEASE OF LIENS

STATE OF:

COUNTY OF:

Before me, the undersigned Notary Public in and for the said County and State personally appeared \_\_\_\_\_, representing the Contractor, \_\_\_\_\_, who being duly sworn according to law deposes and says that all labor, materials, and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract with Board of County Commissioners, Okaloosa County, FL, the Owner, for \_\_\_\_\_, Contract No. \_\_\_\_\_ have been paid in full and that for the final payment in the amount of \$ \_\_\_\_\_, the Contractor releases and discharges the Owner and his authorized representatives from any liens or claims of any nature because of or arising from this contract and/or its performance, which it has had, has or may have in the future.

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

Sworn to and subscribed

before me this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
(Notary Public)

My Commission expires \_\_\_\_\_

**Sample Insurance Assurance Letter**

**[Date]**

Poly, Inc  
P.O. Box 841  
Shalimar, FL 32579

Reference: **[Project Name]**

Dear **[Engineer]**,

As required in the contract specifications, upon expiration of our current Certificate of Insurance, an additional copy will be forwarded to you for your records.

**[Contractors Name]** will maintain our insurance coverage in excess of two (2) years from completion.

If you have questions or require additional information, please do not hesitate to call.

END OF SECTION 01700.

## SECTION 01711

### CLEANUP

#### 1.1 GENERAL

This section covers the general cleaning which the Contractor shall be required to perform both during construction and before final acceptance of each phase of the project unless otherwise shown on the Drawings or specified elsewhere in these Specifications.

#### 1.2 HAZARD CONTROL

- A. The Contractor shall prevent accumulation of wastes which create hazardous conditions.
- B. Burning or burying rubbish and waste materials on any site shall not be allowed.
- C. Disposal of volatile wastes into sanitary or storm sewers shall not be allowed.

#### 1.3 DISPOSAL OF SURPLUS MATERIALS

- A. Unless otherwise shown on the Drawings, specified or directed, the Contractor shall dispose of all surplus excavated materials and equipment from demolition, legally off the site, and shall provide his own suitable, off-site spoil area, or on a site designated by the Owner.

#### 1.4 FINAL CLEANING

The Contractor shall:

- A. Remove from each site all plant, material, tools and equipment belonging to him, and leave the site with an appearance acceptable to the Engineer.
- B. The Contractor shall thoroughly clean all equipment materials installed by him and shall deliver over such materials and equipment in a bright, clean, polished and new-appearing condition.
- C. Restoration of Landscape Damage. Any landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The Engineer will decide what method of restoration shall be used.

- D. Post-Construction Cleanup or Obliteration. The Contractor shall obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, stockpiles of excess or waste materials, or any other vestiges of construction, as directed by the Engineer.

END OF SECTION 01711

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.1 PROJECT MAINTENANCE AND WARRANTY

- A. Maintain and keep in good repair the improvements covered by these Drawings and Specifications during the life of the Contract.
- B. Indemnify the Owner against any repairs which may become necessary to any part of the work performed and to items of equipment and systems procured for or furnished under this Contract, arising from defective workmanship or materials used therein, for a period of ten (10) years after acceptance from the final date of final resolution of the Owner accepting work.
- C. The Contractor shall not be obligated to make replacements which become necessary because of ordinary wear and tear, or as a result of improper operation or maintenance, or as a result of improper work or damage by another Contractor or the Owner, or to perform any work which is normally performed by a maintenance crew during operation.
- D. In the event of multiple failures of major consequences prior to the expiration of the ten-year warranty described above, the affected unit shall be disassembled, inspected, and modified or replaced as necessary to prevent further occurrences. All related components which may have been damaged or rendered non-serviceable as a consequence of the failure shall be replaced. As used herein, multiple failures shall be interpreted to mean two (2) or more successive failures of the same kind in the same item or failures of the same kind in two (2) or more items. Major failures may include, but are not limited to, cracked or broken housings, piping, or vessels, excessive deflections, bent or broken shafts, broken or chipped gear teeth, premature bearing failure, excessive wear, or excessive leakage around seals. Failures which are directly and clearly traceable to operator abuse, such as operations in conflict with published operating procedures, or improper maintenance, such as substitution of unauthorized replacement parts, use of incorrect lubricants or chemicals, flagrant over- or under-lubrication, and using maintenance procedures not conforming with published maintenance instructions, shall be exempted from the scope of the ten-year warranty. Should multiple failures occur in a given time, all products of the same size and type shall be disassembled, inspected, modified or replaced, as necessary and re-warranted for an additional period to equal a complete ten-year warranty on the corrected components.
- E. The Contractor shall, at his own expense, furnish all labor, materials, tools and

equipment required and shall make such repairs and removals or shall perform such work or reconstruction as may be made necessary by any structural or functional defect or failure resulting from neglect, faulty workmanship or faulty materials, in any part of the Work performed by him. Such repair shall also include refilling of trenches, excavations or embankments which show settlement or erosion after backfilling or placement.

- F. Except as noted on the Drawings or as specified, all structures such as embankments and fences shall be returned to their original condition prior to the completion of the Contract. Any and all damage to any facility not designated for removal, resulting from the Contractor's operations, shall be promptly repaired by the Contractor at no cost to the Owner.
- G. In the event the Contractor fails to proceed to remedy the defects of which he has been notified within fifteen (15) days of the date of such notice, the Owner reserves the right to cause the required materials to be procured and the work to be done, as described in the Drawings and Specifications, and to hold the Contractor and the sureties on his bond liable for the cost and expense thereof.
- I. Notice to Contractor for repairs and reconstruction will be made in the form of a registered letter addressed to the Contractor at his home office.
- J. Neither the foregoing paragraphs nor any provision in the Contract Documents, nor any special guarantee time limit implies any limitation of the Contractor's liability with the law of the place of construction.

END OF SECTION 01740

SECTION 02565

SEWER FLOW CONTROL (BYPASS PUMPING)

Part 1 - GENERAL

It is the intent of this specification to provide for temporary bypassing and dewatering of sewers.

1.1 Requirements:

Contractor shall provide the labor, materials and supervision to temporarily bypass flow around the Contractor's work during sewer rehabilitation and construction where the sewer flow exceeds the limits specified in this section. Contractor shall also provide temporary dewatering of low lying portions of existing sewers as necessary when television inspection is performed.

1.2 Submittals

Within 14 days of Notice to Proceed, the Contractor shall submit drawings and complete design data showing methods and equipment he proposes to utilize in sewer bypassing and dewatering. The submittal shall include the following information:

- A. Drawings indicating the location of temporary sewer plugs and bypass discharge lines.
- B. Capacities of pumps, prime movers and standby equipment.
- C. Design calculations proving adequacy of the system and selected equipment.
- D. Emergency (24/7) contact information for the bypass pumping sub-contractor, if applicable. Make sure to include the name, phone number and title of the person(s) onsite responsible for the bypass pumping operations.
- E. The date and time the bypass pumping is expected to begin and be completed. Indicate if bypass pumping will take place outside of normal work hours (7 am to 5 pm).
- F. A Traffic Control Plan that pertains solely to the bypass pumping operations. This may differ from the project's traffic control plan for the overall scope of work. Contractor shall maintain pedestrian and vehicular traffic and comply with ADA regulations for access to all residential and commercial property unless written approval is otherwise obtained from the property owner allowing for

reduced access. The Engineer will primarily require a review and approval of this Plan.

#### G. Emergency Plan

An Emergency Plan detailing procedures to be followed in the event any portion of the bypass operation fails and causes either surcharging or an SSO. Contractor is herein advised that any surcharging of the sewer flows during bypass pumping operations shall be deemed a failure of the bypass pumping plan (BPP) and the Contractor must re-propose an improvement to their BPP for review and acknowledgement. A sanitary sewer surcharge is herein defined as any bypassed flows entering the manhole or structure (above the crown of the pipe), due to lapses in the Contractor's BPP.

### Part 2 - CONDITIONS

#### 2.1 Available Data:

No wet weather flow data is available. The Contractor shall assume the pipes flow full during high flow conditions and provide sufficient equipment to bypass flows as required by this section. The Contractor shall have complete responsibility for design, construction, and operation of an adequate and properly functioning bypass and dewatering system. Any testing or gathering of flow data is the responsibility of the Contractor.

The Owner's sanitary sewer pump stations shall not be used to control flows. All pump stations shall remain in normal operation throughout the project.

#### 2.2 Protection:

Where bypassing is required, the Contractor shall ensure that service for connecting laterals is not disrupted. All bypassed flow shall be discharged into the nearest downstream manhole or adjacent system. No bypassing to the ground surface, receiving streams, storm drains, or bypassing which results in groundwater contamination or potential health hazards shall be permitted.

#### 2.3 Scheduling:

The bypassing and dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Owner. Personnel to man pump watches shall be provided by the Contractor on an "as-needed" basis.

### Part 3 - EXECUTION

### 3.1 Sewer Dewatering

- A. Contractor shall dewater all sagged, submerged portions of the sewer during television inspection. Sewer flow shall be reduced so that no portion of the camera's lens is submerged during inspection and all 360° of the pipe is visible. Puddling in the bottom of the pipe in swags is acceptable if the bottom of the pipe is visible through the water.
- B. The Contractor may temporarily force the flow away from the area under inspection by water jetting or plugging the line. Where these methods cannot adequately reduce the flow, the Contractor shall pump the flow from within the sewerline via bypass pumping.

### 3.2 Sewer Bypassing

#### A. General:

- 1. Sewer bypassing shall be accomplished by pumping or diverting the upstream flow around the Contractor's work or as directed by the Owner.
- 2. The Contractor shall provide temporary pumps, conduits, and other equipment to bypass the sewer flow. Contractor shall furnish the necessary labor and supervision to set up and operate the pumping and bypass system. Engines shall be equipped with mufflers and/or enclosed to keep the noise level within local ordinance requirements. Pumps and bypass lines shall be of adequate capacity and size to handle the flows. All bypassed flow shall be discharged to the nearest downstream manhole or adjacent system.
- 3. Unless otherwise specified, the Contractor shall bypass flow around his work whenever the depth of flow, as measured at the inlet pipe to the upstream manhole adjacent to the Contractor's work, exceeds the crown elevation of the pipe; or whenever the Contractor's equipment operating in the sewer provides an obstruction that restricts flow and causes the depth of flow to exceed the crown elevation.

#### B. Specific Rehabilitation Operations:

- 1. **SEWER CLEANING:** Installation of the Contractor's equipment shall not cause upstream sewers to surcharge. Contractor shall bypass upstream flow around his work where the upstream flow depths exceed the limits specified.
- 2. **TELEVISION INSPECTION:** Contractor shall reduce the depth of the flow as defined in part 3.1-A of this section and such that the upstream flow depth is within the limits specified.

### 3.3 Standby Equipment

The Contractor shall maintain on site sufficient equipment and materials to ensure continuous and successful operation of the bypass and dewatering systems. Standby pumps shall be fueled and operational at all times. The Contractor shall maintain on site a sufficient number of valves, tees, elbows, connections, tools, sewer plugs, piping and other parts or system hardware to ensure immediate repair or modification of any part of the system as necessary.

### 3.4 Damages

The Contractor shall repair without cost to the Owner any damage that may result from his negligence, inadequate or improper installation, maintenance and operation of bypassing and a dewatering system including mechanical or electrical failures.

END OF SECTION 02565

## SECTION 02566

### CLEANING OF SANITARY SEWER LINES

#### Part 1 - GENERAL

It is the intent of this specification to provide the requirements for cleaning of sewers prior to television inspection and/ or rehabilitation.

#### 1.1 Requirements:

Contractor shall clean the sewers specified for television inspection and rehabilitation of debris, roots, and grease accumulations. All materials dislodged during cleaning shall be removed from the sewer and disposed of by the Contractor. Sewer cleaning methods shall include water jetting, rodding, cleaning ball and/or Hinged-Disc cleaner, or bucketing.

Television inspection is not required during cleaning operations. However, the Contractor may, at his own expense, inspect the sewer to view current line conditions.

#### 1.2 Cleaning Classification

Sewer line cleaning shall be categorized into three distinct classifications.

- A. **Light** – Light cleaning shall be defined as debris levels found in the pipe line that are not greater than 15% of the pipe diameter.
- B. **Medium** – Medium cleaning shall be defined as debris levels found in the pipe line that are greater than 15% but do not exceed 30% of the pipe diameter.
- C. **Heavy** - Heavy cleaning shall be defined as debris levels found in the pipe line that are greater than 30% of the pipe diameter.

#### 1.3 Root Intrusion Classification

Sewer root intrusion shall be categorized into three distinct classifications.

- A. **Light** – Light roots shall be defined as small, solitary roots or groups of roots that cover less than 10% of the pipe diameter.
- B. **Medium** – Medium roots shall be defined as groups of roots or root mass that covers 10% to 30% of the pipe diameter.

- C. **Heavy** - Heavy roots shall be defined as groups of roots or root mass that covers more than 30% of the pipe diameter. This also includes larger taproots that impinge beyond the normal sewer flow level.

#### 1.4 Major Blockage

A major blockage shall be defined as an obstruction within the sewer that cannot be removed by cleaning with commercially available hydraulic or mechanical cleaning equipment. Removal of a major blockage shall be by spot repair, which at the discretion of the Owner may be performed by the Owner's maintenance crew.

### Part 2 - MATERIALS

#### 2.1 Equipment

##### A. General:

All equipment specified in this section shall be in good working condition and manufactured or fabricated to withstand the severity of the work covered under this section.

##### B. Hydraulic and Mechanical Cleaning

1. All hydraulic cleaning equipment shall be truck mounted. Water jet cleaning equipment shall include a water tank, auxiliary engine, pumps, and hydraulically driven hose reel. The Contractor shall provide high-pressure hose and a selection of high velocity nozzles required to perform the cleaning operation. A relief valve adjustable for the capacity of the high-pressure hose and nozzles shall regulate pressure to the jet nozzle. Nozzles shall be capable of producing a jet stream angle of 15° to 45° from the horizontal. The Contractor shall also provide a high velocity gun with sufficient discharge and pressure to thoroughly clean manhole interiors.
2. Sewer cleaning balls and/or Hinged-Disc cleaners which are propelled by water shall be readily collapsible at any time during the cleaning operations to protect against flooding of sewer lines. The Contractor shall provide cleaning balls and/or Hinged-Disc cleaners in sizes consistent with the pipe diameters encountered. Each cleaning ball and/or Hinged-Disc cleaner shall have a flexible scraper at its periphery to ensure the total removal of grease. Sewer cleaning balls and/or Hinged-Disc cleaners that are not readily collapsible are prohibited.
3. Mechanically powered equipment such as bucket machines shall be provided in pairs and shall be belt-driven or employ an overload device. Power rodding machines shall be the "continuous rod" type capable of rodding distances of

up to 1,000 feet in one setup. Rodding machines shall have the ability to spin the rod either clockwise or counterclockwise and be able to be pushed straight out or pulled back without rotating the machine. It shall be capable of pulling pipe-size swabs or brushes back through the sewer for cleaning and flushing purposes. The rodding machine shall have a positive drive and shall be capable of producing a 2,0000-pound pull. The rod shall be specifically designed for use with the rodding machine.

C. Root Removal:

The Contractor shall employ sewer-cleaning equipment to cut all roots encountered back to the pipe surface. When large roots are encountered, the Contractor shall consult with the Owner as to the proper method of root cutting to ensure sufficient clearance for passage of the television camera or cleaning equipment. After removal of the root mass, the Contractor shall re-televising the line to verify satisfactory removal of the root(s). Initial re-televising for verification shall be a pay item. If root removal is not satisfactory, all additional verification televising shall be at the Contractor's expense.

D. Debris Removal:

The Contractor shall provide suitable equipment to remove all debris dislodged during cleaning operations from the nearest downstream manhole. Equipment or methods, which require a member, or members, of the Contractor's crew to physically excavate debris from within the manhole, is prohibited. All debris shall be promptly removed from the sewer from the nearest manhole and shall be disposed of off site in a lawful manner at an Owner-approved location. Hauling containers shall be watertight.

E. Hammer Tap Removal:

The Contractor shall provide suitable equipment to cut protruding hammer taps that hinder passage of the television camera or cleaning equipment. After removal of the hammer tap, the Contractor shall re-televising to verify satisfactory removal of the tap. Initial re-televising for verification shall be a pay item. If tap removal is not satisfactory, all additional verification televising shall be at Contractor's expense.

### Part 3 - EXECUTION

#### 3.1 General

The Contractor shall at all times conduct his work so as to prevent any blockage and minimize surcharging in the sewer manholes and connecting sewer pipelines. Damage to

existing facilities as a result of the Contractor's work shall be promptly repaired in kind at the Contractor's expense.

A. Sewer Locates

1. Owner Responsibilities – Owner shall locate all sanitary sewer manholes prior to mobilization of Contractor. Manholes located under pavement will be uncovered by the Owner just prior to cleaning and televising and other rehabilitation work by the Contractor. Contractor must notify Owner 48 hours prior to needing access to a manhole that is covered by pavement. All work in a given “uncovered manhole” must be completed in as short a period as practical to allow the area to be repaved to minimize disruption to traffic. A close degree of coordination will be needed between the Contractor and the Owner.
2. Contractor Responsibilities
  - a. During the course of cleaning and televising, the Contractor may encounter manholes that are not shown on the drawings. The Contractor must contact the Owner's designated representative to obtain appropriate identification numbers for all newly discovered manholes. Television and written inspection logs must have the new numbers incorporated in them to facilitate rehabilitation work in the future.
  - b. In the event of line blockages that cannot be removed by cleaning (i.e. severely offset joints, pipe collapses, wedged foreign objects or severely protruding hammer taps), the Contractor should reverse his setup and attempt to complete the inspection from the other end of the line. If two blockages in the same reach are encountered, the Contractor should note the inability to inspect the entire the line segment. Then he should measure the distance from center-of-manhole above ground and include this distance on the log reports.

B. Sewer Bypassing and Dewatering

The Contractor shall be responsible for bypassing sewer flow around his work and dewatering of sewer lines in accordance with the requirements of Section 02565, Sewer Flow Control.

3.2 Cleaning

- A. Cleaning shall remove all sludge, rocks, debris, roots, grease accumulations and obstructions from the sewer including “hammer taps” that prevent passage of closed-circuit cameras. Sewer cleaning methods may include water-jetting, rodding, cleaning ball and/or Hinged-Disc cleaner, or bucketing. Unless

otherwise directed by the Project Manager, the Contractor shall select the most effective of these cleaning methods according to the prevailing site conditions.

- B. Where bucketing is warranted, bucket machines must be used to remove the major portion of the debris. Bucket operations shall proceed in the upstream direction in one sewer reach at a time. The operation shall continue until the buckets can pass the entire reach with minimum collection of debris. Upon completion, the line shall be cleaned using a sewer cleaning ball and/or Hinged-Disc cleaner and then hydraulically cleaned.
- C. During cleaning operations, the Contractor shall provide a means of catching and removing the dislodged debris conveyed downstream with the sewer flow. The method chosen shall not allow the transport of debris to downstream sewer reaches. All debris removed from the sewer shall be removed from the work site by the end of each work day.

### 3.3 Re-cleaning

Where the sewer is not adequately cleaned, the Contractor shall re-clean and re-televiser at his own expense.

END OF SECTION 02566

SECTION 02567

TELEVISION INSPECTION OF SANITARY SEWER LINES

Part 1 - GENERAL

It is the intent of this specification to provide the requirements for internal television inspection of sanitary sewer lines.

1.1 Requirements:

- A. The Contractor shall inspect the sewer interior using a **color** closed-circuit television camera (CCTV) and document the inspection in DVD format with freeze frame clarity. Handwritten or computer-generated logs shall accompany the DVD for each sewer reach (manhole to manhole) inspected. The nature of the inspection shall be to provide a permanent record of the existing sewer conditions as it relates to line dimensions, materials, obstructions, breakage, connections, deterioration and other visual defects.
- B. **All sewer lines shall be cleaned within 24 hours prior to TV inspection in accordance with Section 02566, Sewer Cleaning.** If the line to be inspected has been cleaned more than 24 hours previously, at the discretion of the Owner's Representative, the line may be inspected if at least one pass of the water jet is made to remove any fresh debris buildup which results in inspection conditions that are satisfactory to the Owner's Representative.

Part 2 - MATERIALS

2.1 Television Camera and Monitor

- A. The camera shall be enclosed in an explosion-proof case and shall be operative in 100% humidity conditions. The camera shall be of the pan and tilt or fish-eye lens system, which will allow for viewing service laterals and defects. Lighting intensity shall be remote controlled and shall be adjusted to minimize reflective glare. Lighting and camera quality shall provide a clear, in-focus picture of the entire inside periphery of the sewer for all conditions except submergence. Camera focal distance shall be remotely adjustable through a range of 6 inches to infinity. An electronic data view shall be used during the inspection, which projects the date of inspection, the manhole numbers of the sewer line being inspected, and the footage at which camera is located to the video recorder and the TV monitor. The footage counter device, which measures the distance traveled by the camera in the sewer, **shall be accurate to  $\pm 1$  foot in 100 feet.** The Contractor shall physically measure the length of each reach from the centerline of each manhole to verify the accuracy of the counter.

- B. The monitor shall be color and measure at least 13” diagonally across the picture tube. Monitor resolution shall be as specified in the following paragraph, 1.2-B, “Video Recordings” of this section. The Owner’s Representative shall have access to observe the monitor and all other operations at all times. The camera shall be mounted on skids or a tractor suitably sized for each pipe diameter inspected. The system of cabling employed to transport the camera and transmit its signal shall not obstruct the camera’s view.

## 2.2 Video Recordings

- A. Recordings of all sewer line inspections shall be made DVD with freeze frame clarity. Replays when reviewed on the Contractor’s field television monitor shall be free of electrical interference and provide a clear, stable image with horizontal resolution greater than 350 lines.
- B. The audio portion of the composite videotape shall be sufficiently free from electrical interference and background noise to provide complete intelligibility of the oral report. Audio reports shall be recorded by the operating technician on the recording as they are being produced and shall include the sewer location, identification of terminating manholes, inspection direction, and complete descriptions of the sewer line conditions as they are encountered.

## Part 3 - EXECUTION

### 3.1 Internal Television Inspection

- A. The camera may be pulled or crawl through the sewer in either direction, provided that the pan and tilt or fish-eye capabilities will allow viewing of the service laterals. At all points within the sewer showing defects, laterals and sewer appurtenances, the Contractor shall stop the forward travel of the camera long enough to ensure adequate video coverage. Inspection crews shall be in constant communication with each other via walkie-talkies or other suitable means during all operations.
- B. If the camera cannot pass the entire sewer reach from its starting direction, the reach shall be inspected as much as possible from each direction. Inspection logs for the reach shall include the nature of the blockage, its location, and why pre-inspection cleaning was ineffective in removing the obstruction. Where a major obstruction exists, as defined in Section 02566, Sewer Cleaning, the Owner may elect to perform a point repair with its own maintenance crew. Roots and “hammer taps” encountered during the TV inspection should be removed and the reach re-televised to document removal for payment.

### 3.2 Sewer Bypassing and Dewatering

The Contractor shall be responsible for bypassing sewer flow around his work and dewatering of sewer lines in accordance with the requirements of Section 02565, Sewer Flow Control. Where sags or submerged sections of the sewer are encountered during TV inspection, the Contractor shall first complete inspection of the entire reach to determine the extent of such areas prior to dewatering the sewer. Dewatered sections of the sewer shall then be TV inspected.

### 3.3 Manhole Numbering

Manholes shall be designated as on the drawings provided by the Owner.

### 3.4 TV Inspection Report

The TV inspection report includes video recordings and inspection logs. The Contractor shall provide equal documentation on both the tapes and logs and shall maintain a copy of all report material.

- A. Inspection Logs – Inspection logs may be hand-written or computer generated and should contain all information necessary to fully describe the location of the segment inspected and its existing condition.
- B. DVDs shall be complete with audio narrative of each feature and defect in the sewer. Text information shall be displayed on the television monitor using a video titling device and positioned away from the feature being inspected. Text shall include the date of inspection, manhole identification, line size and the distance from the camera position to the centerline of the insertion manhole. The color of text shall be in contrast to the background picture and may be changed during the inspection as background color changes.

END OF SECTION 02567

SECTION 02570

CHEMICAL GROUTING

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide all labor, materials, accessories, equipment, and tools required for the rehabilitation, infiltration reduction, and root treatment of pipe sections, lateral connections, and manholes using chemical grouting as shown on the Drawings and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300 – Submittals
- B. Section 02565 – Bypass Pumping
- C. Section 02566 – Cleaning of Sewers
- D. Section 02567– TV Inspection of Sewers
- E. Section 02580 – Cured-in-Place Pipe Lining

1.3 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Without limiting the generality of the other requirements of the Specifications, all work herein shall conform to the applicable requirements of the following documents. All referenced specifications, codes, and standards refer to the most current issue available at the time of Bid.
  - 1. ASTM F2304 Standard Practice for Sealing of Sewers Using Chemical Grouting
  - 2. ASTM F2414 Standard Practice for Sealing Sewer Manholes Using Chemical Grouting
  - 3. ASTM F2454 Standard Practice for Sealing Lateral Connections and lines from the mainline Sewer Systems by the Lateral Packer Method, Using Chemical Grouting
  - 4. NASSCO Specification Guidelines – Specification for Sewer Line Cleaning
  - 5. NASSCO Specification Guidelines – Specification for Television Inspection Main Sewer
  - 6. NASSCO/ICGA Suggested Standard Specification for Pressure Testing and Grouting of Sewer Pipe Joints, Laterals and Lateral Connections Using the Packer Method with Solution Grouts

#### 1.4 SUBMITTALS

- A. Shop Drawings: The Contractor shall submit the following in accordance with the requirements set forth in Section 01300 – Submittals:
1. Chemical grout and additive product data showing physical and chemical properties
  2. Manufacturer's installation instructions
  3. MSDS sheets

#### 1.5 QUALIFICATIONS

- A. The qualifications of the Contractor shall be submitted with the Bid Proposal. These qualifications shall include detailed descriptions of the following:
1. Name, business address, and telephone number of the Contractor
  2. Name(s) of all supervisory personnel that will be directly involved in the Project
  3. Proposed product information showing compliance with the specified requirements listed herein, including chemical grouts, additives, and packers
  4. Documentation of certification of Contractor/installer by the chemical grout manufacturer and/or its authorized representative
  5. A reference list of previous projects on which the Contractor and/or installer has provided chemical grouting over the last five years, including project name, project number, customer name, and owner's contact information (name and phone number)
  6. The chemical grout shall have documented service of successful performance in similar usage, with a minimum of 10,000 joints, laterals, and manholes grouted in the United States.
  7. The Contractor shall sign and date the information provided and certify that, to the extent of his knowledge, the information is true and accurate and that the supervisory personnel will be directly involved with and used on the Project. Substitutions of personnel and/or methods will not be allowed without written authorization by the Owner and/or Engineer.

### PART 2 - PRODUCTS

#### 2.1 CHEMICAL GROUT

- A. For main lines and laterals, chemical grout shall be a minimum of 10 percent acrylamide base material by weight.
- B. Chemical grout shall have the ability to tolerate dilution and react in moving water.

- C. Chemical grout shall have the ability to increase viscosity, density, and strength with the use of approved additives.
- D. Chemical grout shall have an initial viscosity of approximately 2 centipoise.
- E. Chemical grout shall have a controllable reaction time of 10 seconds to 60 minutes.
- F. Contractor shall provide a chemical sealant solution containing a principal chemical sealant constituent, initiator (trigger), and catalyst specifically recommended for the purpose of sealing in sanitary sewer lines and manholes. Chemical sealant constituent, initiator (trigger), and catalyst shall be compatible when mixed.
- G. After final reaction, cured grout shall be continuous, irreversible, impermeable, firm yet flexible, chemically-stable, and non-biodegradable.
- H. Grout used shall be Avanti AV-100 acrylamide or Engineer pre-approved equal. Urethane based grout may be used for infiltration control in manholes.

## 2.2 ADDITIVES

- A. The following additives, in quantities as recommended by the manufacturer and as approved by the Engineer, shall be used for all grouting applications:
  - 1. Strengthening Agents: For joint grouting, a latex or diatomaceous earth additive shall be added to increase compressive and tensile strength. The strengthening agent shall be Avanti AV-257 Icoset or Engineer-approved equal.
  - 2. Root Inhibitor: A root deterrent chemical shall be added to control root re-growth. The root inhibitor shall be Avanti AC-50W or Engineer-approved equal.
- B. If required by field conditions, the following additives, in quantities as recommended by the manufacturer, may be used at the Contractor's discretion:
  - 1. Dye: A manufacturer-approved water soluble dye without trace metals may be added to the grout tank(s) for visual confirmation.
  - 2. Gel Time Modifier: A gel time extending agent may be used to extend gel time as necessary.
  - 3. Freeze/Thaw: In those lines where the grouting material may be exposed to a freeze-thaw cycle, ethylene glycol or an alternative Engineer-approved additive shall be used to prevent chemical grout cracking once set.
- C. When using non-soluble additives, the grout tanks shall have mechanical mixing devices to keep the additives in suspension and maintain a uniform solution of grout and additive.

### PART 3 - EXECUTION

#### 3.1 CLEANING SEWER LINES

- A. Prior to any chemical grouting of a pipe, the Contractor shall remove internal deposits, protrusions, and anything that prevents proper packer seating from the pipeline in accordance with Section 02566 – Cleaning of Sewers. After application of the chemical grout, the Contractor shall remove any excess chemical grout in accordance with same Section prior to post-installation inspection.

#### 3.2 TELEVISION SURVEY

- A. Prior to application of the chemical grout and again after application of the chemical grout, a television survey of each grouted pipeline shall be performed in accordance with Section 02567 – TV Inspection of Sewers. Post-installation inspection shall be submitted and approved by the Engineer prior to approval of payment application.
- B. The interior of the pipeline shall be carefully surveyed to determine the location(s) and extent(s) of any structural failures. The location(s) of any conditions which may prevent proper application of grouting materials in the pipeline shall be noted so that these conditions can be corrected. A videotape and suitable log shall be maintained and submitted to the Engineer.

#### 3.3 FLOW BYPASSING

- A. When required, the Contractor shall provide for the transfer of flow around a section or sections of pipe to be grouted. The proposed bypassing system shall be approved in advance by the Owner and Engineer. The approval of the bypassing system shall in no way relieve the Contractor of his responsibility and/or public liability. The flow bypassing shall be performed in accordance with Section 02565 – Bypass Pumping.
  - 1. If the grouting can be completed in a few hours, bypass pumping may not be required. The placement carriage shall be equipped with a bypass section to allow flow once grouting is completed.

#### 3.4 LINE OBSTRUCTIONS

The Contractor shall clear each pipeline of obstructions prior to grouting. If the survey reveals an obstruction that cannot be removed by conventional cleaning equipment, the Contractor shall notify the Engineer.

#### 3.5 CHEMICAL GROUT APPLICATION

- A. The entire chemical grouting process shall be performed in strict accordance with the manufacturer's current guidelines. If any deviations from the guidelines are proposed, Contractor shall submit explanation and approval from grout and/or packer manufacturer(s).
- B. Repairs shall take place at joints, generally small circumferential cracks, small holes, or similar points of infiltration as listed in the Pipe Rehabilitation Schedules and Manhole Rehabilitation Schedules on the Drawings or in Task Order. The repair shall not permanently reduce or change the original cross-sectional area and shape of the interior of the sewer pipeline.

C. Sewer Pipe Joints or Defects:

1. Contractor shall position the sealing packer over the area to be repaired using a metering device at the surface and CCTV camera in the line.
2. Accurate measurement of the location of the defect to be sealed shall be made using the portion of sealing packer as the datum (i.e. measurement point or target).
3. A similar measurement to the target shall also be used to obtain the necessary measurement for positioning the injection area of the sealing packer over the area to be sealed.
4. Contractor shall expand the sealing packer sleeves using controlled pressures.
5. Expanded sleeve shall seal against the inside periphery of the pipeline to form a void area at the point of infiltration that is completely isolated from the rest of the pipeline.
6. Contractor shall pump sealant materials into the isolated area through those systems at controlled pressures that are in excess of groundwater pressures.
7. Contractor shall pump as much grout as is required to seal any leaks and fill the voids. Under pressure, the grout shall then be forced out into the soil through any leaking joints and pipe defects. No more than 20 gallons of grout shall be pumped into a single sewer section. If a sewer section requires more than 20 gallons of grout to achieve an effective seal, the Engineer shall be notified and shall approve the use of the additional grout before pumping is continued.
8. Chemical grout shall break away from the packer and stay in place when the packer is deflated and moved from the point of infiltration.
9. Upon completion of injection, Contractor shall test the point of repair. If testing shows the seal was not completely effective, Contractor shall repeat the sealing process until the defect successfully passes the pressure test.
10. After sealing each sewer section, Contractor shall remove surplus grouting material from the section at the manhole immediately downstream of the grouting location.
11. If surplus grouting materials left in a sewer section by the Contractor result in sewer surcharging and subsequent damage to public or private property, Contractor shall be responsible for damage to property and payment of any related expenses incurred by Owner.
12. For sealing main line sewer pipe joints and laterals connected to manholes by packer injection grouting, gel times shall be plus or minus 30 seconds unless otherwise approved by Engineer.

D. Lateral Connections:

1. All lateral connections that are not designated on the Drawings or directed by the Owner and/or Engineer to be replaced via excavation or CIPP lining shall be chemically grouted after the CIPP liner is installed and lateral opening has been reinstated in accordance with

Section 02580 – Cured-in-Place Pipe Lining. The grout shall extend a minimum of 6 inches up the lateral pipe. If a minimum of 6 inches of grout in the lateral cannot be achieved due to blockages, the Contractor shall proceed to the next connection and shall immediately inform the Engineer of the location and cause of the blocked connection.

2. The lateral packer shall remain in position during the sealing of the connection so the isolated void is maintained. Grout shall be pressure-injected through the lateral packer into the annular space between the inversion tube and the lateral pipe. Under pressure, the grout shall then be forced out into the soil through any leaking joints and pipe defects. No more than 20 gallons of grout shall be pumped through a single lateral connection. If a connection requires more than 20 gallons of grout to achieve an effective seal, the Engineer shall be notified and shall approve the use of the additional grout before pumping is continued.
3. Upon completion of the lateral sealing procedure, the lateral shall be air-tested to confirm the sealing of the connection. If the lateral fails the air test, the grouting procedure shall be repeated at no additional cost to the Owner. This sequence of grouting and subsequent air testing shall be repeated until either the lateral is sealed or it is determined that the grout consumption is too high and may result in the blockage of the lateral pipe. The final determination to stop subsequent attempts to seal a lateral will be jointly made by the Engineer and the Contractor.
4. The Contractor shall confirm lateral flow after the successful sealing of each lateral tap. With the lateral packer in position, the inversion tube shall be retracted and air shall be pressure-injected into the lateral. If a pressure builds in the lateral and does not drop to approximately zero in a few seconds, the packer shall be moved off the connection and the connection shall be viewed with a television camera. With the camera viewing the connection point, an attempt shall be made to obtain a water flush by the property owner served by the lateral. If water is not visible during this flushing procedure, it shall be assumed that the building sewer connection is blocked with grout and the Contractor shall clear the lateral at no additional cost to the Owner. Contractor shall not be responsible for clearing blockages in the lateral that are not due to grouting operations.

### 3.6 ACCEPTANCE AND TESTING

- A. Prior to and during the joint testing phases of the work, the Contractor shall perform control, intermediate, and final testing in accordance with ASTM F2304, ASTM F2414, and ASTM F2454.
- B. Testing Sewer Main Joints:
  1. Joint testing pressure shall be equal to 0.5 psi per vertical foot of pipe depth plus 2 psi. Test pressure shall not exceed 10 psi without prior approval by the Engineer.
  2. Joints in laterals which are directly connected to manholes shall be tested to 18 inches.
  3. Each sewer pipe joint shall be tested at the previously-specified pressure in accordance with the following air test procedure:

- a. The packer shall be positioned within the pipe so it straddles the joint to be tested.
- b. The packer ends shall be expanded so the joint is isolated from the remainder of the pipe and a void area is created between the packer and the pipe joint. The ends of the testing device shall be expanded against the pipe per the manufacturer's recommendations. If all attempts to isolate the joint fail, grout shall be pumped to seal the leak around the packer end elements. The Contractor shall be paid at the unit price for grout to seal the packer unless the Engineer determines that the sewer was inadequately cleaned or the packer is not properly working.
- c. Air shall then be slowly introduced into the void area until a pressure equal to or greater than the required test pressure, but in no cases greater than 2 psi above the required test pressure, is observed on the pressure monitoring equipment. When the desired pressure is reached, the air flow shall be stopped. If the void pressure decreases by more than 1.0 psi within the next 15 seconds, the joint will have failed the test and shall be sealed.
- d. Upon completing the testing of each individual joint, the packer shall be deflated with the pressure meter continuing to display void pressure. If the void pressure reading does not drop to 0.0 plus or minus 0.5 psi, the test equipment shall be cleaned of residual grout material or repaired as needed to result in an accurate void pressure reading.

C. Testing Lateral Connections:

1. Lateral connection testing pressure shall be equal to 0.5 psi per vertical foot of pipe depth plus 2 psi. Test pressure shall not exceed 10 psi without prior approval by the Engineer.
2. Each lateral connection shall be tested at the previously-specified pressure in accordance with the following air test procedure:
  - a. The area to be tested shall be isolated using the lateral connection packer and by applying positive pressure into the isolated void area. For laterals directly connected to the main line sewer, a pan and tilt camera shall be used to position the lateral packer.
  - b. The lateral bladder shall be inverted from the main line assembly into the lateral pipe and inflated. The main line elements shall then be inflated to isolate the lateral connection and the portion of the lateral to be tested.
  - c. A sensing unit shall monitor the pressure of the packer void and shall accurately transmit a continuous readout of the void pressure to the control panel at the grouting truck or to a pressure gauge on the packer recorded by the CCTV camera.
  - d. Air shall then be slowly introduced into the void area until a pressure equal to or greater than the required test pressure, but in no cases greater than 2 psi above the required test pressure, is observed on the pressure monitoring equipment. When the desired pressure is reached, the air flow shall be stopped. If the void pressure

decreases by more than 2.0 psi within the next 15 seconds, the lateral will have failed the test and shall be grouted and retested.

- e. Upon completing the testing of each individual lateral, the lateral packer shall be deflated with the pressure meter continuing to display void pressure. If the void pressure reading does not drop to 0.0 plus or minus 0.5 psi, the test equipment shall be cleaned of residual grout material or repaired as needed to result in an accurate void pressure reading.

### 3.7 SITE RESTORATION

- A. After the grouting has been completed and accepted by the Owner, the Contractor shall restore the entire Project area and shall return the ground cover to its original or better condition. All excess material and debris not incorporated into the permanent installation shall be disposed of by the Contractor.
- B. A container shall be furnished for the collection of solvents used in the cleaning of the grouting equipment. Contractor shall use an approved solvent recovery process to dispose of the collected solvents. Disposal of cleaning solvents into the sewer system or into natural watercourses is strictly prohibited.

END OF SECTION 02570

SECTION 02580

REHABILITATION OF SEWERS BY CURED-IN-PLACE PIPE (CIPP) METHODS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cleaning and flushing existing sanitary/storm sewers.
2. Television inspection of existing sewers.
3. Inserting liner into existing sewers.
4. Television inspection of post-construction, rehabilitated sewers.

1.2 REFERENCES

A. ASTM International:

1. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance Notched Specimens of Plastics.
2. ASTM D543, Standard Practice for Evaluating the Resistance of Plastics to Chemical Reagents
3. ASTM D638 - Standard Test Method for Tensile Properties of Plastics.
4. ASTM D695, Standard Test Method for Compressive Properties of Rigid Plastics
5. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
6. ASTM D2837 - Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.
7. ASTM F1216 – Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube.
8. ASTM F1743 – Rehabilitation of pipelines by pulled-in-place installation of a cured-in-place thermosetting resin pipe.
9. ASTM F2019 – Rehabilitation of existing pipelines and conduits by the pull in place installation of glass reinforced plastic (GRP) cured-in-place thermosetting resin pipe.
10. ASTM F2561, Standard Practice for Rehabilitation of a Sewer Service lateral and

Its Connection to the Main Using a One Piece Lateral Cured-in-Place Liner

11. ASTM D2990, Standard Test Methods for Tensile, Compressive and Flexural Creep and Creep-Rupture of Plastics
12. ASTM D3567, Standard Practice for Determining Dimensions of Fiberglass (Glass-Fiber Reinforced Thermosetting Resin) Pipe and Fittings
13. ASTM D3681, Standard Test Method for Chemical Resistance of “Fiberglass” (Glass Reinforced Thermosetting Resin) Pipe in a Deflected Condition
14. ASTM D5813, Standard Specification for Cured-In-Place Thermosetting Resin Sewer Pipe

### 1.3 DESIGN REQUIREMENTS

- A. Design lining material to have sufficient structural strength to support loads, live loads and groundwater load imposed assuming existing pipe cannot share loading or contribute to structural integrity of liner.
- B. Design lining material to support reasonable anticipated settlement and movement in aerial and elevated pipe segments without jeopardizing the structural integrity or uniformity of the liner.
- C. Design liner to least possible thickness, but in no instance less than 4mm for 6” pipe and no less than 6 mm for 8” and larger pipe, to minimize decreasing of inside pipe diameter.
- D. Design liner material to provide jointless and continuous structurally sound construction able to withstand imposed static, dynamic and hydrostatic loads on long term basis.
- E. Identify design provisions for shrinkage control to prevent future misalignment of service reconnections.

### 1.4 PERFORMANCE REQUIREMENTS

Perform relining and internally reestablish service connections (if applicable) without need for excavation while minimizing disruptions to adjacent occupied buildings and traffic

### 1.5 SUBMITTALS

The Contractor shall submit to OCWS/Engineer the following specifications, drawings, test results, and other data showing details of the fabrication and installation of the CIPP liner; these submittals shall be considered incidental to this project, unless a specific bid item for such is included in the project bid proposal:

1. Product specifications and technical data for the resin catalyst system, sealing materials, and liner tube.

2. Manufacturer provided information that describes the CIPP materials, curing speeds, curing installation processes, installation pressures, and temperature limitations.
3. Certified test results of physical properties testing and chemical resistance testing of the proposed resin material.
4. If a field wet-out procedure will be used for liner impregnation, submit a complete description of the proposed wet-out procedure with detailed information on equipment and material storage locations, resin volumes and/or weights, liner length, start times, finish times, resin injection locations, and any other pertinent data documenting the wet-out procedure. Provide plan indicating procedure for reconnection of laterals and pipe end seals.
6. Map that legibly shows proposed liner insertion location(s), construction staging area(s), and bypass pump and piping locations.
7. Traffic control plan (if required) in accordance with Okaloosa County or FDOT
8. Bypass pumping plan
9. Hydraulic flow capacity calculations with a copy of certification verifying Manning's roughness "n" value for the proposed liner.
10. Schedule of operations for each project or work order.
11. Liner curing parameter records.
12. Pre and post television inspection videos and logs on DVD in accordance with "Section 02567 - TV Inspection of Sewers".
13. Physical samples. Samples removed for testing shall be individually labeled and logged with the following information:
  - a. Owner's Project number and title.
  - b. Sample number.
  - c. Segment number of line as noted on plans.
  - d. Date and time of sample.
  - e. Name of Contractor.
  - f. Name and location of firm performing testing on sample.
14. Certified test results of structural properties of CIPP samples for each segment installed under this contract.
15. Log of pulling forces measured during insertion.
16. Any other testing results or submittals specified in this document or required by applicable ASTM standards.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Section 01700 – Contract Closeout.
- B. Project Record Documents: Record actual locations of each service connection (if applicable).

#### 1.7 QUALIFICATIONS AND PRE-APPROVAL

Manufacturers have been pre-approved for this project, and others will be considered. To be considered as an equal, manufacturers must be formally approved by addendum, prior to bid. All pre-approval requests must be submitted at least 10-days prior to bid. The engineer will have sole discretion in determining whether a manufacturer is to be approved on this project, based upon documentation submitted as required below and

communication with references.

- A. **Manufacturer:** Company specializing in manufacturing Products specified in this section with minimum five years documented experience. Manufacturer shall provide evidence of a minimum of 500,000 linear feet of documented successful installations in sanitary sewer systems and a minimum of 2,000 documented, successful manhole-to-manhole line sections in sanitary or storm sewer systems. Of this experience, qualifications must indicate the successful completion of a minimum of 100,000 linear feet of documented successful installations in sanitary or storm sewer systems with pipe diameters 12” and larger.

Pre-Approved Manufacturers:

I. Applied Felts

II. Liner Product, LLC

- B. **Installer:** Installer shall have a minimum of 100,000 linear feet of documented successful installations of full main cured-in-place pipe.
- a. Installation of the CIPP products shall be performed by a work force that is experienced and certified in installation of the products. The installer shall be certified by the CIPP product manufacturer to have been trained and approved in the installation of their CIPP products and have a minimum of 3 years total experience with the product.
  - b. The Contractor shall submit such certification of hot water or steam cured CIPP Installer to Owner.
  - c. Contractor shall also submit to Owner at least five (5) recent references of the CIPP installer, indicating successful installation of proposed hot water or steam cured CIPP on projects of similar size and scope. For each reference, include at a minimum the Project Name, Location, Length of Segments Lined, Diameter of Segments Lined, Dollar Value of Contract, Customer’s Name and Contact Information.
  - d. Installer’s project manager must have a minimum of 3 years of CIPP installation experience and must be on-site during the installation of the CIPP products
  - e. **Installer Equipment Requirements**  
Installer shall only use hot water or steam curing equipment that has been certified and approved for use by the CIPP product manufacturer.

1.8 PRE-INSTALLATION MEETINGS

Convene a minimum of one week prior to commencing each phase of work of this section to review pre-rehabilitation video.

1.9 DELIVERY, STORAGE, AND HANDLING

Receive, store, and protect liner materials.

## 1.10 FIELD MEASUREMENTS

Verify field measurements of pipes prior to design, fabrication and delivering of liner material.

## 1.11 COORDINATION/PUBLIC NOTIFICATION

The Contractor shall maintain service usage throughout the duration of the project. In the event that a service will be out of service, the maximum amount of time of no service shall be 8 hours for any property served by the sewer. A public notification program shall be implemented, and shall as a minimum, require the Contractor to be responsible for contacting each home or business connected to the sanitary sewer informing them of the work to be conducted, when the sewer will be offline, and any alternative method of service that may be provided. The Contractor shall also provide the following:

- A. Written notice to be delivered to each home or business two business days prior to the beginning of work being conducted on the section, and a local telephone number of the Contractor they can call to discuss the project or any problems which could arise.
- A. Personal contact with any home or business which cannot be reconnected within the time stated in the written notice.
- B. Inform OCWS Maintenance Department 48 hours prior to starting the work.
- C. Owner will supply water for the work described within this section at no charge. Water must be metered and connection provided with suitable backflow protection. Contractor must provide transmission to site. Coordinate the use of the nearest feasible fire hydrant with the Owner. (See Special Conditions)

## PART 2 – PRODUCTS

### 2.1 CURED-IN-PLACE (CIPP) LINER

- A. Pre-Approved Manufacturers: Other products will be considered but must be pre-approved. Pre-approval requests must be made a minimum of 10-days prior to bid (See section 1.7)
- B. Materials:
  - 1. Tube consisting of one or more layers of absorbent non-woven felt fabric or glass reinforced plastic. It shall not be possible to separate the tube layers. The application of the resin to the felt tubing or fiberglass layers shall be conducted under factory conditions and the materials shall be fully protected against UV Light degradation, excessive heat and contamination at all times.
  - 2. Furnish product material in accordance with ASTM F1216, ASTM F1743 and ASTM F2019.
  - 3. Liner effective length to match length of piping to be lined as determined by the Contractor to effectively carry out the rehabilitation and extend into the adjoining manhole structures. The Contractor shall be responsible for field verifying all liner lengths prior to liner fabrication. Each liner shall contain an end section which shall be bonded to each end of the host pipe to prevent leakage from the liner and host pipe.

4. Furnish wet-out tube with uniform thickness that when compressed at installation pressures will meet or exceed design thickness.
5. The outside layer of the tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.
6. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.
7. 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.
8. Seams in the tube shall be stronger than the un-seamed felt and meet the requirements of ASTM D5813.
9. Furnish tube of sufficient size to provide tight fit to existing pipe. Allowances shall be made for longitudinal and circumferential expansion. All dimensions shall be verified by the Contractor prior to fabrication.
10. Furnish resin system consisting of corrosion resistant polyester, vinyl ester, or epoxy. Recycled resins will not be allowed.
11. Chemical and Physical Testing: Test samples in accordance with ASTM D790. Comply with minimum property values shown below with applicable ASTM requirements.

Property	ASTM Method	Test Value
Flexural Modulus	D790	250,000 psi
Flexural Strength	D790	4,500 psi
Compressive Strength	D695	6,500 psi
Longitudinal Flexural Modulus	D2990	150,000 psi

13. Liner Thickness: All liner thickness calculations shall be submitted in accordance with provisions made in this Specification. The thickness design shall be in accordance with ASTM D2412 and F1216. Calculations shall be based on fully deteriorated gravity pipe values. Liner thickness calculations shall comply with, at a minimum, the following design constraints and the following considerations shall be made:

- a. Minimum Factor of Safety = 2.0
- b. Service Temperature = 33 to 150 degrees F
- c. Groundwater Elevation = At Surface
- d. Minimum Liner Thickness = 4.5mm for 6" pipe and 6 mm for 8" and larger
- e. Maximum Long Term Deflection = 5%

- f. Long term flexural modulus shall be estimated as one-half of the lowest short term flexural modulus dictated by ASTM.
- g. Liner thickness shall be the maximum of that dictated by bending, deflection, buckling, and stiffness calculations.
- h. Soil Characteristics
  - 1. Unit Weight = 120 pcf
  - 2. Modulus of Elasticity = 1,000 psi
  - 3. Coefficient of Friction = 0.130r
- i. The liner shall be designed for a minimum fifty-year service life under continuous loading conditions.

## 2.2 SOURCE QUALITY CONTROL

- A. Inspect each lot of liner for defects. Verify liner is homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters or deleterious faults.
- B. Marking:
  - 1. For testing purposes, mark each production lot with identical marking number.
  - 2. The outside of the tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the manufacturer's name or identifying symbol. The tubes must be manufactured in the USA.
  - 3. At end of production shift, change marking code to indicate where new production shift started.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify location of piping to be relined.

### 3.2 CLEANING AND FLUSHING

- A. Clean existing sewer pipes of debris, sedimentation and mineral deposits with high velocity cleaner, bucket and scraper, root saws, rolling or balling units. All cleaning and flushing must be in accordance with liner manufacturer's requirements. Any protruding taps, roots, and any and all other obstructions not removed during the pre-installation television inspection shall be removed and surfaces cleaned as required by the lining manufacturer to avoid liner puncture.

### 3.3 INITIAL VIDEO INSPECTION AND REPAIR

- A. Conduct closed-circuit video inspection

- B. Determine condition of existing piping, degree of offset of joints, crushed walls, and obstructions.
- C. Determine and document in writing sizes and locations of service entrances and service connections.
- D. Clear obstructions, service piping protrusions, roots, and other materials from existing pipe to ensure inserted pipe liner contacts only existing pipe wall.

### 3.4 BYPASSING SEWAGE

Set up bypassing pump system to isolate each section of piping if required. A detailed bypass plan shall be submitted by contractor and approved by Engineer and Owner prior to starting work.

### 3.5 POINT REPAIRS

- A. When and where indicated by the video inspection, point repairs shall be completed, as necessary, in order to enable lining. All point repairs shall be approved by the Engineer prior to construction. At Owner's discretion, point repairs may be completed by Others, including Owner's staff.
- B. Point repairs shall be completed if required
- C. Point repairs completed to correct pre-existing conditions shall be paid for at the unit bid price as detailed.

### 3.6 PROTECTION

The Contractor shall provide for the general safety of workers, pedestrians and traveling public throughout the project. Existing surface improvements and underground facilities and utilities shall also be protected. Damage caused by the Contractor shall be repaired at his own expense. Protection to be provided shall include but not be limited to:

- A. Provide barricades, warning lights and signs for excavations created by point repairs and/or excavation pits. Conform to requirements of FDOT, Okaloosa County, or any other governing entity, and of contract documents.
- B. Protection of Manholes/Structures: Install all pulleys, rollers, bumpers, alignment control devices and other equipment required to protect existing manholes/structures, and to protect the pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. Under no circumstances will the liners be stressed beyond their elastic limit.
- C. Do not allow sand, debris, or runoff to enter sewer system.
- D. Verify location of all underground utilities and facilities potentially impacted by rehabilitation or other related project activities and take necessary precautions to provide protection from damage. Damage caused by the Contractor shall be his responsibility and repaired at no additional cost to OCWS.
- E. Protect the liner and components during all phases of work including, but not limited to hauling, installation, entry into the entry pit, and prevention of scarring or gouging of the liner, pipe or components.
- F. Contractor will be responsible for monitoring weather prior to planning a CIPP tube insertion to account for a sufficient duration of tube wet out and insertion and curing

- in order to ensure that wet weather that will prevent access to the project site is accounted for. Contractor's failure to account for oncoming weather will be Contractor's sole responsibility which may extend to removal of damaged or improperly cured CIPP resulting from interrupted CIPP construction process.
- G. Contractor shall notify owner 72 hours prior to liner wet out process for approval. Weather conditions and on-site conditions need to be considered.

### 3.7 INSTALLATION – CURED-IN-PLACE PIPE (CIPP) LINER FOR MAINLINE

- A. Install liner in accordance with ASTM F1216, ASTM F1743, ASTM 2019 and manufacturer's instructions.
- B. Pull or invert liner through existing pipe through access points or using existing manholes. Take care not to damage deformed pipe during installation. Use appropriate sleeves and rollers to protect liner.
- C. Contractor shall stop infiltration or leakage into the existing pipeline to prevent contamination of resin in liner.

D. Liner Curing:

Use steam or circulated hot water to cure liner. Ensure temperatures inside liner pipe are sufficient to effect resin curing and are within manufacturers' instructions. Monitor temperature for entire curing period.

E. Cool-down:

Cool cured pipe in accordance with manufacturer's recommendations.

F. Finish:

1. Install finished lining continuous over entire length of piping free of visual defects including foreign inclusions, pinholes and delamination. Confirm lining is impervious and free of leakage from pipe to surrounding ground or from ground to inside lined pipe.
2. Repair defects affecting integrity or strength of lining.

### 3.8 FIELD QUALITY CONTROL

- A. When liner fails to meet installation requirements, remove failed liner and install new liner.
- B. Conduct closed-circuit video inspection of completed rehabilitation work.
- C. No infiltration of groundwater is permitted. No visual defects including foreign inclusions, dry spots, pinholes, cracks or delamination are allowed.

- D. Confirm service connections are complete and are unobstructed.
- E. Submit summary report of final inspection with copy of video documentation.
- F. Measurement - All sewer pipes will be measured from center of manhole to center of manhole or end of main

### 3.9 CLEANING

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

END OF SECTION 02580

SECTION 02590

MANHOLE LINING SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

This section covers all workmanship, equipment, materials and quality requirements for manhole, wetwell and other wastewater structure rehabilitation and lining work. Provide and apply lining materials as specified.

1.2 REFERENCES

This section contains references to the documents listed below. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the more stringent of the requirements shall prevail.

Unless otherwise specified, references to documents shall mean the documents in effect at the time of receipt of Bids. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization or, if there are no replacement documents, the last version of the document before it was discontinued. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, whether or not the document has been superseded by a version with a later date, discontinued or replaced.

Referenced publications found within this specification shall be the latest revision unless otherwise specified; and applicable parts of the referenced publications shall become a part of this specification as if fully included.

1. ASTM C 920 – Specification for Elastomeric Joint Sealants
2. ASTM D 3960 – Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
3. ASTM D 4259 – Practice for Abrading Concrete
4. ASTM E 337 – Standard Practice Test Method for Measuring Humidity with a Psychrometer
5. ASTM 4541 – Adhesion
6. ASTM D 412 – Tensile Strength and Elongation
7. ASTM D 2240 – Tear Strength
8. ASTM D 1737 – Hardness

9. ASTM 460 – Taber Abrasion
10. NACE Pub. 6D□173 – A Manual for Painter Safety
11. NACE Pub. TPC2 – Coatings and Linings for Immersion Service
12. NACE Pub. 6F□163 – Surface Preparation of Steel or Concrete Tank Interiors
13. NACE RP0892□92 – Standard Recommended Practice, Lining over Concrete in Immersion Service
14. NACE RP0288□88 – Standard Recommended Practice, Inspection of Linings on Steel and Concrete
15. F 595 B – Federal Standard Colors
16. Guideline No. 03732 – Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays (Federal Standard Colors and International Concrete Restoration Institute)
17. The Published Standards of the National Association of Corrosion Engineers
18. SSPC□SP12 (Steel Structures Painting Council) – Surface Preparation and Cleaning of Steel and Other Hard Materials by High and Ultrahigh Pressure Water Pressure Prior to Recoating
19. SSPC□SP13 – Surface Preparation of Concrete
20. SSPC□PA□3 – “A Guide to Safety in Paint Application”
21. OSHA 1915.35 – Standards – 29 CFR – Painting
22. ANSI/ASC Exhaust Systems – Abrasive Blasting Operations – Ventilation and Safe Practice

### 1.3 QUALITY ASSURANCE

#### A. REQUIREMENTS

1. Do not use or retain contaminated, outdated, or diluted materials for resurfacing. Do not use materials from previously opened containers.
2. Use only products of the approved Manufacturer. Use products of one manufacturer in any one resurfacing system with compatible materials. Provide same material product for touch□up as for original material.
3. If any requirements of this specification conflict with a referenced standard, the more stringent requirement shall apply.

4. Make available all locations and phases of the work for access by the Engineer or other personnel designated by the Engineer. The Contractor shall provide ventilation and egress to safely access the coating work areas for inspection.
5. Conduct work so that the resurfacing system is installed as specified herein and according to manufacturer's recommendation. Inspect work continually to ensure that the resurfacing system is installed as specified herein. The Contractor shall inspect the work to determine conformance with the specifications and referenced documents. The Contractor shall inform the Engineer of the progress and the quality of the work through daily reports as specified below. Any nonconforming coating system work shall be corrected as specified herein or as recommended by the Manufacturer.
6. The methods of construction shall be in accordance with all requirements of this specification.
7. Employ only tradespeople who have completed at least ten similar projects within the last 2 years. This experience shall be strictly limited to lining manholes or other wastewater structures as specified in this Section with only products approved prior to bid. Lining projects with products not approved for use on this project will not be considered for record of experience.

#### 1.4 SUBMITTALS

##### A. PRE-APPROVAL SUBMITTALS

Products will not be considered by Engineer as an "or-equal" or substitute unless a written request for approval has been submitted by Bidder and has been received by Engineer at least 10 days prior to the date for receipt of Bids. Any pre-approvals will be issued in an addendum prior to bid. Requests for approval shall include all of the following information:

1. A cover sheet stating the name of the proposed product and the name of the currently specified product (with applicable specification section number) which the proposed product is requesting to be approved as an "or-equal."
2. A letter from the Installer stating that the proposed product is in compliance with all aspects of the specifications including all physical properties, thicknesses, dimensions, cure-times, and warranty requirements; and the Installer shall also include with the letter complete references (with current contact information) showing exactly how many successful installations of the proposed product that the Installer has completed to date.
3. A letter from the Manufacturer stating that the proposed product is in compliance with all aspects of the specifications including all physical properties, thicknesses, dimensions, cure-times, and warranty requirements; and the Manufacturer shall also include with the letter complete references (with current contact information) showing that the exact proposed product has been successfully installed in at least 5,000 wastewater structures within the last 5 years.

4. Affidavits signed by both an officer of the Manufacturer and the Installer declaring that all of the information submitted is true and that the proposed product is not currently involved in any unsettled disputes over patent infringement.

The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders **shall not** rely upon approvals made in any other manner.

#### B. PROJECT SUBMITTALS

Submit the following prior to commencing with any phase of the work covered by this Section:

1. Manufacturer's current printed recommendations and product data sheets for all coating system products supplied under this section including performance criteria, surface preparation and applications, volatile organic compound (V.O.C.) data, and safety requirements.
2. Material Safety Data Sheets (MSDS) for any materials brought on site including all resurfacing system materials, solvents, and abrasive blast media (if applicable).
3. Storage requirements including temperature, humidity, and ventilation for resurfacing system materials.
4. Manufacturer's requirements, including application procedures for resurfacing materials shall be in writing and shall be followed in detail. All safety precautions recommended by the Manufacturer shall be strictly adhered to at all times when work is in progress.
5. Submit daily reports that contain the following information: Substrate conditions, ambient conditions, application procedures, work completed and location thereof.

#### 1.5 DELIVERY AND STORAGE

1. Materials shall be stored in accordance with Manufacturer's recommendations in enclosed structures and shall be protected from weather and adverse temperature conditions. Flammable materials shall be stored in accordance with state and local codes. Materials exceeding storage life recommended by the manufacturer shall be removed from the site.
2. If applicable, store all materials only in area or areas designated by the Engineer solely for this purpose. Confine mixing, thinning, clean up and associated operations, and storage of materials related debris before authorized disposal, to these areas. If material is delivered in buckets or bags, all materials are to be stored on pallets or similar storage/handling skids off the ground in sheltered areas in which the temperature is maintained between 50°F and 90°F.
3. If applicable, mix all resurfacing materials in an enclosed mixing area designated

by the Engineer. This enclosed area must protect the mixing operation and materials from direct sunlight, inclement weather, freezing, or other means of damage or contamination. Protect all other concrete and metallic surfaces and finishes from any spillage of material(s) within the mixing area.

4. Do not use floor drains, dikes or storm drains for disposal of resurfacing system materials.
5. If applicable, the Contractor shall take all precautions and implement all measures necessary to avert potential hazards associated with the resurfacing system materials as described on the pertinent Material Safety Data Sheets or container labels.
6. If applicable to manufacturer's packaging standards, deliver all materials to the job site in their original, unopened containers. Each container shall bear the Manufacturer's name and label.
  - A. Labels on all material containers must show the following information:
    - I. Name or title of product
    - II. Federal Specification Number if applicable
    - III. Manufacturer's batch number and date of manufacture
    - IV. Manufacturer's name
    - V. Generic type of material
    - VI. Application and mixing instructions
    - VII. Hazardous material identification label
    - VIII. Shelf life date
    - IX. Storage requirements
  - B. All containers shall be clearly marked indicating any personnel safety hazards associated with the use of or exposure to the materials.
  - C. All materials shall be handled and stored to prevent damage or loss of label.
  - D. Resurfacing material storage and mixing areas shall be designated by the Engineer.
  - E. Do not use or retain contaminated, outdated, prematurely opened, diluted materials, or materials which have

#### 1.6 COORDINATION OF WORK

1. **WORK AREAS:** The work areas will be designated by the Engineer/Owner. The Contractor's personnel shall not be permitted in any area other than those expressly designated by the Engineer.

2. COORDINATION: The contractor shall coordinate with the Engineer regarding availability of work areas, completion times, safety, access and other factors that can impact sewer collection operations.

#### 1.7 SAFETY

1. The Contractor's work forces should comply with the provisions outlined in the following documents: SSPC-PA-3 "A Guide to Safety in Paint Application" NACE Pub. "A Manual for Painter Safety"
2. The Contractor shall provide personnel with all safety equipment necessary to protect them during any phase of the work. This shall include, but not be limited to safety glasses, goggles, earplugs, hard hats, steel toed work shoes, appropriate personal protective clothing, gloves, and approved escape respirators (where required).
3. No work shall be performed until the appropriate Work Requests and lock-outs are approved by the Engineer/Owner. The Lockout system is a safety procedure to prevent unintended equipment activation.
4. Keep any flammable materials such as cleaning solvents, thinners, or resurfacing materials away from open flames, sparks or temperatures higher than 150°F. Drums containing flammable materials will be grounded. No solvent in any quantity shall be allowed inside containment enclosures or permitted confined spaces at any time during resurfacing work.
5. Power tools are to be in good working order to avoid open sparking. No spark producing tools shall be utilized in restricted areas as indicated herein.
6. The Contractor shall fireproof all work areas by maintaining a clean work area and having Underwriter's Laboratories approved fire extinguishers on-hand. The Contractor shall furnish these fire extinguishers.
7. If applicable, workers doing abrasive blasting or chemical coating operations shall wear a fresh air supplied protective helmet and hood and personal protective clothing acceptable to industry standards and all government regulations.
8. Dispose of rags used for wiping up resurfacing materials, solvents, and thinners by drenching them with water and placing in a metal container with a tight fitting metal cover. Complete this disposal process at the end of each day. Final disposal of these materials is the Contractor's responsibility.

#### 1.8 JOB CONDITIONS:

##### Environmental:

1. Air and Surface Temperatures: If epoxy based products are used, prepare surfaces and apply and cure coatings within air and surface temperature range in accordance with Manufacturer's instructions.

2. Relative Humidity: If epoxy based products are used, prepare surfaces and apply and cure coatings within relative humidity range in accordance with Manufacturer's instructions.
3. Precipitation: Do not prepare surfaces or apply coatings in rain, snow, fog, or mist.
4. Wind: Do not spray coatings if wind velocity causes overspray of the coating materials.

#### 1.9 WARRANTY

The supplied lining system shall include a 10-year limited warranty covering both materials AND installation beginning on the date of final acceptance. Both the Manufacturer and the Applicator shall stand behind this warranty for 10 years. For products not already approved, the following must accompany a request for pre-approval:

An affidavit executed under seal by an officer of the Manufacturer and the Installer stating that if their proposed lining system is used on this project; the Manufacturer will warrant the finished, in-place, lining system against infiltration and corrosion for a minimum of 10 years from the installation date.

### PART 2 – PRODUCTS

#### 2.1 MANUFACTURERS

Materials specified are those that have been evaluated for the specific service. Products of CCI Spectrum, Inc. (SpectraShield with AnchorShield) and Tnemec are listed to establish a standard of quality. As part of the proof of equality, the Engineer will require at the cost of the Contractor, certified test reports from a nationally known, reputable and independent testing laboratory conducting comparative tests as directed by the Engineer between the product specified and the requested substitution.

Requests for substitution shall all requirements of section 1.03 Submittals, found in this specification section.

#### 2.2 MATERIALS

##### A. EPOXY COMPOSITE LINING SYSTEM

The following list specifies the material property requirements for the resurfacing system and the epoxy top coat. For Epoxies to be considered, they must make use of a cementitious underlayment, as specified:

##### *Shotcrete Resurfacer*

Shall be Tnemec Series 218 Mortarclad, or pre-approved equal, with the following minimum performance properties:

1. Compressive Strength ASTM C-109: Minimum 7000 psi at 7 days
2. Freeze Thaw ASTM C 666: After 300 cycles, No damage
3. Shrinkage ASTM C596: 0% in 28 days
4. Flexural Strength ASTM C 293: Minimum 1000 psi after 7 days
5. Direct Bond Strength ASTM C882: Minimum 290 psi after 28 days

*Epoxy Liner:*

Shall be Tnemec series 434 Perma-Shield, or pre-approved equal, with the following minimum performance requirements:

a. Minimum performance requirements:

Autoclave: Lining materials must be tested in a controlled autoclave containing 536 ppm H<sub>2</sub>S, 10% H<sub>2</sub>SO<sub>4</sub>, 4,000 ppm NaCl @150°F for 28 days. The autoclave testing must be performed by an independent laboratory. The lining materials must exhibit the following when tested using Electrical Impedance Spectroscopy (EIS)

- 1) Initial EIS impedance of 10 Log Z (Z in ohms cm<sup>2</sup> @ 0.1 Hz)
- 2) Final EIS impedance greater than 9 Log Z after 28 days exposure
- 3) No blistering cracking, checking, or loss of adhesion after 28 days exposure to the H<sub>2</sub>S autoclave.
  - a). Impact (ASTM D 2794) Requirement: No visible cracking or delamination after 56 inch-pounds direct impact
  - b). Chemical Resistance (ASTM C 868) Requirement: No blistering, cracking, erosion, softening, swelling, loss of adhesion or gloss after 98 day continuous immersion at 100F and 25% Sulfuric Acid
  - c). Glaze Coat:Tnemec Perma Glaze Series 435, or approved equal

b. Sealants to be used with the Epoxy Lining System:

- 1) Primer: PolySpec TPR 415 or Equal
- 2) Sealant: PolySpec Thiokol 2235 M or equal

B. MULTI-COMPONENT STRESS PANEL LINER SYSTEM

The following list specifies the material property requirements for the multi-component stress panel liner system, SpectraShield:

1. Liner.

<u>Installation</u>	<u>Materials</u>
Moisture barrier	Modified Polymer (polyurea)
Surfacer	Polyurethane/Polymeric blend
Final corrosion barrier	Modified polymer (polyurea)

2. Modified polymer shall be sprayable, solvent free, two component polymeric, moisture/chemical barrier specifically developed for the corrosive wastewater environment.

3. AnchorShield Mechanical anchoring system shall be imbedded and sprayed into the liner at all leaks and at the wall/floor termination.

**TYPICAL CHEMICAL ANALYSIS**

**“A” Component**

Viscosity, 77° F, cps., ASTM D-1638	300-400
Physical State	Liquid
Color	Clear to amber
Hygroscopicity	Reacts with water

**“B” Component**

Viscosity, 160° F, cps., ASTM D-1638	400-600
Physical State	Liquid
Color	Flamingo Pink
Non-Volatile	100%

**Reaction Profile (100 grams, 175° F sample)**

Gel Time, seconds	1-2
Tack Free Time, seconds	15
Cure Time, seconds	30

**Processing**

A System / B System, volume ratio	1.00 / 1.00
-----------------------------------	-------------

**TYPICAL PHYSICAL PROPERTIES**

Tensile Strength (PSI)	ASTM D412	2670
Elongation (%)	ASTM D412	430
100% Modulus	ASTM D412	2200
300 % Modulus	ASTM D412	2600
Tear Strength (PLI)	ASTM D624	280
Hardness (shore D )	ASTM D2240	42D
Flexibility (1/ 8 “Mandrel)	ASTM D522	Pass
Flashpoint (°F)	ASTM Pensky-Martin	>200
Taber Abrasion (mg loss)	ASTM D4060	25

4. Polyurethane Rigid Structure, low viscosity two-component, containing flame retardants.

**TYPICAL CHEMICAL ANALYSIS**

**“A” Component**

Viscosity, 77° F, cps., ASTM D-1638	200
Physical State	Liquid
Color	Dark Brown
Hygroscopicity	Reacts with water and evolves CO2 gas

**“B” Component**

Viscosity, 77° F, cps., ASTM D-1638	600-1000
Physical State	Liquid
Color	Tan
Hygroscopicity	Absorbs water rapidly thus changing ratio

**Reaction Profile (100 grams, 77° F sample)**

Cream Time, seconds	1-4
Tack Free time, seconds	5-8
Rise Time, seconds	6-10

**Processing**

A System / B System, volume ratio	1.00 / 1.00
-----------------------------------	-------------

***Total thickness of multi-component stress panel liner shall be a minimum of 500 mils. Product shall be SPECTRASHIELD with ANCHORSHIELD.***

**2.3 INITIAL INSPECTION OF SURFACES TO BE COATED:**

Comply with the Manufacturer's recommendations as to environmental conditions under which materials can be applied.

1. It is the responsibility of the Contractor to inspect and report unacceptable concrete substrate surface conditions to the Engineer prior to the commencement of surface preparation activities.
2. Unacceptable concrete surface conditions are defined as the presence of water infiltration/inflow, cracked surfaces or concrete deteriorated to a depth of greater than 1 1/2” or otherwise unable to withstand surface preparation as specified herein.
3. Verify that the pH of the cleaned concrete surfaces to be coated is within the range of 9 to 11. Application of coating materials outside this range will not be permitted without written approval from the ENGINEER.

**2.4 SURFACE PREPARATION REQUIREMENTS FOR EPOXY COMPOSITE LINING SYSTEM**

1. All specified surface preparation shall be performed in accordance with the latest version of the SSPC, NACE, ICRI and other standards referenced in this section.
2. Allow new concrete/shotcrete to cure a minimum of 28 days (or per manufacturers instructions). Contractor may verify dryness by testing for moisture with a “plastic film tape down test.” (Reference ASTM D 4263). If necessary for testing horizontal surfaces, Calcium Chloride test in accordance with ASTM F 1869. If test results indicate moisture levels outside the acceptable range of the manufacturer, contact the manufacturer. Do not proceed with the coating application.

3. Prior to applying shotcrete, all existing areas that are scheduled to receive the chemical resistant lining shall be steam cleaned with minimum 210°F water with alkaline – based detergent to remove all loose materials, acid constituents, grease, oil, and other contaminants. Oil and grease shall be removed before mechanical cleaning is started.
4. Mechanically abrade all surfaces to be coated to remove laitance, curing compounds sealer and other contaminants and to produce a minimum surface profile equal to ICRI CSP 5. Reference SSPC □ SP13. This preparation will be followed by vacuum cleaning to remove all dust, dirt or friable substances leaving clean, dust free surfaces for resurfacing.
5. Prior to applying shotcrete, identify and stop all active cracks from leaking using either a hydraulic cement or a chemical grout. The set time of the Hydraulic Cement shall be approximately 1 minute to 90 seconds per ASTM C 403. The compressive strength of the hydraulic cement shall be approximately 1000 psi after 1 hours per ASTM C 109. All products are to be applied in accordance with manufacturer’s instructions.
6. For all areas to be rehabilitated, apply shotcrete to bring surfaces out to 1/2” beyond original grade. The application shall result in a finish that covers all exposed aggregate and results in no surface voids, discontinuities or irregularities. Cure in accordance with manufacturer’s instructions and in accordance with ACI 308.1 □ 98.
7. All shotcreted surfaces shall be abrasive blasted to remove all laitance from release agents, curing compounds sealers and other contaminants and to produce a minimum surface profile of ICRI CSP 5. This preparation will be followed by vacuum cleaning to remove all dust, dirt or friable substances leaving clean, dust free surfaces for resurfacing. The air used for blast cleaning shall be free of oil and moisture to not cause contamination of the surfaces to be resurfaced.
8. The air used for blast cleaning shall be free of oil and moisture to not cause contamination of the surfaces to be resurfaced.
9. Cleaning and resurfacing shall be scheduled so that dust and other contaminants from the cleaning process will not fall on wet, newly resurfaced areas.

## 2.5 APPLICATION REQUIREMENTS FOR EPOXY LINING SYSTEM

1. Areas not to be resurfaced shall be masked using duct tape or other protection materials to prevent these surfaces from being resurfaced.
2. Ensure straight, even termination of resurfacing/topcoat materials on wall edges and flush with embedded steel.
3. The Contractor must follow the minimum and maximum recoat limitation times and related temperature range restrictions between successive lifts for all products specified herein per Manufacturer's stated requirements.
4. All equipment and procedures used for resurfacing system application shall be as recommended by the Manufacturer.

5. Unless specified elsewhere herein, the Contractor shall comply with the Manufacturer's most recent written instructions with respect to the following:

Mixing of All Materials.

- a. Protection and Handling of All Materials.
  - b. Recoat Limitation and Cure Times.
  - c. Minimum Ambient and Substrate Temperatures, Substrate's Degree of Dryness, Relative Humidity, and Dew Point of Air.
  - d. Application.
  - e. Final Curing.
  - f. Use of Proper Application Equipment.
  - g. Curing of Resurfacing System.
6. The applied resurfacing system shall be protected from damage during curing and shall be cured as recommended by the Manufacturer. Ambient conditions shall be controlled by the Contractor during curing to ensure the minimum air temperature and minimum relative humidity as required by the Manufacturer is maintained.

## 2.6 INSTALLATION OF EPOXY LINING SYSTEM

General Note: The Contractor is advised that with all thick-film, quick curing materials applied to concrete surfaces, outgassing of the concrete can occur. Possible remedies include applying materials when the temperature of the concrete surfaces are descending, or applying only a thin (1/8") layer of the specified surfacing material per lift. Other remedies may exist, and may be submitted for the Engineer's approval.

1. Apply shotcrete. After shotcreting/applying cementitious surfacer, prepare surfaces as described in Paragraph 1.12.
2. Following resurfacing, apply epoxy top coat to all surfaces scheduled to be coated in accordance with the following:

Existing Concrete or Brick Structures	<b>350 mils</b>
---------------------------------------	-----------------

## 2.7 SURFACE PREPARATION REQUIREMENTS FOR MULTI-COMPONENT STRESS PANEL LINING SYSTEM

1. Hydro blasting equipment shall remove all corrosion from structure. Final product shall be a cleaned, mostly dry surface ready for liner application.
2. After completion of surface preparation, blasting phase, perform the seven point check list, which is the inspection for:
  1. Leaks
  2. Cracks
  3. Holes
  4. Exposed Rebar
  5. Ring and Cover condition
  6. Invert Condition
  7. Inlet and Outlet Pipe Condition
3. After the defects in the structure are identified, repair all leaks with a chemical or hydraulic sealant designed for use in field sealing of ground water. Severe cracks shall

be “repaired with a urethane based chemical” sealant. Product to be utilized shall be as approved by Owner/Engineer prior to installation. Repairs to exposed rebar, defective pipe penetrations or inverts, etc. shall be repaired utilizing non-shrink grout or approved alternative method.

## 2.8 APPLICATION REQUIREMENTS FOR MULTI-COMPONENT STRESS PANEL LINING

1. The limits of the corrosion protection system shall be all exposed concrete/brick surfaces including walls, tap sections, risers, etc., unless otherwise directed by the owner/engineer.
2. AnchorShield Mechanical anchoring system shall be imbedded and sprayed into the liner at all wall seams and at the wall/floor termination.
3. Application of multi-component system shall be in strict accordance with manufacturer’s recommendation and must be performed by a contractor licensed and trained by the Manufacturer. A permanent identification number and date of work performed shall be affixed to the structure in a readily visible location.
4. Provide final written report to owner/engineer detailing the location, date of report, and description of repair.

## 2.9 INSTALLATION OF MULTI-COMPONENT STRESS PANEL LINER SYSTEM

1. Apply Moisture Barrier (Spectrashield, or pre-approved equal). This layer of polyurea shall be spray applied to all surfaces.
2. Apply Surfacer (Spectrashield, or pre-approved equal). This layer of polyurethane rigid structure foam shall be spray applied to all surfaces previously lined with the moisture barrier. Layer thickness may vary depending on the condition of the substrate and the level of deterioration. Mechanical anchoring system shall be embedded in this layer.
3. Apply Final Corrosion Barrier (Spectrashield, or pre-approved equal) to all surfaces lined with the Surfacing layer.

TOTAL MULTI-COMPONENT, INERT, POLYMER LINING THICKNESS SHALL BE A MINIMUM OF **500 MILS**

## 2.10 OTHER MATERIALS

1. Active infiltration must be stopped prior to application of epoxy composite system or multi-component stress panel liner system. The following products are pre-approved to assist in leak stopping:
  - A. Injectible Grouts as manufactured by:
    - Avanti International (acrylamide or hydrophilic)
    - Alchemy Polymers (acrylamide or hydrophilic)
    - SpectraShield (hydrophilic)
    - Pre-approved Equal
  - B. Rapid Setting Cements as manufactured by:
    - Quadex
    - Strong Seal
    - Pre-approved Equal

## 2.11 FIELD QUALITY CONTROL INSPECTION AND TESTING

1. Inspection by the Engineer or others does not limit the Contractor's responsibilities for quality control inspection and testing as specified herein or as required by the Manufacturer's instructions. Tests specifically required for epoxy lining systems may not necessarily be applicable to polyureas such as those used in the multi-component system specified.
2. Perform the quality control procedures listed below in conjunction with the requirements of this Section.
3. Inspect all materials upon receipt to ensure that all are supplied by the Manufacturer.
4. Provide specified storage conditions for the resurfacing system materials (if applicable), solvents, and abrasives.
5. If using the Epoxy Lining System, inspect and record findings for the degree of cleanliness of substrates using. The pH of the concrete substrate will be measured using pH indicating papers. pH testing is to be performed once every 50 sq. ft. Acceptable pH values shall be between 9.0 and 11.0 as measured by a full range (1-12) color indicating pH paper with readable color calibrations and a scale at whole numbers (minimum). Use Hydrion Insta-Check Jumbo 0-13 or 1-12 or equal. The paper shall be touched to the surface once using moderate gloved finger pressure. The surface shall not be wiped or moved laterally to disturb the surface during pH testing. Following the one touch, lift the paper vertically to not "wipe" the surface. Compare the color indicated with the scale provided and record the pH.
6. If using the Epoxy Lining System, measure and record ambient air temperature once every two hours of each shift using a thermometer and measure and record substrate temperature once every two hours using a surface thermometer.
7. If using the Epoxy Lining System, measure and record relative humidity every two hours of each shift using a sling psychrometer in accordance with ASTM E337.
8. Inspect and record that the "pot life" of resurfacing materials are not exceeded during installation.
9. Verify curing of the resurfacing materials in accordance with the Manufacturer's instructions.
10. Upon full cure, the installed lining system shall be checked by high voltage spark detection in accordance with NACE RP0188-90 to verify a pinhole-free surface. Voltage shall be set at 11,000 volts. Areas which do not pass the spark detection test shall be corrected at no cost to the Owner and rechecked. High voltage spark detection shall be conducted on the chemical resistant mortar before the installation of the gel coat.
11. Upon completion of the lining system installation the lined area shall be cleaned and prepared to permit close visual inspection by the Engineer or the Engineer's

Representative. Any and all deficiencies or defective work (not in compliance with this section or related sections) will be marked for repair or removal/replacement by the Contractor at no additional cost to the Owner.

2.12 CLEANUP

Upon completion of work, the Contractor shall remove surplus materials, equipment, protective coverings, and accumulated rubbish, and thoroughly clean all surfaces and repair any work-related damage. The surrounding surface areas including roadways and all other surfaces shall be restored to their pre-project condition.

END OF SECTION 02590

## SECTION 02595

### REHABILITATION OF SEWER SERVICE LATERAL PIPE

#### PART 1 - GENERAL

##### 1.1 INTENT

- A. It is the intent of this specification to provide materials and a standard practice for installing a cured-in-place pipe to renew a sewer service lateral that connects to a main pipe or directly to a manhole.

##### 1.2 GENERAL

- A. The service lateral reconstruction shall be accomplished using a translucent inversion bladder, a non-woven fabric tube of particular length that includes a compression gasket seal at each end of the tube, and a thermo-set resin with physical/chemical properties appropriate for the application. The tube is positioned inside of a translucent inversion bladder forming a liner/bladder assembly. The tube shall be resin impregnated under a controlled vacuum within the translucent bladder. The liner/bladder assembly is then inserted into a mobile air-inversion device. The mobile air-inversion device shall include a camera port for inspecting the resin saturated tube inflated in the pipe before the resin is cured, and for visually verifying the liner has been fully deployed and the end is open. Access to an upstream end of the service lateral is accomplished by using an existing clean out or by making a small vacuum excavation.
- B. The mobile air-inversion device is aligned with the access opening in the service lateral pipe (manhole, excavated pit, inside clean out or outside clean out). When the mobile air-inversion device is properly positioned, the liner/bladder assembly is inverted into the lateral pipe under controlled air pressure. The liner/bladder assembly shall include a hold back rope for controlling the speed of inversion and protecting plumbing fixture traps in the building by ensuring a positive pressure is not created in the service lateral pipe. The inversion is complete when the liner is fully extended within the lateral pipe, and the bladder extending beyond the open end of the liner tube, with the compression gasket positioned between the host pipe and the liner.
- C. A lateral camera shall be inserted into a camera port and continuing through the bladder, under pressure providing visual inspection of the inflated liner tube prior to curing the resin. The inspection process shall verify that the liner is properly positioned in the pipe and the tube has been fully deployed with the end open. The resin impregnated tube is cured, the inflation bladder reverted from the cured tube, and the mobile launching device is removed.

### 1.3 MATERIAL

- A. Tube - The fabric tube shall consist of flexible needle punched felt, knitted tube or an equivalent non-woven material. The tube may be reinforced by incorporating scrim or fiberglass strands to limit length stretch and improve structural properties. The tube shall be a butt seam constructed by longitudinal stitching and thermal tape seal bonding producing a uniform wall thickness with no intermediate layers. The tube shall be capable of conforming to bends, offset joints, bells, and disfigured pipe sections. A hydrophilic O-ring shall be positioned at each end of the liner tube providing a leak-free compression gasket seal compatible with all piping materials.
- B. The bladder shall be translucent to enable visual inspection of resin during saturation under a controlled vacuum and inspection of the liner once inflated in the pipe prior to curing of the resin.
- C. Liner/Bladder Assembly - The tube positioned within the translucent bladder shall form a liner/bladder assembly engineered for inserting the liner tube and bladder simultaneously from a single access point maintaining inflation pressure from the initial inversion of the liner tube until the resin is cured.
- D. Resin - The thermo-set resin system shall be polyester, vinyl ester, silicate or epoxy with proper catalysts as designed for the specific application.
- E. Design Considerations - The design of the cured-in-place lateral liner system is largely a function of the condition of the existing pipeline and the loads stipulated by the customer's specification. Structural strength design calculations as per ASTM F1216-09, appendix X1.1.2

#### **Minimum Structural Properties**

Flexural Strength (ASTM D790) = 4,500 psi

Flexural Modulus (ASTM D790) = 250,000 psi

#### **Chemical Resistance**

The cured tube shall meet minimum tests standards described in ASTM F1216-09, appendix X2.

### 1.4 INSTALLATION RECCOMENDATIONS

ASTM F1216-09: Standard Practice for the Installation of Cured In-Place Pipe by Inversion Lining

- A. Accessing the Pipe – Should a cleanout not exist; the lateral does not directly connect to a manhole, then the Installer shall excavate an access pit, or install a cleanout providing access to the lateral pipe.

- B. Cleaning and Inspection – All roots and debris shall be removed from the pipe and a CCTV inspection shall be performed documenting length, diameter and pipe defects as per NASSCO Standards.
- C. The tube is cut to the appropriate length and inserted within the translucent bladder.
- D. Resin Impregnated Tube – The tube in good condition shall be resin impregnated under a controlled vacuum with the appropriate thermo-set resin designed for the pipe and its intended use. All resin shall be contained within the translucent bladder during vacuum impregnation. The Installer shall ensure that no public property is exposed to contamination by liquid resin compounds or components.
- E. Liner Insertion – The resin impregnated tube within the inflation bladder is inserted into the mobile launching device and positioned at the clean out, or pipe opening.
- F. Inversion – The liner/bladder assembly is inverted out of the mobile launching device by controlled air pressure. Once the liner tube begins to invert, the tail of the tube progresses as the tube is pressed against the pipe wall. At no time shall the air pressure be removed causing interruption to inflation and pressing of the tube. The inversion shall be complete when the tube is fully deployed and the bladder is extending beyond the liner tube keeping the end of the liner open. The tube is held tightly in place against the wall of the host pipe under pressure until the cure is complete in accordance with ASTM F1216-09 Sections 7.4.2 and 7.4.3: Using Air Pressure. The inversion air pressure should be adjusted to be of sufficient pressure to cause the impregnated tube to invert from point of inversion to point of termination and hold the tube tight to the pipe wall, producing dimples at side connections. Care should be taken during the inversion so as not to overstress the woven and nonwoven materials.
- G. Curing – The liner is chemically cured at ambient temperatures or by a suitable heat source. The heating equipment shall be capable of delivering a mixture of steam and air throughout the liner bladder assembly to uniformly raise the temperature above the temperature required to cure the resin. The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions. The heat source temperatures shall be monitored and logged during the cure and cool down cycles. The manufacturer's recommended cure schedule shall be submitted.
- H. CIPP Processing – Curing shall be done without pressure interruption with air or a mixture of air and steam for the proper duration of time per the resin manufacturer's recommendations. The bladder is reverted back into the launching device and removed from the manhole, cleanout or access pit. No barriers, coatings, or any material other than the cured tube/resin composite is to be left in the host pipe. The liner shall be leak-free with each end sealed to the host pipe by means of swelling compression gaskets.

- I. Trimming – Any tube protruding into the main pipe shall be robotically trimmed flush.
- J. Post Inspection – A second CCTV inspection is performed documenting liner placement and condition. The owner shall receive a video recording and a written report certified by NASSCO LACP documenting inspection of the CIPP.
- K. Reinstatement of Service – Any side connections shall be reinstated and returned to service, unless otherwise directed by the owner.

END OF SECTION 02595