

Bid Set No. _____

DOCUMENTS AND SPECIFICATIONS
FOR
TRENCHLESS UTILITY REHABILITATION
BRANFORD, CONNECTICUT



FEBRUARY 2020

J.N. 60609301

AECOM

Rocky Hill, Connecticut

**TRENCHLESS UTILITY REHABILITATION
BRANFORD, CONNECTICUT**

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SECTION 00010

INVITATION TO BID

**TRENCHLESS UTILITY REHABILITATION
IN THE
TOWN OF BRANFORD, CONNECTICUT**

OWNER: The Town of Branford, Connecticut, hereby gives notice that sealed unit price Bids will be received for indefinite delivery/indefinite quantity trenchless utility rehabilitation work in the town of Branford.

Sealed Bids will be received until 11:30 a.m. Local Time on the 14th day of March, 2025, by the Purchasing Agent at the office of the Finance Department, Town Hall 1019 Main Street, Branford, Connecticut 06405. Bids will be publicly opened immediately following the submission deadline in the conference room located on the basement floor of the Town Hall.

BIDDING DOCUMENTS: Plans and specifications for this project will be available for download at the Town of Branford website and at the CT DAS website. Printed bid documents will not be offered for review or purchase for this project

WAGE RATES: CONTRACTOR'S shall be required to pay not less than the prevailing wage rates on the individual Projects that will be resulting from this bid. Copies of these wage rates are incorporated in the Contract Documents. Each CONTRACTOR or Subcontractor performing Work on this Project shall comply in all respects with all laws governing the employment of labor, Social Security, and Unemployment Insurance of both the state and federal government.

BID SECURITY: Bid Security in the amount of \$50,000 shall accompany each Bid in accordance with the Instructions to Bidders.

CONTRACT SECURITY: The Bidder to whom a Contract is awarded shall furnish a Performance Bond and a Payment Bond for each resulting project each in an amount equal to 100 percent of the Contract Price for that project.

BID REJECTION/ACCEPTANCE: OWNER reserves the right to reject any and all Bids, waive informalities or minor defects in bidding or to accept the Bid or Bids, which best serve the interests of OWNER.

BID WITHDRAWAL: No bid shall be withdrawn for a period of ninety (90) days after the opening of the bids without consent of the Town of Branford.

Published by authority of the Town of Branford, Connecticut.

By:

**FIRST SELECTMAN
TOWN OF BRANFORD, CONNECTICUT**

AECOM
Rocky Hill, Connecticut
Project No. **60609301**

END OF SECTION

TOWN OF BRANFORD
OFFICE OF THE TREASURER



1019 Main Street
Post Office Box 150
Branford, CT 06405

(203) 488-8394
FAX: 315-3736

**General Requirements for Bidding
and
Instructions to Bidders**

NOTICE

Information provided in this section takes precedence if there are conflicts between this document 00020 and other sections of the bid documents.

Information provided in these specifications is *CONFIDENTIAL* and is to be used only for the purpose of preparing a proposal. It is further expected that each bidder will read these specifications with care, for failure to meet every one or a combination of specified conditions may invalidate the proposal.

The Town reserves the right to reject any or all bids or any portion thereof and to accept the bid deemed to be in the best interest of the Town of Branford.

Bidders are requested to submit quotations on the basis of these specifications. Alternate quotations will receive consideration providing such alternatives are clearly explained.

The information contained herein is believed to be accurate and is based upon the latest available information but is not to be considered in any way as a warranty.

Revised 10/2024
Standard Form

SECTION I - General Terms and Conditions

A. Compliance with Laws

The bidder shall at all times observe and comply with all laws, ordinances and regulations of the federal, state and local governments, which may in any way affect the preparation or the performance of the contract.

B. Timetable

Price quoted must be valid for **90** days. Delivery and installation completion dates must be included in the bid proposal.

C. Consideration of Proposals

The Board of Selectmen, or a majority of them, reserve the right to select or reject alternate proposals; to waive informality in proposals; and to reject any and all bids, or accept such bid as shall in its judgement be to the best interest of the Town of Branford.

D. Bid Bond

1. A certified check made payable to the "Treasurer, Town of Branford", or a satisfactory bid executed by the bidder and a surety company in an amount \$50,000 is required with each proposal.
2. If the bid bond is submitted by a certified check the Town of Branford will issue a refund of the bid bond to unsuccessful bidders within fifteen (15) business days of the bid award
3. See Specification Section 00410 for additional requirements.

E. Performance Bond

1. Successful bidders will be required to furnish a Performance Bond in the amount of 100% of the individual contract sum.
2. See Specification Section 00610 for additional requirements.

F. Protection of Work and Property

Successful bidders shall be responsible for protection of their equipment and materials against theft, damage or deterioration on the site.

G. Competency of Bidders

1. Bidders shall have proven experience in the field of work.
2. Bidders shall submit with their bid a listing of recent work performed within the State of Connecticut of the size equal to or greater than the work being bid.
3. See Specification Section 00450 for additional requirements.

H. Alternates

1. Any alternates to specified materials or workmanship must be separately listed and described in detail.
2. Alternates will be considered in awarding the contract only if they provide, as a minimum requirement, all features contained in the specifications.
3. The Town of Branford reserves the sole right to determine through its agents the equality of alternate products and/or installation procedures.

I. Bid Requirements

1. Each bidder shall return two (2) copies of the proposal sheet entitled "Form of General Bid" plus other documents identified. Each bid proposal must be signed by an authorized agent of the bidder.
2. Each bidder **must complete and have notarized with a notary seal** the "Non-Collusion Affidavit of Bidder" form. **This form must accompany all bids being submitted and is found as the last page of this document, page 00020-7.**
3. Each bidder must be in good standing with the Town of Branford.
4. Successful bidders must obtain any required governmental approvals.

J. Specifications – General

The contract shall include all labor and materials, tools and equipment and services required for proper performance of the work as specified hereinafter and as may be required for proper completion of the work in accordance with the highest standards of the trades involved.

K. Examination of Site – Recommended, not required

Prior to submission of the bid, contractor shall visit the site, consult with the supervisor, and become thoroughly familiar with all conditions under which the work will be installed. The contractor will be responsible for any assumptions made regarding the site for the work to be performed.

SECTION II - Insurance Requirements

Bidder shall agree to maintain in force at all times during which services are to be performed the following coverages and shall name the Town of Branford as an Additional Insured on a primary and non-contributory basis to the Bidder’s Commercial General Liability and Automobile Liability policies. **These requirements shall be clearly stated in the remarks section on the bidders Certificate of Insurance.** Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum Best’s Rating of “A”VIII-. In addition, all Carriers are subject to approval by the Town of Branford.

		(Minimum Limits)
General Liability	Each Occurrence	\$1,000,000
	General Aggregate	\$2,000,000
	Products/Completed Operations Aggregate	\$2,000,000
Excess/Umbrella Liability	Each Occurrence	\$1,000,000
	Aggregate	\$1,000,000
Professional Liability	Each Occurrence	\$1,000,000
	Aggregate	\$1,000,000
Cyber Liability ⁽¹⁾	Each Occurrence	\$1,000,000
	Aggregate	\$1,000,000
Workers’ Compensation and Employers’ Liability ⁽²⁾	WC Statutory Limits	
	EL Each Accident	\$500,000
	EL Disease Each Employee	\$500,000
	EL Disease Policy Limit	\$500,000

If any policy is written on a “Claims Made” basis, the policy must be continually renewed for a minimum of two (2) years from the completion date of this contract. If the policy is replaced and/or the retroactive date is changed, then the expiring policy must be endorsed to extend the reporting periods for claims for the policy in effect during the contract for two (2) years from the completion date.

Original, completed Certificates of Insurance must be presented to the Town of Branford prior to purchase order/contract issuance. Bidder/Contractor/Vendor agrees to provide replacement/renewal certificates at least 30 days prior to the expiration date of the policies. Should any policy be cancelled for nonpayment of premium, 10 days written notice must be provided to the Town. Should any of the policies be cancelled for other reasons, limits reduced or, coverage altered, 30 days written notice must be given to the Town.

Refer to Specification Section 00800 for additional requirements.

Notes

- (1) Cyber Liability is required if Contractor is on Town’s network or houses Town information on their network.
- (2) Workers Compensation is required if employees come onto Town property.

Hold Harmless Requirements

The contractor shall, at all times, indemnify and save harmless the Town of Branford, its officers, agents, and servants on account of any and all claims, damages, losses, litigation expense, counsel fees and compensation arising out of injuries (including death) sustained by or alleged to have been sustained by the public, any or all persons affected by the contractor's work, or by the contractor, any subcontractor, material, men or anyone directly or indirectly employed by them or any one of them while engaged in the performance of this contract. The Town of Branford shall be named as an additional insured on said policy of public liability insurance to cover all claims against the Town arising out of said contract.

NON-COLLUSION AFFIDAVIT OF BIDDER

State of: _____

County of: _____, SS)

_____; being first duly sworn, deposes and says that:

- 1) S/he is (owner, partner, officer, representative or agent) of _____, the Bidder that has submitted the attached Bid:
- 2) S/he is fully informed regarding the preparation and contents of the attached Bid and of all pertinent circumstances regarding such Bid:
- 3) Such Bid is genuine and is not a collusive or sham Bid:
- 4) Neither the said Bidder nor any of its officers, partners, owner, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any Bidder, or to fix any overhead, profit or cost element of the bid price or the bid price of any other Bidder or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage with the Owner or any person interested in the proposed Contract.
- 5) The price quoted in the attached Bid is fair and proper and is not tainted by collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest.

Signed: _____

Title: _____

Subscribed and sworn before me on this _____ day of _____, 20 _____.

Notary Public: _____

NOTARY SEAL

My Commission expires , 20 _____ . _____

Each bidder **must complete and have notarized with a notary seal** the “Non-Collusion Affidavit of Bidder” form. **This form must accompany all bids being submitted.**

SECTION 00200

INSTRUCTION TO BIDDERS FOR CONSTRUCTION CONTRACTS

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
 - B. *Bidder* - The individual or entity who submits a Bid directly to Owner.
 - C. *Successful Bidder(s)* - The lowest, responsible Bidder(s) submitting a responsive Bid to whom Owner (on the basis of Owner's evaluation of price and qualifications as hereinafter provided) makes an award.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 BIDDING DOCUMENTS for this project will be available for download at the Town of Branford website and at the CT DAS website. Printed bid documents will not be offered for purchase for this project.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder shall submit written evidence such as financial data, previous experience present commitments, and such other data as may be called for below. See Specification Section 00450 for requirements.
- A. The address and description of the Bidder's place of business.
 - B. The number of years engaged in the contracting business under the present firm name, and the name of the state where incorporated.
 - C. A list of the property and equipment available to the Bidder to evaluate if the Bidder can complete the Work in accordance with the Bidding Documents.

- D. A financial statement of the Bidder showing that the Bidder has the financial resources to meet all obligations incidental to the Work.
 - E. The Bidder's performance record giving the description, location, and telephone numbers of similar projects constructed in a satisfactory manner by the Bidder.
 - F. A list of projects presently under contract, the approximate contract amount, and percent of completion of each.
 - G. A list of contracts which resulted in lawsuits.
 - H. A list of contracts defaulted.
 - I. A statement of the Bidder indicating whether the Bidder has ever filed bankruptcy while performing Work of like nature or magnitude.
 - J. A list of officers of the firm who, while in the employ of the firm or the employ of previous firms, were associated with contracts which resulted in lawsuits, contracts defaulted or filed for bankruptcy.
 - K. The technical experience of personnel guaranteed to be employed in the responsible charge of the Work stating whether the personnel have or have not performed satisfactorily on other contracts of like nature and magnitude or comparable difficulty at similar rate of progress.
 - L. Such additional information as will assist Owner in determining whether the Bidder is adequately prepared to fulfill the contract.
- 3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.
- 3.03 Owner's decision as to qualification of the Bidders shall be final.
- 3.04 Ability and Experience of Bidder:
- A. No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him to prosecute and complete the Work successfully within the time named. The Owner's decision or judgment on these matters shall be final, conclusive, and binding.
 - B. The Owner may make such investigations as it deems necessary, and the Bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions:

- A. All information given on the Drawings or in the other Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of bidders and is not guaranteed.
- B. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes or other structures encountered during construction will be the same as those indicated on the Drawings or in the other Contract Documents.
- C. It is agreed further and understood that no bidder or contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

4.02 Underground Facilities

- A. Information and data shown or indicated in the Bidding Documents with respect to any existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 Hazardous Environmental Condition

- A. Hazardous Environmental Conditions are not anticipated on this project.

- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 4.06 of the General Conditions.
- 4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.
- 4.06
- A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.
 - B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.
- 4.07 It is the responsibility of each Bidder before submitting a Bid to:
- A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;
 - B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
 - C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
 - D. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding 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 Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;
- E. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
 - F. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
 - G. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
 - H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
 - I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – SITE AND OTHER AREAS

- 5.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents.
- 5.02 All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.
- 5.03 The Contractor shall not work on property requiring obtaining of an easement until the Owner has obtained the necessary easement.

- 5.04 The Contractor shall have no claim for additional compensation or damage on account of any delay in obtaining the necessary easements.

ARTICLE 6 – INTERPRETATIONS AND ADDENDA

- 6.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing to dennis.setzko@aecom.com. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 6.02 To receive consideration, such questions shall be submitted in writing to the Engineer, at least seven days before the established date for receipt of Bids. If the question involves the equality or use of products or methods, it must be accompanied by drawings, specifications or other data in sufficient detail to enable the Engineer to determine the equality or suitability of the product or method. In general, the Engineer will neither approve nor disapprove particular products prior to the opening of Bids; such products will be considered when offered by the Contractor for incorporation into the Work.
- 6.03 The Engineer will set forth as Addenda, which shall become a part of the Contract Documents, such questions received as above provided as in his sole judgment are appropriate or necessary and his decision regarding each. At least five days prior to the receipt of Bids, he will send a copy of these Addenda to those prospective bidders known to have taken out sets of the Drawings and other Contract Documents.
- 6.04 The Contractor agrees to use the products and methods designated or described in the Specifications as amended by the Addenda.

ARTICLE 7 – BID SECURITY

- 7.01 A Bid must be accompanied by Bid security made payable to Owner (“Treasurer, Town of Branford”) in amount of \$50,000 and in the form of a certified check, bank draft, or a Bid Bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.
- 7.02 Bid security of the unsuccessful Bidders who furnished certified checks or bank drafts will have them returned within 10 days after the bid award. Bond forms will be returned upon request.

ARTICLE 8 – CONTRACT TIMES

- 8.01 The times for Substantial Completion and readiness for final payment are to be set forth by Bidder in the Bid and will be entered into the Agreement (or incorporated therein by reference to the specific language of the Bid). Substantial Completion is desired within 45 days. The times will be taken into consideration by Owner during the evaluation of Bids,

and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion and be ready for final payment within the times designated in the Bid.

ARTICLE 9 – LIQUIDATED DAMAGES

9.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 10 – SUBSTITUTE AND “OR-EQUAL” ITEMS

10.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items.

ARTICLE 11 – BASIS OF DESIGN AND MAJOR EQUIPMENT ITEMS

11.01 *Basis of Design*

A. Unless otherwise indicated, design of this Project is based upon the material or Supplier’s equipment named first in the list of manufacturers in the Specifications. Engineer has performed an evaluation of other listed manufacturers for compliance with the requirements of the Contract Documents. When other manufacturers are listed, Contractor may be required to make modifications or adjustments, at Contractor’s expense, to coordinate the installation of the furnished equipment with associated elements of Work, such as piping and electrical connections, or support and mounting provisions.

11.02 *Major Equipment Items*

A. Not Used

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.
- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form shall be completed in ink and Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.
 - B. A Bid price shall be indicated for each Bid item listed therein. In the case of optional alternatives, the words “No Bid,” “No Change,” or “Not Applicable” may be entered.
 - C. The Bid shall contain an acknowledgement of the receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
 - D. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
 - E. All names shall be printed in ink below the signatures.
 - F. It is the responsibility of the Bidder to submit a neat, accurate, and complete Bid.

- 13.02 The Bidder, when signing the Bid(s) shall meet the following requirements:
- A. Each Bidder shall provide two copies of the complete Bid package.
 - B. A Bid by an individual shall show Bidder's name and Bidder's official address.
 - C. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature) accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
 - D. A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.
 - E. A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid form. The official address of joint venture shall be shown.
 - F. A Bid 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 shall be shown.
- 13.03 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state Contractor license number, if any, shall also be shown on the Bid form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 Lump Sum

- A. Bidders shall submit a Bid as set forth in the Bid Form using the estimated quantities provided.

14.02 Allowances

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 11.02.B of the General Conditions.

14.03 Supplementary Unit Prices

- A. Bidder shall submit a unit price for each item of Work listed in the Schedule of Supplementary Prices included in the Bid.

- B. Owner shall have the right to reject any supplemental unit prices for additions to or deductions from the Work if the prices are considered excessive or unreasonable, or to accept any supplementary unit prices which may be considered fair and reasonable.
- C. One or more Contracts will be awarded to responsive and eligible bidder(s) offering the lowest Total Estimated Contract Price in combination with the qualifications of the bidder(s). It is the intent to identify a Contractor or short list of qualified contractors who are interested in performing such work and to establish in advance the rate of compensation for such services.
- D. Bids submitted shall be effective for two years from the bid submittal date. Extensions beyond two years may occur upon mutual agreement.
- E. Bids will be accepted according to the following selection criteria:
 - 1. Contractor qualifications;
 - 2. Unit rates as provided in the bid form.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 Each bidder shall return two (2) hard copies of the bid form along with the Bid security and other documents identified.
- A. A Bid shall be submitted no later than the date and the time prescribed and at the place indicated in the Invitation to Bid and shall be enclosed in a plainly marked package 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 Bidder, and shall be accompanied by the Bid security and other required documents. If the Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” No oral, facsimile, or telephonic bids will be accepted. A mailed Bid shall be addressed to the address indicated on the Bid Form.
 - B. OWNER may consider informal any Bid not prepared and submitted in accordance with the provisions hereof.
 - C. Bidders are cautioned that it is the responsibility of each individual bidder to assure that his bid is in the possession of the responsible official or his designated alternate prior to the stated time and at the place of the Bid Opening. Owner is not responsible for bids delayed by mail and/or delivery services, of any nature.
- 15.02 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 a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or

other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to Purchasing Agent, Office of the Finance Department, Town Hall, 1019 Main Street, Branford, CT 06405.

15.03 Bids received after the official Bid closure time will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

A. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

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

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder

has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

- 19.03 In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders as well as the bid pricing and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.
- 19.06 In the event that there is a discrepancy in the Bid between the lump sum or unit prices written in words and figures, the prices written in words shall govern. If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.07 The Owner reserves the right to omit certain items in their entirety and other items in part as set forth in the Bid.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

21.02 The Notice of Award will be issued within 60 days after the Bids are received.

ARTICLE 22 – WAGE RATES

22.01 Wages and rates are subject to the provisions of the Davis-Bacon Act and shall be taken into account when preparing this bid.

ARTICLE 23 – SALES AND USE TAXES

23.01 Provisions for the Bidder's responsibilities for sales and other taxes appear in Paragraph 6.10 of the General Conditions and as supplemented in the Supplementary Conditions. The Owner has tax exempt status; therefore, Contractor(s) shall forward this information to its Suppliers in order that the sale of such materials and equipment be properly recorded as a tax-exempt sale.

23.01 Materials purchased for permanent installation in the work will be exempt from the Connecticut Sales and Use Tax under the Connecticut Education, Welfare and Public Health Tax Act. Each bidder shall take this exemption into account in calculating his bid for the work.

ARTICLE 24 – POST-BID SUBMITTALS

24.01 *Minority/Women's/Small Business Enterprises Participation* -- Not Used

ARTICLE 25 – RETAINAGE

25.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

END OF SECTION

SECTION 00301

BID FORM

To the Town of Branford, Connecticut, herein called the Owner, acting by and through its Town Engineer, for Trenchless Utility Rehabilitation in the Town of Branford, Connecticut

It is the intent of the town to receive and review bid proposals for the purpose of selecting a vendor or multiple vendors to provide an indefinite delivery/indefinite quantity or work that will be defined later in separate projects with separate purchase orders. The town intends to award the bid to responsible and responsive bidder(s) using a combination of price for services and Contractor qualifications. The town reserves the right to select any, all, or none of the items of work as budget allows or to stop work before any item is completed if it is deemed to be in the best interests of the Town.

The Undersigned, as proposer, herein referred to as singular and masculine, declares as follows:

- (1) The only parties interested in this BID as Principals are named herein;
- (2) this BID is made without collusion with any other person, firm, or corporation;
- (3) no officer, agent, or employee of the Owner is directly or indirectly interested in this BID;
- (4) he has carefully read and examined the Drawings, the annexed proposed AGREEMENT and the Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
- (5) and he understands that the quantities of work tabulated in this BID or indicated on the Drawings or in the Specifications or other Contract Documents are only approximate and are subject to increase or decrease as deemed necessary by the Engineer;

and he agrees that, if this BID is accepted he will contract with the Owner, as provided in the copy of the Contract Documents deposited in the office of the Engineer, this BID form being part of said Contract Documents, and that he will perform all the work and furnish all the materials and equipment, and provide all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other things required by the Contract Documents in the manner and within the time therein prescribed and according to the requirements of the Engineer as therein set forth, and that he will take in full payment

therefor the unit price applicable to each item of the Work as stated in the schedule below.

(Note: Bidders must bid on each item. All entries in the entire BID must be made clearly and in ink; prices bid must be written in both words and figures.)

(Bidders should insert extended item prices obtained from quantities and unit prices.)

(Quantities shown are indeterminate and are only used to compare bids)

Item No.	Estimated quantity	Brief description; unit or lump sum price bid in both words and figures	Total figure
1	Cleaning		
1a	<u>1,000</u> lin. ft	Light cleaning pipes less than 12" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____

1b	<u>1,000</u> lin. ft	Light cleaning pipes 12" to 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1c	<u>1,000</u> lin. ft	Light cleaning pipes greater than 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1d	<u>1,000</u> lin. ft	Medium cleaning pipes less than 12" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1e	<u>1,000</u> lin. ft	Medium cleaning pipes 12" to 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1f	<u>1,000</u> lin. ft	Medium cleaning pipes greater than 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1g	<u>1,000</u> lin. ft	Heavy cleaning pipes less than 12" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1h	<u>1,000</u> lin. ft	Heavy cleaning pipes 12" to 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
1i	<u>1,000</u> lin. ft	Heavy cleaning pipes greater than 24" in diameter, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____

2	Pre-Installation CCTV		
2a	<u>5,000</u> lin. ft	All pipe diameters, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
3	Chemical Treatment and Root Removal		
3a	<u>100</u> lin. ft	8" Pipe and smaller, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3b	<u>100</u> lin. ft	10" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3c	<u>100</u> lin. ft	12" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3d	<u>100</u> lin. ft	15" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3e	<u>100</u> lin. ft	18" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3f	<u>100</u> lin. ft	20" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3g	<u>100</u> lin. ft	24" Pipe, per lin. ft _____ dollars and _____ cents (\$ _____)	\$ _____
3h	<u>100</u> lin. ft	30" Pipe and greater, per lin. ft _____ dollars	

		and _____ cents (\$ _____)	\$ _____
4	Cured-In-Place Sewer Pipe Rehabilitation (Inversion Method)		
4a	<u>500</u> lin. Ft	8" Pipe, per lin. ft., less than 10 feet deep _____ dollars and _____ cents (\$ _____)	
4b	<u>500</u> lin. Ft	8" Pipe, per lin. ft., between 10-15 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4c	<u>500</u> lin. ft	8" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	
4d	<u>500</u> lin. Ft	10" Pipe, per lin. ft., less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4e	<u>500</u> lin. Ft	10" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4f	<u>500</u> lin. Ft	10" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4g	<u>500</u> lin. Ft	12" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4h	<u>500</u> lin. Ft	12" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4i	<u>500</u> lin. ft	12" Pipe, per lin. ft., greater than 20 feet deep _____ dollars	

		and _____ cents (\$ _____)	\$ _____
4j	<u>500</u> lin. Ft	15" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4k	<u>500</u> lin. Ft	15" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4l	<u>500</u> lin. Ft	15" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4m	<u>500</u> lin. Ft	18" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4n	<u>500</u> lin. Ft	18" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4o	<u>500</u> lin. Ft	18" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4p	<u>500</u> lin. Ft	20" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4q	<u>500</u> lin. ft	20" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4r	<u>500</u> lin. ft	20" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____

4s	<u>500</u> lin. Ft	24" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4t	<u>500</u> lin. Ft	24" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4u	<u>500</u> lin. Ft	24" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4v	<u>500</u> lin. Ft	27" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4w	<u>500</u> lin. Ft	27" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4x	<u>500</u> lin. ft	27" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4v	<u>500</u> lin. Ft	30" Pipe, per lin. ft. less than 10 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4w	<u>500</u> lin. Ft	30" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4x	<u>500</u> lin. ft	30" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4v	<u>500</u> lin. Ft	36" Pipe, per lin. ft. less than 10 feet deep	

	Ft	_____ dollars and _____ cents (\$ _____)	\$ _____
4w	<u>500</u> lin. Ft	36" Pipe, per lin. ft., between 10-20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____
4x	<u>500</u> lin. ft	36" Pipe, per lin. ft., greater than 20 feet deep _____ dollars and _____ cents (\$ _____)	\$ _____

5	Cutting Protruding Service Connections		
5a	<u> 10 </u> each	Cutting Protruding Service Connections, each _____ dollars and _____ cents (\$ _____)	\$ _____
6	Bypass Pumping		
6a	<u> 1 </u> day	Bypass Pumping 0 – 1,000 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
6b	<u> 1 </u> day	Bypass Pumping 1,001 – 3,000 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
6c	<u> 1 </u> day	Bypass Pumping 3,001 – 5,000 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
6d	<u> 1 </u> day	Bypass Pumping 5,001 – 7,500 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
6e	<u> 1 </u> day	Bypass Pumping 7,501 – 10,000 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
6f	<u> 1 </u> day	Bypass Pumping greater than 10,000 gpm _____ dollars and _____ cents (\$ _____)	\$ _____
7	Warranty Period Testing		

7a	<u>3,000</u> lin. ft	All pipe sizes, per lin. ft. _____ dollars and _____ cents (\$ _____)	\$ _____
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The estimated unit quantities provided are for informal comparison only. The total price for Items 1 to 7, inclusive, derived as described in the INSTRUCTIONS TO BIDDERS under the heading "Comparison of Bids," is

\$ _____ (Bidder must fill in this blank.)

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the annexed form of AGREEMENT, he will accept compensation as stipulated therein in full payment for such extra work.

If this BID is accepted by the Owner, the undersigned agrees to complete work identified as separate projects for the unit prices identified above and to be completed under the Contract within the time negotiated and stipulated in any AGREEMENT.

As provided in the INSTRUCTIONS TO BIDDERS, the bidder hereby agrees that he will not withdraw this PROPOSAL within 90 consecutive calendar days after the actual date of the opening of Bids and that, if the Owner shall accept this BID, the bidder will duly execute and acknowledge the AGREEMENT and furnish, duly executed and acknowledged, the required CONTRACT BONDS within ten (10) days after notification that the AGREEMENT and other Contract Documents are ready for signature.

Bid prices for work items shall be effective for two (2) years commencing on the date of this bid submittal. Extensions beyond two (2) years may occur upon mutual agreement between the town and contractor.

The contractor will be contractually obligated to use the unit rates included in their proposal to generate invoices for individual projects.

By submitting this proposal, the Contractor authorizes the town to undertake such investigation as may be necessary to verify the Contractors qualifications and reputation

Should the bidder fail to fulfill any of his agreements as hereinabove set forth, the Owner shall have the right to retain as liquidated damages the amount of the bid check which shall

AECOM
Rocky Hill, Connecticut

Branford, Connecticut
Trenchless Utility Rehabilitation

become the Owner's property. If a bid bond was given, it is agreed that the amount thereof shall be paid as liquidated damages to the Owner by the Surety.

This BID includes Addenda number _____ (To be filled in by Bidder if Addenda are issued.)

The bidder, by submittal of this BID, agrees with the Owner that the amount of the bid security deposited with this BID fairly and reasonably represents the amount of damages the Owner will suffer due to the failure of the bidder to fulfill his agreements as above provided.

(SEAL) _____ L.S.
(Name of Bidder)

By _____
(Signature and title of authorized representative)

(Business address)

(City and State)

Date

The bidder is a corporation incorporated in the State (or Commonwealth) of _____
- a partnership - an individual. (Bidder must add and delete as necessary to make this sentence read correctly.)

The required names and addresses of all persons interested in the foregoing Bid, as Principals, are as follows:

AECOM
Rocky Hill, Connecticut

Branford, Connecticut
Trenchless Utility Rehabilitation

The bidder is requested to state below what work of a similar character to that included in the proposed Contract he has done and to give references that will enable the Owner to judge his experience, skill, and business standing.

(Add supplementary page if necessary.)

END OF SECTION

DOCUMENT 00303

**CERTIFICATION OF BIDDER REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

INSTRUCTIONS

This certification is required pursuant to Connecticut's Executive Order No. Three. The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name: _____

Address and Zip Code: _____

1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.

Yes No (If answer is yes, identify the most recent contract.)

2. Compliance reports were required to be filed in connection with such contract or subcontract.

3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.

Yes No (If answer is yes, identify the most recent contract.)

4. If answer to Item 3 is "No", please explain in detail on reverse side of this certification.

Certification - The information above is true and complete to the best of my knowledge and belief.

Name and Title of Signer (Please Type)

Signature

Date

SECTION 00410

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)*:

Town of Branford, CT
1019 Main Street
Branford, CT 06405

BID

Bid Due Date:
Description: Trenchless Utility Rehabilitation

BOND

Bond Number:
Date *(Not earlier than Bid due 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

Attest: _____
Signature

Title

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

PENAL SUM FORM

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.
2. 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.
3. This obligation shall be null and void if:
 - 3.1 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
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 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).
4. 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.
5. 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 Bid due date without Surety's written consent.
6. 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 Bid due date.
7. 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.
8. 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.
9. 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.
10. 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.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

DOCUMENT 00450

BIDDER QUALIFICATIONS STATEMENT

(Bidder shall complete this statement and submit it with his bid)

SUBMITTED BY:

Name of Organization: _____
(Print or Type Name of Bidder)

Name of Individual: _____

Title: _____

Business Address: _____

Telephone No.: _____

Fax No.: _____

Ladies and Gentlemen:

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made herein.

(Note: Attach additional sheets as required)

1.0 Bidder's General Business Information

1.1 Check if:

- Corporation Partnership Joint Venture Sole Proprietorship
 Limited Liability Company

If Corporation:

A. Date and State of Incorporation:

B. List of Executive Officers:

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____

If Partnership:

A. Date and State of Organization: _____

B. Names of Current and General Partners: _____

C. Type of Partnership

General Publicly Traded Limited

Other (describe): _____

If Joint Venture:

A. Date and State of Organization: _____

B. Name, Address, and Form of Organization of Joint Venture Partners:
(Indicate managing partner by an asterisk*):

If Sole Proprietorship:

A. Date and State of Organization: _____

B. Name and address of Owners: _____

- 2.0 How many years has your organization been in business as a general contractor? _____
- 3.0 If your organizational structure has changed within the past five years, provide data as listed above in Item 1.0 for your previous organization(s).
- 4.0 We normally perform _____ percent of the work with our own forces. List work normally subcontracted. _____

- 5.0 Has any construction contract to which you have been a party been terminated by the owner; have you ever terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", furnish details of all such occurrences including the name of the owner, architect or engineer; and surety, and the name and date of the project.
 No. Yes, Details provided.
- 6.0 Has any officer or partner of your organization ever been and officer or partner of another organization that had any construction contract terminated by the owner; terminated work on a project prior to its completion for any reason; has any surety which issued a performance bond complete the work in its own name or financed such completion; or has any surety expended monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is "yes", furnish details of all such occurrences including the name of the owner, architect or engineer; and surety, and the name and date of the project.
 No. Yes, Details provided.
- 7.0 In the last five years, has your organization or any predecessor organization failed to substantially complete a project in a timely manner? If the answer to this question is "yes", furnish details of all such occurrences including the name of the owner, architect or engineer; and surety, and the name and date of the project.
 No. Yes, Details provided.
- 8.0 On Schedule A attached, list the name, location, and description of the project, owner, architect, or engineer, contract price, percent complete, and scheduled completion of the major construction projects your organization currently has in progress. Provide name, address, and telephone number of a reference for each project listed.

9.0 On Schedule B attached, list the name, location, and description of the project, owner, architect, or engineer, contract price, percent complete, and date of completion and percent of work with your own forces of major projects of the same general nature as this project which your organization has completed within the past five years. Provide name, address, and telephone number of a reference for each project listed.

10.0 On Schedule C attached, list the name and construction experience of the principal individuals of your organization directly involved in construction operations.

11.0 List the states and categories in which your organization is legally qualified to do business.

12.0 Provide the following for your surety:

12.1 Surety Company: _____

12.2 Agent: _____

A. Address: _____

B. Telephone Number: _____

13.0 Provide the following with respect to an accredited banking experience institution familiar with your organization.

13.1 Name of Bank: _____

13.2 Address: _____

13.3 Account Manager: _____

13.4 Telephone Number: _____

14.0 Provide the name, address, and telephone number of an individual who represents a major equipment / material supplier whom the owner may contact for a financial reference:

15.0 Dated at _____, this _____ day of _____, 20__.

Bidder: _____
(Print or Type Name of Bidder)

By: _____ (Seal, if corporation)

Title: _____

Attachments A, B, and C

------(Affidavit for Individual)-----

_____ being duly sworn, deposes and says that:

a) all of the foregoing qualification is true, complete, and accurate.

------(Affidavit for Partnership)-----

_____ being duly sworn, deposes and says that:

- a) he/she is a member of the partnership of _____;
- b) he/she is familiar with the books of said partnership showing its financial condition;
- c) all of the foregoing qualification is true, complete, and accurate.

------(Affidavit for Corporation)-----

_____ being duly sworn, deposes and says that:

- a) he/she is a _____ of _____;
(Title) (Full name of Corporation)
- b) he/she is familiar with the books of said Corporation showing its financial condition;
- c) all of the foregoing qualification is true, complete, and accurate.

------(Affidavit for LLC)-----

_____ being duly sworn, deposes and says that:

- a) he/she is a member of the LLC of _____;
- b) he/she is familiar with the books of said LLC showing its financial condition;
- c) all of the foregoing qualification is true, complete, and accurate.

------(Acknowledgment)-----

_____ being duly sworn, deposes and says that he/she is
_____ of _____;

(Title)

(Name of Bidder)

that he/she is duly authorized to make the foregoing affidavit and that he/she makes it on behalf of
 himself / herself; said partnership; said corporation; said LLC.

Sworn to before me this _____ day of _____ 20____, in the County
of _____, State of _____.

(Notary Public)

My commission expires _____

(Seal)

**SCHEDULE A
PROJECTS IN PROGRESS**

Name, Location and Description of Project	Owner	Architect or Engineer	Contract Price	Percent Complete	Scheduled Completion	Reference / Contact Include Address and Phone
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ATTACHMENT B

**SCHEDULE B
PROJECTS COMPLETED**

Name, Location and Description of Project	Owner	Architect or Engineer	Contract Price	Percent with Own Forces	Reference / Contact Include Address and Phone
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**SCHEDULE C
PERSONNEL**

Name	Position	Date Started with This Organization	Date Started in Construction	Prior Positions and Experience in Construction
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END OF SECTION

SECTION 00520

AGREEMENT

THIS AGREEMENT is by and between the Town of Branford, Connecticut (“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 for this is generally described as follows:

REHABILITATION OF UNDERGROUND SANTARY SEWERS

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only
a part is generally described as follows:

WORK SCOPE WILL BE IDENTIFIED AS INDIVIDUAL PROJECTS WITH THE
TOTAL COST TO COMPLETE THESE PROJECTS BASED ON BID PRICES
SUBMITTED IN THE BID FORM

ARTICLE 3 – ENGINEER

- 3.01 The Project has been designed by AECOM (Engineer), which is to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.
- 3.01 The Project has been designed by AECOM (Engineer) who will issue clarifications and interpretations in accordance with Paragraph 9.08 of the General Conditions.
- 3.02 Owner will provide a site representative who is to act as Owner’s representative, assume duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents except as described in Paragraph 3.01.

ARTICLE 4 – CONTRACT TIMES

4.01 Days to Achieve Substantial Completion and Final Payment

The Work will be substantially completed within a period of time to be determined by mutual agreement between the Contractor and the Owner for each individual project.

4.02 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 loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$250 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$250 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

- 4.03 Permitting Contractor or Surety to continue and finish the Work or any part of the Work after the times specified for completion, or after the date to which the times for completion may have been extended, shall in no way operate as a waiver on the part of Owner of its rights under the Contract.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents and the scope of the individual project an amount in current funds equal to the sum of the amounts determined pursuant to Paragraph 5.01.A below:

A. For all Work a Contract Price of: \$ _____

All specific cash allowances are included in the above price in accordance with Paragraph 11.02 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 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 on or about the 1st day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of 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 in the General Requirements.

1. Prior to Substantial Completion, 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 Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work 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

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General

Conditions and less the Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.
- B. Retainage. The Owner may retain out of the moneys otherwise payable to the Contractor hereunder a percentage of 2 percent and may expend the same, in the manner hereinafter provided, in making such repairs, corrections or replacements in the Work as the Owner, in its sole judgment, may deem necessary.

If at any time within the said period of guarantee any part of the Work requires repairing, correction or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, correction, or replacements to the satisfaction of the Owner within three (3) days from the date of receipt of such notice, or having commenced, fails to prosecute such work with diligence, the Owner may employ other persons to make the same. The Owner shall pay the cost and expense of the same out of the amounts retained for that purpose. Upon the expiration of the said period of guarantee, provided that the Work at that time is in good order, the Contractor will be entitled to receive the whole or such part of the sum last aforesaid, if any, as may remain after the cost and expense of making said repairs, correction or replacements, in the manner aforesaid, have been paid therefrom.

ARTICLE 7 – INTEREST

- 7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum rate allowed by law at the place of the Project.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:
 - A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. Contractor has visited the Site 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 federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Contractor has considered the information known to Contractor; 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; 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, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.
- E. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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 Documents.
- 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. In connection with the performance of Work under this Contract, Contractor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition or developmental disability. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. Contractor further agrees to take affirmative action to ensure equal employment opportunities for persons with disabilities. Contractor agrees to post in conspicuous places, available for employees and applicants for employment, notices setting forth the provisions of the nondiscrimination clause. Form of notice is included in the Project Forms.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 00520-1 to 00520-8, inclusive).
 - 2. Performance bond (pages 00610-1 to 00610-4, inclusive).

3. Payment bond (pages 00615-1 to 00615-3, inclusive).
 4. General Conditions (pages 00700-1 to 00700-62, inclusive).
 5. Supplementary Conditions (pages 00800-1 to 00800-17, inclusive).
 6. Technical Specifications as listed in the table of contents of the Project Manual.
 7. Addenda (numbers _____ to _____, inclusive).
 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages _____ to _____, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).
 9. Wage Rates.
 10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages _____ to _____, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 9.01.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 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

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

10.02 Assignment of Contract

- A. 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, moneys that may become due and

moneys that are 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.

10.03 *Successors and Assigns*

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

10.04 *Severability*

- A. 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.

10.05 *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 10.05:
 - 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.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

OWNER:

CONTRACTOR

By: _____

By: _____

Title: _____

Title: _____

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

[CORPORATE SEAL]

Attest
· _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License No.: _____

(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.)

(Where applicable)

END OF SECTION

PERFORMANCE BOND (EJCDC C-610)

CONTRACTOR *(name and address)*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

Town of Branford, 1019 Main Street, Branford, CT 06405

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount: \$

Description *(name and location)*: Contract: Trenchless Utility Rehabilitation, Branford, CT

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: None See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

_____ *(seal)*

Contractor's Name and Corporate Seal

_____ *(seal)*

Surety's Name and Corporate Seal

By: _____

Signature

By: _____

Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____

Signature

Attest: _____

Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint ventures. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of

the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within

two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND (EJCDC C-615)

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):* Town of Branford, 1019 Main Street, Branford, CT 06405

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):* Trenchless Utility Rehabilitation, Town of Branford Connecticut

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: None See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

(seal)
Contractor's Name and Corporate Seal

(seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint ventures. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or

(2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond

shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

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CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
 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. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *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.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *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 at the Site.
44. *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.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *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 Subcontractor.
48. *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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F 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 Paragraph 9.09 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 14.04 or 14.05).

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. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

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. 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 Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 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 Agreement 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 Agreement. 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 Agreement, whichever date is earlier.

2.04 *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 the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;
 - 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *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 2.05.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 component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
 1. Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, 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 Contract Documents. 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 Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
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 Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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
 2. 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.
- 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.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- 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 the Work is to be performed 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.

4.02 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 contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed 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 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; 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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and
 - 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 Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and

contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous 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 shall not be responsible for 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 such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the

consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *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.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. 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 arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. 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 arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds 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 each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also

meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

- a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
5. 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; and
 6. 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.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and 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;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
 5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
 6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full 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 interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 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, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, 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.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies 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 of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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 as trustee 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 utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.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, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *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. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- 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.

6.02 *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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, 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.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "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 specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. "*Or-Equal*" Items: If in Engineer's sole discretion 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, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, 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; and
 - 3) it has a proven record of performance and availability of responsive service.
- 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.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. 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:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) 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

- c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be

required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.
- C. 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. 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 moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. 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.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner,

Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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 arbitration 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 arbitration 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.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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 knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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 arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *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.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. 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 arbitration 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 by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other 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 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 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 property to stresses or pressures that will endanger it.

6.12 *Record Documents*

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

6.13 *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, 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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- 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 6.13.A.2 or 6.13.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 (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 for protection of the Work 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 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *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.

6.15 *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.

6.16 *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.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- 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 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. 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 6.17.D.

B. 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. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated each 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 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 and approval of that 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 both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval 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 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

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.

6.18 *Continuing the Work*

- A. 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, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *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 representation of 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 or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. 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 arbitration 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 6.20.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 6.20.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.

6.21 *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 law.
- 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, Shop Drawings 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 6.21, 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 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner’s employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner’s employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor’s Work depends upon work performed by others under this Article 7, 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.

7.02 Coordination

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *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.

8.12 *Compliance with Safety Program*

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 pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with 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, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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 Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. 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; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. 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.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data

shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
 2. approve the Claim; or
 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs 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 11.01.B, 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, 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 11.01.
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 5.06.D), 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 telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which 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 Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work 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 or when a Claim for an 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 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

11.02 *Allowances*

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 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; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor 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 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee*: 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - 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 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or

neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests 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.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.

- C. If it is found that the uncovered Work is defective, 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 arbitration or other dispute resolution costs) 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
 2. correct such defective Work; or
 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 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. 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 arbitration 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) will be paid by Contractor.
- 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 13.07, 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 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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 arbitration or other dispute resolution costs) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *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 in accordance with Paragraph 13.06.A, 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, 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 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A 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.

14.02 *Progress Payments*

A. *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 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.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 9.07, 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 Documents; 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 moneys 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. 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;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor remedies the reasons for such action.
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 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before

final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. 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 tentative list.

14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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.

B. *Engineer's Review of Application and Acceptance:*

1. 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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
1. 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. 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
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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 arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *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;
 - 3. 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 arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) 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 15.03.

- 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 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:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

17.03 *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 Documents. 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.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

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

17.06 *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 1. DEFINITIONS

SC-1.01

Defined Terms:

Insert the following language before the word "Agreement" in the first sentence of the definition 1.01A.12 entitled "Contract Documents" in the General Conditions:

Invitation to Bid, Instructions to Bidders, and

ARTICLE 2. PRELIMINARY MATTERS

SC-2.01

Copies of Documents:

Delete paragraph 2.01B of the General Conditions in its entirety and insert the following in its place:

- B. Before any work at the site is started, Contractor shall deliver to Owner, with a copy to Engineer, certificates of insurance (and other evidence of insurance requested by Owner) which Contractor is required to purchase and maintain in accordance with the requirements of Article 5.
 - 1. Contractor shall include and identify on the certificate of insurance, indemnification as required by Article 6.20.
 - 2. Engineer shall furnish to the Contractor, the form for Certificate of Insurance to be completed.

SC-2.02

Copies of Documents:

Delete Paragraph 2.02.A. in its entirety and insert the following in its place:

- A. Owner shall furnish Contractor copies of the Drawings and Project Manual in electronic format.

SC-2.03

Commencement of Contract Times; Notice to Proceed:

Delete the last sentence of Paragraph 2.03.A. in its entirety and insert the following in its place:

In no event will the Contract Times commence to run later than the 61st day after the day of Bid opening or the 30th day after the Effective Date of the Agreement, whichever date is earlier.

SC-2.05

Before Starting Construction:

Amend the first sentence of Paragraph 2.05.A.3. by inserting the words “except for Unit Price Work” at the beginning of the sentence.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01

Intent:

Add a new paragraph immediately after paragraph 3.01A of the General Conditions which is to read as follows:

1. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.
2. Sections of Division 1 - General Requirements govern the execution of the work of all sections of the specifications.

SC-3.03

Reporting and Resolving Discrepancies:

Add the following language as Paragraph 3.03.A.4.:

4. A request for written interpretation or clarification of the Contract Documents shall be submitted on the Contract Clarification/Interpretation Request form provided in the Project Forms section.

ARTICLE 4. AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS

SC-4.04

Underground Facilities:

Delete the following words from line 5 of paragraph 4.04B.2 of the General Conditions:

“or not shown or indicated with reasonable accuracy”

SC-4.05

Reference Points:

Add a new paragraph at the end of paragraph 4.05A of the General Conditions which is to read as follows:

- B. Engineer may check the lines, elevations, reference marks, batter boards, etc., set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate and satisfactory construction and completion of the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades.

SC-4.06

Hazardous Environmental Conditions at Site:

Delete Paragraphs 4.06.A. and 4.06.B. in their entirety and insert the following in their place:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are available.
- B. Not used.

ARTICLE 5. BONDS AND INSURANCE

SC-5.01

Performance, Payment, and Other Bonds:

Add the following language at the end of Paragraph 5.01.C:

In addition, no further progress payments under the Agreement will be made by Owner until Contractor complies with the provisions of this paragraph.

SC-5.02

Licensed Sureties and Insurers:

Add the following language at the end of Paragraph 5.02.A.:

Insurance companies shall be carriers approved in the State of Connecticut and have an A- or better rating by Best's Insurance Guide Rating. In addition, all carriers are subject to approval by the Town of Branford.

SC-5.03

Certificates of Insurance:

Delete paragraph 5.03B of the General Conditions.

SC-5.04

Contractor's Insurance:

Add the following new paragraph immediately after Paragraph 5.04.B.:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Worker's Compensation, and related coverage under Paragraphs 5.04.A.1 and 5.04.A.2 of the General Conditions:
 - a. State: Statutory
 - b. Applicable Federal (e.g., Longshoreman's): Statutory
 - c. Employer's Liability:
EL Each Accident \$500,000

- | | |
|--------------------------|-----------|
| EL Disease Each Employee | \$500,000 |
| EL Disease Policy Limit | \$500,000 |
2. Contractor's General Liability under Paragraphs 5.04.A.3 through 5.04.A.6 of the General Conditions which shall include completed operations and product liability coverage's and eliminate the exclusion with respect to property under the care, custody, and control of Contractor or provide equivalent coverage under Builders Risk:
- | | |
|--|---------------------|
| a. General Aggregate: | \$ 2,000,000 |
| b. Products/Completed Operations
Aggregate: | \$ 2,000,000 |
| c. Each Occurrence
(Bodily Injury and Property Damage): | \$ 1,000,000 |
| d. Excess or Umbrella Liability | |
| Umbrella | \$ 1,000,000 |
| (Excess Liability) | \$ 1,000,000 |
| Each Occurrence | \$ 1,000,000 |
| Aggregate | \$ 1,000,000 |
3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
- | | |
|---------------------|---------------------|
| a. Bodily Injury: | |
| Each Person | \$ 2,000,000 |
| Each Accident | \$ 1,000,000 |
| b. Property Damage: | |
| Each Accident | \$ 2,000,000 |
4. The Contractual Liability coverage required by Paragraph 5.04.B.3 of the General Conditions shall provide coverage for not less than the following amounts:
- | | |
|---------------------|---------------------|
| a. Bodily Injury: | |
| Each Accident | \$ 1,000,000 |
| Annual Aggregate | \$ 2,000,000 |
| b. Property Damage: | |
| Each Accident | \$ 1,000,000 |
| Annual Aggregate | \$ 2,000,000 |

5. Original, completed Certificates of Insurance must be presented to the Town of Branford prior to purchase order/contract issuance. Bidder agrees to provide replacement/renewal certificates at least 60 days prior to the expiration of the policy.
6. Bidder shall agree to maintain in force at all times during which services are to be performed the following coverages and shall name the Town of Branford and AECOM as an Additional Insured on a primary and non-contributory basis to the Bidder's Commercial General Liability and Automobile Liability policies. These requirements shall be clearly stated in the remarks section on the bidders Certificate of Insurance. Insurance shall be written with Carriers approved in the State of Connecticut and with a minimum Best's Rating of A-. In addition, all Carriers are subject to approval by the Town of Branford.

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

SC-6.03

Services, Materials, and Equipment:

Add the following new paragraph(s) immediately after Paragraph 6.03.C.:

D. Basis of Design

1. Unless otherwise indicated, design of this Project is based upon the material or Supplier's equipment named first in the list of manufacturers in a Specification section. Engineer has performed an evaluation of other listed manufacturers for compliance with the requirements of the Contract Documents.
2. When other manufacturers are listed, Contractor may be required to make modifications or adjustments, at Contractor's expense, to coordinate the installation of the furnished equipment with associated elements of Work, such as piping and electrical connections, or support and mounting provisions.

E. For material or equipment listed in the Specifications, Contractor shall provide Supplier A.

1. Contractor shall provide material or equipment of Supplier A unless one of the following conditions is satisfied.
 - a. Required equipment or material cannot be provided within the Contract Time, but not as a result of Contractor's failure to pursue Work timely or coordinate various activities properly.

- b. Packaging of several items of equipment from single source will provide maintenance and coordination advantages to Owner.
 - c. Contractor proposes to provide one of the other items of material or equipment listed with cost savings to Owner.
2. If Contractor feels that one of above conditions can be met, Contractor shall submit documentation to substantiate condition before requesting approval of submittals. Engineer will be sole judge of acceptance.
 3. If substitute material or equipment is accepted by Owner, the substitute material or equipment shall be provided and the Contract Price will be adjusted by a Change Order.
 4. If substitute material or equipment is not acceptable, the material or equipment of Supplier A shall be furnished for the amount included in the Lump Sum Contract Price.

SC-6.06

Concerning Subcontractor's, Suppliers, and Others:

Re-number subparagraph 6.06F to 6.06G and subparagraph 6.06G to 6.06H and add new subparagraph as follows:

- F. Owner or Engineer may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to Contractor in accordance with Contractor's Applications for Payment on account of the particular Subcontractor's, Suppliers, other person's, or other organization's Work.

SC-6.09

Concerning Laws and Regulations:

Add the following new paragraph(s) immediately after Paragraph 6.09.C.:

D. MINIMUM WAGE RATES (CONNECTICUT):

1. A schedule of minimum wage rates issued by the Commissioner of Labor for the State of Connecticut, in accordance with Chapter 558 of the General Statutes of Connecticut, are included in these specifications. Building Heavy and Highway Construction Rates apply to this project. It is the responsibility of the Contractor before bid opening to request, if necessary, any additional information on State Wage Rates for those

tradespeople who are not covered by the applicable Stage Wage Determination but who may be employed for the proposed work under this contract.

2. Particular attention is directed to the following excerpt from Section 31-53a of the General Statutes of Connecticut.
 - a. “The wages paid on an hourly basis of any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare, fund, as defined in Section 31-78 of the general statutes, shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification, on each pay day.
3. Upon award of the contract, the Contractor shall complete the “Contractor’s Wage Certification Form” and forward it to the Wage and Workplace Standards Division of the Connecticut Labor Department. During the progress of the work, the Contractor shall, on a weekly basis, submit to the Owner certified payroll and a statement of compliance on Form WWS-CPI, a copy of which is attached to the wage rates schedule.

SC-6.10

Taxes:

Add a new paragraph immediately after Paragraph 6.10.A.:

- B. Owner is exempt from payment of sales and compensating use taxes of the State of Connecticut and of cities and counties thereof on all materials to be incorporated into the Work.
 1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 2. Owner’s exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-6.12

Record Documents:

Delete the last sentence of Paragraph 6.12.A. in its entirety and insert the following in its place:

Upon Substantial Completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

SC-6.16

Emergencies:

Add the following new paragraph immediately after Paragraph 6.16.A.:

- B. In emergencies affecting the safety or protection of persons or property or maintenance of temporary construction at the Site or adjacent thereto, and Contractor cannot be reached, Owner may act to attempt to prevent threatened damage, injury, or loss. Owner will give Contractor and Engineer prompt written notice of such action and the cost of the correction or remedy shall be charged against Contractor. A Change Order will be issued to document the change in Contract Price.

SC-6.17

Shop Drawings and Samples:

Add the following new paragraphs immediately after Paragraph 6.17.E.:

- F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.
- G. After Engineer has reviewed and approved a Shop Drawing or Sample, Contractor shall provide the material or equipment approved. Engineer will not review subsequent submittals of a different manufacturer or Supplier unless Contractor provides sufficient information to Engineer that the approved material or equipment is unavailable, time of delivery will delay the construction progress but not as a result of Contractor's failure to timely pursue the Work or to coordinate various activities properly, or Owner requests a different manufacturer or Supplier.

ARTICLE 7. OTHER WORK AT THE SITE

SC-7.04

Damages to the Work or Property:

Add the following new paragraph at the end of Article 7 of the General Conditions:

- A. Should Contractor cause damage to the work or property of any separate contractor at the site, or should any claim arising out of Contractor's performance of the Work at the site be made by any separate contractor against Contractor, Owner, Engineer, Engineer's Consultants, or any other person, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, Engineer, and Engineer's Consultants, harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals, and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any separate contractor against Owner, Engineer, or Engineer's Consultants, to the extent based on a claim arising out of the Contractor's performance of the Work. Should a separate contractor cause damage to the Work or property of Contractor or should the performance of Work by any separate contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer or Engineer's Consultants, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or Engineer's Consultants, on such damage or claim. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and Owner and Contractor are unable to agree to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and Engineer's Consultants, for any delay, disruption, interference or hindrance caused by any separate contractor. This paragraph does not prevent recovery from Owner, Engineer, or Engineer's Consultant, for activities that are their respective responsibilities.

ARTICLE 8. OWNER'S RESPONSIBILITIES

SC-8.06

Insurance:

Delete paragraph 8.06 of the General Conditions in its entirety.

SC-8.13

Owner's Project Representative:

Add the following new paragraph immediately after Paragraph 8.12.:

- A. Owner will furnish a site representative, assistants, and other field staff to observe performance and progress of the Work.
- B. The duties and responsibilities of Owner's site representative are described as follows:
 - 1. Become familiar with the Contract Documents to observe the progress and quality of the executed Work, and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.
 - 2. Promptly forward to Engineer, reports from Contractor indicating conflict, error, ambiguity, or discrepancy in the Contract Documents to enable Engineer to issue a written clarification or interpretation as provided for in Paragraph 9.04 of the General Conditions.
 - 3. Provide Engineer with copy of Site Representatives' daily log.

ARTICLE 9. ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.03

Project Representative:

Add the following new paragraph immediately after Paragraph 9.03.A.:

- B. Owner will provide a site representative whose responsibilities and duties are described in Paragraph SC 8.13.

SC-9.07

Determinations for Unit Price Work:

Delete the last sentence of Paragraph 9.07.A. in its entirety and insert the following in its place:

“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 and not subject to appeal.”

SC-9.10

Compliance with Safety Program:

Add the following new paragraph immediately after Paragraph 9.10.A.:

- B. In the event Engineer determines that Contractor's safety plans, programs, and procedures do not provide adequate protection for Engineer, Engineer may direct its employees to leave the Project Site or implement additional safeguards for Engineer's protection. If taken, these actions will be in furtherance of Engineer's responsibility to its own employees only, and Engineer will not assume any responsibility for protection of any other persons affected by the Work. In the event Engineer observes situations which appear to have potential for immediate and serious injury to persons, Engineer may warn the persons who appear to be affected by such situations. Such warnings, if issued, shall be given based on general humanitarian concerns, and Engineer will not, by the issuance of any such warning, assume any responsibility to issue future warnings or any general responsibility for protection of persons affected by the Work.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

SC-10.01

Authorized Changes in the Work:

Add the following new subparagraph immediately after Paragraph 10.01.B.:

1. By submission of a Claim Contractor certifies that the claim is made in good faith, that the supporting data are accurate and complete to the best of Contractor's knowledge and belief, and that the amount or time requested accurately reflects the Contract adjustment for which Contractor believes Owner is liable.

SC-10.03

Execution of Change Orders:

Add the following new paragraph immediately after Paragraph 10.03.A.3.:

4. Change Orders will be prepared on the form included in the Project Forms of the Project Manual.

SC-10.05

Claims:

Amend Paragraph 10.05.B. by deleting the words “30 days” in the first sentence and inserting the words “10 days” in their place, and deleting the words “60 days” in the third sentence and inserting the words “30 days” in their place.

Amend the sixth sentence of Paragraph 10.05.B. by deleting the words “believes it.”

ARTICLE 11. COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK

SC-11.01

Cost of the Work:

In the second sentence of paragraph 11.01A.1 delete the word "superintendents".

SC-11.02

Allowances:

Add the following new paragraph immediately after Paragraph 11.02.B.:

- C. *Quantities Allowances:* The allowances include the quantity of material or equipment to be installed or removed from the Site; and
1. Contractor agrees that:
 - a. Contractor’s cost for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowance shall have been included in the Contract Price and not in the allowances.
 - b. Contractor’s cost for removing and loading material or equipment on the Site, transporting and fees for disposal on or off Site, overhead, profit, and other expenses contemplated for the Allowance shall have been included in the Contract Price.
 - c. Contractor’s cost for furnishing and installing material or equipment to replace the removed material or equipment shall include cost for furnishing and installing the material or equipment, labor, installation costs, overhead, profit and other expenses contemplated for the allowance shall have been included in the Contract Price.
 2. No demand for additional payment on account of any of the foregoing will be valid.

Renumber Paragraphs 11.02.C. and D. to 11.02.D respectively.

ARTICLE 12. CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

SC-12.01

Change in Contract Price

Delete Paragraph 12.01.B.2. in its entirety and insert the following in its place:

2. When the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which includes an allowance for overhead and profit in accordance with Paragraph 12.01.C.2); or

SC-12.01

Change of Contract Price:

Delete the semicolon at the end of Paragraph 12.01.C.2.c., and add the following language:

“, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be no greater than 27 percent of the cost incurred by the Subcontractor who actually performed the work”;

SC-12.02

Change of Contract Times:

Add the following new paragraph immediately after Paragraph 12.02.B.:

- C. Time extensions provided under Paragraph 12.03 of the General Conditions will only be allowed for controlling items of Work (critical path).

SC-12.03

Delays:

Delete Paragraph 12.03.B. in its entirety and insert the following in its place:

- B. If Owner, Engineer, or other contractors or utility owners performing other work for the Owner as contemplated by Article 7, 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. 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 with the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.02.B.

ARTICLE 14. PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Progress Payments:

Amend the first sentence of Paragraph 14.02.A.1. by striking out the words “20 days” and inserting the words “30 days” in their place.

Add the following language at the end of Paragraph 14.02.A.2.:

Owner may at any time require Contractor to furnish lien waivers for labor and materials covered by specified Applications for Payment.

SC-14.02

Progress Payments:

Amend Paragraph 14.02.C.1. by striking out the words “Ten days” and inserting the words “Twenty days” in their place.

SC-14.07

Final Payment:

Amend the first sentence of Paragraph 14.07.A.1. by striking out the words “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, marked up record documents (as provided in Paragraph 6.12), and other documents,”

Amend Paragraph 14.07.A.2.a. by striking out the words “, including but not limited to evidence of insurance required by Paragraph 5.04.B.6.”

SC-14.07

Final Payment:

Add the following new paragraph after paragraph 14.07A.3 of the General Conditions.

4. The amount of retainage with respect to final payment will be as stipulated in the Agreement.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

SC-15.04

Contractor May Stop Work or Terminate:

Amend Paragraph 15.04.A. by striking out the words “30 days” in two places and inserting the words “60 days” in their places, and by striking out the words “seven days” and inserting the words “10 days” in their place.

Amend Paragraph 15.04.B. by striking out the words “30 days” in two places and inserting the words “60 days” in their places, and by striking out the words “seven days and inserting the words “10 days” in their place.

ARTICLE 16. DISPUTE RESOLUTION

SC-16.01

Methods and Procedures:

Add a new sentence at the end of paragraph 16.01A of the General Conditions which is to read as follows:

Contractor shall carry on the Work and maintain the progress schedule during the dispute resolution proceedings unless otherwise agreed in writing by Owner and Contractor.

ARTICLE 17. MISCELLANEOUS

SC-17.06

Delete paragraph 17.06 in its entirety and replace with the following:

17.06 Headings:

- A. The headings or titles of any article, paragraph, subparagraph, section, subsection, or part of the Contract Documents shall not be deemed to limit or restrict the article, paragraph, section, or part.

SC-17.07

Legal Address of Contractor:

Add new paragraph immediately after paragraph 17.06 of the General Conditions as follows:

- A. Contractor’s business address and his office at or near the site of the Work are both hereby designated as places to which communications shall be delivered. The depositing of any

letter, notice, or other communication in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the Post Office Department or the delivery at either designated address of any letter, notice, or other communication by mail or otherwise shall be deemed sufficient service thereof upon Contractor, and the date of such service shall be the date of receipt. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by Contractor and delivered to Engineer. Service of any notice, letter, or other communication upon the Contractor personally shall likewise be deemed sufficient service.

SC-17.08

Engineering and Inspection Costs and Expenses:

Add a new paragraph immediately after paragraph 17.07 of the General Conditions which is to read as follows:

- A. The Contractor shall be responsible and liable for all engineering and inspection costs and expenses incurred by the Owner caused by, or related in any way to, the failure of the Contractor to perform its services in the time and manner set forth in the Agreement, the General Conditions and the Supplemental Conditions. The Owner may charge to the Contractor, and may deduct from the periodical payments and the final payment for the Contractor's work, the full amount of such engineering and inspection costs and expenses including Owner's and Engineer's costs.
 - 1. The Engineer's charges will be based on the Engineer's actual labor and expenses at the same rate the Owner is charged.
- B. For any engineering costs and expenses beyond the regular eight-hour day and for any time work on Saturday, Sunday, or holidays, the charges for such personnel will be one and one-half times the rate established above.

END OF SECTION

DOCUMENT 00850

SPECIAL CONDITIONS IN GENERAL

1.01 Statutory Requirements in General

- A. The Contractor shall keep himself fully informed of all existing and future State and National Laws and municipal ordinances and regulations in any manner affecting those engaged or employed in the work, or the materials used or employed in the work, or in any way affecting the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same and of all provisions required by law to be made a part of this contract, all of which provisions are hereby incorporated by reference and made a part thereof. If any discrepancy or inconsistency is discovered in the drawings or specifications or contract for this work in relation to any such law, ordinance, regulation, order or decree, he shall forthwith report the same to the Engineer in writing. He shall at all times himself observe and comply with, and shall cause all his agents and employees to observe and comply with all such existing and future laws, ordinances, regulations, orders and decrees; and shall protect and indemnify the Owner and Engineer and all of its and their officers, agents, and servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees or subcontractors.
- B. All materials furnished and work done are to comply with all State and Federal laws and regulations.

1.02 Police Officers/Certified Flaggers for Traffic Control

- A. Any certified flaggers or police officers, reserve, special or otherwise, employed by the Contractor, shall be paid the prevailing wage rates paid to flaggers or regular police officers of the municipality in which the work is to be performed. Contractor will be reimbursed for these traffic control costs as incurred with no markup.

END OF SECTION

* * * * *

CONTRACTOR'S
EXEMPT PURCHASE CERTIFICATE

Town _____

Grant or Loan Identifier

Contract Name _____

Contract Number

I hereby certify under penalties of (FALSE STATEMENT) that I am engaged in the performance of a construction contract funded by the following named exempt agency or organization:

Department of Environmental Protection, 79 Elm Street, Hartford, Connecticut

That such agency is, to the best of my knowledge and belief, exempt from the Education, Welfare and Public Health Tax (Sales and Use Tax) because it is a branch of the State Government, in accordance with Regulation 18 of the Sales and Use Tax Division of the State Department of Revenue Services.

That this certificate is issued to cover all purchases of material and supplies to be physically incorporated in and become a permanent part of the project referred to above.

Signature of Contractor

Date

Name of Firm:
Business Address:

* * * * *

STATE OF CONNECTICUT

BY HIS EXCELLENCY

THOMAS J. MESKILL

GOVERNOR

EXECUTIVE ORDER NO. THREE

WHEREAS, sections 4-61d(b) and 4-114a of the 1969 supplement to the general statutes require nondiscrimination clauses in state contracts and subcontracts for construction on public buildings, other public works and goods and services, and

WHEREAS, section 4-61e(c) of the 1969 supplement to the general statutes requires the labor department to encourage and enforce compliance with this policy by both employers and labor unions, and to promote equal employment opportunities, and

WHEREAS, the government of this state recognizes the duty and desirability of its leadership in providing equal employment opportunity, by implementing these laws,

NOW, THEREFORE, I, THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under section twelve of article fourth of the constitution of the state, as supplemented by section 3-1 of the general statutes, do hereby ORDER and DIRECT, as follows, by this Executive Order:

I

The labor commissioner shall be responsible for the administration of this Order and shall adopt such regulations as he deems necessary and appropriate to achieve the purposes of this Order. Upon the promulgation of this Order, the commissioner of finance and control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the labor commissioner for violation of or noncompliance with this Order or state or federal laws concerning nondiscrimination, notwithstanding that the labor commissioner is not a party to such contract or subcontract.

II

Each contractor having a contract containing the provisions prescribed in section 4-114a of the 1969 supplement to the general statutes, shall file, and shall cause each of his subcontractors to file, compliance reports with the contracting agency or the labor commissioner, as may be directed such reports shall be filed within such times and shall contain such information as to employment policies and statistics of the contractor and each subcontractor, and shall be in such form as the labor commissioner may prescribe. Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order or any preceding similar Order, and in that event to submit on behalf of themselves and their proposed subcontractors compliance reports prior to or as an initial part of their bid or negotiation of a contract.

III

Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor organization or employment agency as defined in section 31-122 of the general statutes, the compliance report shall identify the said organization or agency and the contracting agency or the labor commissioner may require a compliance report to be filed with the contracting agency or the labor commissioner, as may be directed, by such organization or agency, signed by an authorized officer or agent of such organization or agency, with

supporting information, to the effect that the signer's practices and policies, including but not limited to matters concerning personnel, training, apprenticeship, membership, grievance and representation, and upgrading, do not discriminate on grounds of race, color, religious creed, age, sex or national origin, or ancestry of any individual, and that the signer will either affirmatively cooperate in the implementation of the policy and provisions of this Order, or that it consents and agrees that recruitment, employment and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the Order.

IV

The labor commissioner may by regulation exempt certain classes of contracts, subcontracts or purchase orders from the implementation of this Order, for standard commercial supplies or raw materials, for less than specified amounts of money or numbers of workers or for subcontractors below a specified tier. The labor commissioner may also provide by regulation for the exemption of facilities of a contractor which are in all respects separate and distinct from activities of the contractor related to the performance of the state contract, provided only that such exemption will not interfere with or impede the implementation of this Order, and provided further, that in the absence of such an exemption, all facilities shall be covered by the provisions of this Order.

V

Each contracting agency shall be primarily responsible for obtaining compliance with the regulations of the labor commissioner with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the regulations of the labor commissioner in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this Order and of the regulations of the labor commissioner issued pursuant to this Order. They are directed to cooperate with the labor commissioner and to furnish the labor commissioner such information and assistance as he may require in the performance of his functions under this Order. They are further directed to appoint or designate from among the personnel of each agency, compliance officers, whose duty shall be to seek compliance with the objectives of this Order by conference, conciliation, mediation, or persuasion.

VI

The labor commissioner may investigate the employment practices and procedures of any state contractor or subcontractor and the practices and policies of any labor organization or employment agency hereinabove described, relating to employment under the state contract, as concerns nondiscrimination by such organization or agency as hereinabove described, or the labor commissioner may initiate such investigation by the appropriate contract agency, to determine whether or not the contractual provisions hereinabove specified or statutes of the state respecting them have been violated. Such investigation shall be conducted in accordance with the procedures established by the labor commissioner and the investigating agency shall report to the labor commissioner any action taken or recommended.

VII

The labor commissioner shall receive and investigate or cause to be investigated complaints by employees or prospective employees of a state contractor or subcontractor or members or applicants for membership or apprenticeship or training in a labor organization or employment agency hereinabove described, which allege discrimination contrary to the contractual provisions specified hereinabove or state statutes requiring nondiscrimination in employment opportunity. If this investigation is conducted for the labor commissioner by a contracting agency, that agency shall report to the labor commissioner what action has been taken or is recommended with regard to such complaints

VIII

The labor commissioner shall use his best efforts, directly and through contracting agencies, other interested federal, state and local agencies, contractors and all other available instrumentalities, including the commission on human rights and opportunities, the executive committee on human rights and opportunities, and the apprenticeship

council under its mandate to provide advice and counsel to the labor commissioner in providing equal employment opportunities to all apprentices and to provide training, employment and upgrading opportunities for disadvantaged workers, in accordance with section 31-51(d) of the 1969 supplement to the general statutes, to cause any labor organization or any employment agency whose members are engaged in work under government contracts or referring workers or providing or supervising apprenticeship or training for or in the course of work under a state contract or subcontract to cooperate in the implementation of the purposes of this Order. The labor commissioner shall in appropriate cases notify the commission on human rights and opportunities or other appropriate state or federal agencies whenever it has reason to believe that the practices of any such organization or agency violate equal employment opportunity requirements of state or federal law.

IX

The labor commissioner or any agency officer or employee in the executive branch designated by regulation of the labor commissioner may hold such hearings, public or private, as the labor commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.

X

(a) The labor commissioner may hold or cause to be held hearings, prior to imposing ordering or recommending the imposition of penalties and sanctions under this Order. No order for disbarment of any contractor from further state contracts shall be made without affording the contractor an opportunity for a hearing. In accordance with such regulations as the labor commissioner may adopt, the commissioner or the appropriate contracting agency may

(1) Publish or cause to be published the names of contractors or labor organizations or employment agencies as hereinabove described which it has concluded have complied or failed to comply with the provisions of this Order or the regulations of the labor commissioner in implementing this Order.

(2) Recommend to the commission on human rights and opportunities that in cases in which there is substantial or material violation or threat thereof of the contractual provision or related state statutes concerned herein, appropriate proceedings be brought to enforce them, including proceedings by the commission on its own motion under chapter 563 of the general statutes and the enjoining, within the limitations of applicable law, of organizations, individuals or groups who prevent directly or indirectly or seek to prevent directly or indirectly compliance with the provisions of this Order.

(3) Recommend that criminal proceedings be brought under chapter 939 of the general statutes.

(4) Cancel, terminate, suspend or cause to be cancelled, terminated, or suspended in accordance with law any contract or any portion or portions thereof for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for fixture compliance approved by the contracting agency.

(5) Provide that any contracting agency shall refrain from entering into any further contracts or extensions or modifications of existing contracts with any contractor until he has satisfied the labor commissioner that he has established and will carry out personnel and employment policies compliant with this Order.

(6) Under regulations prescribed by the labor commissioner each contracting agency shall make reasonable efforts within a reasonable period of time to secure

compliance with the contract provisions of this Order by methods of conference conciliation, mediation or persuasion, before other proceedings shall be instituted under this Order or before a state contract shall be cancelled or terminated in whole or in part for failure of the contractor or subcontractor to comply with the contract provisions of state statute and this Order.

(b) Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the labor commissioner or pursuant to his regulations shall promptly notify *him* of such action. Whenever the labor commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency and other interested federal, state and local agencies of the action recommended. The state and local agency or agencies shall take such action and shall report the results thereof to the labor commissioner within such time as he shall specify.

XI

If the labor commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order, or submits a program, for compliance acceptable to the labor commissioner, or if the labor commissioner so authorizes, to the contracting agency.

XII

Whenever a contracting agency cancels or terminates a contract, or a contractor has been disbarred from, further government contracts because of noncompliance with the contract provisions with regard to nondiscrimination, the labor commissioner or the contracting agency shall rescind such disbarment, upon the satisfaction of the labor commissioner that the contractor has purged himself of such noncompliance and will thenceforth carry out personnel and employment policies of nondiscrimination in compliance with the provision of this order.

XIII

The labor commissioner may delegate to any officer, agency or employee in the executive branch any function or duty of the labor commissioner under this Order except authority to promulgate regulations of a general nature.

XIV

This Executive Order supplements the Executive Order issued on September 28, 1967. All regulations, orders, instructions, designations and other directives issued heretofore in these premises, including those issued by the heads of various departments or agencies under or pursuant to prior order or statute, shall remain in full force and effect, unless and until revoked or superceded by appropriate authority, to the extent that they are not inconsistent with this Order.

This Order shall become effective thirty days after the date of this Order.

Dated at Hartford, Connecticut, this 16th day of June, 1971.

Thomas J. Meskill, GOVERNOR

Filed this ____ day of June, 1971.

SECRETARY OF THE STATE (DEPUTY)

STATE OF CONNECTICUT

BY HIS EXCELLENCY

THOMAS J. MESKILL

GOVERNOR

EXECUTIVE ORDER NO. SEVENTEEN

WHEREAS, Section 31-237 of the General Statutes of Connecticut as amended requires the maintaining of the established free services of the Connecticut State Employment Service to both employers and prospective employees and

WHEREAS, Section 31-5 of the General Statutes of Connecticut requires that no compensation or fee shall be charged or received directly or indirectly for the services of the Connecticut State Employment Service and

WHEREAS, large numbers of our citizens who have served in the Armed Forces of our nation are returning to civilian life in our state and seeking employment in civilian occupations and

WHEREAS, we owe a duty as well as gratitude to these returning veterans including the duty to find suitable employment for them and

WHEREAS, many of our handicapped citizens are fully capable of employment and are entitled to be placed in suitable employment and

WHEREAS, many of the citizens of our state who are unemployed are unaware of the job openings and employment opportunities which do in fact exist in our state and

WHEREAS, notwithstanding the free services of the Connecticut State Employment Service, many of our Connecticut employers do not use its free services or do not avail themselves fully of all of the services offered,

NOW, THEREFORE, I THOMAS J. MESKILL, Governor of the State of Connecticut, acting by virtue of the authority vested in me under the fourth article of the Constitution of the State and in accordance with Section 3-1 of the General Statutes, do hereby ORDER and DIRECT, as follows, by this Executive Order:

I

The Labor Commissioner shall be responsible for the administration of this Order and shall do all acts necessary and appropriate to achieve its purpose. Upon promulgation of this Order, the Commissioner of Finance and Control shall issue a directive forthwith to all state agencies, that henceforth all state contracts and subcontracts for construction on public buildings, other public works and goods and services shall contain a provision rendering such contract or subcontract subject to this Order, and that such contract or subcontract may be cancelled, terminated or suspended by the Labor Commissioner for violation of or noncompliance with this Order, notwithstanding that the Labor Commissioner is not a party to such contract or subcontract.

II

Every contractor and subcontractor having a contract with the State or any of its agencies, boards, commissions, or departments, every individual partnership, corporation, or business entity having business with the state or who or which seeks to do business with the state, and every bidder or prospective bidder who submits a bid or replies to an invitation to bid on any state contract shall list all employment openings with the office of the Connecticut State Employment Service in the area where the work is to be performed or where the services are to be rendered.

III

All state contracts shall contain a clause which shall be a condition of the contract that the contractor and any subcontractor holding a contract directly under the contractor shall list all employment openings with the Connecticut State Employment Service. The Labor Commissioner may allow exceptions to listings of employment openings which the contractor proposes to

fill from within its organizations from employees on the rolls of the contractor on the date of publication of the invitation to bid or the date on which the public announcement was published or promulgated advising of the program concerned.

IV

Each contracting agency of the state shall be primarily responsible for obtaining compliance with this Executive Order. Each contracting agency shall appoint or designate from among its personnel one or more persons who shall be responsible for compliance with the objectives of the Order.

V

The Labor Commissioner shall be and is hereby empowered to inspect the books, records, payroll and personnel data of each individual or business entity subject to this Executive Order and may hold hearings or conferences, formal or informal, in pursuance of the duties and responsibilities hereunto delegated to the Labor Commissioner.

VI

The Labor Commissioner or any agency officer or employee in the executive branch designated by regulation of the Labor Commissioner may hold such hearings, public or private, as the Labor Commissioner may deem advisable for compliance, enforcement or educational purposes under this Order.

VII

- a. The Labor Commissioner may hold or cause to be held hearings, prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this Order. In accordance herewith, the Commissioner or the appropriate contracting agency may suspend, cancel, terminate, or cause to be suspended, cancelled, or terminated in accordance with law any contract or any portion or portions thereof for failure of the contractor or subcontractor to comply with the listing provisions of the contract. Contracts may be cancelled, terminated, suspended absolutely or their continuance conditioned upon a program for future compliance approved by the contracting agency.
- b. Any contracting agency taking any action authorized by this Order, whether on its own motion or as directed by the Labor Commissioner, shall promptly notify him of such action. Whenever the Labor Commissioner makes a determination under this Order, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall report the results to the Labor Commissioner promptly.

VIII

If the Labor Commissioner shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless he has satisfactorily complied with the provisions of this Order.

This Order shall become effective sixty days after the date of this Order.

Dated at Hartford, Connecticut, this 15th day of February, 1973.

Thomas J. Meskill, GOVERNOR

Filed this 15th day of February, 1973.

SECRETARY OF THE STATE (DEPUTY)

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 LOCATION OF WORK:

- A. The work of this Contract is located in the Town of Branford, Connecticut at the following locations:

- 1. TO BE PROVIDED FOR EACH INDIVIDUAL PROJECT

1.02 SCOPE OF WORK:

- A. Furnish all labor, materials, equipment and incidentals necessary to rehabilitate sewers and manholes as shown and as specified herein.

- B. The Work may include, but is not necessarily limited to, the following major items:

- 1. Sewer Rehabilitation:

- a. Cleaning and Closed Circuit Televisual (CCTV) Inspection;
- b. Root control;
- c. Relining existing pipe with a cured in place liner;

1.03 WORK SEQUENCE:

- A. Operation of the existing sewer system must be maintained throughout the duration of the project and use of portions of new work may be required prior to the completion of the project to maintain operation. The Contractor shall schedule his work to meet the time for completion.
- B. The Contractor shall submit to the Engineer for review a sequence of operations, giving detailed plans and schedules of proposed operations. Said sequence of operations shall have been accepted by the Engineer prior to the start of work. The sequence shall be periodically updated as requested by the Engineer.

1.04 CONTRACTOR'S USE OF PREMISES:

- A. Contractor shall limit the use of the premises for the performance of the Work and storage of materials and equipment to allow for the Owner's use in operating and maintaining the sewer system.
- B. Contractor shall coordinate with Owner necessary access for normal maintenance requirements.
- C. Contractor shall assume full responsibility for security of all his and his subcontractors materials and equipment stored on the site.
- D. If directed by the Owner, Contractor shall move any stored items which interfere with operations of Owner.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

END OF SECTION

SECTION 01046

CONTROL OF WORK

PART 1 - GENERAL

1.01 PLAN AND HOURS OF CONSTRUCTION:

- A. Furnish labor and equipment which will be efficient, appropriate, and large enough to secure a satisfactory quality of work and a rate of progress which will insure the completion of the work within the Contract Time. If at any time such plan appears to the Engineer to be inefficient, inappropriate, or insufficient for securing the quality of work required or for producing the rate of progress aforesaid, he may order the Contractor to increase the efficiency, change the character, or increase the plan equipment, and the Contractor shall conform to such order. Failure of the Engineer to give such order shall in no way relieve the Contractor of his obligations to secure the quality of the work and rate of progress required.
- B. Normal construction activity shall take place only between the hours of 7:00 a.m. to 4:00 p.m., excluding Saturdays, Sundays, and legal holidays. Work outside the above time periods will be permitted only on an emergency basis and only with the approval of the Owner.

1.02 OCCUPYING PRIVATE LAND:

- A. The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment any land outside the rights of way or property of the Owner. A copy of the written consent shall be given to the Engineer.

1.03 PIPE LOCATIONS:

- A. Not Used

1.04 DIMENSION OF EXISTING STRUCTURES

- A. Where the dimensions and locations of existing structures are of importance in the installation or connection of any part of the Work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

1.05 OPEN EXCAVATIONS AS APPLICABLE:

- A. All open excavations or access locations shall be adequately safeguarded by providing temporary barricades, fencing, caution signs, lights, and other means to prevent accidents to persons and damage to property. The Contractor shall, at his own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians

and workmen. Bridges provided for access during construction shall be removed when no longer required. The length or size of excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer. If the excavation or access location becomes a hazard, or if it excessively restricts traffic at any point, the Engineer may require special construction procedures such as limiting the length of the open trench, prohibiting stacking excavated material in the street, and requiring that the trench shall not remain open overnight.

- B. The Contractor shall take precautions to prevent injury to the public due to open trenches. All trenches, excavated material, equipment, or other obstacles which could be dangerous to the public shall be well lighted at night.

1.07 INTERFERENCE WITH AND PROTECTION OF STREETS:

- A. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefor from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.
- B. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefor.
- C. The Contractor shall, sufficiently in advance of any operations, notify the Branford Police and Fire Departments in writing, with a copy to the Engineer, if the closure of a street or road is necessary. He shall cooperate with the Police Department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion. Street closures are to be kept to a minimum and only after approval is received.
- D. Contractor shall also post proposed street closings in the local newspaper at least 24 hours in advance.

1.08 CARE AND PROTECTION OF PROPERTY:

- A. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

1.09 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities in the street, gas pipes, water pipes, hydrants, sewers, drains, and electric and telephone cables, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by him at his expense.
- B. Assistance will be given the Contractor in determining the location of existing services. The Contractor, however, shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.
- C. Protection and temporary removal and replacement of existing utilities and structures as described in this Section may be a part of the work under the Contract and all costs in connection therewith shall be included in the Total Price Bid in the Bid Form.
- D. If, in the opinion of the Engineer, permanent relocation of a utility owned by the Town is required, he may direct the Contractor, in writing, to perform the work. Work so ordered will be paid at the Contract unit prices, if applicable, or as extra work under Article 11 of the Supplementary Conditions. If relocation of a privately owned utility is required, the Town will notify the Utility to perform the work as expeditiously as possible. The Contractor shall fully cooperate with the Town and Utility, and shall have no claim for delay due to such relocation. The Contractor shall notify all utility companies in writing at least 72 hours (excluding Saturdays, Sundays, and Legal holidays) before excavating in any public way. Contractor shall also notify Call Before You Dig, telephone number (1-800-922-4455) at least 72 hours prior to start of work.
- E. The Contractor shall coordinate the removal and replacement of traffic loops and signals, if required for the performance of the work, at no additional cost to the Owner.

1.10 INSPECTION OF WORK AWAY FROM THE SITE:

- A. If work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Engineer of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Engineer in ample time so that the necessary arrangements for the inspection can be made.

1.11 COOPERATION WITHIN THIS CONTRACT:

- A. All firms or persons authorized to perform any work under this Contract shall cooperate with General Contractor and his Subcontractors or trades, and shall assist in incorporating the work of other trades where necessary or required.
- B. Cutting and patching, drilling and fitting shall be carried out where required by the trade or subcontractor having jurisdiction, unless otherwise indicated herein or directed by the Engineer.

1.12 CLEANUP AND DISPOSAL OF EXCESS MATERIAL:

- A. During the course of the work, the Contractor shall keep the site of his operations in as clean and as neat a condition as is possible. He shall dispose of all residue resulting from the construction work and, at the conclusion of the work, he shall remove and haul away any surplus excavation, broken pavement, lumber, equipment, temporary structures, and any other refuse remaining from the construction operations, and shall leave the entire site of the work in a neat and orderly condition.
- B. In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the Contractor and his subcontractors shall comply with all applicable Federal, State, and local laws, and regulations concerning waste material disposal, as well as the specific requirements stated in this Section and elsewhere in the Specifications.
- C. The Contractor is advised that the disposal of excess excavated material in wetlands, stream corridors, and plains is strictly prohibited even if the permission of the property owner is obtained. Any violation of this restriction by the Contractor or any person employed by him, will be brought to the immediate attention of the responsible regulatory agencies, with a request that appropriate action be taken against the offending parties. Therefore, the Contractor will be required to remove the fill at his own expense and restore the area impacted.
- D. The Contractor's may dispose of grit and cleanings from Branford's sanitary sewers at the Branford Water Pollution Control Facility located at 75 Block Island Road. The Contractor shall be responsible for all services necessary for the collection, transportation and offloading. Disposal shall be granted in accordance with requirements of the Town.

END OF SECTION

SECTION 01080

ABBREVIATIONS AND DEFINITIONS

PART 1 - GENERAL

1.01 RELATED SECTIONS:

- A. Section 01090: Reference Standards

1.02 ABBREVIATIONS:

- A. Where any of the following abbreviations are used in the Contract Documents, they shall have the meaning set forth opposite each. Abbreviations for trade associations and standards organizations are listed in Section 01090.

AASHTO American Association of State Highway and Transportation Officials

ACI American Concrete Institute

AFBMA Anti-Friction Bearing Manufacturers Association

AGA American Gas Association

AGMA American Gear Manufacturers Association

AISC American Institute of Steel Construction

AMCA Air Moving and Conditioning Association

ANS American National Standard

ANSI American National Standards Institute

API American Petroleum Institute

ASCE American Society of Civil Engineers

ASHRAE American Society of Heating, Refrigerating and Air Conditioning Engineers

ASME American Society of Mechanical Engineers

ASTM American Society for Testing and Materials

AWG	American or Brown and Sharpe Wire Gage
AWPA	American Wood-Preservers' Association
AWWA	American Water Works Association
CS	Commercial Standard
IBR	Institute of Boiler and Radiator Manufacturers
IEEE	Institute of Electrical and Electronics Engineers, Inc.
Fed. Spec.	Federal Specifications issued by the Federal Supply Service of the General Services Administration, Washington, D.C.
IPS	Iron Pipe Size
JIC	Joint Industry Conference Standards
NBS	National Bureau of Standards
NEC	National Electrical Code; latest edition
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NPT	National Pipe Thread
OS&Y	Outside screw and yoke
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
Stl. WG	U. S. Steel Wire, Washburn and Moen, American Steel and Wire or Roebing Gage
UL	Underwriters' Laboratories
USS Gage	United States Standard Gage
WOG	Water, Oil, Gas
WSP	Working steam pressure
125-lb. ANS	American National Standard for Cast-Iron

or Pipe Flanges and Flanged Fittings,
250-lb. ANS Designation B16.1-1975, for the appropriate class

1.03 DEFINITIONS:

- A. Wherever the words defined in this section or pronouns used in their stead occur in the Contract Documents, they shall have the meanings herein given.

As Directed, as Required, Etc.

Wherever in the Contract Documents, or on the Drawings, the words "as directed," "as ordered," "as requested," "as required," "as permitted," or words of like import are used, it shall be understood that the direction, order, request, requirement, or permission of the Engineer is intended. Similarly, the words "approved," "acceptable," "suitable," "satisfactory," and words of like import shall mean approved by, acceptable to, suitable to, or satisfactory to the Engineer.

Provide

Wherever in the Contract Documents the word "provide" is used, it shall mean to furnish (or supply) and install.

Elevation

The figures given on the Drawings or in the other Contract Documents after the word "elevation" or abbreviation of it shall mean the distance in feet above the datum adopted by the Engineer.

Rock

The word "rock," wherever used as the name of an excavated material or material to be excavated, shall mean only boulders and pieces of concrete or masonry exceeding 1 cu. yd. in volume, or solid ledge rock which, in the opinion of the Engineer, requires, for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. No soft or disintegrated rock which can be removed with a hand pick or power-operated excavator or shovel, no loose, shaken, or previously blasted rock or broken stone in rock fillings or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation, will be measured or allowed as "rock."

Earth

The word "earth", wherever used as the name of an excavated material or material to be excavated, shall mean all kinds of material other than rock as above defined.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SECTION 01090

REFERENCE STANDARDS

PART 1 - GENERAL

1.01 QUALITY ASSURANCE:

- A. Should specified reference standards conflict with the Contract Documents, refer to paragraph 3.02 of the General Conditions.

1.02 SCHEDULE OF REFERENCES:

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AABC	Associated Air Balance Council 1000 Vermont Avenue, N.W. Washington, DC 20005
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, DC 20001
ABMA	American Bearing Manufacturers Association 1101 Connecticut Avenue, N.W., Suite 700 Washington, DC 20036
ACI	American Concrete Institute Box 19150 Reford Station Detroit, MI 48219
ADC	Air Diffusion Council 230 North Michigan Avenue Chicago, IL 60601
AGA	American Gas Association
AGC	Associated General Contractors of America 1957 E Street, N.W. Washington, DC 20006

AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AIA	American Institute of Architects 1735 New York Avenue, N.W. Washington, DC 20006
AISC	American Institute of Steel Construction Eighth Floor 400 North Michigan Avenue Chicago, IL 60611
AISI	American Iron and Steel Institute 1000 16th Street, N.W. Washington, DC 20036
AITC	American Institute of Timber Construction 333 W. Hampden Avenue Englewood, CO 80110
AMCA	Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
APA	American Plywood Association Box 11700 Tacoma, WA 98411
API	American Petroleum Institute 1220 L. Street, N.W. Washington, DC 2005
ARI	Air-Conditioning and Refrigeration Institute 1501 Wilson Boulevard Arlington, VA 22209
ASCE	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191

ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASPA	American Sod Producers Association 4415 West Harrison Street Hillside, IL 60162
ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWI	Architectural Woodwork Institute 2310 South Walter Reed Drive Arlington, VA 22206
AWPA	American Wood-Preservers' Association 7735 Old Georgetown Road Bethesda, MD 20014
AWS	American Welding Society 550 LeJeune Road, N.W. Miami, FL 33135
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
BIA	Brick Institute of America 11490 Commerce Park Drive Reston, VA 22091
BOCA	BOCA International Headquarters Office 4051 West Flossmoor Road Country, Club Hills, IL 60478-5795
CDA	Copper Development Association 57th Floor, Chrysler Building 405 Lexington Avenue New York, NY 10174

CLFMI	Chain Link Fence Manufacturers Institute 1101 Connecticut Avenue, N.W. Washington, DC 20036
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60195
DHI	Door and Hardware Institute 7711 Old Springhouse Road McLean, VA 22101
EJCDC	Engineers' Joint Contract Documents Committee American Consulting Engineers Council 1015 15th Street, N.W. Washington, DC 20005
EJMA	Expansion Joint Manufacturers Association 25 North Broadway Tarrytown, NY 10591
FGMA	Flat Glass Marketing Association 3310 Harrison White Lakes Professional Building Topeka, KS 66611
FM	Factory Mutual System 1151 Boston-Providence Turnpike P.O. Box 688 Norwood, MA 02062
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WRSIS) Washington Navy Yard, Building 197 Washington, DC 20407
GA	Gypsum Association 1603 Orrington Avenue Evanston, IL 60201
JIC	Joint Industrial Council c/o National Machine Tool Builders Association 79-1 Westpark Drive McLean, VA 22102

IBR	Institute of Boiler and Radiator Manufacturers a/k/a Hydronics Institute P.O. Box 218 35 Russo Place Berkeley Heights, NJ 07922
ICBO	International Conference of Building Officials 5360 S. Workman Mill Road Whittier, CA 90601
ICEA	Insulated Cable Engineers Association Box 1568 Carrollton, GA 30112
IEEE	Institute for Electrical and Electronics Engineers 3 Park Ave 17 th Floor New York, NY 10016-5997
IMIAC	International Masonry Industry All-Weather Council International Masonry Institute 815 15th Street, N.W. Washington, DC 20005
MBMA	Metal Buildings Manufacturer's Association 1230 Keith Building Cleveland, OH 44115
MEC	Massachusetts Electric Code
MIL	Military Specifications Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
ML/SFA	Metal Lath/Steel Framing Association 221 North LaSalle Street Chicago, IL 60601
NAAMM	National Association of Architectural Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601
NCMA	National Concrete Masonry Association P.O. Box 781 Hendron, VA 22070

NEBB	National Environmental Balancing Bureau 8224 Old Courthouse Road Vienna, VA 22180
NEC	National Electric Code
NECA	National Electrical Contractors Association 3 Belhesda Metro Center Suite 1100 Bethesda, MD 20814
NEMA	National Electrical Manufacturers' Association 1300 N 17 th Street Suite 1847 Rosslyn VA 22209
NETA	InterNational Electrical Testing Association 106 Stone St. P.O. Box 687 Morrison, CO 80465
NFPA	National Fire Protection Association Battery March Park Quincy, MA 02269
NFPA	National Forest Products Association 1619 Massachusetts Avenue, N.W. Washington, DC 20036
NSWMA	National Solid Wastes Management Association 1730 Rhode Island Avenue, N.W. Washington, DC 20036
NTMA	National Woodwork Manufacturers Association 205 W. Touhy Avenue Park Ridge, IL 60068
PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077
PCI	Prestressed Concrete Institute 201 North Wells Street Chicago, IL 60606

PS	Product Standard U.S. Department of Commerce Washington, DC 20203
RIS	Redwood Inspection Service One Lombard Street San Francisco, CA 94111
RCSHSB	Red Cedar Shingle and Handsplit Shake Bureau 515 116th Avenue Bellevue, WA 98004
SDI	Steel Deck Institute P.O. Box 9506 Canton, OH 44711
SDI	Steel Door Institute 712 Lakewood Center North 14600 Detroit Avenue Cleveland, OH 44107
SIGMA	Sealed Insulating Glass Manufacturers Association 111 East Wacker Drive Chicago, Il 60601

END OF SECTION

SECTION 01110

ENVIRONMENTAL PROTECTION PROCEDURES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The work covered by this Section consists of furnishing all labor materials and equipment and performing all work required for the prevention of environmental pollution in conformance with applicable laws and regulations, during and as the result of construction operations under this Contract. For the purpose of this Specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic and/or recreational purposes.
- B. The control of environmental pollution requires consideration of air, water, and land, and involves management of noise and solid waste, as well as other pollutants.
- C. Schedule and conduct all work in a manner that will minimize the erosion of soils in the area of the work. Provide erosion control measures such as diversion channels, sedimentation or filtration systems, berms, staked hay bales, seeding, mulching, or other special surface treatments as are required to prevent silting and muddying of streams, rivers, impoundments, lakes, etc. All erosion control measures shall be in place in an area prior to any construction activity in that area. Specific requirements for erosion and sedimentation controls are specified in Section 01568.
- D. These Specifications are intended to ensure that construction is achieved with a minimum of disturbance to the existing ecological balance between a water resource and its surroundings. These are general guidelines. It is the Contractor's responsibility to determine the specific construction techniques to meet these guidelines.
- E. All phases of sedimentation and erosion control shall comply with and be subject to the approval of the Department of Energy Environmental Protection and local Conservation Commission.
- F. Schedule and conduct all work in a manner that will minimize the level of noise escaping the site, especially at night and on weekends.

1.02 APPLICABLE REGULATIONS:

- A. Comply with all applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement.

1.03 NOTIFICATIONS:

- A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions or of any environmentally objectional acts and corrective action to be taken. State or local agencies responsible for verification of certain aspects of the environmental protection requirements shall notify the Contractor in writing, through the Engineer, of any non-compliance with State or local requirements. The Contractor shall, after receipt of such notice from the Engineer or from the regulatory agency through the Engineer, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later determined that the Contractor was in compliance.

1.04 IMPLEMENTATION:

- A. Prior to commencement of the work, meet with the Engineer to develop mutual understandings relative to compliance with this provision and administration of the environmental pollution control program.
- B. Remove temporary environmental control features, when approved by the Engineer, and incorporate permanent control features into the project at the earliest practicable time.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EROSION CONTROL:

- A. Provide positive means of erosion control such as shallow ditches around construction to carry off surface water. Erosion control measures such as siltation basins, hay check dams, mulching, jute netting, and other equivalent techniques shall be used as appropriate. Offsite surface water shall be diverted around the site to a downstream channel ahead of siltation barriers. Flow of surface water into excavated areas shall be prevented. Ditches around construction area shall also be used to carry away water resulting from dewatering of excavated areas. At the completion of the work, ditches shall be backfilled and the ground surface restored to original condition.

3.02 PROTECTION OF STREAMS, WETLANDS, AND SURFACE WATER:

- A. Care shall be taken to prevent or reduce to a minimum any damage to any stream, drainage ditch, storm drain or sewer from pollution by debris, sediment, or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that has been used for washing or processing, or that contains oils or sediments that will

reduce the quality of the water in the stream, shall not be directly returned to the stream. Such water will be diverted through a settling basin or filter before being directed into the streams.

- B. The Contractor shall not discharge water from dewatering operations directly into any live or intermittent stream, channel, wetlands, surface water, or any storm sewer. Water from dewatering operations shall be treated by filtration, settling basins, or other approved method to reduce the amount of sediment contained in the water to allowable levels.
- C. All preventative measures shall be taken to avoid spillage of petroleum products and other pollutants. In the event of any spillage, prompt remedial action shall be taken in accordance with a contingency action drawing or plan approved by the Department of Energy and Environmental Protection. Contractor shall submit to copies of approved contingency drawings or plans to the Engineer.
- D. Water being flushed from structures or pipelines after disinfection, with a Cl₂ residue of 2 mg/l or greater, shall be treated with a dechlorination solution, in a method approved by the Engineer, prior to discharge.

3.03 PROTECTION OF LAND RESOURCES:

- A. Land resources within the project boundaries and outside the limits of permanent work shall be restored to a condition, after completion of construction, that will appear to be natural and not detract from the appearance of the project. Confine all construction activities to areas shown on the Drawings.
- B. Outside of areas requiring earthwork for the construction of the new facilities, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without prior approval. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorage unless specifically authorized by the Engineer. Where such special emergency use is permitted, first wrap the trunk with a sufficient thickness of burlap or rags over which softwood cleats shall be tied before any rope, cable, or wire is placed. The Contractor shall in any event be responsible for any damage resulting from such use.
- C. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment, dumping or other operations, protect such trees by placing boards, planks, or poles around them. Monuments and markers shall be protected similarly before beginning operations near them.
- D. Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition. The Engineer will decide what method of restoration shall be used and whether damaged trees shall be treated and healed or removed and disposed of.

All scars made on trees by equipment, construction operations, or by the removal of limbs larger than 1-in. in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted.

Climbing ropes shall be used where necessary for safety. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Engineer, shall be immediately removed and replaced.

- E. The locations of the Contractor's storage, and other construction building, required temporarily in the performance of the work, shall be cleared portions of the job site or areas to be cleared as shown on the Drawings and shall require written approval of the Engineer and shall not be within wetlands or floodplains. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. Drawings showing storage facilities shall be submitted for approval of the Engineer.
- F. Remove all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess of waste materials, or any other vestiges of construction as directed by the Engineer. It is anticipated that excavation, filling, and plowing of roadways will be required to restore the area to near natural conditions which will permit the growth of vegetation thereon. The disturbed areas shall be prepared and seeded as described in Section 01568, or as approved by the Engineer.
- G. All debris and excess material will be disposed of outside wetland or floodplain areas in an environmentally sound manner.

3.04 PROTECTION OF AIR QUALITY:

- A. Burning. The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- B. Dust Control. The Contractor will be required to maintain all excavations, embankments, stockpiles, access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which could cause the standards for air pollution to be exceeded, and which would cause a hazard or nuisance to others.
- C. An approved method of stabilization consisting of sprinkling or other similar methods will be permitted to control dust. The use of chlorides may be permitted with approval from the Engineer.
- D. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times, and the Contractor must have sufficient

competent equipment on the job to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs, as determined by the Engineer.

3.05 MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION:

- A. During the life of this Contract, maintain all facilities constructed for pollution control as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created.

3.06 NOISE CONTROL:

- A. The Contractor shall make every effort to minimize noises caused by his operations. Equipment shall be equipped with silencers or mufflers designed to operate with the least possible noise in compliance with State and Federal (OSHA) regulations.

END OF SECTION

SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 MEASUREMENT AND PAYMENT:

- A. The following subsections describe the measurement of and payment for the work to be completed under the items listed in the BID.
- B. Each unit or lump sum price stated in the BID shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications.

1.02 Bid Item #1: Cleaning

The term "light cleaning", as used in these specifications, shall be equivalent to one to two passes of a hydraulic jet cleaner through the sewer line to render the line clean. This work will be measured horizontally by the Engineer, along the invert of the cleaned pipe, on a linear foot basis, from beginning of the section of cleaned pipe to the end of the section of cleaned pipe to the nearest even foot. Pipe inside manholes is excluded from measurement and payment.

The term "medium cleaning", as used in these specifications, shall be equivalent to three to four passes of a hydraulic jet cleaner through the sewer line to render the line clean. This work will be measured horizontally by the Engineer, along the invert of the cleaned pipe, on a linear foot basis, from beginning of the section of cleaned pipe to the end of the section of cleaned pipe to the nearest even foot. Pipe inside manholes is excluded from measurement and payment.

The term "heavy cleaning", as used in these specifications, shall be equivalent to five or more passes of a hydraulic jet cleaner through the sewer line or the use of mechanical equipment to remove debris including substantial root masses not included in other bid items, to render the line clean. This work will be measured horizontally by the Engineer, along the invert of the cleaned pipe, on a linear foot basis, from beginning of the section of cleaned pipe to the end of the section of cleaned pipe to the nearest even foot. Pipe inside manholes is excluded from measurement and payment.

The unit price under this item shall constitute full compensation for complete cleaning of sewers of the diameter stated in the appropriate bid item, with suitable cleaning machinery as approved by the Engineer, and for reverse set-ups of cleaning equipment if necessary. The unit cost shall also include the costs for reverse set-ups when an obstruction prevents the camera from passing in the original direction in sewers. The unit price shall include transportation and disposal of the debris at the Branford Water Pollution Control Facility and all other work incidental thereto and not specifically

included for payment under other items.

1.03 Bid Item #2: Pre installation CCTV

The unit price shall include all pre installation television inspection (including the costs for reverse set-ups when an obstruction prevents the camera from passing in the original direction).

This work will be measured horizontally, along the invert of the inspected pipe, on a linear foot basis, from beginning of the pipe to the end of the CCTV record to the nearest even foot.

The price paid per linear foot as listed in the Bid shall include full compensation for furnishing labor, tools, and equipment necessary to perform the work, exclusive of pipe cleaning which is included in other items of work.

1.04 Bid Item #3: Chemical Treatment and Root Removal

The length of sewers to receive chemical treatment and root removal to be paid for under this item shall be measured by the linear foot along the horizontal projection of the centerline of the sewer for the diameter stated in the appropriate bid item. .

The unit price under the appropriate subdivision of this pay item shall constitute full compensation for cleaning (if necessary) and treating the lines, joints, and manholes with root inhibiting chemicals including the cost of the chemicals and their preparation and application.

The unit price under the appropriate subdivision of this pay item shall constitute full compensation for returning a minimum of 60 days after chemical treatment to cut off, remove, and dispose of all roots remaining that protrude into the pipe or manhole including the cost of television inspection and all methods of flow control required for the proper treatment and removal of roots.

1.05 Bid Item #4: Cured-In-Place Sewer Pipe Rehabilitation (Inversion Method)

The length of cured-in place sewer pipe liner to be paid for under this item shall be the actual lengths measured by the linear foot along the centerline of the sewer, the lengths of manhole inverts (as measured between the inside walls of the manholes) being deducted.

The unit price under this item shall constitute full compensation for lining the sewer as indicated and specified, including the cost of reinstating lateral service connections, removal and disposal of debris materials, and all other work incidental to the completion of the lining and not specifically paid for under other items.

1.06 Bid Item #5: Cutting Protruding Service Connections

The quantity of protruding service connection laterals cut-back at the connection to the sewer main to be paid for under this item shall be equal to the number of service connection laterals cut back to the satisfaction of the Engineer. .

The unit price for this item shall constitute full compensation for removal of protruding service connection laterals by means of internal remote controlled cutting devices at the locations identified by preinstallation CCTV inspection herein including removal and disposal of debris and material generated by the cut-back of the connection, all television inspection and flow control required for the proper operation of the cutting device, and all methods of television inspection and flow control required for the proper operation of the cutting equipment.

1.07 Bid Item #6: Bypass Pumping

The cost for bypass pumping shall be on a per day basis per the average flowrate bypassed as identified in the bid item. This cost shall include all labor, equipment, tools, and materials necessary to complete the work as specified, including but not limited to temporary bypass piping, fittings, pumps, fuel, other consumables, vehicular and pedestrian traffic protection, and any other incidental work relative thereto for all work proposed under this Contract.

1.08 Bid Item #7: Warranty Period Testing

Warranty Period Testing conducted after the completion of contract construction shall be paid for under this item. This work is to be performed on a linear foot basis.

The unit price bid shall include full compensation for labor, equipment, tools, materials, and incidentals for performing preparatory cleaning, debris removal and disposal, control of wastewater flows, CCTV inspection, CCTV report preparation, and repair or replacement of any defective CIPP liner sections identified. The length of pipe testing to be paid for under this item shall be the actual lengths measured by the linear foot along the centerline of the sewer, the lengths of manhole invert (as measured between the inside walls of the manholes) being deducted

If additional inspections and/or tests are found to be required as a result of failed inspections/tests, the additional inspections/tests shall be paid for by the Contractor and will not be eligible for compensation under this item.

1.09 EXTRA WORK:

- A. Extra work, if any, shall be performed in accordance with Article 10 of the General Conditions and will be paid for in accordance with Article 11 of the General Conditions.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This Section specifies the general methods and requirements of submissions applicable to the following work-related submittals.
 - 1. Shop Drawings, Product Data and Samples.
 - 2. Mock Ups.
 - 3. Construction Photographs.
 - 4. Contractor's Responsibilities.
 - 5. Submission Requirements.
 - 6. Review of Shop Drawings, Product Data, Working Drawings and Samples.
 - 7. Distribution.
 - 8. General Procedures for Submittals.
 - 9. Certificate of Design.
 - 10. Certificates of Compliance.
 - 11. Schedules.
- B. Additional general submission requirements are contained in Paragraph 6.17 of the General Conditions.
- C. Detailed submittal requirements will be specified in the technical specifications section.

1.02 SHOP DRAWINGS, PRODUCT DATA, SAMPLES:

- A. Shop Drawings:
 - 1. Shop drawings, as defined in the General Conditions, and as specified in individual work Sections include, but are not necessarily limited to: custom-prepared data such as fabrication and erection/installation (working) drawings of concrete reinforcement, structural details and piping layout, scheduled information, setting diagrams, actual

shopwork manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports including performance curves and certifications as applicable to the work.

2. All shop drawings shall be submitted using the transmittal form furnished by the Engineer.
3. All shop drawings submitted by subcontractors for approval shall be sent directly to the Contractor for checking. The Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
4. The Contractor shall check all subcontractor's shop drawings regarding measurements, size of members, materials, and details to satisfy himself that they conform to the intent of the Drawings and Specifications. Shop drawings found to be inaccurate or otherwise in error shall be returned to the subcontractors for correction before submission thereof.
5. All details on shop drawings submitted for approval shall show clearly the relation of the various parts of the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted for approval.

B. Product Data:

1. Product data as specified in individual Sections, include, but are not necessarily limited to, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and printed installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances including certificates of compliance and applicability, roughing-in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational-range diagrams, production or quality control inspection and test reports and certifications and recommended spare-parts listing, and printed product warranties, as applicable to the Work.

C. Samples:

1. Samples specified in individual Sections, include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols, and units of work to be used by the Engineer or Owner for independent inspection and testing, as applicable to the Work.

1.04 CONSTRUCTION PHOTOGRAPHS:

- A. The Contractor shall provide construction photographs in accordance with requirements specified in Section 01063.

1.05 CONTRACTOR'S RESPONSIBILITIES:

- A. The Contractor shall review shop drawings, product data and samples, including those by subcontractors, prior to submission to determine and verify the following:
 - 1. Field measurements
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data
 - 4. Conformance with the Specifications
- B. Each shop drawing, sample, and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements." Shop drawings and product data sheets 11-in. X 17-in. and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package. Provide to the Engineer a copy of each submittal transmittal form for shop drawings, product data and samples at the time of submittal of said drawings, product data and samples to the Engineer.
- C. If a shop drawing shows any deviation from the requirements of the Contract Documents, the Contractor shall make specific mention of the deviations in the Transmittal Form furnished by the Engineer and provide a description of the deviations in a letter attached to the submittal.
- D. The review and approval of shop drawings, samples or product data by the Engineer shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor and the Engineer will not have responsibility therefor.
- E. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at the Contractor's risk. The Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

- F. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.
 - 1. Manufacturer's printed installation instructions, a part of product data submitted to the Engineer will not be reviewed and are for informational purposes only.

1.06 SUBMISSION REQUIREMENTS:

- A. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other contractor.
- B. All submittals shall be submitted sufficiently in advance of construction requirements to provide no less than fourteen working days, excluding Saturdays, Sundays and legal holidays for review from the time received at the Engineer's reviewing office. For submittals of major equipment, that require more than fourteen days to review, due to its sheer complexity and amount of detail and also requiring review by more than one engineering discipline, a letter will be sent by the Project Manager or his/her designee to the Contractor informing him/her of the circumstances and the date it is expected the submittal will be returned to the Contractor.
- C. Number of submittals required:
 - 1. Shop Drawings: Unless otherwise stated in the respective Specifications Sections, submit six (6) copies.
 - 2. Product Data: Unless otherwise stated in the respective Specifications submit six (6) copies.
 - 3. Samples: Submit the number stated in the respective Specification Sections.
- D. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The Project title and number.
 - 3. Contractor identification.
 - 4. The names of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer

5. Identification of the product, with the specification section number, page and paragraph(s).
 6. Field dimensions, clearly identified as such.
 7. Relation to adjacent or critical features of the Work or materials.
 8. Applicable standards, such as ASTM or Federal Specification numbers.
 9. Identification of deviations from Contract Documents.
 10. Identification of revisions on resubmittals.
 11. An 8-in. X 3-in. blank space for Contractor and Engineer stamps.
- E. Each shipment of drawings shall be accompanied by a transmittal form furnished by the Engineer providing a list of the drawing numbers and the names mentioned above.
- F. Submittals shall be separated by specification section. Do not combine submittals for different specification sections under the same transmittal.
- 1.07 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES:
- A. The Engineer's review is for general conformance with the design concept and contract drawings. Markings or comments shall not be construed as relieving the Contractor from compliance with the contract plans and specifications or from departures therefrom. The Contractor remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner.
- B. The review of shop drawings, data, and samples will be general. They shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the Contractor of responsibility for any errors, including details, dimensions, and materials;
 3. as approving departures from details furnished by the Engineer, except as otherwise provided herein.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which the Engineer finds to be in the interest of the Owner and to be so minor as not to involve a change in Contract Price or time for performance, the Engineer may return the reviewed drawings without noting an exception.

- D. Two (maximum) copies of shop drawings or product data will be returned to the Contractor via First Class United States Postal Service. Samples will not be returned.
- E. Submittals will be returned to the Contractor under one of the action codes indicated and defined on the transmittal form furnished by the Engineer.
- F. Resubmittals will be handled in the same manner as first submittals. On resubmittals the Contractor shall direct specific attention, in writing, on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the Engineer, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the Contractor. The Contractor shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the Engineer.
- G. Partial submittals may not be reviewed. The Engineer will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the Contractor and will be considered "Rejected" until resubmitted. The Engineer may at his option provide a list or mark the submittal directing the Contractor to the areas that are incomplete.
- H. If the Contractor considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the Contractor shall give written notice thereof to the Engineer at least seven working days prior to release for manufacture.
- I. When the shop drawings have been completed to the satisfaction of the Engineer, the Contractor shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the Engineer.

1.08 DISTRIBUTION:

- A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the Engineer. Number of copies shall be as directed by the Engineer but shall not exceed 6.

1.09 GENERAL PROCEDURES FOR SUBMITTALS:

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work sections, of the Specifications, so that the installation will not be delayed by processing times including disapproval resubmittal (if required), coordination with other submittals, inspection, testing (off-site and on-site), purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the Contractor's failure to transmit submittals sufficiently in advance of the Work.

1.10 CERTIFICATE OF DESIGN:

- A. If specifically specified in other Sections of these Specifications, the Contractor shall submit the applicable Certificate of Design for each item required, and in the form attached to this Section, completely filled in and signed and sealed by a registered professional engineer.

1.11 CERTIFICATES OF COMPLIANCE:

- A. Certificates of Compliance as specified in the specifications shall include and mean certificates, manufacturer's certificates, certifications, certified copies, letters of certification and certificate of materials.
- B. The Contractor shall be responsible for providing Certificates of Compliance as specified in the technical specifications. Certificates are required for demonstrating proof of compliance with specification requirements and shall be executed in 6 copies unless otherwise specified. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Supplier, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Supplier from furnishing satisfactory material, if after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.12 SCHEDULES:

- A. Provide all schedules specified in the General Conditions.

END OF TEXT

CERTIFICATE OF DESIGN

The undersigned hereby certifies that he/she is a Professional Engineer registered in the state of _____ and that he/she has been employed by (Name of Contractor) _____ to design _____ in accordance with Specifications Section _____ for the (Name of Project) _____. The undersigned further certifies that he/she has performed similar designs previously and has performed the design of the _____; that said design is in conformance with all applicable local, state, and federal codes, rules, and regulations and professional practice standards; that his/her signature and Professional Engineer (P.E.) Stamp have been affixed to all calculations and drawings used in, and resulting from, the design; and that the use of that stamp signifies the responsibility of the undersigned for that design.

The undersigned hereby certifies that he/she has Professional Liability Insurance with limits of \$1,000,000.00 and a Certificate of Insurance is attached.

The undersigned hereby agrees to make all original design drawings and calculations available to the Town/City of _____ or Owner's representative within seven (7) days following written request therefore by the Owner.

P.E. Name

Contractor's Name

Signature

Signature

Title

Title

Address

Address

CERTIFICATE OF UNIT RESPONSIBILITY
For Specification Section _____

(Section title)

In accordance with Section 01300, paragraph 1.11 of the contract documents, the undersigned manufacturer accepts unit responsibility for all components of equipment furnished under specification Section 02607. We hereby certify that these components are compatible and comprise a functional unit suitable for the specified and indicated performance and design requirements.

Notary Public

Name of Corporation

Commission expiration date

Address

Seal: By: _____
Duly Authorized Official

Legal Title of Official

Date: _____

SECTION 01400

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This section covers Quality Assurance and Control requirements for this contract.
- B. The Contractor is responsible for controlling the quality of work, including work of its subcontractors, and suppliers and for assuring the quality specified in the Technical Specifications is achieved.
- C. Contractor to cooperate with sampling and field testing as specified.

1.02 QUALITY ASSURANCE:

- A. Copies of applicable referenced standards are not included in the Contract Documents. Where copies of standards are needed by the Contractor for superintendence and quality control of the work, the Contractor shall obtain a copy or copies directly from the publication source and maintain at the jobsite, available to the Contractor's personnel, subcontractors, and Engineer
- B. Quality of Materials: Unless otherwise specified, all materials and equipment furnished for permanent installation in the Work shall conform to applicable standards and specifications and shall be new, unused, and free from defects and imperfections, when installed or otherwise incorporated in the Work. The Contractor shall not use material and equipment for any purpose other than that intended or specified unless the Engineer authorizes such use.
- C. Where so specified, products or workmanship shall also conform to the additional performance requirements included within the Contract Documents to establish a higher or more stringent standard or quality than that required by the referenced standard.

1.03 OFFSITE INSPECTION:

- A. When the specifications require inspection of materials or equipment during the production, manufacturing, or fabricating process, or before shipment, such services shall be performed by the Owner's independent testing laboratory, or inspection organization acceptable to Engineer in conjunction with or by the Engineer.
- B. The Contractor shall give appropriate written notice to the Engineer not less than 30 days before offsite inspection services are required, and shall provide for the producer, manufacturer, or fabricator to furnish safe access and proper facilities and to cooperate with inspecting personnel in the performance of their duties.

1.04 MATERIALS AND EQUIPMENT:

- A. The Contractor shall maintain control over procurement sources to ensure that materials and equipment conform to specified requirements in the Contract Documents.
- B. The Contractor shall comply with manufacturer's printed instructions regarding all facets of materials and/or equipment movement, storage, installation, testing, startup, and operation. Should circumstances occur where the contract documents are more stringent than the manufacturer's printed instructions, the Contractor shall comply with the specifications. In cases where the manufacturer's printed instructions are more stringent than the contract documents, the Contractor shall advise the Engineer of the disparity and conform to the manufacturer's printed instructions. In either case, the Contractor is to apply the more stringent specification or recommendation, unless approved otherwise by the Engineer.

1.05 SHOP AND FIELD TESTING:

- A. The Contractor is responsible for providing advance notice of and access for the shop and field testing specified in the technical specification sections.
- B. The Contractor and its Subcontractor shall permit inspections, tests, and other services as required by the Contract Documents.
- C. Contractor shall provide twenty one days written notice to the Engineer so that the Engineer may schedule and witness off site and on site tests. The Engineer's witnessing of tests does not relieve the Contractor and/or Subcontractors of their obligation to comply with the requirements of the Contract Documents.

1.06 MANUFACTURER'S FIELD SERVICES:

- A. When specified in the technical specifications sections, the Contractor shall arrange for and provide technical representation from manufacturer's of respective equipment, items or components. The manufacturer's representative shall be a factory trained service engineer/technician with the type and length of experience specified in the technical specifications.
- B. Services Furnished Under This Contract: An experienced, competent, and authorized factory trained service engineer/technician representative of the manufacturer of each item of equipment for which field services are indicated in the specifications shall visit the site of the Work and inspect, operate, test, check, adjust if necessary, and approve the equipment installation. In each case, the manufacturer's service representative shall be present when the equipment is placed in operation. The manufacturer's service representative shall revisit the jobsite as often as necessary until all problems are corrected and the equipment installation and operation are satisfactory to the Engineer.
- C.

1.07 CERTIFICATION FORMS AND CERTIFICATES:

- A. The Contractor shall be responsible for submitting the certification forms and certificates in conformance with the requirements specified in Section 01300 - Submittals.

PART 2 - PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 QUALITY CONTROL:

- A. Quality control is the responsibility of the Contractor, and the Contractor shall maintain control over construction and installation processes to assure compliance with specified requirements.
- B. Certifications for personnel, procedures, and equipment associated with special processes (e.g., welding, cable splicing, instrument calibration, surveying) shall be maintained in the Contractor's field office, available for inspection by the Engineer. Copies shall be made available to the Engineer upon request.
- C. Means and methods of construction and installation processes are the responsibility of the Contractor, and at no time is it the intent of the Engineer to supersede or void that responsibility.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. The Contractor shall provide all temporary facilities for the proper completion of the work, as required and as specified.

1.02 SANITARY REGULATIONS:

- A. The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observation, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.
- B. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the Work, on the lands of the Owner, or on adjacent property.

1.03 WATER SUPPLY:

- A. For all necessary operations at the site of the work (except as noted in the next paragraph below) the Contractor, without charge therefor, shall provide reasonable quantities of water at the then existing pressure from a mutually convenient hydrant of the water distribution system. The Contractor shall furnish all necessary pipe or hose extensions to conduct the water to the points of use and shall exercise due care not to waste water. The Contractor shall coordinate with the Regional Water Authority and the Town to comply with conditions to not contaminate the water supply and shall comply with all applicable regulations and code requirements.
- B. The Owner reserves the right to limit, suspend, or terminate the supplying of water as set forth above should it consider such action to be necessary on account of damage to the distribution system, the necessity of conserving water, or other emergency. In this event, the Contractor shall obtain water from some other approved source, at his own expense.

1.04 TEMPORARY HEAT:

- A. If temporary heat is required for the protection of the Work, the Contractor shall provide and install suitable heating apparatus, shall provide adequate and proper fuel, and shall maintain heat as required.
- B. Temporary heating apparatus shall be installed and operated in such manner that finished work will not be damaged thereby. After the permanent heating system has been installed, tested, and made ready for operation, the Contractor may, at his own risk and expense, use it for providing heat for protection of the Work. He shall provide and pay for all fuel and care necessary, and, when the Work is ready for acceptance, he shall, at his own expense, put the system into first-class condition, even to the extent of replacing worn or damaged parts as directed.

1.05 ELECTRICAL ENERGY:

- A. The Contractor shall make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for the proper completion of the Work and during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters.
- B. The Contractor shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

1.06 PRECAUTIONS DURING ADVERSE WEATHER:

- A. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other suitable means.
- B. During cold weather, materials shall be preheated, if required, and the materials and adjacent structure into which they are to be incorporated shall be made and kept sufficiently warm so that a proper bond will take place and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by suitable means which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture will be warm throughout when used.

1.07 BYPASS PUMPING

- A. The Contractor shall submit a bypass pumping plan for approval by Owner prior to beginning the work. Contractor shall provide an emergency response plan indicating responsible individuals, anticipated response times, and response procedures.
- B. The Contractor shall furnish the necessary labor, equipment, tools and materials necessary to divert the flow of sewage to maintain sanitary sewer service at all times. The Contractor shall be responsible for the start up and operation of the bypass pumping

system.

- C. Sanitary sewer service, including service connections and gravity sewers shall be maintained at all times. The Contractor shall provide all labor, equipment, tools and materials for the time necessary to complete the permanent installation, including time for testing. All temporary bypass pumping equipment shall be removed when work is completed. If necessary to maintain operations, the Contractor shall also provide septage trucks or other means and methods to perform this work.
- D. The bypass pumping plan shall provide for 100% backup bypass pumping operations in case of prime bypass pumping failure.
- E. Sound levels generated by the bypass pumping equipment when added to ambient sound levels shall not exceed 51 dBA at any time as measured at the pumping station site property line. The Contractor shall include sound attenuation procedures and all bypass pumping operations shall conform to the requirements of Town of Branford noise pollution ordinances.
- F. The bypass pumping system shall be equipped with automatic alarm facilities to simultaneously notify Contractor and Owner of a malfunction of the bypass pumping equipment and a high wastewater level.
- G. Contractor shall provide and pay for temporary electric and telephone utility services including establishment, demand, commodity and removal charges.
- H. The Contractor shall conduct his work so as to not cause excessive surcharging of the sewer system and shall not cause damage to the existing sewer system. Contractor shall schedule his work so as to minimize the period of time that the existing pumping stations are out of service. Any damage caused by the Contractor's operations shall be repaired to the complete satisfaction of the Engineer and at no additional cost to the Owner.
- I. When bypass pumping equipment is no longer required, remove all temporary facilities and equipment. Permanently seal all temporary openings in manholes and structures. Restore all disturbed pavement or grassed areas to "as existing" condition.

END OF SECTION

SECTION 01568

EROSION CONTROL, SEDIMENTATION AND CONTAINMENT OF CONSTRUCTION MATERIALS

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. Provide all work and take all measures necessary to control soil erosion resulting from construction operations, prevent flow of sediment from construction site, and contain construction materials (including excavation and backfill) within protected working area as to prevent damage to any stream or wetlands.

1.02 REFERENCE:

- A. EPA document titled: “Stormwater Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices” document number EPA 832-R-92-005, dated 1992, or most recent edition.
- B. Connecticut Stormwater Quality Manual.
- C. State or appropriate County Conservation District standards may be substituted for the EPA standard if the State or County Conservation District standard is equal to, or more detailed than, the EPA standard.
- D. Connecticut Guidelines for Soil Erosion and Sediment Control, latest edition.

1.03 SUBMITTALS:

- A. Two weeks prior to the start of the work, submit to Engineer, for review, a plan with detailed sketches showing the proposed methods to be used for controlling erosion during construction.

1.04 QUALITY ASSURANCE:

- A. Use acceptable procedures, including use of water diversion structures, diversion ditches, settling basins, and sediment traps.
- B. Operations restricted to areas of work indicated on drawings and area which must be entered for construction of temporary or permanent facilities.
- C. If construction materials are washed away during construction, remove materials from fouled areas.

- D. Stabilize diversion outlets by means acceptable to Engineer.
- E. Engineer has authority to limit surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations and to direct immediate permanent or temporary pollution control measures to prevent contamination of any stream or wetlands, including construction of temporary berms, dikes, dams, sediment basins, sediment traps, slope drains, and use of temporary mulches, mats, or other control devices or methods as necessary to control erosion.

PART 2 – PRODUCTS

2.01 BALES:

- A. Hay or straw or other suitable material acceptable to Engineer.

2.02 WOOD STAKES:

- A. 2 in. by 2 in. by 3 ft.

PART 3 – EXECUTION

3.01 GENERAL:

- A. Do not discharge chemicals, fuels, lubricants, bitumen, raw sewage and other harmful waste into or alongside any body of water or into natural or man-made channels.

3.02 INSTALLATION:

- A. Install baled hay or straw erosion checks in all locations as directed, surrounding base of all deposits of stored excavated material outside of disturbed area, and where directed by the Engineer.
- B. Install checks immediately after site is cleared and before trench excavation. Locate checks, surrounding stored material, approximately 6 ft. from material.
- C. Hold bales in place with two 2 in. by 2 in. by 3 ft. stakes so that each bale is butted tightly against ad-joining bale thereby precluding shortcircuiting of erosion check.
- D. Construct earth berms or diversions to intercept and divert runoff water from critical areas.
- E. Discharge silt-laden water from excavations onto filter fabric mat and/or baled hay or straw sediment traps to ensure that only sediment-free water is returned to watercourses.

- F. Do not place excavated soil material adjacent to water-course in manner that will cause it to wash away by high water or runoff.
- G. Prevent damage to vegetation by excessive watering or silt accumulation in the discharge area.
- H. Do not dump spoiled material into any streams, wetlands, surface waters, or unspecified locations.
- I. Prevent indiscriminate, arbitrary, or capricious operation of equipment in streams, wetlands or surface waters.
- J. Do not pump silt-laden water from trenches or excavations into surface waters, streams, wetlands, or natural or man-made channels leading thereto.
- K. Prevent damage to vegetation adjacent to or outside of construction area limits.
- L. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, washwater from concrete trucks or hydroseeders, or any other pollutant in streams, wet-lands, surface waters, or natural or man-made channels leading thereto, or unspecified locations.
- M. Do not alter flow line of any stream unless indicated or specified.

END OF SECTION

SECTION 01710

CLEANING UP

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

- A. During its progress, the work and the adjacent areas affected thereby shall be cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed, and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
- B. Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipes, structures, and work, etc., shall, upon completion of the work, be left in a clean and neat condition.
- C. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.
- D. Upon completion of the work, the Contractor shall remove from the sites of the subsurface explorations all of his plant, machinery, tools, equipment, temporary work, and surplus materials; shall, unless otherwise directed or permitted in writing, remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.
- E. The Contractor shall thoroughly clean all materials and equipment installed by him and his sub-contractors, and on completion of the work shall deliver it undamaged and in fresh and new-appearing condition. All mechanical equipment shall be left fully charged with lubricant and ready for operation.
- F. The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work.

Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

END OF SECTION

SECTION 01740

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 SCOPE OF WORK:

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

1.02 RELATED WORK:

- A. Refer to Conditions of Contract for the general requirements relating to warranties and bonds.
- B. General closeout requirements are included in Section 01700 Contract Closeout.
- C. Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections.
- D. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

1.03 SUBMITTALS:

- A. Submit written warranties to the Owner prior to the date fixed by the Engineer for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Owner.
- B. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Owner within fifteen days of completion of that designated portion of the Work.
- C. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Engineer for approval prior to final execution.
- D. Refer to individual Sections for specific content requirements, and particular requirements for submittal of special warranties.

- E. At Final Completion, compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- F. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-in. by 11-in. paper.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification Section in which specified, and the name of the product or work item.
- H. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer, supplier, and manufacturer.
- I. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS," the Project title or name, and the name, address, and telephone numbers of the Contractor and equipment supplier.
- J. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.
- K. Schedule of Special Warranties:

Manhole and Sewer rehabilitations specified under Sections 02602, 02605 and 02607 shall be warranted for a period 1-year after acceptance of the work.

1.04 WARRANTY REQUIREMENT:

- A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or

rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights or remedies.
- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- F. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
- G. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.05 DEFINITION:

- A. Standard Product Warranties are pre-printed written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION - (NOT USED)

END OF SECTION

SECTION 02605

CLEANING, INSPECTING, SEALING AND TESTING OF SEWERS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Furnish all labor, materials and equipment and do all work necessary, as indicated, as specified and as directed by Engineer for following:
1. Cleaning existing sewers including root removal and root treatment.
 2. Cutting and removal of protruding break-in service connection laterals.
 3. Flow control for sewer sections.
 4. Removal and disposal of materials which are cleaned from sewer during conduct of work.

1.02 QUALITY ASSURANCE:

- A. Equipment for Work:
1. Selection of equipment to be used based upon the condition of sewers at the time work commences.
 2. Do not use equipment that might exert internal pressure great enough to damage sewer pipe.
 3. Motorized or mechanical equipment with direct drive not permitted.
 4. Special high pressure, hydraulically propelled cleaning equipment and tools incorporating cleaning chemical compounds may be used upon approval by Engineer where deemed suitable and necessary by Engineer.
 5. Cleaning by a combination of standard mechanical equipment such as rodding machines, boring machines, hydraulic balls, B-liners, bucket machines, cones, ferrets and similar equipment.

6. Root removal by chemical root treatment material as specified and by suitable mechanical cutting device. Application equipment to be approved by chemical root treatment material manufacturer.
7. Isolation of sewer section for root treatment by suitable air-inflatable packers.
8. Suitable flow control equipment for plugging, blocking, bypassing and pumping of flow around isolated sewer section. Plug and blocking designed so that any amount of flow can be released into the isolated pipe section.
9. Provide footage metering device(s) such that the location of all equipment, devices, points of reference, on measuring target is known at all times at the ground level. Footage metering device designed so that distance recorder can be set at zero when equipment or devices is at entrance of pipe inside manhole. Metering device to have an accuracy of not less than two-tenths of a foot. Marking of cable, or similar means, that require interpolation of depth of manhole not permitted.
10. Television camera and appurtenances for inspection of main line sewer pipe, specifically designed and constructed for such inspection:
 - a. Lighting to allow clear picture of entire periphery of the pipe.
 - b. Suitable for operation in 100 percent humidity conditions.
 - c. Capable of producing minimum of 500 line resolution in picture quality from camera.
 - d. Capable of being moved through the sewer pipe in either direction at uniform slow rate by means of manual cable winches or motorized mechanical equipment of indirect drive type.
 - e. Continuous color video and audio recording capability capable of variable playback speed ranging from normal to one-third normal speed and video to have capability of not less than 180 lines of resolution. Equipment appropriate to the medium of recording (DVD) shall be provided.
 - f. Suitable television video and audio playback equipment made available at office of Engineer.

- g. Equipment for taking instant-developing type photographs of television monitor.
- h. Capable of pan and tilt inspection within pipeline.

11. Debris Screening, Trapping, Collection and Removal Equipment:

- a. Suitable screening and other devices for installation in downstream manhole to collect and trap solids and other material cleaned from upstream sewers.
- b. Suitable equipment for removal, and disposal of screened and trapped material cleaned and removed from sewers.

12. Cutting and Removal of Protruding Services Connection Laterals:

- a. Select and use equipment specifically designed for cutting and removing protruding service connection laterals.
- b. Use remote-control television camera to allow cutting equipment operator to observe actual work.
- c. Use high speed 15,000 to 25,000 RPM cutting head with air motors.
- d. Modified root cutters will not be allowed.
- e. Cut protruding service connections to within 1/8-inch of mainline and contour to match curvature of main line sewer.

B. Quality:

- 1. Maintain sewer flow around work and in manner that will not cause excessive surcharging of sewers, damage to sewers, and that will protect the public and private property from damage and flooding.
- 2. Screened and trapped material cleaned from sewers to be promptly removed from sewer and site in suitable containers and disposed of in a manner acceptable to the Engineer and in conformance with all applicable laws and regulations.

3. No debris, equipment, tools or other alien matter to be left in sewer and manholes as the result of the Contractor's operations.
 4. Coordinate work and sequence of work as directed by Engineer.
- C. Epoxy Resin Compounds and Root Control Materials:
1. To be used in strict compliance with all applicable federal, state and local requirements relative to material type and usage thereof and in accordance with manufacturer's recommendations.
 2. Application equipment to be approved by the product material manufacturer prior to start of application.
- 1.03 SAFETY:
- A. Contractor is responsible for safety of personnel and public during Contract period.
 - B. Provide all devices, materials and equipment necessary to assure safety and health of personnel and public.
 - C. Comply with requirements of agencies having jurisdiction including confined space entry requirements.
 - D. Take precautions recommended by manufacturer and all other precautions necessary during handling of epoxy resin compounds, chemical grout, additives and root treatment chemicals.
 - E. Handling of the chemicals done only by personnel trained and experienced with safe handling of chemicals involved.
 - F. The Contractor shall keep informed and adhere to all existing federal, state, or local laws, rules, regulations or ordinances affecting those engaged or employed on the work, and the materials and equipment used for the conduct of the work. In particular, compliance with all regulations concerning confined space entry will be required.
- 1.04 SUBMITTALS:
- A. In accordance with Section 01300 - SUBMITTALS:
 - B. Submit to Engineer for review before start of work:

1. Detailed emergency response plan in the event of a problem that causes a sanitary sewer overflow or backup into homes. Plan shall include names of those that will respond, detailed cleanup procedures, notification of regulatory authorities, notification to town of Branford, and submittal of any required forms or letters.
 2. Detailed written description, including pertinent supplemental drawings, literature, tables and other material, or equipment, methods, procedures and scheduling proposed for work.
 3. For chemicals proposed; manufacturers literature, material safety data sheets, written instructions and written recommendations regarding use, method of application, dosage, mixing, and safety precautions.
 4. Specific documentation, information, number of years performing this type of work, and references that the Contractor or the firm doing the work, and the on-site supervisor for the work, have had successful experience in similar work under similar conditions.
 5. Certification including licenses for usage, where required, for each of the personnel handling chemicals that they are trained and experienced in handling the proposed chemicals.
 6. Detailed written description, including equipment, methods, and procedures proposed for the heavy cleaning of sewers.
 7. When cured-in-place spot repairs are used, furnish a mill certificate from the company manufacturing the fabric attesting that the fabric meets the chemical, physical, and manufacturing requirements. Fabric will be rejected if it is found to have defects, rips, holes, flaws, deterioration or other damage.
 8. A list of five municipalities where similar work has been performed in the last 3 years in the Northern US. Provide contact names, telephone numbers, and brief descriptions of the work performed.
 9. Detailed written description, including equipment, methods, procedures, and emergency plan for flow control and bypass pumping.
- C. To Engineer, at the end of each week during progress of the work: Submit copies of the following records, on acceptable printed forms:

1. Cleaning tasks performed and quantity of debris removed.
 2. Root treatment and removal performed.
 3. Spot repairs performed using epoxy resin, rigid sleeves or short cured-in-place liners.
 4. Protruding service laterals cutting and sealing performed.
 5. Flow control methods used and records.
 6. Damages or faults observed including location.
 7. The location of all work performed as measured from the upstream manhole.
 8. Evaluation of any evidence indicating possibility of hidden damages or faults that may exist including estimated location.
 9. TV inspections performed.
 10. Other testing or inspection tasks performed.
- D. To Engineer immediately after completion of recording, a copy of all video and audio tapes from television inspection of repairs of mainline sewers.
- E. To Engineer immediately after development, digital screen shot images taken by Contractor as directed by Engineer.
- F. To Engineer at conclusion of work all video recordings shall be copied onto DVD media in a format compatible with Town of Branford's video and computer equipment.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Chemical Root Treatment Material:
1. Active component for destroying roots to be non-systemic toxin, which will kill roots at low concentrations, but which will not permanently affect parts of the plant distant from the treated roots.

2. Must be spontaneously detoxified by natural chemical or biochemical processes in a relatively short interval following its use.
3. Shall not adversely affect the performance of wastewater treatment plants.
4. Shall inhibit root cell growth on contact, but shall not be transported so as to damage other portions of the parent plant.
5. Shall bind firmly to the soil in the vicinity of openings in line joints so as to form a persistent chemical barrier suppressing growth of root tips.
6. To be sufficiently stable under conditions of use to provide protection for twelve months or longer, but shall be subject to decomposition in wastewater treatment plants without disturbing plant processes.
7. To improve transportation of the root control agent into root tissues, the root control agent shall contain emulsifiers to degrease pipe surfaces and remove fatty acids from root tissue and surfactants to convert an aqueous solution of the root control agent into a volatile foam.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Equipment and materials, including standby, to be on hand at site to permit satisfactory and expeditious performance and completion of work.
- B. All phases of work to be performed shall be completed in sections between two manholes, unless approved otherwise by Engineer.
- C. Repair or correct any damage or disturbance to sewer, building connections, manholes, work area, public and private property or structures resulting from Contractor's operations at Contractor's expense.
- D. Conduct work and operation of equipment in a manner to cause minimum inconvenience and disturbance, including noise and other nuisances to the public.

3.02 RECORDS:

- A. Obtain data for and maintain the records required under subsection SUBMITTALS.
- B. Records to show, as a minimum, the following as appropriate and applicable to the phase of work and specific tasks performed:
 1. Contractor's name.
 2. Project name.
 3. Dates of period covered by record(s).
 4. Street name or brief description of off-street areas.
 5. Type of sewer, size and kind of pipe.
 6. Condition of sewer as found at start of phase of work or task.
 7. Date, time, length and location by distance(s) as measured from the upstream manhole, for each phase of work and task performed.
 8. Location, material, dates and details of flow control used.
 9. Location of work performed including sub-area, manhole-to-manhole reach, actual station as measured at the time work is performed, and station as listed in these specifications.
 10. Depth of flow in pipe sections during phase of work and task performance.
 11. Results of each phase of work, task and tests performed.
 12. Equipment and materials used.
 13. Observed damage or faults found.
 14. Evaluation of any hidden damage or fault that may be indicated by Contractor's operation. Include estimated location of such hidden damage or fault.
 15. Any unusual conditions or events encountered during performance.
 16. Refer to Section 1.04, Submittals, of this specification for additional requirements.

3.03 FLOW CONTROL:

A. Utilize flow control methods and procedures as required. Flow control methods and procedures are to be in accordance with manufacturer's recommendations for proper operation of equipment, application of materials and performance of work, or as directed by Engineer.

1. Plugging or Blocking:

- a. At manhole upstream of section.
- b. Plugging or blocking designed and installed to readily control any amount of flow. Capable of releasing sewage flow or reducing flow from full flow to complete shutoff, to permit satisfactory performance of work and tasks.
- c. When plugging or blocking is no longer needed for performance and acceptance of work, it is to be removed in a manner that permits sewer flow to slowly return to normal without surge, surcharging or causing other major disturbances downstream.

2. Pumping and Bypassing System:

- a. Provide, install, operate and maintain a bypass system to conduct sewer flows around the work area when flow cannot be controlled by plugging and blocking or when it is necessary to maintain system sewer flow around the work area. Bypass system shall include provisions for continuous monitoring to guard against overflows and backups.
- b. System to consist of pumping equipment, conduits and other equipment and appurtenances necessary to bypass the sewer flow around the work area.
- c. System to be of sufficient capacity to handle existing normal sewer flows plus additional flow that may occur during a rain storm.
- d. Have adequate standby equipment available and ready for immediate installation and use in the event of emergency or breakdown.
- e. All engines and powered equipment for operation outside of normal work hours to be equipped in a manner to keep noise at a minimum.

Noise control to include the use of appropriate baffles or other means of noise control.

- f. Bypass system to be capable of bypassing the total flow around the work area or of releasing any amount of flow up to full available flow into the work area as necessary for satisfactory performance of the work.
- B. Flow control and flow bypassing methods and procedures must result in minimum inconvenience and nuisance to the public and prevent damage to public and private property from flooding, surge or excessive surcharging.
- C. Flow control methods and procedures to meet Owner's requirements and be as directed by Engineer.

3.04 CLEANING AND HEAVY CLEANING:

- A. All dirt, sand, rock, gravel, sludge, grit, grease, coatings and other deleterious materials that would interfere with satisfactory performance of the work and inspection to be removed from the sewer lines before beginning of any inspection.
- B. Provide and install suitable screening and other means of trapping and blocking as required in the downstream manhole to prevent cleaned material from passing downstream.
- C. Promptly remove screened, trapped, blocked material from manhole by suitable means, place in suitable containers, remove from site and dispose of in manner acceptable to Engineer and in conformance with all applicable laws and regulations. Debris may be disposed of at the Branford Water Pollution Control Facility. All work shall be done at the Contractor's expense.
- D. Sewers to receive chemical root treatment are not to be cleaned prior to chemical root treatment unless extensive grease, root growths, debris, etc. preclude proper application of chemical root treatment material.
- E. Heavy cleaning of the sewer shall include mechanical removal of debris, solids, roots, sand, rock, gravel, pieces of broken pipe, bricks, grease, grit, and all other deleterious materials that would interfere with the satisfactory performance of the work, inspection, or performance of the sewer.

Mechanical equipment acceptable for heavy cleaning includes buckets, scrapers, scooters, porcupines, kites, heavy-duty brushes, metal pigs, and other debris-

removing equipment in conjunction with an approved power winching machine. Other equipment and accessories must be approved by Engineer prior to starting the work.

Mechanical cleaning equipment shall be used in conjunction with variable pressure water nozzles to achieve required results prior to TV inspection.

3.05 CHEMICAL TREATMENT AND ROOT REMOVAL:

- A. Root intrusion shall be removed by chemical root treatment in accordance with manufacturer's recommendations.
- B. After chemical root treatment, a minimum of 60 days shall pass prior to any cleaning, testing, or sealing.
- C. After a minimum 60 days waiting period, any remaining roots and root masses are to be removed by suitable mechanical cutting devices.
- D. Following root treatment and removal, the locations shall be cleaned, inspected, tested, and sealed as specified hereinafter.

3.06 CLOSED CIRCUIT TELEVISION INSPECTION:

- A. Inspect interior of sewer pipe sections during testing and sealing operations, and spot repairs in the presence of the Engineer. Use closed circuit television camera, after cleaning, and in the presence of Engineer.
- B. Inspection to be one section at a time unless otherwise approved by Engineer.
- C. Section being inspected must be isolated from remainder of sewer.
- D. Flow in section being inspected to be minimum possible, to permit inspection of invert of pipe. In no case shall flow exceed manufacturer's recommendation for equipment.
- E. Picture quality and definition to be to satisfaction of Engineer. If unsatisfactory, remove equipment, replace with satisfactory equipment and repeat inspection at no additional cost to Owner.
- F. Make continuous visual and audio tape/DVD recording of each inspection. Provide Engineer with two copies.

- G. Audio recording to identify run in accordance with applicable portions of subsection RECORDS. Stationing to be recorded at least every 10 ft. on the audio tape and at all points of interest.
- H. Video tape to be synchronized with audio tape/DVD.
- I. Make video and audio playback equipment available at Engineer's field office.
- J. Provide suitable means of communication between all points of operation.

3.07 CUTTING OF PROTRUDING LATERAL SERVICE CONNECTIONS:

- A. All protruding lateral cutting, removal, and sealing to be performed in the presence of the Engineer.
- B. Cutting of protruding lateral service connections to be performed as indicated in the contract documents or where the Engineer deems that the protruding lateral prohibits the passage of equipment necessary to perform specified work.
- C. Protruding laterals shall be cut to the contour of the pipe.
- D. For each lateral cut, Contractor shall report sub-area, manhole reach, actual station as measured during the performance of the work, and station as indicated in contract documents.

3.08 WARRANTY PERIOD TESTING:

- A. The Contractor will be required to provide a warranty in which the Contractor will re-inspect spot repairs at the Owners direction approximately one year from the date of installation. If any are found to be sub-standard by the Engineer, the Contractor will be required to repair or make repairs to the original spot repair.

END OF SECTION

SECTION 02607

CURED-IN-PLACE SEWER REHABILITATION
(INVERSION METHOD)

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Provide all labor, materials and equipment and do all work necessary, as indicated, as specified and as directed by the Engineer for the following:
1. Clean existing sewers designated for relining. Refer to Specification Section 02605.
 2. Root control at locations designated for relining as necessary. Refer to Specification Section 02605.
 3. Closed-circuit television inspection of sewers. Refer to Specification Section 02605.
 4. Lining of designated sewers.
 5. Reinstate active service connections identified.
 6. Flow control for sewer sections during cleaning, inspection, root removal, and lining operations.
 7. Removal and disposal of materials which are cleaned and removed from sewers, manholes and service laterals. Refer to Specification Section 02605
- B. Internal television inspection shall be conducted within the reaches of sewer to be relined, and recorded on video tape.
- C. It is the design intent of this pipe rehabilitation work to install a lining system that provides a full structural system capable of supporting all earth, live and hydrostatic loads; and eliminates groundwater infiltration within the rehabilitated pipe.

1.02 RELATED WORK:

- A. Division 1: General Requirements
- B. Section 02605: Cleaning, Inspecting Sealing and Testing

1.03 QUALITY ASSURANCE:

- A. Provide in accordance with Section 01400 and as specified.
- B. The manufacturer furnishing the cured-in-place liner and the Contractor performing the cured-in-place liner installation shall be fully qualified, experienced and equipped to complete this work expeditiously and in a fully satisfactory manner. Information confirming compliance with the following shall be submitted to the Engineer:
 - 1. The manufacturer of the cured-in-place liner shall have at least 10 years of experience in the manufacture of cured-in-place liners of equal or greater size than the liners to be provided for this project, including liners for mainline sewers.
 - 2. The Contractor's personnel performing the cured-in-place lining shall have been in a similar type of cured-in-place liner installation business for the past 10 years.
 - 3. The Contractor's personnel performing the liner installation shall have successfully completed similar projects for a minimum of three municipalities in the Northeast, including cured-in-place liner installation in mainline sewers. References including names, addresses, and telephone numbers of persons who can verify the previous satisfactory performance shall be provided.
 - 4. At the request of the Engineer, the Contractor shall provide documentation on infiltration reduction achieved as a result of the cured-in-place liner system in actual installations prior to approval of the lining system.
 - 5. Failure to satisfactorily meet above qualifications may result in rejection of lining system.
- C. This specification references the ASTM Standards and Test Methods, which are made a part hereof by such reference and shall be the latest edition and revision thereof. Refer to ASTM Designation F-1216, "Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of a Resin Impregnated Tube". This standard shall be the general guide for acceptable products/processes.
- D. General Corrosion Requirements: The pipe shall be fabricated from materials which when cured will chemically resist internal exposure to domestic sewage.

- E. Cured-in-place pipe to be a full reinforced resin pipe. Fiberglass or similar reinforced product will not be allowed.
- F. Contractor shall have in place a quality assurance and quality control program to verify that products delivered meet or exceed specifications. The Contractor shall inform the Engineer in writing, the name and designation of all in-house quality control tests along with sampling frequencies for analysis of resin and liner materials. Perform tests in accordance with in-house programs.
- G. Field Quality Control:
 - 1. For each inversion, place a short section of pipe in the manhole aligned with and the same size as the existing sewer. Run the impregnated tube through the pipe and cure the CIPP under restrained conditions. Contractor shall use this liner to obtain samples for testing. All sampling and test procedures shall be performed in accordance with ASTM D5813. Label samples with the project number, date of installation, location, manhole number and specified thickness. Provide duplicate samples from the same pipe section to the Independent Laboratory for inspection and testing. Independent tests shall be run on each sample, in accordance with ASTM standards for identification of resin type, wall thickness, flexural modulus of elasticity, flexural strength, delamination strength, and chemical resistance.
 - 2. Contractor shall have a quality control plan or procedure for the wet out process that shall include a report for each wet out of each CIPP segment showing information such as resin lot numbers, volumes of resin, and catalyst used. Include a check list so that each critical step in the wet out process is checked off and initialed.
 - 3. Maintain a curing log of CIPP temperatures at the upstream and downstream manholes during the curing process to document that proper temperatures and cure times have been achieved.
 - 4. Repair failed CIPP or CIPP deemed unacceptable as a result of post-installation inspection or test reports for structural values, thickness, or other defects. Obtain approval of the Engineer for method of repair, which may require field or workshop demonstration.
- H. Equipment for Work:
 - 1. Selection of equipment to be used based upon the condition of sewers at the time work commences.

2. Do not use equipment that might exert internal pressure great enough to damage sewer pipe.
3. Motorized or mechanical equipment with direct drive not permitted.
4. Special high pressure, hydraulically propelled cleaning equipment and tools incorporating cleaning chemical compounds may be used where deemed suitable and necessary by Engineer.
5. Suitable flow control equipment for plugging, blocking, bypassing and pumping of flow around isolated sewer section. Plug and blocking designed so that any amount of flow can be released into the isolated pipe section.
6. Provide footage metering device(s) such that the location of all equipment, devices, points of reference, on measuring target is known at all times at the ground level. Footage metering device designed so that distance recorder can be set at zero when equipment or device is at entrance of pipe inside manhole. Metering device to have an accuracy of not less than two-tenths of a foot. Marking of cable, or similar means, that require interpolation of depth of manhole not permitted.
7. TV inspection camera's shall include pan and tilt capability for inspection of service laterals from within the mainline sewer.

I. Quality:

1. Maintain sewer flow around work and in manner that will not cause excessive surcharging of sewers, damage to sewers, and that will protect the public and private property from damage and flooding.
2. No debris, equipment, tools or other alien matter to be left in sewer and manholes as the result of the Contractor's operations.
3. Coordinate work and sequence of work as directed by Engineer.

1.04 REFERENCES:

A. American Society for Testing and Materials (ASTM) Publications:

1. ASTM F1216, Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin Impregnated Tube.

2. ASTM F1743, Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)
3. ASTM D543, Test Methods for Resistance of Plastics to Chemical Reagents.
4. ASTM D638, Test Method for Tensile Properties of Plastics.
5. ASTM D790, Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
6. ASTM D2412, Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
7. ASTM D2990, Test Methods for Tensile, Compressive, and Flexural Creep and Creep Rupture of Plastics.

1.05 SAFETY:

- A. Contractor is responsible for safety of personnel and public during Contract period.
- B. Provide all devices material and equipment necessary to assure safety and health of personnel and public.
- C. Comply with requirements of agencies having jurisdiction.
- D. Take precautions recommended by manufacturer and all other precautions necessary during handling of chemicals.
- E. Handling of the chemicals done only by personnel trained and experienced with safe handling of chemicals involved.

1.06 SUBMITTALS:

- A. Shop Drawings: Submit the following in accordance with Section 01300 - SUBMITTALS.
1. Detailed written description, including pertinent supplemental drawings, literature, tables and other material, or equipment, methods, procedures and scheduling proposed for work. The description and schedule shall address hours of operation, sequencing of work, number of shifts, number of crews, access and staging locations, flow handling and bypass pumping equipment and methods, seals for the liner, procedures and methods for preparatory spot repairs such as filling of spaces and voids within pipelines, root control, lateral connection details, traffic maintenance, signage schedules, and any other pertinent details.
 2. Written notices to the public that include general notice for the lining shall be distributed one month in advance, one week in advance, and 24 hours in advance.
 2. For chemicals proposed; manufacturers literature, written instructions and written recommendations regarding use, method of application, dosage, mixing, and safety precautions.
 3. Specific documentation, information and references that the Contractor's personnel or the firm doing the work, and the on-site supervisor for the work, have had successful experience in similar work under similar conditions in accordance with Section 1.03.
 4. Certification, where required, for each of the personnel handling chemicals that they are trained and experienced in handling the proposed chemicals.
 5. Analysis of design criteria and calculations for the liner thickness to be prepared by a Registered Professional Engineer licensed in the state of Connecticut. Do not submit calculations for review. Submit Certificate of Design - See Section 01300.
 6. Schedule of all liners.
 7. Quality control plan, including sample field log wet out check list, and curing logs. Check list and curing logs shall be provided on a weekly basis to the Engineer.
- B. Certification:

1. Certified copies of all test reports on the properties of the selected resin and, later, on the liner coupons performed by, and/or for, the Contractor.
 2. Sworn and notarized certificates indicating that materials supplied for this work comply with appropriate standards.
 3. Sworn and notarized certificates indicating that pipes lined were in suitable condition for relining prior to beginning process. Further, indicate that installation was accomplished in accordance with manufacturer's recommendations.
- C. Manufacturer's Literature:
1. Catalog cuts of all materials and processes.
 2. Technical data on materials to be used.
- D. To Engineer immediately after completion of recording, a copy of all video and audio tapes from television inspection of repairs of mainline sewers.
- E. To Engineer immediately after development, digital screen shot images taken by Contractor as directed by Engineer.
- F. To Engineer at conclusion of work all video recordings shall be copied onto DVD media in a format compatible with Town of Branford's video and computer equipment.

PART 2 - MATERIALS

2.01 LINING PROCESS MANUFACTURERS:

- A. Insituform.
- B. National Liner
- C. In-Liner
- D. Approved Equal.

2.02 FLEXIBLE FELT FIBER TUBES:

- A. The flexible tube shall be fabricated to a size that when installed will neatly fit the internal circumference of the conduit specified by the Owner. Allowance shall be made for circumferential stretching during insertion.

- B. The minimum length shall be that deemed necessary by the Contractor to effectively span the distance from the inlet to the outlet of the respective manholes unless otherwise specified. The Contractor shall verify the lengths in the field before impregnation. Individual inversion runs can be made over one or more manhole sections as determined in the field by the Contractor and approved by the Engineer.
- C. Unless otherwise specified, the Contractor shall furnish a general purpose, unsaturated, polyester resin and catalyst system compatible with the reconstruction inversion process, a system that provides cured physical strengths specified herein.
- D. Physical Strength: The cured pipe shall conform to the minimum structural standards, as listed below.

<u>U.S. Licensor Standard</u>	<u>Results</u>
Flexural Stress #101 (Modified ASTM D-790)	4,500 psi
Flexural Modulus of Elasticity #101 (Modified ASTM D-790)	250,000 psi

Note: Values above are for commonly used polyester resins in the United States. Values for nontypical polyesters, vinyl esters and epoxies should be substituted when applicable, and approved by the Engineer. Unless otherwise specified, these values shall be supported using lab test samples.

- E. Cured-in-place liner thicknesses shall be calculated based on the following physical condition of the existing pipe or manhole.
 - 1. All pipes shall be considered fully deteriorated.
 - 2. All pipe shall be subjected to full soil load of 120 lbs/cf, soil modulus of 1,000 psi, with applicable live load (H2O minimum), and water table at ground surface.
 - 3. All pipes shall be considered to have a minimum of two percent ovality in the circumference.
 - 4. Pipe depth to be field verified.
 - 5. The design shall assume no bonding to the original pipe wall.

Only condition (1) and (3) may be changed for later case-by-case calculations. Conditions will only be changed after CCTV inspection, and with the Engineer's approval. The Engineer may also add and/or modify the conditions based on field condition and other considerations.

- F. Based on physical strength criteria and conditions presented in 2.01 D and 2.01 E, respectively, the minimum required liner thickness using standard resin shall be adequate to reconstruct the pipelines assuming fully deteriorated conditions. Thickness shall be rounded to the next highest multiple of 1.5 mm after adding an allowance of five percent to the design thickness to account for resin migration.

The thickness of the cured-in-place liner shall be within minus 5% and plus 10% of the design thickness. The installed liner thickness shall be accurately measured and certified by the Contractor. When cured, the finished liner will be continuous and formed to the original pipeline and provide a minimum of 100% of the full flow pipe capacity before rehabilitation.

- G. CIPP Field Samples - The Contractor shall submit test results from field installations of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified have been achieved in previous field applications. Samples for this project shall be made and tested as described herein.
- H. The wall color of the interior pipe surface of the C.I.P.P. after installation shall not be of a dark or non-reflective nature that could inhibit proper closed circuit television inspection.
- I. The tube shall contain no intermediate or encapsulated elastomeric layers. No materials that are subject to delamination in the cured state shall be included in the tube.
- J. Sewing of pieces of the liner together to form the length desired for a particular run will not be allowed without the approval of the OWNER. In no case will multiple felt liners be allowed to be sewn together in a single run.
- K. Holes made in the felt liner during the wet out process or for whatever other reason shall be identified with an identifiable marker and repaired before delivery to the job site. Puncture marks or tears must be brought to the OWNER'S attention for approval before insertion into the sewer line.

2.03 RESIN:

- A. The liquid thermosetting resin used to impregnate the polyester felt tube shall produce a properly cured tube that will be resistant to abrasion and corrosion due to solids, grit, sand, acids, and gases such as hydrogen sulfide, methane, and carbon monoxide. The resin selected shall have proven resistance to normal municipal sewage, especially sulfuric acid corrosion from hydrogen sulfide gas.

- B. The resin system to be used shall be manufactured by approved company(ies) selected by the process manufacturer.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Equipment and materials, including standby, to be on hand at site to permit satisfactory and expeditious performance and completion of work.
- B. Phases of work are to be performed and completed in sections, from manhole to manhole, unless approved otherwise by Engineer.
- C. Repair or correct any damage or disturbance to sewer, building connections, manholes, work area, public and private property or structures resulting from Contractor's operations at Contractor's expense.
- D. Conduct work and operation of equipment in a manner to cause minimum inconvenience and disturbance, including noise and other nuisances to the public.
- E. Cold Weather Operations: CONTRACTOR shall pay particular attention during cold or sub-freezing weather that cure is not affected. Exposed host pipe, taps, saturated ground, shallow bury or other conditions, which may adversely affect cure, must be eliminated or remedied by the CONTRACTOR.

3.02 RECORDS:

- A. Obtain data for and maintain the records required under subsection SUBMITTALS.
- B. RECORDS to show, as a minimum, the following as appropriate and applicable to the phase of work and specific tasks performed:
 - 1. Contractor's name.
 - 2. Project name.
 - 3. Dates of period covered by record(s).
 - 4. Street name or brief description of off-street areas.
 - 5. Type of sewer, size and kind of pipe.

6. Condition of sewers, service laterals and manholes as found at start of phase of work or task.
7. Date, time, length and location by station(s) each phase of work and task performed.
8. Location, material, dates and details of flow control used.
9. Depth of flow in pipe sections and manhole during phase of work and task performance.
10. Results of each phase of work, task and tests performed.
11. Equipment and materials used.
12. Observed damage or faults found.
13. Evaluation of any hidden damage or fault that may be indicated by Contractor's operation. Include estimated location of such hidden damage or fault.
14. Any unusual conditions or events encountered during performance.

3.03 FLOW CONTROL:

- A. Utilize flow control methods and procedures as specified in SECTION 02605.

3.04 CLEANING:

- A. Refer to Section 02605.

3.05 CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION

- A. Refer to Section 02605.

3.06 CURED-IN-PLACE INSTALLATION STANDARDS:

The following installation standards shall be adhered to unless otherwise approved by the Owner and/or Engineer:

- A. Safety: The Contractor shall carry out his operations in strict accordance with all applicable OSHA standards. Particular attention is drawn to those safety requirements involving working with scaffolding and entering confined spaces.

- B. **Cleaning of Mainline Sewers:** It shall be the responsibility of the Contractor to remove all internal debris from pipelines prior to the inversion process by utilizing those conventional methods that are currently standards of the industry and acceptable to the Engineer. Reference is hereby made to Part 1.05 and Part 3.04 of this specification.
- C. **Inspection of Pipelines:** Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television (CCTV). The interior of the pipeline shall be carefully inspected in accordance with these Specifications to determine the location of active service connections or any condition which may prevent proper inversion into the pipelines, and it shall be noted so that these conditions can be corrected. Color videotapes/DVDs and suitable logs shall be kept and submitted to the Owner and Engineer for later reference.
- D. **Bypassing Sewage:** The Contractor, when required, shall provide for bypassing sewage around the work area during the reconstruction. Bypasses shall be in accordance with the requirements as specified herein and approved by the Engineer prior to the work.
- E. **Line Obstructions:** It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, dropped joints, protruding service connections, roots, collapsed pipe, or other obstructions that may prevent normal installation. If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, bucketing, robotic or mechanical cutting equipment, or other conventional equipment or devices, then the Contractor shall propose a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner and Engineer prior to the commencement of the work. The amount paid for this will be paid as extra work upon authorization.
- F. **Preparatory Spot Repairs:** Prior to lining operations, the Contractor shall make the necessary preparatory spot repairs to pipelines including, but not limited to, filling and sealing of spaces, voids, or other spot repairs that may be necessary for the proper installation of the cured-in-place liner. When making spot repairs within the pipeline, proper contour and slope of a pipeline shall be maintained so as not to restrict the flow of sewage or decrease the capacity of the pipeline. Procedures and methods for preparatory spot repairs shall be acceptable to the cured-in-place liner manufacturer.

3.07 CURED-IN-PLACE INSTALLATION PROCEDURES:

- A. The Contractor shall designate a location where the reconstruction tube will be vacuum impregnated prior to installation. The Contractor shall allow the Engineer to inspect the materials and "wet-out" procedure. A catalyst system compatible with the resin and reconstruction tube shall be used.

- B. The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. The resin shall be uniformly distributed throughout the tube.

- C. The wet-out reconstruction tube shall be inserted through an existing manhole or other approved access by means of an inversion process and the application of a hydrostatic head sufficient to fully extend the reconstruction tube to the next designated manhole or termination point. The reconstruction tube shall be inserted into the vertical inversion standpipe with the impermeable plastic membrane side out. At the lower end of the inversion standpipe, the reconstruction tube shall be turned inside out and attached to the standpipe so that a leakproof seal is created. The inversion head will be adjusted to a height sufficient to cause the impregnated tube to invert from manhole to manhole while holding the tube with sufficient pressure against the existing pipe wall so as to produce dimples at the side connections and flared ends at the manholes. The use of a lubricant is recommended. Care shall be taken during the elevated curing temperature so as not to overstress the felt fiber. (In certain cases the Contractor may elect, upon the Engineer's approval, to use a top inversion where the reconstruction tube is attached to a top ring and the standpipe is formed from the reconstruction tube itself.)

- D. After inversion is completed the Contractor shall supply a suitable heat source and water recirculation equipment for the curing process. The equipment shall be capable of delivering hot water throughout the section by means of a pre-strung hose to uniformly raise the water temperature above the temperature required to effect a cure of the resin. This temperature shall be determined by the resin/catalyst system employed.

The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Another such gauge shall be placed between the impregnated reconstruction tube and the pipe invert at the remote manhole to determine the temperatures during cure. Water temperature in the line during the cure period shall be recommended by the resin manufacturer.

- E. Initial cure shall be deemed to be completed when inspection of the exposed portions of cured pipe appear to be hard and sound and the remote temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the cured-in-place inversion process, during which time the recirculation of the water and cycling of the heat exchanger and maintained at the necessary temperature.

- F. The Contractor shall cool the hardened pipe to a temperature below 100 deg. F before relieving the static head in the inversion standpipe. Cool-down may be accomplished by the introduction of cool water into the inversion standpipe to replace water being drained from a small hole made in the downstream end. Care shall be taken in the release of the static head so that a vacuum will not be developed that could damage the newly installed pipe.
- G. The finished pipe shall be continuous over the entire length of an inversion run and be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes and delamination. It shall also meet the leakage requirements or pressure test specified below.
- H. Prior to expiration of the guarantee period, but not sooner than six months after completing the above specified work, the Contractor shall provide television inspection of lined pipe sections in the presence of the Engineer. The inspection video/DVD and audio tapes shall be immediately submitted to the Engineer.
- I. During the warranty period any defects which will affect the integrity or strength of the pipe shall be repaired at the Contractor's expense, in a manner mutually agreed by the Owner, Engineer and the Contractor.
- J. The cured-in-place C.I.P.P. shall make a tight seal at the manhole opening with no annular gaps. Under all circumstances, the liner shall be sealed to the manhole and host pipe with quick-set epoxy mortar or high viscosity epoxy. Materials and procedures used shall be submitted for approval. Where the liner continues through the manhole, the upper portion of the liner will be removed and the bottom half to remain resulting in a smooth, continuous flowline through the manhole. Inverts may be rebuilt using epoxy grout or the C.I.P.P. liner material should be sealed to the invert and bench with quick-set epoxy mortar or high viscosity epoxy. These procedures shall be completed before proceeding to the next manhole section.
- K. Service Connections: After the new pipe has been cured in place, the Contractor shall reconnect the existing active service connections as designated by the Engineer and the videotapes and record logs to be generated by the Contractor established prior to the lining work. This shall be done without excavation, and in the case of non-man entry pipes, from the interior of the pipeline by means of a television camera and a cutting device that reestablishes the service connection. The Contractor shall certify a minimum of two complete functional cutters plus key spare components are on the job site before each installation or are in the immediate area of the jobsite and can be quickly obtained.
- L. Testing and Cleanup: The watertightness of the pipe shall be gauged while curing and under a positive head. After the work is completed, the Contractor will provide the

Owner and Engineer with a color videotape/DVD showing the completed work including the restored conditions.

Upon acceptance of the installation work and testing, the Contractor shall reinstate the project area affected by his operations.

- M. Any bladders or tubes used to inflate the tube material against the original pipe that were not fully bonded to the tube material prior to insertion into the original conduit shall be completely removed after C.I.P.P. installation.

3.08 SERVICE LATERALS:

- A. Work related to lateral service connections during lining of mainline sewers:
 - 1. All service laterals identified as active to be reinstated by cutting into cured-in-place liner.
 - 2. The Contractor shall make sure through video inspection or whatever other means necessary that each active lateral connection is opened, free to discharge and is not plugged or backed up as a result of the lining operation.
 - 3. The lateral connections shall be opened to provide a capacity not less than 95% of the original opening. It shall be the Contractor's responsibility to determine that status of each existing lateral connection. The lateral reconnection shall be made from the main pipe by means of a closed circuit television camera and robotic cutter. In the event the active service connection is missed, it will be the Contractor's responsibility to reconnect said service.
 - 4. No additional payment will be made for necessary excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work.

3.09 WARRANTY PERIOD TESTING:

- A. The Contractor will be required to provide a warranty in which the Contractor will re-inspect repairs at the Owners direction approximately one year from the date of installation. If any are found to be sub-standard by the Engineer, the Contractor will be required to repair or make repairs to the original repair.
- B. Cured-in-place Liner Inspection: The Contractor shall inspect, at the Owners direction, the repair locations utilizing television inspection equipment as necessary to ensure satisfactory installation and performance according to the liner manufacturer's published literature. Failure shall be defined as segments with visually evident leakage,

tears, buckling, faulty seals, or faulty workmanship. Segments failing the inspection due to leakage, tears, buckling, faulty seals or faulty workmanship shall be rehabilitated at no additional cost to the Owner. Engineer may require that additional segments be inspected, should the inspected segments reveal defects. The initial three segments shall be paid for under the specified bid item. All additional inspection, cleaning and repairs shall be done by Contractor at no additional cost to the Owner.

END OF SECTION

Appendix A

Minimum Rates and Classifications for Heavy/Highway Construction

ID#: 20-12937

Connecticut Department of Labor Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: #60609301

Project Town: Branford

State#: #60609301

FAP#: #60609301

Project: Trenchless Utility Rehabilitation (Branford)

CLASSIFICATION	Hourly Rate	Benefits
1) Boilermaker	33.79	34% + 8.96
1a) Bricklayer, Cement Masons, Cement Finishers, Plasterers, Stone Masons	35.72	33.16
2) Carpenters, Piledrivermen	33.53	25.66
2a) Diver Tenders	33.53	25.66
3) Divers	41.99	25.66
03a) Millwrights	34.94	26.19
4) Painters: (Bridge Construction) Brush, Roller, Blasting (Sand, Water, etc.), Spray	51.0	21.80
4a) Painters: Brush and Roller	34.62	21.80
4b) Painters: Spray Only	36.62	21.80
4c) Painters: Steel Only	35.62	21.80
4d) Painters: Blast and Spray	37.62	21.80
4e) Painters: Tanks, Tower and Swing	36.62	21.80

5) Electrician (Trade License required: E-1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	38.5	28.61+3% of gross wage
6) Ironworkers: Ornamental, Reinforcing, Structural, and Precast Concrete Erection	36.67	35.77 + a
7) Plumbers (Trade License required: (P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2) and Pipefitters (Including HVAC Work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4 G-1, G-2, G-8, G-9)	43.62	32.06
----LABORERS-----		
8) Group 1: Laborer (Unskilled), Common or General, acetylene burner, concrete specialist	31.0	22.15
9) Group 2: Chain saw operators, fence and guard rail erectors, pneumatic tool operators, powdermen	31.25	22.15
10) Group 3: Pipelayers	31.5	22.15
11) Group 4: Jackhammer/Pavement breaker (handheld); mason tenders (cement/concrete), catch basin builders, asphalt rakers, air track operators, block paver, curb setter and forklift operators	31.5	22.15
12) Group 5: Toxic waste removal (non-mechanical systems)	33.0	22.15
13) Group 6: Blasters	32.75	22.15
Group 7: Asbestos/lead removal, non-mechanical systems (does not include leaded joint pipe)	32.0	22.15
Group 8: Traffic control signalmen	18.0	22.15
Group 9: Hydraulic Drills	29.3	18.90
----LABORERS (TUNNEL CONSTRUCTION, FREE AIR). Shield Drive and Liner Plate Tunnels in Free Air.----		
13a) Miners, Motormen, Mucking Machine Operators, Nozzle Men, Grout Men, Shaft & Tunnel Steel & Rodmen, Shield & Erector, Arm Operator, Cable Tenders	33.23	22.15 + a
13b) Brakemen, Trackmen	32.26	22.15 + a
----CLEANING, CONCRETE AND CAULKING TUNNEL----		

14) Concrete Workers, Form Movers, and Strippers	32.26	22.15 + a
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15) Form Erectors	32.59	22.15 + a
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----ROCK SHAFT LINING, CONCRETE, LINING OF SAME AND TUNNEL IN FREE AIR:----

16) Brakemen, Trackmen, Tunnel Laborers, Shaft Laborers	32.26	22.15 + a
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17) Laborers Topside, Cage Tenders, Bellman	32.15	22.15 + a
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18) Miners	33.23	22.15 + a
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----TUNNELS, CAISSON AND CYLINDER WORK IN COMPRESSED AIR: ----

18a) Blaster	39.72	22.15 + a
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19) Brakemen, Trackmen, Groutman, Laborers, Outside Lock Tender, Gauge Tenders	39.52	22.15 + a
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20) Change House Attendants, Powder Watchmen, Top on Iron Bolts	37.54	22.15 + a
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21) Mucking Machine Operator	40.31	22.15 + a
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----TRUCK DRIVERS----(*see note below)

Two axle trucks	29.86	25.79 + a
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Three axle trucks; two axle ready mix	29.97	25.79 + a
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Three axle ready mix	30.03	25.79 + a
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Four axle trucks, heavy duty trailer (up to 40 tons)	30.08	25.79 + a
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Four axle ready-mix	30.13	25.79 + a
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Heavy duty trailer (40 tons and over)	30.35	25.79 + a
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Specialized earth moving equipment other than conventional type on-the road trucks and semi-trailer (including Euclids)	30.13	25.79 + a
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----POWER EQUIPMENT OPERATORS----

Group 1: Crane handling or erecting structural steel or stone, hoisting engineer (2 drums or over), front end loader (7 cubic yards or over), Work Boat 26 ft. & Over, Tunnel Boring Machines. (Trade License Required)	42.45	25.30 + a
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Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver (\$3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	42.11	25.30 + a
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Group 3: Excavator/Backhoe under 2 cubic yards; Cranes (under 100 ton rated capacity), Gradall; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar); Grader Operator; Bulldozer Fine Grade (slopes, shaping, laser or GPS, etc.). (Trade License Required)	41.32	25.30 + a
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Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper)	40.91	25.30 + a
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Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Spreader; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24	40.28	25.30 + a
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Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller.	40.28	25.30 + a
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Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	39.95	25.30 + a
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Group 7: Asphalt Roller; Concrete Saws and Cutters (ride on types); Vermeer Concrete Cutter; Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24	39.59	25.30 + a
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Group 8: Mechanic, Grease Truck Operator, Hydroblaster, Barrier Mover, Power Stone Spreader; Welder; Work Boat under 26 ft.; Transfer Machine.	39.17	25.30 + a
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Group 9: Front End Loader (under 3 cubic yards), Skid Steer Loader regardless of attachments (Bobcat or Similar); Fork Lift, Power Chipper; Landscape Equipment (including hydroseeder).	38.71	25.30 + a
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Group 10: Vibratory Hammer, Ice Machine, Diesel and Air Hammer, etc.	36.54	25.30 + a
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Group 11: Conveyor, Earth Roller; Power Pavement Breaker (whiphammer), Robot Demolition Equipment.	36.54	25.30 + a
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Group 12: Wellpoint Operator.	36.48	25.30 + a
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Project: Trenchless Utility Rehabilitation (Branford)		
Group 13: Compressor Battery Operator.	35.86	25.30 + a
Group 14: Elevator Operator; Tow Motor Operator (Solid Tire No Rough Terrain).	34.66	25.30 + a
Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	34.23	25.30 + a
Group 16: Maintenance Engineer/Oiler	33.54	25.30 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	38.11	25.30 + a
Group 18: Power Safety Boat; Vacuum Truck; Zim Mixer; Sweeper; (minimum for any job requiring CDL license).	35.53	25.30 + a

**NOTE: SEE BELOW

----LINE CONSTRUCTION----(Railroad Construction and Maintenance)---

20) Lineman, Cable Splicer, Technician	48.19	6.5% + 22.00
21) Heavy Equipment Operator	42.26	6.5% + 19.88
22) Equipment Operator, Tractor Trailer Driver, Material Men	40.96	6.5% + 19.21
23) Driver Groundmen	26.5	6.5% + 9.00
23a) Truck Driver	40.96	6.5% + 17.76

----LINE CONSTRUCTION----

24) Driver Groundmen	30.92	6.5% + 9.70
25) Groundmen	22.67	6.5% + 6.20
26) Heavy Equipment Operators	37.1	6.5% + 10.70
27) Linemen, Cable Splicers, Dynamite Men	41.22	6.5% + 12.20

28) Material Men, Tractor Trailer Drivers, Equipment Operators

35.04

6.5% + 10.45

Project: Trenchless Utility Rehabilitation (Branford)

Welders: Rate for craft to which welding is incidental.

*Note: Hazardous waste removal work receives additional \$1.25 per hour for truck drivers.

**Note: Hazardous waste premium \$3.00 per hour over classified rate

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra \$4.00 premium in addition to the hourly wage rate and benefit contributions:

- 1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)**
- 2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson**
- 3) Cranes (under 100 ton rated capacity)**

Crane with 150 ft. boom (including jib) - \$1.50 extra

Crane with 200 ft. boom (including jib) - \$2.50 extra

Crane with 250 ft. boom (including jib) - \$5.00 extra

Crane with 300 ft. boom (including jib) - \$7.00 extra

Crane with 400 ft. boom (including jib) - \$10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyman instructing and supervising the work of each apprentice in a specific trade.

~~Connecticut General Statute Section 31-55a: Annual Adjustments to wage rates by contractors doing

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

As of: May 21, 2020

Project: Trenchless Utility Rehabilitation (Branford)

--Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.