Project Manual
for

Collection System Rehabilitation
Phase 3

Uxbridge, MA

Contract No. 2024-28

Volume I of I

1545 Iyannough Road - Route 132
Hyannis, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
MARC
DRAINVILLE
ENVIRONMENTAL
No. 43294
REGISTERED
PROFESSIONAL ENGINEER

3/12/2024

March 2024

PROJECT MANUAL

FOR

COLLECTION SYSTEM REHABILITATION

PHASE 3

CONTRACT NO. 2024-28

TOWN OF UXBRIDGE, MASSACHUSETTS

VOLUME I OF I

GHD Inc.

1545 Iyannough Road

Hyannis, Massachusetts 02601-1840

March 2024

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INVITATION TO BID
COLLECTION SYSTEM REHABILITATION PHASE 3
TOWN OF UXBRIDGE, MA
CONTRACT NO. 2024-28

Sealed Bids for construction of the Manhole Rehabilitation Phase 3 Project for the Town of Uxbridge, MA, will be received at the Uxbridge Department of Public Works, 147 Hecla Street until 10:00 AM local time on March 29, 2024 and at that place and time will be publicly opened and read aloud.

The Project is being bid under the provisions of M.G.L. c.30, s39M.

The Work consists of sanitary sewer pipe lining and sanitary sewer manhole rehabilitation in accordance with the Bidding Documents heretofore prepared by GHD Inc. Substantial completion shall be achieved on or before May 15, 2024. Final completion shall be achieved on or before June 15, 2024.

GHD Inc. is the Issuing Office for this Project. The Contract Documents may be examined at the following locations (by appointment only):

GHD Inc.
1545 Iyannough Road
Hyannis, MA 02601

Works in Progress
www.worksinprog.com

Public Works Department
Town of Uxbridge
147 Hecla Street
Uxbridge, MA 01569

Projectdog
www.projectdog.com

Copies of Bidding Documents may be purchased at the office of GHD, 1545 Iyannough Road, Hyannis, MA 02601 after 2:00 p.m. on March 14, 2024. Bidding documents are available in both electronic and hardcopy form.

Electronic copies of Bidding Documents can be emailed for no fee provided the plan holder provides an email request with plan holder name, business name, mailing address, email address, telephone number, and fax number. Plan holder is required to acknowledge receipt of emailed set of bidding documents with a return email.

Electronic copies of Bidding Documents on flash drive may be obtained at the office of GHD Inc., 1545 Iyannough Road, Hyannis, MA for no charge. The flash drive can be picked up at the office of GHD or the flash drive can be shipped (shipped UPS ground; UPS overnight requires providing a UPS account number) upon receipt of a non-refundable check payable to the Town of Uxbridge in the amount of $25.00 to cover handling and postage fees and after full contact information for the plan holder is provided including: plan holder name, business name, address, email address, and telephone number. A UPS account number may also be provided for shipping purposes. FedEx or other delivery service will not be accepted.

Copies of paper Bidding Documents may be obtained at GHD Inc., 1545 Iyannough Road, Hyannis, MA upon submission of a refundable check or money order payable to Town of Uxbridge in the amount of $175.00. Any hardcopy set or digital copy of documents beyond the first set of Bidding Documents (whether first set is paper or electronic) is available for a non-refundable fee. Refund of deposit is contingent upon plans and specifications being returned in clean and usable condition to the Engineer's office within 30 days following the bid opening. Only one set of Contract Documents per person or entity is considered available for a refund. If mailing of documents is requested (shipped UPS ground; UPS overnight requires providing a UPS account number), a separate non-refundable check payable to Town of Uxbridge in the amount of $40.00 per set must be included with the request to cover handling and postage fees; a UPS account number (no Fed Ex) may also be provided for shipping purposes.

List of Plan Holders will be updated weekly in the Central Register. GHD will email a current Plan Holders list at the following times: 1) once per week to all contacts on the list, 2) two (2) business days before the bid opening, and 3) when addenda are issued.

Direct all questions regarding distribution of Bidding Documents to Laura Muir, 774-470-1630; email: laura.muir@ghd.com.

All other questions shall be submitted in writing to Marc Drainville at marc.drainville@ghd.com. The subject heading for all e-mails shall be exactly (INCLUDING ALL CAPS) as follows:

Subject: UXBRIDGE COLLECTION SYSTEM REHABILITATION PHASE 3 BID

No response will be given to questions received less than seven (7) days before the Bid opening date.

Bidders shall review and acknowledge all Addenda on the Bid Form.

Bid must be accompanied by Bid security made payable to Owner in an amount of 5-percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid Bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

If, upon acceptance of a Bid, a Bidder fails to enter into a Contract with the Town of Uxbridge, the bid security shall be forfeited to and become the property of the Town.

The bid hold period is as defined in the Bid Form. The successful Bidder must furnish a 100% Performance Bond and a 100% Payment Bond with a surety company satisfactory to the Town of Uxbridge and conforming to the prerequisite requirements of Article 5 of the General Conditions on the forms included in the Bidding Documents.

Minimum Wage Rates as determined by the Commissioner of Department of Workforce Development under the provision of the Massachusetts General Laws, apply to this project. It is the responsibility of the contractor, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those tradespeople who may be employed for the proposed work under this contract. The Contract Work Hours Act of 1962 regarding overtime compensation applies to this project. Federal Minimum Wage Rates as determined by the United States Department of Labor under the Davis-Bacon Act also apply to this project.

Bidding and award of this Contract shall be required to comply with Massachusetts General Law Chapter 30 Section 39M, and all other applicable Massachusetts General Laws.

The Town of Uxbridge reserves the right to waive any informalities in its sole discretion or to reject any or all Bids to the maximum extent permitted by law.

A pre bid meeting will be conducted on March 21 at 10 AM at the Uxbridge WWTF on River Road in Uxbridge, MA. Contractors will have an opportunity to see the work area.

Bidders are required to certify, under penalty of perjury, that Bids have been prepared without collusion with other Bidders, subcontractors, suppliers, etc. This certification is included with the Bid Form and each Bidder must sign in the space provided.

Town of Uxbridge Department of Public Works

SECTION 00100

INSTRUCTIONS TO BIDDERS

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. GHD Inc. is the Issuing Office.

B. Prefixes to Referenced Paragraph Numbers are as follows:

General Conditions; "GC-_____."

Supplementary Conditions; "SC-____."

C. Bidder - The individual or entity who submits a Bid directly to Owner.

D. Successful Bidder - The lowest responsible and eligible Bidder submitting a responsive Bid to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01. Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office. The deposit will be refunded for the first set of documents only to each document holder of record who returns a complete set of Bidding Documents in good condition, as determined by the Engineer, within 30 days after opening of Bids.

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, within 10 days of Owner's and/or Engineer's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be identified herein or requested by Owner and/or Engineer.

3.02. Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

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

4.01. Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site that the Engineer has used in preparing the Bidding Documents.

2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except underground facilities) that the Engineer has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in Paragraph 4.01.A are either appended to these Contract Documents as defined in Section 00520, or will be made available by Owner to any Bidder as defined in the General Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any data, interpretations, opinions or information contained in such reports, or shown or indicated in such drawings.

C. A complete set of referenced drawings is available for review at the issuing office, during normal business hours. No claim can be made as to the accuracy of the drawings.

4.02. Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to 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. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition that has been identified at the Site.

B. Copies of such reports and drawings referenced in Paragraph 4.03.A are appended to these Contract Documents.

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 written 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.

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4.06. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is planned to be performed at the Site by others (such as utilities, other prime contractors, and Owner) 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 if they exist.

A. Any construction personnel on this construction site for this project shall have certifications per Paragraph 6.13.C of 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, or performance of the Work;

D. carefully study all Contract Documents including: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph 4.06 of the General Conditions;

E. 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;

F. 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;

G. 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;

H. 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;

I. 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

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J. 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 - PRE-BID CONFERENCE

5.01. A pre-Bid conference will be held as indicated in the Invitation to Bid. Any oral statements made during this pre-bid meeting will not be binding or legally effective.

ARTICLE 6 - SITE AND OTHER AREAS

6.01. 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. 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.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01. All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. 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. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. Questions received less than seven days prior to the date for the applicable openings of Bid may not be answered (questions due by close of business, 5:00 PM, local time).

7.02. Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

7.03. Failure of a bidder to receive any addendum, or to acknowledge receipt thereof, will not relieve such bidder from conforming with the requirements which such addendum impose on his Bid or the Contract Documents, and may subject his Bid to disqualification by Owner.

ARTICLE 8 - BID SECURITY

8.01. A Bid must be accompanied by Bid security made payable to Owner in an amount of 5-percent of Bidder’s maximum Bid price and in the form of a certified check, bank money order, 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.

8.02. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of

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Award and the Bid Security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner per Article 2 of the Contractor's General Bid Form.

8.03. Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

9.01. The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

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

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible "or-equal" items. Whenever it is specified or described in the Bidding Documents that an "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed "or-equal" item. The burden of proof of the merit of the proposed item is upon Contractor. Engineer's decision of approval or disapproval of a proposed item will be final and binding on the Contractor. Refer to General Conditions and Supplementary Conditions.

ARTICLE 12 - PREPARATION OF BID

12.01. The Bid Form is included with the Bidding Documents. Additional copies may be obtained from Engineer.

12.02. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid Item and alternate listed therein.

12.03. 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.

12.04. 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.

12.05. 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 must be shown.

12.06. A Bid by an individual shall show the Bidder's name and official address.

12.07. 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 the joint venture must be shown.

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12.08. All names shall be printed in ink below the signatures.

12.09. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

12.10. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

12.11. The products furnished are to meet or exceed all specified requirements of the Bidding Documents. No evaluation of submittals will be made prior to the Bid opening.

12.12. Not used.

ARTICLE 13 - BASIS OF BID; COMPARISON OF BIDS

13.01. Lump Sum

A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

B. Bidders shall submit a Bid on lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the Base Bid if Owner selects the alternate. In the comparison of Bids, alternates will be applied in the same order as listed in Bid Form.

13.02. Unit Price

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.03. Allowances

A. Not Used

13.04. Resolution of Discrepancies

A. Where there are discrepancies between numbers and words, words shall prevail.

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ARTICLE 14 - SUBMITTAL OF BID

14.01. Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State Laws and Regulations exist, the more stringent applicable requirement shall apply.

14.02. The contractor guarantees that the Work and Services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other contract documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of Substantial Completion and acceptance of the Work as stated in the final estimate or as such longer time as Owner may be allowed under Massachusetts General Law or any other portion of the Contract. If part of the Work is accepted in accordance with that subsection of this AGREEMENT titled "Partial Acceptance", the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance or as such longer time as Owner may be allowed under Massachusetts General Law or any other portion of the Contract.

14.03. 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 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 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. With each copy of the Bidding Documents, a Bidder is furnished one copy of the Bid Form, and, if required, the Bid Bond Form. The copy of the Bid Form is to be completed and submitted with the Bid security and all required attachments to the Bid stated in the Bid Form.

14.04. With each copy of the Bidding Documents, a Bidder is furnished one copy of the Bid Form, and, if required, the Bid Bond Form. The copy of the Bid Form is to be completed and submitted with the Bid security and all required attachments to the Bid stated in the Bid Form.

14.05. 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 envelope plainly marked on the outside with the notation "BID ENCLOSED." When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the Advertisement for Bid. A mailed Bid shall be addressed to Owner at Uxbridge Department of Public Works, 147 Hecla Street, Uxbridge, Massachusetts, 01569.

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ARTICLE 15 - MODIFICATION AND WITHDRAWAL OF BID

15.01. 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.

15.02. 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 16 - OPENING OF BIDS

16.01. 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.

16.02. As a minimum, bid documents shall be reviewed/inspected for conformance with the following requirements in the order presented below. Failure to comply with any of these requirements may render the bid non-responsive and upon determination of such non-responsiveness, such bid shall be rejected immediately, set aside, and shall receive no further consideration at the sole discretion of the Owner.

16.03. Timeliness – The bid must be filed at the place and within the time specified therefore in the invitation to bid, and no bid shall be accepted after such time. The time at which a bid is filed should be time/date stamped or otherwise prominently noted on the bid.

16.04. Bid Security – Properly executed bid security, in the amount and terms specified in the invitation to bid (equal to 5% of Highest Possible Amount considering all alternatives) shall be placed in a sealed envelope and attached to the outside of the envelope containing the bid at the time of its submission.

A. Bid Bond: The Bid bond must be dated On or Before the Bid Date; Issued by a Bonding Company Licensed in Massachusetts; Accompanied by a Current Power of Attorney; Signed by Surety.

B. Check: The Check must be a Certified, Cashiers or Bank Treasurer's; Dated On or Before the Bid Date.

16.05. Bid Signature – The bid and all accompanying documents so required shall be signed by the bidder or its authorized representative before submission.

16.06. Addenda – All addenda shall be sent by email to all individuals and organizations which have received plans and specifications and shall be emailed not later than five days prior to the date established for submission of bids. All bidders shall include with their bids written acknowledgement of receipt of all addenda, which acknowledgement may be on a form provided therefore by the Owner.

16.07. Alternates – Alternatives, if any, shall be acknowledged.

16.08. The Bid Opening Procedures, Contractor Checklist also attached hereto, will be used during the bid opening. This is not an all-inclusive list of items that need to be included in the bid proposal. Refer to Bid Form for a full listing of documents to be provided.

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ARTICLE 17 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01. 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 18 - EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01. Owner reserves the right to reject any or all Bids, including without limitation, nonconforming bids, nonresponsive bids, or bids which contain abnormally high or abnormally low prices for any item of work, 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 a responsive and eligible bidder. Owner also reserves the right to waive all informalities in its sole discretion and to reject any and all Bids to the maximum extent permitted by law.

18.02. 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.

18.03. In evaluating Bids, Owner will consider whether or not 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.

18.04. In evaluating Bidders, Owner will consider the qualifications of Bidders 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.

18.05. Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of the General Contractor in accordance with the Contract Documents.

ARTICLE 19 - CONTRACT SECURITY AND INSURANCE

19.01. 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 20 - SIGNING OF AGREEMENT

20.01. 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 10 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.

ARTICLE 21 - COPIES OF CONTRACT DOCUMENTS

21.01. Owner will furnish copies of Contract Documents as defined in 00520 to Contractor as indicated in General Conditions Paragraph 2.02.

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ARTICLE 22 - SALES AND USE TAXES

22.01. Owner is exempt from Massachusetts state sales and use taxes on materials and equipment to be incorporated in the Work. Exemption No. 046-001-331. Said taxes shall not be included in the Bid. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 - FUNDING REQUIREMENTS

23.01. Minimum Wage Rates as determined by the Commissioner of Department of Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this project. It is the responsibility of the contractor, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed work under this contract.

23.02. This project is subject to the Safety and Health Regulations of the U.S. Department of Labor set forth in Title 29 CFR, Part 1926 and to all subsequent amendments, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety 'Rules and Regulations for the Prevention of Accidents in Construction Operations' (Chapter 454 CMR 10.00 et seq.). Contractors shall be familiar with the requirements of these regulations.

23.03. Not Used

23.04. The Construction Reform Law (Chapter 193 of the Acts of 2004) includes a new municipal affirmative marketing program. This requirement is not applicable to the procurement of site work (horizontal construction) subject to MGL c. 30 sec. 39M or MGL c. 30B. However, municipalities must incorporate MBE/WBE goals into both their design and construction procurement for municipal contracts for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public work by any city or town that includes funding provided by the Commonwealth, in whole or in part.

23.05. Not Used

23.06. Not Used

23.07. Whenever it is written that an equipment manufacturer must have a specified period of experience with his product, equipment which does not meet the specified experience period can be considered if the equipment supplier or manufacturer is willing to provide an "Efficiency Guarantee Bond" or cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

CONTINUED

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BID OPENING PROCEDURES CONTRACTORS CHECKLIST

CONTRACT NO.: 2024-28; Collection System Rehabilitation Phase 3 BIDDER: _____ DATE: _____

All non-responsive bids shall be rejected forthwith by the awarding authority upon determination of such bids' non-responsiveness at the time bids are opened and read. Failure to comply with one or more of the following requirements shall render the bid non-responsive, and upon determination of such non-responsiveness such bid shall be rejected and receive no further consideration.

ITEMS	REQUIREMENTS	COMPLIANCE (CIRCLE 1)		REASONS FOR REJECTION
1. Timeliness	Bids filed within time specified	Yes	No; Rejected	
2. Bid Security	Appropriate and properly executed security with bid.	Yes	No; Rejected	
3. Signature	Bid signed by authorized representative	Yes	No; Rejected	
4. Addenda	Any alternative	Yes	No; Rejected	
5. Dollar Amount	Dollar amount in words specified for each line item in bid	Yes	No; Rejected	

END OF SECTION

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CONTRACTOR'S BID
FOR
CONSTRUCTION OF CONTRACT NO. 2024-28
COLLECTION SYSTEM REHABILITATION PHASE 3
TOWN OF UXBRIDGE, MA

ARTICLE 1 - BID RECIPIENT

1.01. THIS BID IS SUBMITTED TO:

Town of Uxbridge, MA
Dept. of Public Works
147 Hecla Street
Uxbridge, MA 01569

1.02. The undersigned Bidder proposes and agrees to furnish all labor and materials required for Collection System Rehabilitation Phase 3, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents prepared by GHD Inc. to perform all Work as specified or indicated in the Bidding Documents for the contract price, specified below, and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

1.03. This bid includes addenda numbered _____to _____.

1.04. The proposed contract price for the base bid (Items A plus B plus C) is

_____ dollars

($_____).

For Add Alternate Item D (total for Unit Price Item D)

Add $ _____

Subtract $_____

ARTICLE 2 - BIDDER'S ACKNOWLEDGEMENTS

2.01. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

2.02. Bidder acknowledges the time frame for obtaining substantial completion and the time to final completion as outlined in the Agreement.

2.03. The undersigned agrees that, if he is selected as general contractor, he will within ten days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price; provided, however, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

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2.04. The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to applicable Massachusetts Law.

2.05. The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01. In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the Addenda

B. Bidder 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. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data", and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-4.06

E. Bidder has considered 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 the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this 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.

G. Bidder is aware of the general nature of work to be performed by others at the Site that relates to the Work as indicated in the Bidding Documents.

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H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01. Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Article:

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;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid 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.

ARTICLE 5 - BASIS OF BID

5.01. Bidder will perform the Work in accordance with the Contract Documents for the prices shown in the Bid Schedule that follow.

5.02. Bidder acknowledges that Bidder's price(s) constitute Bidder's sole compensation for performing all Work required by the Contract Documents and if a particular part of the Work is not listed specifically in the Bid Item Descriptions, Bidder has included that part of the Work in the Bid Item Description which it most logically belongs.

A. Schedule A: Unit Price Work: Measurement and payment of Unit Price Work is defined in Section 01025, Unit Price Items.

1. Unit Prices have been computed in accordance with General Conditions Article 11.03.B.

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2. Bidders acknowledge that estimated quantities are not guaranteed, and are solely for the purposes of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

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A. **BASE BID:** Lump Sum Bid Items: Measurement and payment of Lump Sum work is defined in Section 01026, Lump Sum Items.

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (FIGURES AND WORDS)	BID PRICE (FIGURES AND WORDS)
A	General Conditions	EA	N/A	N/A	$_____
B	Line SSMH-829 to SSMH-830	EA	N/A	N/A	$_____
C	Line SSMH-831 to SSMH-832	EA	N/A	N/A	$_____

ALTERNATE BID 1: The unit price work of the General Contractor, with measurement and payment as defined in Section 01025, and being all work as shown and specified in the Contract Documents, as follows:

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE (FIGURES AND WORDS)	BID PRICE (FIGURES AND WORDS)
D	Remove and Replace Manhole Frame and Cover	EA	20	$_____	$_____

B. Bid Price determination

1. All mathematical errors will be corrected. In case of a discrepancy between unit prices bid and extended totals, unit prices will govern. In case of discrepancy between the correct sum of individual bid items and the (incorrectly) calculated sum, the correct sum of individual bid items will govern.

2. In case of a discrepancy between the prices written in words and in figures, the prices written in words shall govern.

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ARTICLE 6 - PRICE ADJUSTMENT CLAUSE

6.01. Prices shall be adjusted for fuel, both diesel and gasoline; liquid asphalt; and Portland cement contained in cast-in-place concrete when the monthly cost change exceeds plus or minus 5 percent. A base price for each material shall be as listed on the Massachusetts Department of Transportation website for the month in which bids are opened.

ARTICLE 7 - TIME OF COMPLETION

7.01. Bidder agrees that the Work will be substantially completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

7.02. Liquidated damages are specified in this contract in the Agreement.

ARTICLE 8 - ATTACHMENTS TO THIS BID

8.01. The following documents are submitted with and made a condition of this Bid:

A. Required Bid Security in the form of a Bid Bond or money order

B. Bidder's Qualification Statement

C. OSHA Certification

D. State Taxes, EEO/AA, and Non-Collusive Bidding Certification

ARTICLE 9 - THIS BID IS SUBMITTED BY

Name of General Bidder: _____
(company/business)

By:_____
(authorized signature of bidder)

Name of person signing bid and Title: _____
(printed)

Bidder's Business Address _____

City / State _____

Phone No. _____ Fax No. _____

Email: _____

SUBMITTED on _____, 20__

END OF SECTION

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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)*:

BID

Bid Due Date:

Description *(Project Name and Include Location)*:

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**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	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.

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.

BID SECURITY

(ATTACH BID SECURITY TO THIS PAGE IF CERTIFIED CHECK.)

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STATEMENT OF SURETY'S INTENT

(To be completed if Bid Security is to be
Certified or Bank Cashier's Check)

To: _____
(Owner)

We have reviewed the Bid of _____
(Contractor)

of _____
(Address)

for _____
(Project)

Bids for which will be received on _____
(Bid Opening Date)

and wish to advise that should this Bid of the Contractor be accepted and the Contract awarded to him, it is our intention to become surety on the performance bond and labor and material bond required by the Contract.

We are duly authorized to do business in the State of Massachusetts.

Attest:

_____ _____

_____
Surety's Authorized Signature(s)

Attach Power of Attorney

(Corporate seal if any. If no seal, write "No Seal" across this place and sign.)

(This form must be completed prior to the submission of the bid.)

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CERTIFICATION
STATE TAXES, EEO/AA, NON-DEBARMENT, AND NON-COLLUSION

Pursuant to M.G.L. Ch. 62C, s49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all State Taxes required under law.

The undersigned bidder hereby certifies he/she will comply with the specific affirmative action steps contained in the Equal Employment Opportunity/Affirmative Action (EEO/AA) provisions of this Contract, including compliance with the Disadvantaged Business Enterprise provisions as required under these contract provisions. The contractor receiving the award of the contract shall incorporate the EEO/AA provisions of this contract into all subcontracts and purchase orders so that such provisions will be binding upon each subcontractor or vendor.

The undersigned certifies under penalties of perjury that there have been no substantial changes in his financial position or business organization other than those changes noted within the application since the applicant's most recent pre-qualification statement and that the bid is in all respects bonafide, fair and made without collusion or fraud with any other person.

c149 s44D (1)(b) "Person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity which sells materials, equipment or supplies used in or for, or engages in the performance of, the same or similar construction, reconstruction, installation, demolition, maintenance or repair work or any part thereof.

c149 s44E (2) The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A.

c149 s44E (3) The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provision of Section Twenty-Nine F of Chapter Twenty-Nine, or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulation promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

_____ _____ _____

(Date) (Name of General Bidder) (Federal Employer Identification No.)

By: _____

(Signature)

_____

(Title & Name of person signing bid)

_____

(Business Address)

_____

(City, State, Zip)

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CERTIFICATION
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TRAINING

In accordance with Massachusetts General Law 30: Section 39S, for all contracts for the construction, reconstruction, installation, demolition, maintenance or repair of any public work estimated to cost more than $10,000, the Contractor hereby certifies to the following:

(a) (1) that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.

The undersigned hereby certifies under the penalties of perjury to the above:

Company: _____

Authorized Signature: _____

Print Name: _____

Title: _____

Date: _____

Telephone: _____ Fax: _____

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BIDDER'S QUALIFICATION STATEMENT

To induce the making of this Contract, the Bidder represents to the Owner the following, as evidence of Bidder's Qualifications to perform the work herein specified:

1. How many years has your organization been in business under the name in which you propose to execute this Contract?
   _____Years

2. What projects of character similar to that proposed has your present organization completed? Give the information indicated by the following tabulations:

NAME, ADDRESS, AND PHONE NO. OF OWNER FOR WHOM WORK WAS DONE	REFERENCE PERSON'S NAME, PHONE NUMBER, AND EMAIL	DESCRIPTION OF WORK	APPROXIMATE AMOUNT OF CONTRACT	APPROXIMATE DATE WORK WAS DONE

BIDDER'S QUALIFICATION STATEMENT, CONT'D

3. Has your present organization ever been or are late or assessed liquidated damages or ever failed to complete any work awarded to it? If so, state when, where and why.

_____

_____

_____

4. Do you have, or can you procure the necessary personnel, equipment, facilities and financial resources to immediately undertake and satisfactorily complete the work contemplated in this Contract?

_____

_____

_____

5. The Owner reserves the right to investigate and/or request more information from the Bidder concerning the Bidder's history of payments to Subcontractor's and the Bidder's history of litigation.

AGREEMENT

THIS AGREEMENT is by and between the Town of Uxbridge, MA ("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 including Addenda.

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:

Collection System Rehabilitation Phase 3; Contract No. 2024-28

ARTICLE 3 - ENGINEER

3.01. The Project has been designed by GHD Inc. (Engineer). GHD Inc. or other Engineer identified by Owner is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in Article 9 of the General and Supplementary Conditions in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01. Time of the Essence

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

4.02. Days to Achieve Substantial Completion and Final Payment

A. Substantial completion shall be achieved on or before May 15, 2024 and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before June 15, 2024.

B. Both parties acknowledge that the funding is provided by the Town and that this funding expires on June 30, 2024. All pay applications must be submitted by the Contractor and approved by the Engineer no later than June 15, 2024.

C. Partial Substantial Completion shall be reached for Milestones, as follows:

1. Not Used.

4.03. Liquidated Damages

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above of this Agreement 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

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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 $750 for each calendar day that expires after the time specified in Paragraph 4.02 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 calendar 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.

ARTICLE 5 - CONTRACT PRICE

5.01. Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the amounts determined pursuant to the following:

A. For all Work, other than Unit Price Work, a lump sum of

$_____.

B. For all Unit Price Work, an amount equal to the sum of the established unit price shown on the Bid Form for each separately identified item of Unit Price Work times the actual quantity of that item.

$_____

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. Progress Payments and Retainage shall be per M.G.L. Chapter 30, Section 39G.

B. Contractor shall provide a claim and lien release with each progress payment in a form acceptable to Owner and Engineer.

6.03. Price Adjustments

A. Price adjustments for fuel, both diesel and gasoline; liquid asphalt; and Portland cement contained in cast-in-place concrete shall be made on a monthly basis if the cost change exceeds plus or minus 5 percent. The adjustment will provide for either additional compensation to the Contractor or repayment to the Town, depending on an increase or decrease in the average prices.

1. Base prices are as listed on MassDOT's web site (www.mhd.state.ma.us) for the month in which bids are opened.

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2. Monthly prices will be based on price information listed on MassDOT's web site (www.mhd.state.ma.us).

3. No adjustment will be paid for work done beyond the completion date of any contract.

4. Delivery slips from concrete or asphalt delivery trucks shall be provided for any of the above material subject to price adjustments.

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 rate prescribed in M.G.L. c.30 s39K.

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, ordinances, or codes that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) , if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data", and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph SC-4.06 of the Supplementary Conditions as containing reliable "technical data".

E. 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; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, or 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; (3 Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the previous paragraph, Contractor does not consider that any 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.

G. Contractor is aware of the general nature of work to be performed by others at the Site that relates to the Work as indicated in the Contract Documents.

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H. Contractor has given Engineer written notice of all conflict's errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

8.02. The Contractor agrees that it will fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons). The Contractor shall not award any subcontracts or purchase any materials from suppliers that appear on the Excluded Parties List System. The Contractor shall include this requirement in each subcontract and require it to be included in all subcontracts regardless of tier. The Contractor shall maintain reasonable records to demonstrate compliance with these requirements.

8.03. Not Used.

8.04. Equal Employment Opportunity/Affirmative Action (EEO/AA) Requirements – During the performance of this contract, the contractor agrees as follows:

A. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action 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. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

B. The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

E. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders. Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230

F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled,

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terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. The contractor will include the provisions of paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States." [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966-1970]

8.05. The contractor shall not participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue code 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

ARTICLE 9 - CONTRACT DOCUMENTS

9.01. Contents

A. The Contract Documents consist of the following:

1. Exhibits to this Agreement (enumerated as follows):

a. Bid Form (pages ___ to ___, inclusive).

b. Exhibit A: Notice of Award /Notice to Proceed.

c. Exhibit B: Performance Bond and Payment Bond.

d. Exhibit C: Certificates of Insurance.

e. Exhibit D: Documentation for Contractor’s Direct Labor Costs

2. Standard General Conditions (pages 1 to 50, inclusive).

3. Supplementary Conditions (pages 00800-1 to 00800-25, inclusive).

4. Appendices to General Conditions and Supplementary Conditions (Appendix A through E, inclusive)

5. Specifications as listed in the table of contents of the Project Manual.

6. Addenda (Nos. ____ to _____, inclusive).

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7. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

   a. Amendments and supplements to the Contract Documents per General Conditions Paragraph 3.04.

B. There are no Contract Documents other than those listed herein.

C. 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 have the meanings stated in the General Conditions and the Supplementary Conditions [unless specifically identified otherwise herein].

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.

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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.

This Agreement will be effective on _____, 20___, (which is the Effective Date of the Agreement).

Owner_____	Contractor_____
By_____ Signature	By _____ Signature
By_____ Printed Name	By _____ Printed Name
Title:_____	Title:_____

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

Attest _____

Title _____

Address for giving notices:	Address for giving notices:
_____	_____
_____	_____
	License No._____ (Where applicable)

Certified as to Form:

_____

Town Counsel Date

Pursuant to M.G.L. c.44, s31C, I certify that an appropriation has been made in the total amount of the contract.

_____

Finance Director/ Town Accountant Date

_____

Approval of Town Counsel as to form Date

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AFFIDAVIT

State of_____ }
}
County of_____ }
}

ss. _____, _____
(Bid Opening Date)

The undersigned being duly sworn, deposes and says that he or she is the sole owner, partner, president, treasurer, or other duly authorized agent or office of:

_____
(Name of bidder as appearing in submitted proposal)

for work in _____ on _____
(City/Town) *(Road)*

and certifies that to his or her own knowledge, said bidder has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken into any action in restraint of free competitive bidding in connection with this contract.

_____
Signature and Title of Person Making Affidavit

On this the_____day of _____, _____, before me,
Day *Month* *Year*

_____, the undersigned Notary Public personally appeared
Name of Notary Public

_____, proved to me through satisfactory evidence of identity, which was/were
Name of Signer

_____ to be the person(s) whose name(s) is/are signed on the preceding
Description of Evidence of Identity

or attached document, in my presence, and who swore and affirmed to me that the contents of the document are truthful and accurate to the best of his/her/their knowledge and belief

☐ as partner(s) for_____ , a partnership.
Name of Partnership

☐ as _____ for , a corporation. _____
Title of Office *Name of Corporation*

☐ as attorney in fact for _____, the principal.
Name of Principal Signer

☐ as _____ for _____, a/the _____.
Type of Capacity *Name of Person/Entity* *Type of Entity*

_____
Signature of Notary Public

Place Notary Seal and/or Any Stamp Above

_____
Printed Name of Notary

My Commission Expires:_____

END OF SECTION

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EXHIBIT A

NOTICE OF AWARD

NOTICE TO PROCEED

Notice of Award

Date: _____

Project:	
Owner:	Owner's Contract No.:
Contract:	Engineer's Project No.:
Bidder:	
Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*	

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for _____.

[Indicate total Work, alternates, or sections of Work awarded.]

The Contract Price of your Contract is _____ Dollars $_____). The Contract shall be paid in accordance with the Lump Sum and Unit Prices set forth in the Bid Form.

[Insert appropriate data if unit prices are used. Change language for cost-plus contracts.]

_____ copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [_____] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent: _____

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

_____
Owner

By: _____
Authorized Signature

_____
Title

Copy to Engineer

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Notice to Proceed

Date: _____

Project:	
Owner:	Owner's Contract No.:
Contract:	Engineer's Project No.:
Contractor:	
Contractor's Address: *[send Certified Mail, Return Receipt Requested]*	

You are notified that the Contract Times under the above Contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____, and the date of readiness for final payment is _____[(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insured's and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

_____ *[add other requirements].*

_____ _____
Owner

Given by:

_____ _____
Authorized Signature

_____ _____
Title

_____ _____
Date

Copy to Engineer

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EXHIBIT B

PERFORMANCE BOND
PAYMENT BOND

Contract # _____

PERFORMANCE BOND

BOND No._____

Know all men by these presents, that

_____

as principal and _____ as surety are held and firmly bound unto the Town of _____ in the sum of,

_____

in lawful money of the United States of America, to be paid to the Town of _____ , for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said principal has made a contract with the Town of _____ bearing the date of _____, 20 _____, for the construction of Project No. _____ Contract No. _____ Project Name _____ .

Now the condition of this obligation is such that if the principal shall pay for all labor performed or furnished and for all materials used or employed in said Contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said Contract that may hereafter be made, notice to the surety of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, the provisions of Massachusetts General Law, Chapter 30, Section 39A, and Chapter 149, Section 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

In witness whereof we hereunto set our hand and seals this _____ day of 20 _____.

_____(Seal) _____

(Print Name of General Contractor) (Print Name of Surety)

By _____ By _____

(Signature – Title) (Signature – Title)

Surety Address _____

_____

Contract # _____

PAYMENT BOND

BOND No._____

Know all men by these presents, that

_____

as principal and _____ as surety are held and firmly bound unto the Town of _____ in the sum of,

_____

in lawful money of the United States of America, to be paid to the Town of _____ , for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas, the said principal has made a contract with the Town of _____ bearing the date of _____, 20 _____, for the construction of Project No. _____ Contract No. _____ Project Name _____ .

Now the condition of this obligation is such that if the principal shall pay for all labor performed or furnished and for all materials used or employed in said Contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said Contract that may hereafter be made, notice to the surety of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, the provisions of Massachusetts General Law, Chapter 30, Section 39A, and Chapter 149, Section 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

In witness whereof we hereunto set our hand and seals this _____ day of 20 _____.

_____(Seal) _____

(Print Name of General Contractor) (Print Name of Surety)

By _____ By _____

(Signature – Title) (Signature – Title)

Surety Address _____

_____

EXHIBIT C

CERTIFICATES OF INSURANCE

EXHIBIT D

Documentation of Contractor's Direct Labor Costs
(Contractor to Insert in this Exhibit)

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

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by

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American Council of Engineering Companies

The Associated General Contractors of America
SKILL RESPONSIBILITY INTEGRITY

ASCE American Society of Civil Engineers

National Society of Professional Engineers
Professional Engineers in Private Practice

AMERICAN COUNCIL OF ENGINEERING COMPANIES

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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).

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►See Supplementary Conditions.

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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 (60ºF 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.

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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

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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).

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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.

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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

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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

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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.

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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

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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:

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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.

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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.

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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.

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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;

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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.

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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.

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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

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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

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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:

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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.

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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

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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.

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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;

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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.

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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.

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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;

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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.

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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.

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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.

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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.

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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.

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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.

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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

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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.

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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, expediters, 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.

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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.

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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;

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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.

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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,

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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.

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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,

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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 Payment*

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

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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.

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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.

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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.

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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:

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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.

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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.

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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

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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.

►See Supplementary Conditions.

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These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated herein, which are applicable to both the singular and plural thereof.

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

SC-1.01 Modify existing definitions as follows:

3. Replace the phrase “acceptable to Engineer” in Paragraph 1.01.A.3 of the General Conditions with the phrase “furnished by the Engineer”

22. Replace the definition of *Hazardous Environmental Conditions* and replace with “This includes Disposal Sites and the presence 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. Replace the definition of *Hazardous Waste* and replace with “The term Hazardous Waste shall have the meaning provided in Massachusetts Contingency Plan, 310 CMR 40 as amended from time to time.”

44. Replace the definition of *Substantial Completion* with “The time at which the work (or a specified part thereof) required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.”

SC-1.01 Add the following definitions immediately following subparagraph 1.01.A.51:

52. *Engineer’s Consultant* – an individual or entity who is subcontracted to work for the Engineer for whom the Engineer shall remain responsible.

53. *Disposal Site*- as provided in the Massachusetts Contingency Plan (MCP), 310 CMR 40 as amended from time to time.

54. *Final Payment*- The time at which the Work (or a specified part thereof) including the work under Substantial Completion and all of the work identified by the Owner as being incomplete or unsatisfactory at the time of Substantial Completion has been completed.

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ARTICLE 2 - PRELIMINARY MATTERS

SC-2.02 *Copies of Documents*

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

Owner shall furnish to Contractor up to four (4) printed or hard copies of the full size Drawings and Project Manual and one CD or flash drive with PDF files of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.03 *Reporting and Resolving Discrepancies*

SC-3.03.B *Resolving Discrepancies*

SC-3.03.B Add the following new paragraph immediately after Paragraph 3.03.B.1.b:

2. In determining Contract Price with respect to a conflict, error, or discrepancy within the Contract Documents, the Contract Documents shall be given precedence in the following order with Change Orders being the highest precedence:

    1. Laws and Regulations
    2. Change Orders
    3. Work Change Directives
    4. Field Orders
    5. Agreement
    6. Addenda
    7. Supplementary Conditions
    8. General Conditions and all Appendices
    9. Drawings
    10. Specifications
    11. Bid Form and all bid submittals

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

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Add the following new paragraphs immediately after Paragraph 4.02.B:

C. The following reports of explorations and tests of physical conditions at or contiguous to the Site are known to Owner:

    1. Manhole Inspection Reports, prepared by National Water Main (see Appendix A)

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D. The following drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) are known to Owner:

1. Record Drawings dated 1979, prepared by Haley and Ward, Inc., entitled Sewer Record Drawings, Town of Uxbridge, Massachusetts.

Unless otherwise noted, all drawings are Contract Drawings and are not as-built or record drawings. Engineer has not verified the accuracy of these drawings. They are available for reference only.

E. The reports and drawings identified above are not part of the Contract Documents, but the "technical data" contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.

F. Copies of reports and drawings identified in SC-4.02.C and SC-4.02.D that are not included with the Bidding Documents may be examined at GHD, 1545 Iyannough Road, Hyannis, MA during regular business hours.

SC-4.03 *Differing Subsurface or Physical Conditions*

SC- 4.03.A *Notice*

Delete Paragraph 4.03 A entirely and replace with the following:

If Contractor believes that any subsurface or physical condition that is uncovered or revealed is of a differing condition as defined by M.G.L. Chapter 30, Section 39N, the Contractor shall within 3 days and in accordance with paragraph 10.05 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 conditions. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written or to do so.

SC-4.06 *Hazardous Environmental Condition at Site*

SC-4.06 Insert the following after Paragraph 4.06.A:

1. The following reports regarding Hazardous Environmental Conditions at the Site are known to Owner:

a. N/A

2. Copies of reports identified in 4.06.A.1 are included in the Contract Documents in Appendix I.

ARTICLE 5 - BONDS AND INSURANCE

SC-5.01 *Performance, Payment and Other Bonds*

SC 5.01.C Modify 5.01.C After "Contractor shall promptly" add "but in no event later than three days after becoming aware of"

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SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new Paragraphs 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. Workers' Compensation, and related coverages under paragraphs 5.04.A.1 and A.2 of the General Conditions:

a.	State:	Statutory
b.	Applicable Federal (e.g., Longshoreman's):	Statutory
c.	Employer's Liability:	$500,000 each accident $500,000 disease per employee

d. Insurance shall include Employer's Liability Part B.

2. Contractor's General Liability under paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of Contractor and shall be annual limits unless indicated to be by occurrence:

a.	General Aggregate:	$3,000,000
b.	Products - Completed Operations Aggregate:	$2,000,000
c.	Personal and Advertising Injury:	$1,000,000
d.	Each Occurrence (Bodily Injury and Property Damage):	$1,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.

f. Excess or Umbrella Liability

1)	General Aggregate:	$4,000,000
2)	Each Occurrence:	$3,000,000

3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:

a.	Bodily Injury:	
	Each Person	$1,000,000
	Annual Aggregate	$3,000,000
b.	Property Damage:	
	Each Accident	$1,000,000
	Annual Aggregate	$3,000,000
c.	Combined Single Limit (Bodily Injury and Property Damage)	
	Each Accident	$1,000,000

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4. The Contractual Liability coverage (included in Commercial General Liability) required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

a.	Bodily Injury:	
	Each Accident	$1,000,000
	Annual Aggregate	$3,000,000
b.	Property Damage:	
	Each Accident	$1,000,000
	Annual Aggregate	$3,000,000

5. Builder's Risk (Fire Insurance) in an amount equal to the insurable value (completed value) of the buildings and structures that are either fully or partially part of the Work. The insurance shall include "All Risk" insurance for physical loos or damage including theft.

6. "Products and Completed Operations" shall be maintained for three years after completion of the Work.

7. "Property Coverage" shall be purchased for materials and supplies being transported by the contractor.

8. "Pollution Liability" shall be purchased in an amount equal to $10,000,000 per occurrence and $10,000,000 General aggregate.

9. Any Architect or Engineer hired by the Contractor shall carry professional liability of at least $1,000,000 per occurrence and $3,000,000 aggregate.

10. Owner, Engineer, and Engineer's Consultants identified prior to Notice to Proceed shall be listed as additional insureds for all insurance. Contractor shall request a listing of Engineer's Consultants to be named prior to the Notice to Proceed and prior to obtaining insurance for the project.

D. The provisions or endorsements necessary to comply with paragraph 5.04.B.5 of the General Conditions shall include the obligation to notify the Owner and Engineer when an aggregate limit of liability required or certified has been reduced by the payment of claim(s).

SC-5.07 *Waiver of Rights*

Delete paragraphs A, B and C in their entirety and replace with the following paragraph:

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Engineer, Engineer's consultants or separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Article or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Engineer/Engineer's consultants, separate contractors, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective

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as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

SC-6.02 *Labor; Working Hours*

SC-6.02. Add the following new Paragraphs immediately after Paragraph 6.02.B:

C. Normal working hours are defined as 7:00 a.m. to 3:00 p.m., Monday through Friday, excluding Holidays. Owner's permission is required should the Contractor work outside of normal working hours. The following are considered Holidays during which work at the Site is not allowed:

- New Year's Day
- Martin Luther King's Birthday
- Washington's Birthday/Presidents Day
- Memorial Day
- Independence Day
- Patriot's Day
- Labor Day
- Columbus Day/Indigenous People's Day
- Veteran's Day
- Thanksgiving
- Day after Thanksgiving
- Christmas

If Contractor intends to work on one of the above-listed holidays, written request shall be made to Owner a minimum of <u>two</u> business days before the holiday. If the Owner approves Contractor to work on a holiday, Contractor is responsible for paying the costs of any police, fire, and emergency service details required, Engineer's time (including office and/or Resident Project Representative), utility services (fuel, gas, cable, electric, telephone) and Owner's time (including Water and Sewer Department contract operators and related subcontractors) for work performed on the holiday. Costs for these services shall be included in a credit Change Order from the Contractor to the Owner following the completion of the holiday work. Rates for Owner's contract operator are called out in paragraph 6.02.D; all other costs billed to the Owner shall be provided to the Contractor in the form of invoices and receipts for work performed.

D. Should Contractor's working hours extend outside normal working hours, any and all costs for weekend, Holiday, and/or on-site overtime services of Town's contract operators incurred by Owner will be the sole obligation of Contractor. The overtime rates shall be $125 per hour per person for the Owner's operators.

E. Should construction related activities result in the need for the services of Engineer's personnel at times outside of normal working hours, any and all costs, including but not limited to direct salaries, fringe benefits, overhead and profit, administration and supervision, and travel costs, will be the sole obligation of the Contractor. The overtime rates for Engineer's representative shall be $150 per hour.

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SC-6.05 Add the following subparagraph immediately after Subparagraph 6.05.A.1.b:

c. Contractor provides a line-by-line comparison of the proposed product to the specified product. Line-by-line comparison shall not only include all specified features, but shall also include all other design and/or manufacturing differences between the proposed product and the specified product. Line-by-line comparison shall show no significant design or manufacturing differences that, in the Engineer's opinion, could result in lesser quality, performance, or reliability of the proposed product compared to the specified product.

SC-6.05.A.2. Add the following subparagraph immediately after Subparagraph 6.05.A.2.d of the General Conditions:

e. If the substitute item requires modifications to the structures, piping, layouts, etc., detailed on the Drawings or described in the Contract Documents, the application shall also include details of proposed modifications necessary to accommodate the substitute item. Such details shall include scaled layouts, dimensions, and other pertinent information to enable Engineer to evaluate the entire application. If the substitute item and proposed modifications are approved, Contractor, at no additional cost to Owner, shall do all work necessary to make such modifications and absorb all costs of any related changes imposed on other contractors. Final details of such modifications shall be prepared and submitted for approval by Contractor in accordance with Specification Section 01300, Submittals.

SC-6.05.A. Add the following paragraph immediately after Paragraph 6.05.A.2 of the General Conditions:

3. Time Constraints: All applications for use of substitutes or 'or equal' items shall be submitted to Engineer within 90 days of the Effective Date of the Agreement. No applications will be considered thereafter unless Contractor produces satisfactory evidence that the specified item is no longer manufactured or is unavailable for the Project.

SC-6.05.C. Add the following subparagraph after Paragraph 6.05.C of the General Conditions:

1. In order to aid Engineer in determining the equality of a proposed 'or equal' or substitute item (when compared to the item actually specified), Contractor shall arrange for the performance of any tests requested by Engineer. The nature, extent, tester and supervisions of such tests including engineering costs, shall be borne by Contractor. Certified test results shall be mailed directly to Engineer for all tests requested.

SC-6.05.D Delete paragraph in its entirety and replace with:

D. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee, efficiency guarantee bond, or other surety with respect to any substitute or "or equal" item.

SC-6.06 *Concerning Subcontractors, Suppliers, and Others*

SC-6.06 Add a new paragraph immediately after Paragraph 6.06.G:

H. Owner may furnish to any Subcontractor or Supplier, to the extent practical, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

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SC-6.10 *Taxes*

SC-6.10 Add a new Paragraph immediately after Paragraph 6.10.A:

B. Owner is exempt from payment of sales and compensating use taxes of the Commonwealth of Massachusetts 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*.

SC-6.12 Add the following paragraph after 6.12.A

B. If Owner utilizes any part of the project in accordance with Paragraph GC- 14.05, Contractor shall provide to Engineer for Owner's use, a complete set of record drawings current to the date of Owner's utilization.

SC- 6.13 *Safety and Precaution*

SC-6.13 Delete paragraph C in its entirety and replace with the following:

C. Contractor shall comply with the applicable requirements of the Owner's safety programs if any. Any construction personnel on this construction site for this project shall have, at a minimum, an OSHA-10 card and such additional certifications as required by local laws, regulations, and ordinances. Copies of OSHA-10 cards shall be submitted at the beginning of the project and at any time thereafter for each new employee that joins the project for Contractor and all Subcontractors.

SC-6.16 *Emergencies*

Add the following paragraph after Paragraph 6.16.A of the General Conditions:

B. Contractor shall designate one person to respond to emergencies and act on the Contractor's behalf during off-work hours at the Site. The person's name, address, and telephone number shall be provided to Owner during the preconstruction conference and the designated person shall be on call during off-work hours. Response time shall not exceed one hour after notification is given by Owner and/or Engineer that an emergency exists at the Site.

SC-6.17 *Shop Drawings and Samples*

SC-6.17.B Delete "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." and replace with the following:

"no work shall be performed without Engineer's prior written approval."

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SC-6.17.C.2 Replace “or specific written certification” with “certifying”.

SC-6.17.D.1 In the first sentence of Paragraph 6.17.D.1, replace “in accordance with the Schedule of Submittals acceptable to Engineer” with “in accordance with Specification Section 01300, Submittals”.

SC-6.17.D.1. Add the following after Paragraph 6.17.D.1

a. Submittal reviews may take up to 45 days for Division 17 submittals and 30 days for submittals under all other Divisions.

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

F. 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 Owner will deduct costs for such services from progress payments made to Contractor.

G. In the event that Contractor requests a change of a previously approved item, Owner will deduct costs for Engineer’s charges for its review time unless the need for such change is beyond the control of Contractor.

ARTICLE 7 - OTHER WORK

SC-7.04 *Claims Between Contractors*

SC-7.04 Add the following new paragraphs immediately after Paragraph 7.03.C:

“7.04 Claims Between Contractors

A Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor’s performance of the Work at the Site be made by any other contractor against Contractor, Owner, or Engineer, then Contractor (without involving Owner, Engineer) shall (1) remedy the damage, or (2) agree to compensate the other contractor for remedy of the damage, and shall be responsible to Owner and Engineer for all costs, fees and damages including attorney’s fees.

B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer consultants, to the extent said claim is based on or arises out of Contractor’s performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer 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 on account of any such damage or Claim.

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C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, entity, agency or individual and Owner and Contractor are unable to agree as 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 sole and exclusive remedy with respect to Owner and Engineer, for any delay, disruption, interference, or hindrance caused by any other contractor or entity."

ARTICLE 8 - OWNER'S RESPONSIBILITIES

(No Amendments to General Conditions.)

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.03 *Project Representative*

SC-9.03 Add the following new paragraphs immediately after Paragraph 9.03.A:

B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:

1. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. *Liaison*:

   a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.

   b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

   c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

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5. *Shop Drawings and Samples:*

   a. Record date of receipt of Samples and approved Shop Drawings.

   b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

6. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

7. *Review of Work and Rejection of Defective Work*:

   a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.

   b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

8. *Inspections, Tests, and System Startups:*

   a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

   b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

9. *Records:*

   a. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.

   b. Maintain records for use in preparing Project documentation.

10. *Reports:*

    a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

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b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition.

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

12. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. *Completion*:

a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.

b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.

c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).

2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor’s superintendent.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of Contractor’s work unless such advice or directions are specifically required by the Contract Documents.

5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

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6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.

8. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

(No Amendments to General Conditions.)

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

SC-11.01 *Cost of the Work*

SC-11.01.A.1 Delete the second sentence and replace with the following: "Such employees shall only include trade employees, directly performing full time Work and shall not include Superintendent, Foreman, and any other administrative or supervisory positions and any other similar positions."

SC-11.01.A.2 Replace the entire paragraph with the following: "Actual 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."

SC-11.01.A.4 Replace the entire paragraph with the following: "Costs of land surveyors specifically related to this work."

SC-11.01.A.1 Delete the second sentence and replace with the following: "Such employees shall only include trade employees directly performing full time Work and shall not include Superintendent, Foreman, and any other administrative or supervisory positions and any other similar positions."

SC-11.01.A.5.c. Delete Paragraph 11.01.A.5.c in its entirety and insert the following in its place:

c. Construction Equipment and Machinery

1) Rentals of all construction equipment and machinery actually utilized in the performance of the work, and the parts thereof 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.

2) Costs for equipment and machinery actually utilized and owned by Contractor or any entity related to the Contractor who has common ownership with the Contractor will be paid at a rate shown for such equipment in the Rental Rate Blue Book for Construction Equipment for equipment in Massachusetts. An hourly rate will be computed by dividing the monthly rates by 176 adjusted by application of the Rate Adjustment Table (for machine age adjustment) plus adjustments to eliminate equipment overhead (indirect ownership) plus regional adjustments. This rate shall be defined as the Adjusted Blue Book Rate. These computed rates will include all

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operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than $1,000 will be considered small tools.

3) There shall be no payment for idle or standby equipment.

4) For equipment use periods in excess of 8 hours, costs shall be calculated on the daily rate, for equipment use periods in excess of five (5) days, costs shall be calculated on the weekly rate, and for equipment use periods in excess of 4 weeks, costs shall be calculated at the monthly rate.

5) The current values of the Rental Rate Blue Book will be used in establishing equipment rates. The version applicable to specific extra work or force account work will be the version in effect as of the first day of work is performed and that rate shall apply throughout the period the extra work or force account work is being performed

SC-11.01.A.5 Delete Paragraph i, and replace with:

i. The costs for additional premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain that are documented.

SC-11.01.B *Costs Excluded*

SC-11.01.B.1 after the word “clerks” in the first sentence, add “claims consultants, general foremen, superintendents”

SC-11.01.B Add the following paragraphs

6. Costs associated with small tools and hand tools not consumed in the work.

7. Costs associated with vehicles of the superintendents, foremen and other administrative and/or supervisory personnel.

8. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, attorneys and accountants) employed for services specifically related to the Work.

9. 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. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor’s fee.

SC-11.01.D Documentation

SC-11.01.D Delete Paragraph D and replace with:

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 detailed records thereof in accordance with generally accepted

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accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data and sworn written certification reasonable to the Owner regarding the accuracy of the submitted cost. Owner and Engineer have the right to audit and review all Contractor records regarding Claims and credits submitted.

SC-11.02 *Allowances* Delete 11.02 in its entirety.

SC-11.03 *Unit Price Work*

SC-11.03.D. Delete Paragraph 11.03.D in its entirety and insert the following in its place:

D. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:

1. if the Bid price of a particular item of Unit Price Work amounts to 30 percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

2. if there is no corresponding adjustment with respect to any other item of Work; and

3. if Contractor believes that Contractor has incurred additional expense as a result thereof; or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

4. Adjusted unit prices, if any, shall be applied as follows:

a. Quantity Overruns: Applied only to the difference between the total quantity of completed Work and the calculated quantity of Work at the variation limit for a particular item of Unit Price Work.

b. Quantity Underruns: The difference between the adjusted unit price and the original unit price (stated in the Agreement) shall be applied to the total quantity of completed Work for a particular item of Unit Price Work.

SC-11.03 Add the following after Paragraph 11.03.D.

E. Price adjustments for fuel, both diesel and gasoline; liquid asphalt; and Portland cement contained in cast-in-place concrete shall be made as outlined in Article 6.04 of the Agreement.

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

SC-12.01 *Change of Contract Price*

SC-12.01.C.1 Delete paragraph 12.01.C.1 in its entirety.

SC-12.01.C.2 Delete paragraph 12.01.C.2 in its entirety and replace with:

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12.01.C.2 The fee shall be based on the following percentages of the various portions of the Cost of 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, materialmen, vendors of manufacturer's, or any of their respective personnel are on the basis of Cost of the Work plus a fee, 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 not to exceed five percent of the amount paid to the next lower tier Subcontractor. Regardless of the number of affected subcontractor tiers, 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 costs incurred by the Subcontractor that actually performs the work;

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.

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

(No Amendments to General Conditions.)

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.01 *Schedule of Values*

SC-14.01.A. Replace the phrase "form of Application for Payment acceptable to Engineer" in the first sentence with the phrase "form of Application for Payment furnished by Engineer."

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SC-14.02 *Progress Payment*

SC-14.02.A *Applications for Payments:*

SC-14.02.A. Add the following to the end of Subparagraph 14.02.A.1 of the General Conditions:

By signing the Application and Certificate for Payment, Contractor certifies that all items, units, quantities, and prices of Work and material in the estimate are correct, that all claimed Work has been performed and materials supplied in full accordance with the Contract Documents, and that Contractor has no claims for damages, losses or expense against Owner for compensation in addition to that provided for in the application except such claims for change of Contract Price as Contractor has filed with Engineer and Owner in writing (in accordance with Article 10) prior to the date of his certifying the application.

SC-14.02.A Add the following after paragraph 14,02.A.3

4. Contractor shall submit a claim and lien release with each application for payment in a form acceptable to Owner and Engineer.

5. All applications for payment and all payments shall be in accordance with applicable Laws and Regulations.

SC-14.02.B *Review of Applications:*

SC-14.02.B. Add the following subparagraph after subparagraph 14.02.B.5.d of the General Conditions:

e. because of Contractor's failure to submit certifications, affidavits, schedules, or other written information when and as required in the Contract Documents, or Contractor's failure to make submittals in accordance with the Schedule of Submittals; or

f. Contractor has failed to comply with the Contract Documents.

SC-14.02.C. *Payment Becomes Due:*

Delete 14.02.C *Payments Become Due* in its entirety, and replace with the following

C. *Progress Payments to the Contractor:*

1. The Owner will make payments in accordance with the following provisions, pursuant to Section 39G of Chapter 30 of the Massachusetts General Laws:

a. Upon substantial completion of the Work required by a contract with the Commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and, water mains, airports and other public works, the Contractor shall present in writing to the Owner its certification that the Work has been substantially completed. Within twenty-one days thereafter, the Owner shall present to the Contractor either a written declaration that the Work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the Contract sufficient to demonstrate that the Work has not been substantially completed. The Owner may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the Contractor must achieve

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Substantial Completion of the Work. In the event that the Owner fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the Contractor's certification within the twenty-one day period, the Contractor's certification shall take effect as the Owner's declaration that the Work has been substantially completed.

b. Within sixty-five days after the effective date of a declaration of a substantial completion, the Owner shall prepare and forthwith send to the Contractor for acceptance a substantial completion estimate for the quantity and price of the Work done and all but one per cent retainage on that Work, including the quantity, price and all but one percent retainage for the undisputed part of each Work item and extra Work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the Work. The Owner also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by Subcontractors and not yet paid to Subcontractors or deposited in joint accounts pursuant to Section 39F of Chapter 30 of the Massachusetts General Laws, but no contract subject to said Section 39F shall contain any other provision authorizing the Owner to deduct any amount by virtue of claims asserted against the Contract by Subcontractors, Suppliers or others.

c. If the Owner fails to prepare and send to the Contractor any substantial completion estimate required by Section 39G of Chapter 30 of the Massachusetts General Laws, on or before the date herein above set forth, the Owner shall pay to the Contractor interest on the amount which would have been due to the Contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the Owner sends that substantial completion estimate to the Contractor for acceptance or to the date of payment therefor, whichever occurs first. The Owner shall include the amount of such interest in the substantial completion estimate.

d. Within fifteen days after the effective date of the declaration of Substantial Completion, the Owner shall send to the Contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond its control, the Contractor shall complete all such work items within forty-five days after the receipt of such list or before the then contract completion date, whichever is later. If the Contractor fails to complete such work within such time, the Owner may, subsequent to seven days' written notice to the Contractor by certified mail, return receipt requested, terminate the Contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the Contractor.

e. Within thirty days after receipt by the Owner of a notice from the Contractor stating that all of the Work required by the Contract has been completed, the Owner shall prepare and forthwith send to the Contractor for acceptance a final estimate for the quantity and price of the Work done and all retainage on that Work less all payments made to date, unless the Owner's inspection shows that Work items required by the Contract remain incomplete or unsatisfactory, or that documentation required by the Contract has not been completed. If the Owner fails to prepare and send to the Contractor the final estimate within thirty days after receipt of notice of completion, the Owner shall pay to the Contractor interest on the amount which would have been due to the Contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the Owner sends the final estimate to the Contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the Owner's inspection shows that no Work items required by the Contract remain incomplete or unsatisfactory. Interest shall

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not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The Owner shall include the amount of the interest required to be paid hereunder in the final estimate.

f. The Owner shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the Contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the day of payment. Within 15 days after receipt from the Contractor, at the place designated by the Owner, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the Owner shall make a periodic payment to the Contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the Work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the Contractor has title or to which a Subcontractor has title and has authorized the Contractor to transfer title to the Owner, upon certification by the Contractor that it is the lawful owner and that the materials are free from all encumbrances. The Owner shall include with each such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the Owner may deduct from its payment a retention based on its estimate of the fair value of its claims against the Contractor, a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Section 39F of said Chapter 30, and a retention to secure satisfactory performance of the contractual Work not exceeding five percent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded Subcontractors entitled to direct payment under Section 39F of said Chapter 30; provided, that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

g. (g) No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar the Contractor from reserving all rights to dispute the quantity and amount of, or the failure of the Owner to approve a quantity and amount of, all or part of any Work item or extra Work item.

h. Substantial Completion, for the purposes of this Paragraph, shall mean either that the Work required by the Contract has been completed except for Work having a contract price of less than one per cent of the then adjusted total Contract Price, or substantially all of the Work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work required by the Contract. Substantial Completion shall be conclusively determined by the Owner after inspection of the Work.

2. The payment approved will be based on a determination that the Work indicated in the periodic estimate has progressed to the indicated point and is in accordance with the Contract Documents subject to evaluation upon Substantial Completion, to results of subsequent tests specified in the Contract Documents and to specific qualifications issued as part of the approval. The Owner may, within seven days after receipt, return to the Contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter.

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SC14.02.D.1. Delete subparagraph b in its entirety and replace with:

b. Contractor has not fulfilled its obligation under the contract.

Add the following after 14.02.D.

E. *Payments to Subcontractors:*

1. Pursuant to Section 39F of Chapter 30 of the Massachusetts General Laws, the following provisions (a) through (h) shall apply with respect to payment of Subcontractors:

a. Forthwith after the Contractor receives payment on account of a periodic estimate, the Contractor shall pay to each Subcontractor the amount paid for the labor performed and the materials furnished by that Subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

b. Not later than the sixty-fifth day after each Subcontractor substantially completes its Work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of Work, shall be due the Subcontractor; and the Owner shall pay that amount to the Contractor. The Contractor shall forthwith pay to the Subcontractor the full amount received from the Owner less any amount specified in any court Proceedings barring such payment and also less any amount claimed due from the Subcontractor by the Contractor.

c. Each payment made by the Owner to the Contractor pursuant to Clauses (a) and (b) of this Subparagraph for the labor performed and the materials furnished by a Subcontractor shall be made to the Contractor for the account of that Subcontractor; and the Owner shall take reasonable steps to compel the Contractor to make each such payment to each such Subcontractor. If the Owner has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the Contractor or which is to be included in a payment to the Contractor for payment to the Subcontractor as provided in Clauses (a) and (b), the Owner shall act upon the demand as provided in this Paragraph.

d. If, within seventy days after the Subcontractor has substantially completed the subcontract Work, the Subcontractor has not received from the Contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount retained by the Owner as the estimated cost of completing the incomplete and unsatisfactory items of work, the Subcontractor may demand direct payment of that balance from the Owner. The demand shall be by a sworn statement delivered to or sent by certified mail to the Owner, and a copy shall be delivered to or sent by certified mail to the Contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract Work shall be valid even if delivered or mailed prior to the seventieth day after the Subcontractor has substantially completed the subcontract Work. Within ten days after the Subcontractor has delivered or so mailed the demand to the Owner and delivered or so mailed a copy to the Contractor, the Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the Owner and a copy shall be delivered to or sent by certified mail to the Subcontractor at the same time.

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The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor and of the amount due for each claim made by the Contractor against the Subcontractor.

e. Within fifteen days after receipt of the demand by the Owner, but in no event prior to the seventieth day after substantial completion of the subcontract Work, the Owner shall make direct payment to the Subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount (i) retained by the Owner as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the Contractor in the sworn reply; provided, that the Owner shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by Clause (d). The Owner shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this Clause.

f. The Owner shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of Clause (e) in an interest-bearing joint account in the names of the Contractor and the Subcontractor in a bank in Massachusetts selected by the Owner or agreed upon by the Contractor and the Subcontractor and shall notify the Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.

g. All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to Clause (f) shall be made out of amounts payable to the Contractor at the time of receipt of a demand for direct payment from a Subcontractor and out of amounts which later become payable to the Contractor and in the order of receipt of such demands from Subcontractors. All direct payments shall discharge the obligation of the Owner to the Contractor to the extent of such payment.

h. The Owner shall deduct from payments to a Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to Clause (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the Contractor.

i. If the Subcontractor does not receive payment as provided in Subparagraph (a) or if the Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the Subcontractor may demand direct payment by following the procedure in Subparagraph (d) and the Contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the Contractor. Thereafter the Owner shall proceed as provided in Subparagraphs (e), (f), (g) and (h).

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2. "Subcontractor" as used in Paragraph 1014.02F shall mean a person approved by the Owner in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the Contractor.

3. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its Subcontractors in a manner similar to that provided in Clause 14.02.

4. Except as set forth in this Paragraph or as may be otherwise required by law, the Owner shall have no obligation to pay or to see to the payment of any moneys to any Subcontractor.

F *Payments Withheld*

5. If the Owner is unable to approve an application for payment as provided in Paragraph 1014.02C, it will notify the Contractor. If the Contractor and the Owner cannot agree on a revised amount, the Owner will issue a payment for the amount which it is able to approve. The Owner may also decline to make payment or, because of subsequently discovered evidence or subsequent observations, it may nullify the whole or any part of any payment previously issued, or, notwithstanding that the Owner has issued a payment, the Owner, in addition to and without limitation of any other rights and remedies of the Owner under the Contract Documents, may withhold payment of any amounts claimed to be due by the Contractor and paid by the Owner, in each case to such extent as may be necessary in order to provide for retention covering the fair value of the Owner's claims against the Contractor, which amounts may include, but shall not be limited to, the fair value of costs or losses arising from:

   a. defective Work not remedied,

   b. third party claims filed or reasonable evidence indicating probable filing of such claims,

   c. failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment,

   d. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price,

   e. damage to the Owner or another contractor,

   f. reasonable evidence that the Work will not be completed within the Contract Time,

   g. failure to carry out the Work in accordance with the Contract Documents or other default by the Contractor under, or failure of the Contractor to comply with any provisions of, the Contract Documents, or

   h. actual or anticipated claims for damages for delay.

   If and when the grounds set forth above are removed without cost to the Owner, payment may be requested and shall be made for amounts withheld because of such grounds.

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SC-14.04 *Substantial Completion*

SC-14.04 Delete 14.04 in its entirety and replace with the following:

SC-14.04 Substantial Completion

A. When the Contractor considers that the Work, or a portion thereof designated by the Owner in the Contract Documents, is substantially completed as defined in Paragraph 14.02c, the Contractor shall prepare and submit to the Owner three complete sets of all warranties and guarantees required by the Contract Documents, and a list of items to be completed or corrected in addition to the certification that the Work has been substantially completed as required by Paragraph 14.02.C. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Owner, on the basis of an inspection, determines that the Work or designated portion thereof is substantially complete, the Owner will then prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall include an itemized list of incomplete or unsatisfactory work items as required by Paragraph 14.02.C and shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance. The incomplete and unsatisfactory work items shall be completed within the time specified in Paragraph 14.02.C. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be signed by the Owner and the Contractor indicating their written acceptance of the responsibilities assigned to them in such Certificate.

B. Upon Substantial Completion of the Work or the occupancy or use by the Owner of the Work, or designated portion thereof, and upon application by the Contractor and certification by the Owner, payment will be made in accordance with Paragraph 14.02.C.

SC-14.05 *Partial Utilization*

SC-14.05.A.1 In the last sentence, delete the phrase “Paragraph 14.04.A through D” and replace with the phrase “Paragraph 14.04.A through B.”

SC-14.07 *Final Payment*

Delete 14.07 in its entirety and replace with the following:

SC-SC-14.07 Final Completion and Final Payment

A. Subject to the provisions of Paragraph 14.02.C, if applicable, upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final request for payment, the Owner will promptly make such inspection and, when it finds the Work acceptable under the Contract Documents and the Contract fully performed, it will promptly issue a final recommendation for payment stating that, based on its observations and inspections, the Work has been completed and that to its best knowledge, information and belief the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final recommendation, is due and payable. The Owner will not approve final payment until an inspection for final completion has been performed and the Work has been accepted.

B. Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or its property might in any way be

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responsible, have been paid or otherwise satisfied, (2) consent of the Contractor's surety to final payment and (3), if required by the Owner, other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers of Claims and liens arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify it against any such claim or lien. If any such claim or lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all moneys that the latter may be compelled to pay in discharging such claim or lien, including all costs and reasonable attorneys' fees.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

SC-15.01 *Owner May Suspend Work*

SC-15.01.A Delete the paragraph in its entirety and replace with:

A. At any time and without cause, Owner may suspend the Work or any portion thereof by notice in writing to Contractor and Engineer which may fix the date on which Work will be resumed. Contractor shall be granted an extension of the Contract Time only as its sole remedy or as otherwise permitted by applicable Massachusetts Law, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05 unless the suspension is due to the actions or inactions of the Contractor or anyone for whom Contractor is responsible.

SC-15.02 *Owner May Terminate for Cause*

Delete 15.02.F in its entirety and replace with the following.

F The Owner may also proceed under the provision of the Contractor’s provided performance and payment bonds and any Owner’s actions under the Contract Documents shall not relieve any surety obligations under such performance and payment bonds.

G. If it is ever determined that Owner improperly terminated Contractor for cause, the termination shall convert to termination for convenience as defined by these Contract Documents.

ARTICLE 16 - DISPUTE RESOLUTION

(No Amendments to General Conditions.)

ARTICLE 17 – MISCELLANEOUS

Add the following new paragraphs immediately after Paragraph 17.06:

SC-17.07 *Labor and Legal Requirements*

A. Contractor shall abide by all regulations and laws that relate to labor that may affect the Work of this Contract, including Federal Davis-Bacon and Massachusetts Prevailing Wage regulations.

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B. The latest Prevailing Wage Rate Schedules setting forth minimum wages and supplements for this area of the state, together with labor standard provisions and non-discrimination in employment provisions are appended to the Agreement.

C. The Contractor shall make provision for the disability benefits, unemployment insurance, and social security required by law.

D. The Contractor shall keep himself fully informed of all laws of the State (in which the Project is located) and of the United States of America, and of all municipal laws and ordinances in any manner affecting the Work of this Contract, and of all orders or decrees of any body or tribunal having any jurisdiction or authority in any manner affecting such Work, and shall be responsible for strict compliance therewith. If any clause of this Contract does not conform to any such law, such clause shall be void insofar as it conflicts with such law, and such law shall be operative in lieu thereof.

E. Each and every provision of law and clause required by law to be inserted in this Contract should be, is and is deemed to be inserted herein, and if through a mistake or otherwise any such provision is not inserted, or it is not correctly inserted, then upon the application of either party the Contract shall forthwith be amended physically to make such insertion.

F. If any provision herein shall be as to destroy the mutuality of this Contract or to render it invalid or illegal, then if such provision shall not appear to have been so material that without it the Contract would not have been made by the parties, it shall not be deemed to form part thereof but the balance of the Contract shall remain in full force and effect.

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APPENDIX A

CONTRACT SUPPLEMENT

STATUTORY PROVISIONS
FOR
MASSACHUSETTS PUBLIC CONSTRUCTION CONTRACTS
(Horizontal Construction)

CONTRACT SUPPLEMENT

STATUTORY PROVISIONS FOR MASSACHUSETTS PUBLIC CONSTRUCTION CONTRACTS

The following provisions are required by requirements of Massachusetts statutes governing public works construction contracts in the Commonwealth of Massachusetts. Any other provisions required by statute to be included herein shall be deemed to be so included, and are incorporated herein by reference as if set forth herein in full. In addition, the parties recognize that the other rights, duties and obligations with respect to public construction contracts are provided for by statute, notwithstanding the fact that they are not provided for in the Contract Documents. In the case of conflict between the provisions and the Contract Documents, the provisions of this Contract Supplement shall govern. In the case of conflict between the provisions of this Contract Supplement and the provisions of any applicable statute, the statutory provisions shall govern.

Chapter 29 – Section 29F

Chapter 30 – Section 38A

Chapter 30 - Section 39A

Chapter 30 - Section 39B

Chapter 30 - Section 39C

Chapter 30 - Section 39D

Chapter 30 - Section 39E

Chapter 30 - Section 39F

Chapter 30 - Section 39G

Chapter 30 - Section 39H

Chapter 30 - Section 39I

Chapter 30 - Section 39J

Chapter 30 - Section 39K

Chapter 30 - Section 39L

Chapter 30 - Section 39M, M½

Chapter 30 -Section 39N

Chapter 30 – Section 39O

Chapter 30 - Section 39P

Chapter 30 - Section 39R

Chapter 30 - Section 39S

Chapter 30 - Section 39T

Chapter 44 – Section31C

Chapter 62C – Section 49A

Chapter 82 - Section 40

Chapter 131 – Section 40

Chapter 149 - Section 26

Chapter 149 - Section 27

Chapter 149 - Section 27A

Chapter 149 - Section 27B

Chapter 149 - Section 27C

Chapter 149 - Section 27D

Chapter 149 - Section 34

Chapter 149 – Section 44

Chapter 149 - Section 44A, 44A½

Chapter 149 - Section 44J

Chapter 151 - Section 2

Section 29F. (a) As used in this section the following words shall, unless the context clearly requires otherwise, have the following meanings:—

"Affiliates", entities which are affiliates of each other when either 11 directly or indirectly one concern or individual controls or has the power to control another, or when a third party controls or has the power to control both.

"Commissioner", the commissioner of the division of capital asset management and maintenance or the commissioner's designee within such division.

"Contractor", any person that has furnished or seeks to furnish supplies or services under a contract with a public agency or with a person under a contract with a public agency.

"Debarment", an exclusion from public contracting or subcontracting for a reasonable, specified period of time commensurate with the seriousness of the offense.

"Person", any natural person, business, partnership, corporation, union, committee, club or other organization, entity or group of individuals.

"Public agency", a department, agency, board, commission, authority, activity or instrumentality of the commonwealth, or of any political subdivision of the commonwealth, or of 2 or more subdivisions of the commonwealth.

"Public contract", a contract for the furnishing of supplies or services to any public agency.

"Secretary", the head of an executive office established under chapter 6A or such head's designee within such executive office, or the secretary of administration and finance appointed under section 4 of chapter 7 or a designee within the executive office.

"Suspension", the temporary disqualification of a contractor who is suspected upon adequate evidence of engaging or having engaged in conduct which constitutes grounds for debarment.

(b) The secretary of administration and finance shall establish and maintain a consolidated list of contractors to whom public contracts shall not be awarded and from whom offers, bids or proposals shall not be solicited.

The list shall show at a minimum the following information: (1) the names of those persons debarred or suspended in alphabetical order with appropriate cross reference where more than one name is involved in a single debarment or suspension; (2) the basis of authority for each debarment or suspension, including the secretary or other official who imposed the debarment or suspension; (3) the extent of restrictions imposed; (4) the termination date of each debarment or suspension; and (5) in the case of a suspension, the hearing date, if and when set, for debarment proceedings.

The secretary of administration and finance shall cause the list to be kept current by the issuance of notices of additions and deletions. The list shall be published on a periodic basis, together with notices of additions to and deletions from the list, in the goods and services bulletin and the central register published by the state secretary and in such other publications as the

secretary of administration and finance shall designate. The secretary of administration and finance shall also forward said list to the inspector general, the attorney general and the state auditor. A secretary or the commissioner, as the case may be, upon imposing a debarment or suspension or removing a suspension shall forthwith notify the secretary of administration and finance of all information required for inclusion on such list.

(c) Debarment may be imposed for the following causes but debarment shall be imposed in all causes where debarment is required by law:

(1) conviction or final adjudication by a court or administrative agency of competent jurisdiction of any of the following offenses: (i) a criminal offense incident to obtaining or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract; (ii) a criminal offense involving embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or any other offense indicating a lack of business integrity or business honesty which seriously and directly affects the contractor's present responsibility as a public contractor; (iii) a violation of state or federal antitrust laws arising out of the submission of bids or proposals; (iv) a violation of state or federal laws regulating campaign contributions; (v) a violation of chapter 268A; (vi) a violation of any state or federal law regulating hours of labor, prevailing wages, minimum wages, overtime pay, equal pay, child labor, or worker's compensation; (vii) a violation of any state or federal law prohibiting discrimination in employment; or (viii) repeated or aggravated violation of any state or federal law regulating labor relations or occupational health or safety; or (ix) repeated or aggravated violation of any state or federal law protecting the environment; or (x) a violation of federal law prohibiting the employment of unauthorized aliens; or

(2) substantial evidence, as determined by a secretary or the commissioner, of any of the following acts: (i) willfully supplying materially false information incident to obtaining or attempting to obtain or performing any public contract or subcontract; (ii) willful failure to comply with record-keeping and accounting requirements prescribed by law or regulation; (iii) a record of failure to perform or of unsatisfactory performance under the terms of 1 or more public contracts, provided that such failure to perform or unsatisfactory performance has occurred within a reasonable period of time preceding the determination to debar and provided further that such failure to perform or unsatisfactory performance was not caused by factors beyond the contractor's control; (iv) a record of health and safety or environmental violations of a sufficient frequency and severity so as to evidence a pattern of noncompliance with existing state and federal laws, or any rules and regulations applicable thereto; (v) any other cause affecting the responsibility of a contractor which the secretary or the commissioner determines to be of such serious and compelling nature as to warrant debarment. Notwithstanding any other provision of this section, any contractor debarred or suspended by any agency of the United States shall by reason of such debarment or suspension be simultaneously debarred or suspended under this section, with respect to non-federally aided contracts; the secretary or the commissioner may determine in writing that special circumstances exist which justify contracting with the affected contractor. The secretary or the commissioner shall give written notice to the secretary of administration and finance of any such determination.

(d) No contractor may be suspended unless a secretary or the commissioner has first informed the contractor by written notice of the proposed suspension mailed by registered or certified mail to the contractor's last known address, except when the secretary or the commissioner determines that immediate suspension is necessary to prevent serious harm to the commonwealth, in

which case the suspension shall take effect immediately upon signing by the secretary or the commissioner of an order of suspension, and notice shall be mailed to the contractor at the earliest opportunity. The notice shall inform the contractor of the reasons for the proposed suspension and shall state that the contractor may within 14 days respond in writing and may in such response request a hearing. The secretary or the commissioner may extend the period for response at the request of the contractor. The secretary or the commissioner shall determine whether to impose the suspension or, in the case of an emergency suspension imposed prior to notice to the contractor, whether to continue the suspension after reviewing the contractor's response, if any, and making such investigation as the secretary or the commissioner determines is necessary and appropriate. An indictment, or any information or other filing by a public agency charging a criminal offense, for any of the offenses listed in paragraph (1) of subsection (c) shall constitute adequate evidence to support a suspension.

If the contractor requests a hearing, and the suspension is not based on an indictment, the secretary or the commissioner shall conduct a hearing according to the rules for the conduct of adjudicatory hearings established by the secretary of administration and finance under chapter 30A. Such hearing shall be initiated within 30 days of the imposition of the suspension, unless the contractor requests that the hearing be delayed. Officers and employees of the office of the inspector general and records of said office shall not be subject to subpoena for such hearing, if in the opinion of the inspector general production of records or testimony would prejudice any pending investigation by said office.

A suspension shall not exceed 12 months unless a pending administrative or judicial proceeding in which the contractor is a party may result in a conviction or final adjudication of an offense listed in paragraph (1) of subsection (c).

(e) No contractor may be debarred under this section unless a secretary or the commissioner proposing the debarment has first informed the contractor by written notice of the proposed debarment mailed by registered or certified mail to the contractor's last known address. The notice shall inform the contractor of the reasons for the debarment and shall state that the contractor will be afforded an opportunity for a hearing if the contractor so requests within 14 days of receipt of the notice. A hearing requested under this subsection shall be conducted by the secretary or the commissioner within 60 days of receipt of the request, unless the secretary or the commissioner grants additional time for the hearing at the request of the contractor. The hearing shall be conducted according to the rules for the conduct of adjudicatory hearings established by the secretary of administration and finance under chapter 30A. A debarment shall not be imposed until (i) 14 days after receipt by the contractor of notice of the proposed debarment if no hearing is requested, or (ii) the issuance of a written decision by the secretary or the commissioner which makes specific findings that there is sufficient evidence to support the debarment and that debarment for the period specified in the decision is required to protect the integrity of the public contracting process. A contractor shall be notified forthwith of the decision by registered or certified mail, and of the contractor's right to judicial review in the event that the decision is adverse to the contractor. If a suspension precedes a debarment, the suspension period shall be considered in determining the debarment period.

(f) A debarment or suspension may include all known affiliates of a contractor. The decision to include a known affiliate within the scope of a debarment or suspension shall be made on a case-by-case basis, after giving due regard to all relevant facts and circumstances. The offense or act of an individual justifying suspension, or the evidence justifying a suspension, may

be imputed to the entity with which the individual is connected when such offense or act occurred in connection with the individual's performance of duties for or on behalf of the entity or with the knowledge, approval, or acquiescence of the entity or 1 or more of its principals. The entity's acceptance of the benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence. The offense or act of an entity justifying debarment, or the evidence justifying a suspension, may be imputed to any officer, director, shareholder, partner, employee or other individual associated with the entity who participated in, knew of, or had reason to know of the entity's act. An entity or individual shall not be suspended or debarred except under the procedures in this section, provided that a public agency may reject a bid or proposal from any contractor when the public agency reasonably determines that such contractor is not responsible or eligible.

(g) In determining whether to debar a contractor, or the period of a debarment, all mitigating facts and circumstances shall be taken into consideration. Except as precluded by law, a debarment may be removed or the period of debarment may be reduced by the secretary or the commissioner who imposed the debarment or suspension upon the submission of an application supported by documentary evidence setting forth appropriate grounds for the granting of relief, such as newly discovered material evidence, reversal of a judgment or conviction, bona fide change of ownership or management or the elimination of the cause for which the debarment was imposed.

(h) During the period for which a person has been debarred or suspended, that person shall not submit or cause to be submitted offers, bids or proposals to any public agency, nor shall any public agency solicit or consider offers, bids or proposals from, nor execute, renew or extend any contract with, a debarred or suspended contractor and a contractor shall not contract for supplies or services from a debarred or suspended subcontractor on any public contract.

(i) The secretary of administration and finance shall by regulation drawn up in consultation with each secretary and the commissioner provide for, upon the request of any secretary or the commissioner the timely commencement by, the removal to, or consolidation at the executive office for administration and finance of debarment or suspension proceedings. Such regulations also shall provide that the contractor against whom debarment or suspension proceedings have been initiated may apply to the secretary of administration and finance for consolidation of such proceedings at the executive office for administration and finance. Such proceedings shall be conducted by the secretary of administration and finance or the secretary's designee under this section.

Part I ADMINISTRATION OF THE GOVERNMENT

Title III LAWS RELATING TO STATE OFFICERS

Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 38A PRICE ADJUSTMENT CLAUSE IN CONTRACTS FOR ROAD, BRIDGE, WATER AND SEWER PROJECTS AWARDED UNDER SEC. 39M

Section 38A. Contracts for road and bridge projects awarded as a result of a proposal or invitation for bids under section 39M shall include a price adjustment clause for each of the following materials: fuel, both diesel and gasoline; asphalt; concrete; and steel. Contracts for water and sewer projects awarded as a result of a proposal or invitation for bids under said section 39M shall include a price adjustment clause for fuel, both diesel and gasoline; liquid asphalt; and portland cement contained in cast-in-place concrete. A base price for each material shall be set by the awarding authority or agency and shall be included in the bid documents at the time the project is advertised. The awarding authority or agency shall also identify in the bid documents the price index to be used for each material. The price adjustment clause shall provide for a contract adjustment to be made on a monthly basis when the monthly cost change exceeds plus or minus 5 per cent.

Section 39A. Officers or agents executing a contract in behalf of the commonwealth or any agency thereof, or in behalf of any political subdivision thereof, for the construction, repair, alteration or improvement of public ways, airports or similar public works, wherein it is contemplated that dump trucks will be hired from common or contract carriers for use in the prosecution of such contract or for the delivery of materials to be incorporated in such work, shall obtain from the general or prime contractor, in addition to the security required by section thirty-nine, sufficient security for payment of all such rental or transportation charges for the hire or use of such dump trucks upon such contract, whether such charges are incurred by the contractor, subcontractor or suppliers or transporters of materials to be incorporated in the work.

Such security for payment of transportation charges shall be incorporated by appropriate reference thereto as an additional obligation or condition in the general bond required by section thirty-nine.

If required by the general or prime contractor, any subcontractor or supplier of materials who rents dump trucks from common or contract carriers in the prosecution of his work or for the transportation or delivery of materials to be incorporated in the work shall furnish to the general contractor a payment bond written by a surety company as security for payment of all such rental and transportation charges which he may incur on such contract and to indemnify and save harmless the general contractor from such liability.

In order to obtain the benefit of such security, the claimant shall file with the contracting officer or agency a sworn statement of his claim within sixty days after the transportation has been furnished or provided, and shall within one year after the filing of such claim, file a petition in the superior court for the proper county to enforce his claim or intervene in a petition already filed; and the provisions of chapter two hundred and fifty-eight shall apply to such petition; provided, that, notwithstanding the foregoing, in case a petition has been duly filed hereunder, any other person who has duly filed a claim solely for transportation furnished or provided in connection with a certain public works project, may obtain his rights in the following manner: the court, before making final disposition of such petition, shall examine all claims which may arise under this section and which have been duly filed in accordance herewith; may determine the respective amounts due such claimants and their rights to participate in the security and apply the security to the claimants held entitled thereto; and the court shall have the power and authority to compel the attendance of any official, with whom such claim may be on file, with such claims. The court may require such officials to furnish for the use of the court copies of any such claim as may be on file. Any claimant whose claim has been duly filed shall have the right to appear at any hearings on any petition without formally intervening by any pleadings, and may object, except or appeal from any ruling or decision adversely affecting his claim to the same extent and in the same manner as though he had intervened by formal pleadings.

A general or prime contractor against whom final judgment has been entered as a result of claims arising out of transportation charges incurred by a sub-contractor or materials supplier on any such contract may file a petition in the superior court for the proper county to enforce his claim for reimbursement from such sub-contractor or materials supplier within one year after the date of final judgment.

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Title III LAWS RELATING TO STATE OFFICERS

Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 39B CONSTRUCTION CONTRACTS FOR PUBLIC WAYS, AIRPORTS OR PUBLIC WORKS; DUMP TRUCKS; SCHEDULE OF RATES; DISPUTES

Section 39B. Every contract entered into by the commonwealth or any agency thereof, or in behalf of any political subdivision thereof, for the construction, repair, alteration or improvement of public ways, airports or other public works of a similar nature wherein it is contemplated that dump trucks, so called, will be hired from common or contract carriers for use in the prosecution of such contract or for the delivery or transportation of materials to be incorporated in such work, shall contain provisions setting forth in detail all applicable rates and transportation charges prescribed by the department of telecommunications and energy with respect to such common carriers and contract carriers who engage in dump-truck operations.

"Transportation charges", as used herein, shall be defined as any charge prescribed or authorized by the department of telecommunications and energy to be paid to the owner of a dump truck who holds a certificate as a common carrier or a permit as a contract carrier whether such charge is based on an hourly rental basis, cubic yard per mile basis, ton per mile basis, or any other basis approved and authorized by said department of telecommunications and energy which is applicable to any such contract.

On contracts where payment of transportation charges is being made on a cubic yard-mileage or ton-mileage basis, if any dispute shall arise between a common or contract carrier and a contractor, sub-contractor or materials supplier as to the proper mileage or carrying capacity of any vehicle on which payment is based, such dispute may be referred by either party to the contracting officer or agency of the commonwealth, or in behalf of any political subdivision thereof, for decision. In such cases the contracting office or agency shall cause the mileage from the loading point or source of supply to the nearest point of delivery on said contract to be computed, or shall cause the carrying capacity of such vehicle to be measured and determined. Such determination of facts shall be conclusive and binding upon both parties and shall be used as the basis for payment to all carriers in accordance with rates prescribed by the department of telecommunications and energy for the mileage and carrying capacity of each vehicle as determined.

Section 39C. In any action or claim instituted under section thirty-nine A, it shall be no defense that any common carrier or contract carrier, who has furnished or provided transportation on any such contract, agreed to accept less than the minimum rates and charges prescribed by the department of telecommunications and energy or that such carrier voluntarily made rebates or refunds. In any such action any common carrier or contract carrier shall be entitled to recover the established minimum rates even though the original invoices were presented incorrectly because of the use of threats, intimidation or coercion of any kind.

Section 39D. Nothing contained in section thirty-nine A shall be construed as limiting the authority of an officer or agent of the commonwealth, or in behalf of any political subdivision thereof, to require other performance or payment bonds whenever required or permitted by law.

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Title III LAWS RELATING TO STATE OFFICERS

Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 39E INDUCING REBATES OR REFUNDS OF TRANSPORTATION CHARGES; PENALTIES

Section 39E. Whoever, by force or the use of threats, intimidation or coercion of any kind, induces any common carrier or contract carrier or the person who has furnished or provided transportation on any contract for which a payment bond is required under section thirty-nine A to make a rebate or refund of any transportation charges or to give up any part of any payment to which he is legally entitled or to render an incorrect bill for less than the established minimum rates and charges prescribed by the department of telecommunications and energy shall be punished for a first offense by a fine of one thousand dollars, for a second offense by a fine of fifteen hundred dollars and for any subsequent offense by a fine of two thousand dollars.

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Title III LAWS RELATING TO STATE OFFICERS

Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 39F CONSTRUCTION CONTRACTS; ASSIGNMENT AND SUBROGATION; SUBCONTRACTOR DEFINED; ENFORCEMENT OF CLAIM FOR DIRECT PAYMENT; DEPOSIT, REDUCTION OF DISPUTED AMOUNTS

Section 39F. (1) Every contract awarded pursuant to sections forty-four A to L, inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract

and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor

and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g) and (h).

(2) Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of section twenty-nine of chapter one hundred forty-nine shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority or which are on deposit pursuant to subparagraph (f) of paragraph (1) shall be subordinate to the rights of all subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) "Subcontractor" as used in this section (i) for contracts awarded as provided in sections forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, (ii) for contracts awarded as provided in paragraph (a) of section thirty-nine M of chapter thirty shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, and (iii) for contracts with the commonwealth not awarded as provided in forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall also mean a person contracting with the general contractor to supply materials used or employed in a public works project for a price in excess of five thousand dollars.

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit.

No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1).

(5) In any petition to collect any claim for which a subcontractor has filed a demand for direct payment the court shall, upon motion of the general contractor, reduce by the amount of any deposit of a disputed amount by the awarding authority as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1) any amount held under a trustee writ or pursuant to a restraining order or injunction.

Section 39G. Upon substantial completion of the work required by a contract with the commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and, water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty-one day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

Within sixty-five days after the effective date of a declaration of a substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one per cent retainage, if held by the awarding authority, on that work, including the quantity, price and all but one per cent retainage, if held by the awarding authority, for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five days after the receipt of such list or before the then contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven days' written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage, if held by the awarding authority, on that work less all payments made to date, unless the awarding authority's inspection shows that work items required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the awarding authority's inspection shows that no work items required by the contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the date of payment. Within 15 days, 30 days in the case of the commonwealth, after receipt from the contractor, at the place designated by the awarding authority, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances. The awarding authority shall include with each such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five per cent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled

to direct payment under section thirty-nine F of chapter thirty; provided, that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one per cent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.

Section 39H. Every contract entered into by or on behalf of the commonwealth for the construction, reconstruction or alteration of a public way shall contain a provision whereby the commonwealth agrees to indemnify the contractor against loss by reason of the liability to pay damages to others for entry upon any land included within the boundaries of the area within which the work is to be performed as set forth in the construction contract and the plans and specifications applying to such contract or any approved alteration thereof or for damage sustained upon any lands adjoining said land by reason of the flowage or drainage of water thereto or therefrom, in any case wherein such damages result from the failure of the commonwealth to take an interest or easement in such adjoining area, provided that the commonwealth acting by an authorized representative thereof, has issued a notice in writing to the contractor prior to the making of an entry upon such premises directing or permitting him to proceed with his contract and to make such entry upon the premises for the purpose of performing the work required by said contract, or any approved alteration thereof, and provided, further, that the contractor has given notice in writing to the contracting authority within fifteen days after receiving notice of any claim to come in and settle the same and upon the commencement of any action against him to come in and defend said action, but in no event shall any such damage claim be compromised or adjusted without the written consent of the commonwealth. The provisions of this section shall in no way relieve the contractor from any liability for damage to property of others caused by his negligence or that of his employees nor shall they be construed to require the commonwealth to indemnify the contractor against any loss resulting from such acts of negligence.

Section 39I. Every contractor having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No wilful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating: (1) If such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor; (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the contracting authority.

Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.

Whoever violates any provision of this section wilfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both.

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Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 39J PUBLIC CONSTRUCTION CONTRACTS; EFFECT OF DECISIONS OF CONTRACTING BODY OR ADMINISTRATIVE BOARD

Section 39J. Notwithstanding any contrary provision of any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount of the contract is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, a decision, by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily is unsupported by substantial evidence, or is based upon error of law.

Section 39K. Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph:— Within fifteen days (30 days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate than charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Notwithstanding the provisions of this section, at any time after the value of the work remaining to be done is, in the estimation of the awarding authority, less than 1 per cent of the adjusted contract price, or the awarding authority has determined that the contractor has substantially completed the work and the awarding authority has taken possession for occupancy, the awarding authority may send to the general contractor by certified mail, return receipt requested, a complete and final list of all incomplete and unsatisfactory work items, including, for each item on the list, a good faith estimate of the fair and reasonable cost of completing such item. The general contractor shall then complete all such work items within 30 days of receipt of such list or before the contract completion date, whichever is later. If the general contractor fails to complete all incomplete and unsatisfactory work items within 45 days after receipt of such items furnished by the awarding authority or before the contract completion date, whichever is later, subsequent to an additional 14 days' written notice to the general contractor by certified mail, return receipt requested, the awarding authority may terminate the contract and complete the incomplete and unsatisfactory work items and charge the cost of same to the general contractor and such termination shall be without prejudice to any other rights or remedies the awarding authority may have under the contract. The awarding authority shall note any such termination in the evaluation form to be filed by the awarding authority pursuant to the provisions of section 44D of chapter 149.

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Section 39L PUBLIC CONSTRUCTION WORK BY FOREIGN CORPORATIONS; RESTRICTIONS AND REPORTS

Section 39L. The commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, requests proposals, bids or sub-bids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for the work with, and shall not approve as a subcontractor furnishing labor and materials for a part of the work, a foreign corporation which has not filed with the awarding authority a certificate of the state secretary stating that the corporation has complied with requirements of section 15.03 of subdivision A of Part 15 of chapter 156D and the date of compliance, and further has filed all annual reports required by section 16.22 of subdivision B of Part 16 of said chapter 156D, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and any person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the commonwealth.

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Section 39M CONTRACTS FOR CONSTRUCTION AND MATERIALS; MANNER OF AWARDING

Section 39M. (a) Every contract for the construction, reconstruction, alteration, remodeling or repair of any public work, or for the purchase of any material, as hereinafter defined, by the commonwealth, or political subdivision thereof, or by any county, city, town, district or housing authority that is and estimated by the awarding authority to cost less than $10,000 dollars shall be obtained through the exercise of sound business practices as defined in section 2 of chapter 30B. The awarding authority shall make and keep a record of each procurement that, at a minimum, shall include the name and address of the person from whom the services were procured. An awarding authority that utilizes a vendor on a statewide contract procured through the operational services division, or a blanket contract procured by the awarding authority pursuant to this section, shall be deemed to have obtained the contract through sound business practices.

Every contract for the construction, reconstruction, alteration, remodeling or repair of any public work, or for the purchase of any material, as hereinafter defined, by the commonwealth, or political subdivision thereof, or by any county, city, town, district or housing authority that is estimated by the awarding authority to cost not less than $10,000 but not more than $50,000 shall be awarded to the responsible bidder offering to perform the contract at the lowest price. The awarding authority shall make public notification of the contract and shall seek written responses from no fewer than 3 persons who customarily perform such work. For purposes of this subsection, the term "public notification" shall include, but need not be limited to, posting, at least 2 weeks before the time specified in the notification for the receipt of responses, the contract and scope-of-work statement: (1) on the website of the awarding authority, (2) on the COMMBUYS system administered by the operational services division, (3) in the central register published pursuant to section 20A of chapter 9 and (4) in a conspicuous place in or near the primary office of the awarding authority; provided, however, that if the awarding authority obtains a minimum of 2 written responses from a vendor list established through a blanket contract or a statewide contract procured through the operational services division, and the lowest of those written responses is deemed acceptable to the awarding authority, public notification is not required. The solicitation shall include a scope-of-work statement that defines the work to be performed and provides potential responders with sufficient information regarding the objectives and requirements of the awarding authority and the time period within which the work shall be completed. The awarding authority shall record the names and addresses of all persons from whom written responses were sought, the names of the persons submitting written responses and the date and amount of each written response.

An awarding authority may utilize a vendor list established through a statewide contract procured through the operational services division to identify 1 or more of the persons from whom it will seek written responses for purposes of this subsection. An awarding authority may also procure a blanket contract to establish a listing of vendors in certain defined categories

of work that are under contract to provide services for multiple individual tasks of not more than $50,000 each, and from whom written responses will be sought. Any such blanket contract procured by the awarding authority shall be procured pursuant to this section or sections 44A to 44J, inclusive, of chapter 149 which are applicable to projects over $50,000.

Every contract for the construction, reconstruction, alteration, remodeling or repair of any public work, or for the purchase of any material, as hereinafter defined, by the commonwealth, or political subdivision thereof, or by any county, city, town, district or housing authority that is estimated by the awarding authority to cost more than $50,000, and every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, as defined by subsection (1) of section 44A of chapter 149, estimated to cost more than $50,000 but not more than $150,000, shall be awarded to the lowest eligible responsible bidder on the basis of competitive bids publicly opened and read by the awarding authority forthwith upon expiration of the time for the filing thereof; provided, however, that such awarding authority may reject any and all bids, if it is in the public interest to do so. Every bid for such contract shall be accompanied by a bid deposit in the form of: (1) a bid bond, (2) cash, or (3) a certified check on, or a treasurer's or cashier's check issued by, a responsible bank or trust company, payable to the awarding authority. The amount of the bid deposit shall be 5 per cent of the value of the bid. Any person submitting a bid pursuant to this section shall, on such bid, certify as follows:

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

(Name of person signing bid)

(Company)

This subsection shall not apply to the award of any contract subject to the provisions of sections 44A to 44J, inclusive, of chapter 149 and every such contract shall continue to be awarded as provided therein. In cases of extreme emergency: (1) caused by enemy attack, sabotage or other such hostile actions or (2) resulting from an imminent security threat explosion, fire, flood, earthquake, hurricane, tornado or other such catastrophe, an awarding authority may, without competitive bids and notwithstanding any general or special law, award contracts otherwise subject to this subsection to perform work and to purchase or rent materials and equipment, all as may be necessary for temporary repair and restoration to service of any and all public work in order to preserve the health and safety of persons or property; provided, that this exception shall not apply to any permanent reconstruction, alteration, remodeling or repair of any public work.

(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full competition for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the item so named or described if, in the opinion of the awarding authority: (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least

equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said name or described materials.

(c) The term "lowest responsible and eligible bidder" shall mean the bidder: (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; (4) who, where the provisions of section 8B of chapter 29 apply, shall have been determined to be qualified thereunder; and (5) who obtains within 10 days of the notification of contract award the security by bond required under section 29 of chapter 149; provided that for the purposes of this section the term "security by bond" shall mean the bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority; provided further, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

(d) The provisions of this section shall not apply (1) to the extent that they prevent the approval of such specifications by any contributing federal agency, (2) to materials purchased under specifications of the state department of highways at prices established by the said department pursuant to advertisement and bidding in connection with work to be performed under the provisions of chapter eighty-one or chapter ninety, (3) to any transaction between the commonwealth and any of its political subdivisions or between the commonwealth and any public service corporation, and (4) to any contract of not more than $50,000 awarded by a governmental body, as defined by section two of chapter thirty B, in accordance with the provisions of section five of said chapter thirty B; and (5) to any contract solely for the purchase of material awarded by a governmental body, as defined by section 2 of chapter 30B, in accordance with section 5 of said chapter 30B, or procured through the operational services division pursuant to sections 22 and 52 of chapter 7.

(e) The word "material" as used in this section shall mean and include any article, assembly, system, or any component part thereof.

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Section 39M1/2 PROJECT OVERSIGHT; OWNER'S REPRESENTATIVE; QUALIFICATIONS; PROCUREMENT; POWERS AND DUTIES

Section 39M1/2. (a) The following words shall have the following meanings unless the context clearly requires otherwise:

"Certified estimate of cost", a good-faith estimate based on the best available information and made by the most senior official in the agency responsible for the contract, accounting for all expenses which could be reasonably foreseen including, but not limited to, those involving design, construction, management, acquisition and disposition of rights of way and contingency costs.

"Cost-plus basis", a form of compensation in which a premium is added to the actual cost of service to determine a total amount to be paid.

"Major contract", a contract by which the commonwealth or any of its public agencies or authorities is to procure the construction, repair or rehabilitation of a publicly-owned highway, railway, bridge, tunnel, building platform or any component thereof and for which the certified estimate of cost exceeds $50,000,000, or a contract or lease by which the commonwealth or any of its public agencies or authorities is to procure, directly or indirectly, the construction, repair or rehabilitation of a privately-owned, publicly-used highway, railway, bridge, tunnel, building platform or any component thereof.

"Oversight cost estimate", an estimate developed by the commonwealth or any agency thereof, prior to the engagement of an owner's representative, of the anticipated total cost of the services of that representative. "Owner's representative", an individual registered by the commonwealth as a professional engineer, who has not less than 5 years of experience in the construction and supervision of construction of the type which is the subject of the pertinent major contract in nature, scope and complexity.

"Owner's representative" shall mean an individual registered by the commonwealth as a professional engineer, who has not less than 5 years of experience in the construction and supervision of construction of the type which is the subject of the pertinent major contract in nature, scope and complexity.

(b) The commonwealth or any agency or authority thereof shall engage and maintain an owner's representative to provide professional project oversight with regard to any major contract. Such representative shall be an individual employed by a corporation, partnership, sole proprietorship, joint stock company, joint venture or other entity engaged in the practice of providing project management services for public construction of the nature, scope and complexity which is the subject of the contract. A public agency may designate an existing employee as owner's representative subject to the conditions set forth in subsection (c).

(c) An existing employee of a public agency may act as its owner's representative if the following conditions are met:

(1) the employee meets or exceeds the qualifications set forth in subsection (b);

(2) the employee has suitable experience in the construction and supervision of projects of the nature, scope and complexity of the relevant major contract; and

(3) The employee and his employer have entered into a memorandum of understanding, contract or other comparable document establishing the independence of the employee as being equal to that of an owner's representative contracted from the private sector;

(d) An owner's representative shall certify in writing, under the pains and penalties of perjury, that his sole responsibility shall be to the commonwealth and the agency which has retained his services. The independent owner's representative shall be wholly independent of the designer, general contractor or any subcontractor involved in the public works project and shall attest to the same in a sworn statement.

(e) An owner's representative shall be subject to chapter 268A.

(f) An owner's representative shall be selected and retained prior to the award of a major contract by any public agency; provided, however, that such agency shall select and procure the services of the owner's representative through a process which is documented in writing, incorporates the evaluation of qualifications and experience and is competitive in nature. The process shall utilize a system of written applications which shall be retained for inspection for a period of not less than 6 months following the selection of an owner's representative. The process shall also be promulgated in writing by the inspector general prior to the commencement of any hiring process pursuant to this section.

(g) Any major contract executed prior to the selection of an owner's representative shall be null and void as against public policy. Prior to the award of any major contract, the public agency seeking to award the contract shall certify in writing to the inspector general that an owner's representative has been selected.

(h) Any individual, organization or agency eligible to receive information from an owner's representative shall do so in a form and manner approved and promulgated by the inspector general. Upon receipt of such request, the owner's representative shall respond within 60 days. Such response shall contain the requested information, indicate why it is not available to the party requesting it or indicate a date certain when the information will be available and the date on which it will be provided. A party denied information pursuant to this section may appeal such denial to the inspector general.

(i) The owner's representative shall conduct a peer review of engineering elements on its projects.

(j) The owner's representative shall be the primary manager of cost recovery and value engineering on the project.

(k) The owner's representative shall enjoy unfettered access to project work sites, documents, and correspondence.

(l) The owner's representative shall file reports on the project, under oath, not later than December 31 of each year in which their contract is in effect, to the inspector general, to the secretary of transportation and public works, the house and senate chairs of the joint committee on transportation and to the state auditor.

(m) The inspector general shall promulgate regulations governing the operations and actions of owner's representatives which shall include, but not be limited to, sanctions for misfeasance, malfeasance and the failure to adhere to any contracts or agreements executed pursuant to this section.

(n) In no instance shall an awarding agency execute a contract that pays the independent owner's representative on a cost-plus basis. Awarding agencies shall establish an oversight cost estimate for the work of an owner's representative prior to the hiring of the owner's representative.

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Section 39N CONSTRUCTION CONTRACTS; EQUITABLE ADJUSTMENT IN CONTRACT PRICE FOR DIFFERING SUBSURFACE OR LATENT PHYSICAL CONDITIONS

Section 39N. Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.

Section 39O. Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim.

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Section 39P CONTRACTS FOR CONSTRUCTION AND MATERIALS; AWARDING AUTHORITY'S DECISIONS ON INTERPRETATION OF SPECIFICATIONS, ETC.; TIME LIMIT; NOTICE

Section 39P. Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made.

Section 39Q. (1) Every contract awarded by any state agency as defined by section thirty-nine A of chapter seven for the construction, reconstruction, alteration, remodeling, repair or demolition of any capital facility as defined by the aforesaid section thirty-nine A shall contain the following subparagraphs (a) through (d) in their entirety:

(a) Disputes regarding changes in and interpretations of the terms or scope of the contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures, which shall constitute the exclusive method for resolving such disputes. Written notice of the matter in dispute shall be submitted promptly by the claimant to the chief executive official of the state agency which awarded the contract or his designee. No person or business entity having a contract with a state agency shall delay, suspend, or curtail performance under that contract as a result of any dispute subject to this section. Any disputed order, decision or action by the agency or its authorized representative shall be fully performed or complied with pending resolution of the dispute.

(b) Within thirty days of submission of the dispute to the chief executive official of the state agency or his designee, he shall issue a written decision stating the reasons therefor, and shall notify the parties of their right of appeal under this section. If the official or his designee is unable to issue a decision within thirty days, he shall notify the parties to the dispute in writing of the reasons why a decision cannot be issued within thirty days and of the date by which the decision shall issue. Failure to issue a decision within the thirty-day period or within the additional time period specified in such written notice shall be deemed to constitute a denial of the claim and shall authorize resort to the appeal procedure described below. The decision of the chief executive official or his designee shall be final and conclusive unless an appeal is taken as provided below.

(c) Within twenty-one calendar days of the receipt of a written decision or of the failure to issue a decision as stated in the preceding subparagraph, any aggrieved party may file a notice of claim for an adjudicatory hearing with the division of hearing officers or the aggrieved party may file an action directly in a court of competent jurisdiction and shall serve copies thereof upon all other parties in the form and manner prescribed by the rules governing the conduct of adjudicatory proceedings of the division of hearing officers. In the event an aggrieved party exercises his option to file an action directly in court as provided in the previous sentence, the twenty-one day period shall not apply to such filing and the period of filing such action shall be the same period otherwise applicable for filing a civil action in superior court. The appeal shall be referred to a hearing officer experienced in construction law and shall be prosecuted in accordance with the formal rules of procedure for the conduct of adjudicatory hearings of the division of hearing officers, except as provided below. The hearing officer shall issue a final decision as expeditiously as possible, but in no event more than one hundred and twenty calendar days after conclusion of the adjudicatory hearing, unless the decision is delayed by a request for extension of time for

filing post-hearing briefs or other submissions assented to by all parties. Whenever, because an extension of time has been granted, the hearing officer is unable to issue a decision within one hundred and twenty days, he shall notify all parties of the reasons for the delay and the date when the decision will issue. Failure to issue a decision within the one hundred and twenty-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

(d) When the amount in dispute is less than ten thousand dollars, a contractor who is party to the dispute may elect to submit the appeal to a hearing officer experienced in construction law for expedited hearing in accordance with the informal rules of practice and procedure of the division of hearing officers. An expedited hearing under this subparagraph shall be available at the sole option of the contractor. The hearing officer shall issue a decision no later than sixty days following the conclusion of any hearing conducted pursuant to this subparagraph. The hearing officer's decision shall be final and conclusive, and shall not be set aside except in cases of fraud.

(2) The commissioner of administration shall require the division of hearings officers to prepare annually a report concerning the construction contract claims submitted to the division during the preceding twelve months, in such form as the commissioner shall prescribe. The report shall contain, at a minimum, the following information: the number of claims submitted; the names of all parties to each such claim; a brief description of the claim; the date of submission and of disposition of the claim; its disposition, whether by settlement, withdrawal, default or written decision; and the number of claims currently pending. The original of the report shall be submitted to the commissioner of administration by January fifteenth, and a copy shall be filed with the state librarian and shall be a public document.

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Section 39R KEEPING AND MAINTAINING OF BOOKS, RECORDS AND ACCOUNTS; STATEMENT OF MANAGEMENT ON INTERNAL ACCOUNTING CONTROL; FINANCIAL STATEMENTS; ENFORCEMENT

Section 39R. (a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

(2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.

(3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

(4) "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

(5) "Audit", when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a *certified* opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

(6) "Accountant's Report", when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has

fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

(7) "Management", when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.

(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

(2) until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and

(3) if the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description the date of the change and reasons therefor, and shall accompany said description with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and

(4) if the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) if the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and its subsidiaries reasonably assures that:

(1) transactions are executed in accordance with management's general and specific authorization;

(2) transactions are recorded as necessary

i. to permit preparation of financial statements in conformity with generally accepted accounting principles, and

ii. to maintain accountability for assets;

(3) access to assets is permitted only in accordance with management's general or specific authorization; and

(4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he has examined the statement of management on internal accounting controls, and expressing an opinion as to

(1) whether the representations of management in response to this paragraph and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

(2) whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.

(e) The office of inspector general, the commissioner of capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).

Section 39S. (a) As used in this section the word "person" shall mean any natural person, joint venture, partnership corporation or other business or legal entity. Any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the commonwealth, or political subdivision thereof, or by any county, city, town, district, or housing authority, and estimated by the awarding authority to cost more than $10,000, and any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, estimated to cost more than $10,000, shall certify on the bid, or contract, under penalties of perjury, as follows:

(1) that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding.

Part I ADMINISTRATION OF THE GOVERNMENT

Title III LAWS RELATING TO STATE OFFICERS

Chapter 30 GENERAL PROVISIONS RELATIVE TO STATE DEPARTMENTS, COMMISSIONS, OFFICERS AND EMPLOYEES

Section 39T CONTROLLED INSURANCE PROGRAM

Section 39T. Notwithstanding section 8 of chapter 268A, section 44F of chapter 149 or section 8 of chapter 149A, any agency of the commonwealth may, in the agency's discretion, implement a controlled insurance program on any single project or by pooling more than 1 project into a combined or rolling program, including, but not limited to: (i) the division of capital asset management and maintenance; (ii) the Massachusetts Department of Transportation or any division or authority thereof; (iii) the Massachusetts Port Authority; (iv) the Massachusetts Water Resources Authority; (v) the Massachusetts State College Building Authority; (vi) the University of Massachusetts Building Authority; and (vii) the Massachusetts Convention Center Authority. For the purposes of this section, a "controlled insurance program" means that the awarding authority bears the costs and benefits of 1 or more of the usual categories of insurance required for such a project or projects, including, but not limited to, general liability, completed operations, excess umbrella and workers' compensation insurance covering the awarding authority, the general contractor or construction manager at risk, the owner's project manager and all subcontractors performing work on site.

Part I ADMINISTRATION OF THE GOVERNMENT

Title VII CITIES, TOWNS AND DISTRICTS

Chapter 44 MUNICIPAL FINANCE

Section 31C CONSTRUCTION CONTRACTS; CERTIFICATE AS TO AVAILABILITY OF FUNDS; EFFECT OF CERTIFICATE UPON DEFENSE OF INSUFFICIENCY OF APPROPRIATIONS

Section 31C. No contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public work by any city or town costing more than two thousand dollars shall be deemed to have been made until the auditor or accountant or other officer of the city or town having similar duties has certified thereon that an appropriation in the amount of such contract is available therefor and that an officer or agent of the city, town or awarding authority has been authorized to execute said contract and approve all requisitions and change orders. No order to the contractor for a change in or addition to the work to be performed under a contract subject to this section, whether in the form of a drawing, plan, detail or any other written instruction, unless it is an order which the contractor is willing to perform without any increase in the contract price, shall be deemed to have been given until the auditor or accountant, or other officer of the city or town having similar duties, has certified thereon that an appropriation in the amount of such order is available therefor; but such certificate shall not be construed as an admission by the city or town of its liability to pay for such work. The certificate of the auditor or accountant or other officer of the city or town having similar duties, that an appropriation in the amount of such contract or order is available shall bar any defense by the city or town on the grounds of insufficient appropriation; and any law barring payment in excess of appropriations shall not apply to amounts covered by any certificate under this section.

Part I ADMINISTRATION OF THE GOVERNMENT

Title IX TAXATION

Chapter 62C ADMINISTRATIVE PROVISIONS RELATIVE TO STATE TAXATION

Section 49A CERTIFICATION OF COMPLIANCE WITH TAX LAWS AS PREREQUISITE TO OBTAINING LICENSE OR GOVERNMENTAL CONTRACT; CONFIRMATION OF GOOD TAX STANDING; IMPROPER REGISTRATION OF MOTOR VEHICLE IN ANOTHER STATE; MISREPRESENTATION ON DOCUMENTS FOR PURPOSE OF EVADING PAYMENT OF TAX; APPEAL AND HEARING

Section 49A. (a) A person applying to any department, board, commission, division, authority, district or other agency of the commonwealth or a subdivision of the commonwealth, including a city, town or district, for a right or license to conduct a profession, trade or business or for the renewal of the right or license, shall certify upon application, under penalties of perjury, that he has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.

(b) Upon receipt of the application, and once the commissioner has promulgated applicable regulations and implemented to his satisfaction the manner and method, including electronic data matching, by which verification may be obtained, the department or other entity charged with issuing the right or license shall confirm that the applicant is in good standing with respect to all returns due and taxes payable to the commissioner as of the date of issuance of the confirmation. An applicant shall be considered to have consented to the commissioner's release of tax and child support data to the department or other entity to the extent necessary to confirm the applicant's adherence to the tax and child support laws of the commonwealth. A right or license shall not be issued or renewed unless the issuer has confirmed the tax or child support status of the applicant as required herein; but, the commissioner may issue waivers of the requirements of this subsection for reasonable cause, and the existence of a non-frivolous appeal of a tax or child support assessment, or of a payment agreement with which the taxpayer is fully compliant shall not prevent issuance of the license.

No contract or other agreement for the purposes of providing goods, services or real estate space to any of the foregoing agencies shall be entered into, renewed or extended with any person unless the person certifies in writing, under penalties of perjury, that he has complied with all laws of the commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support and, subject to the conditions stated above, the contracting agency confirms with the commissioner that the person is in good standing with respect to all returns due and taxes payable to the commissioner as of the date of confirmation.

(c) Any such agency, which has been notified by the commissioner pursuant to section forty-seven A that a person who holds a license or certificate of authority issued by such agency or who has agreed to furnish goods, services or real estate space to such agency has neglected or refused to file any returns or to pay any tax required under this chapter and that such person has not filed in good faith a pending application for abatement of such tax or a pending petition before the appellate tax board contesting such tax or has been penalized pursuant to section 9 of chapter 62E for failure to comply with the provisions under said chapter 62E relating to reporting of employees and contractors, or has been penalized pursuant to paragraph (3) of subsection (f) of section 12 of chapter 119A for failure to comply with the provisions under

said chapter 119A relating to withholding and remitting child support, shall refuse to reissue, renew or extend such license, certificate of authority, contract or agreement until the agency receives a certificate issued by the commissioner that the person is in good standing with respect to any and all returns due and taxes payable to the commissioner as of the date of issuance of said certificate, including all returns and taxes referenced in the initial notification or, if the licensee has been penalized for failure to comply with the provisions relating to reporting of employees and contractors under chapter 62E or withholding and remitting child support under chapter 119A, a certificate issued by the commissioner that the licensee is in compliance with said provisions.

(d) Any person who owns or leases a motor vehicle or trailer that is required to be registered in the commonwealth under chapter 90 and improperly registers the motor vehicle or trailer in another state or misrepresents the place of garaging of the motor vehicle or trailer in another city or town, shall be considered in violation of laws of the commonwealth relating to taxes under chapter 60A, chapter 64H or chapter 64I. The right, license or contract provided for in subsections (a) and (b) shall not be issued or renewed until the person or business entity has paid all taxes due at the time of application for such right, license or contract.

(e) Any person who, for the purpose of evading payment of a tax pursuant to chapters 59 to 64J, inclusive, willfully makes and subscribes any return, form, statement or other document pursuant to subsection (a), (b) or (d) that contains or is verified by a written declaration that is made under the penalties of perjury, and that contains information that he does not believe to be true and correct as to every matter material to his compliance with all laws of the commonwealth relating to taxes, shall be subject to section 73.

(f) Where the revocation, suspension or nonrenewal of a license, permit, right to operate or certificate of motor vehicle registration is based upon nonpayment of an assessed tax administered under this chapter, the sole right of appeal and to a hearing shall be pursuant to and within the time limitations of this chapter. The commissioner shall give the taxpayer not less than 30 days notice of any proposed action, during which the taxpayer may enter into a payment agreement with the commissioner or file a good faith abatement application within the time periods determined under section 37. The filing of an abatement application shall stay the proposed revocation, suspension or nonrenewal of a license, permit, right to operate or certificate of motor vehicle registration until the amount of disputed tax due is finally determined. The taxpayer subject to a proposed revocation, suspension or nonrenewal of a license, permit, right to operate or certificate of motor vehicle registration, who is beyond the time limitations in said section 37 but who disputes that he is liable for the assessment and is unable to resolve that issue with the commissioner during the 30–day period, may appeal the proposed revocation, suspension or nonrenewal by filing a civil action as provided in section 14 of chapter 30A. The scope of the appeal shall be limited to assertions of mistake or verification of payments made and shall not include determination or redetermination of the proper amount of tax assessed or any other issues appropriately raised through a timely-filed abatement under said section 37. Any stay of the proposed revocation, suspension or nonrenewal pending resolution of this appeal shall be within the discretion of the court.

Section 40. The following words, as used in this section and sections 40A to 40E, inclusive, shall have the following meanings:—

"Company", natural gas pipeline company, petroleum or petroleum products pipeline company, public utility company, cable television company, and municipal utility company or department that supply gas, electricity, telephone, communication or cable television services or private water companies within the city or town where such excavation is to be made.

"Description of excavation location", such description shall include the name of the city or town, street, way, or route number where appropriate, the name of the streets at the nearest intersection to the excavation, the number of the buildings closest to the excavation or any other description, including landmarks, utility pole numbers or other information which will accurately define the location of the excavation.

"Emergency", a condition in which the safety of the public is in imminent danger, such as a threat to life or health or where immediate correction is required to maintain or restore essential public utility service.

"Excavation", an operation for the purpose of movement or removal of earth, rock or the materials in the ground including, but not limited to, digging, blasting, augering, backfilling, test boring, drilling, pile driving, grading, plowing in, hammering, pulling in, jacking in, trenching, tunneling and demolition of structures, excluding excavation by tools manipulated only by human power for gardening purposes and use of blasting for quarrying purposes.

"Excavator", any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body which performs excavation operations.

"Premark", to delineate the general scope of the excavation or boring on the paved surface of the ground using white paint, or stakes or other suitable white markings on nonpaved surfaces. No premarking shall be acceptable if such marks can reasonably interfere with traffic or pedestrian control or are misleading to the general public. Premarking shall not be required of any continuous excavation that is over 500 feet in length.

"Safety zone", a zone designated on the surface by the use of standard color-coded markings which contains the width of the facilities plus not more than 18 inches on each side.

"Standard color-coded markings", red - electric power lines, cables, conduit or light cables; yellow - gas, oil, street petroleum, or other gaseous materials; orange - communications cables or conduit, alarm or signal lines; blue - water, irrigation and slurry lines; green - sewer and drain lines; white - premark of proposed excavation.

"System", the underground plant damage prevention system as defined in section 76D of chapter 164.

Section 40. No person shall remove, fill, dredge or alter any bank, riverfront area, fresh water wetland, coastal wetland, beach, dune, flat, marsh, meadow or swamp bordering on the ocean or on any estuary, creek, river, stream, pond, or lake, or any land under said waters or any land subject to tidal action, coastal storm flowage, or flooding, other than in the course of maintaining, repairing or replacing, but not substantially changing or enlarging, an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, sewer, water, telephone, telegraph and other telecommunication services, without filing written notice of his intention to so remove, fill, dredge or alter, including such plans as may be necessary to describe such proposed activity and its effect on the environment and without receiving and complying with an order of conditions and provided all appeal periods have elapsed. Said notice shall be filed by delivery in hand to the conservation commission or its authorized representative or by certified mail, return receipt requested, to said commission, or, if none, to the board of selectmen in a town or the mayor of a city in which the proposed activity is to be located. Upon such filing, the receipt of such notice shall be acknowledged in writing on the face thereof and shall include the time and date so received. A person delivering said notice by hand shall be given a receipt in writing acknowledging the time and date of such filing. Copies of such notice shall be sent at the same time by certified mail to the department of environmental protection. To defray state and local administrative costs each person filing such a notice shall pay a filing fee, determined on a sliding scale basis by the commissioner of administration after consultation with the secretary of environmental affairs. Fifty percent of any filing fee in excess of twenty-five dollars shall be made payable to the department of environmental protection, in a manner to be determined by the commissioner of environmental protection, at the same time as the copies of the notice are sent to the department of environmental protection. The remainder of said fee shall be made payable to the city or town; provided, that said remainder shall be expended solely by the local conservation commission for the performance of its duties under this chapter and shall accompany the copy of the notice sent to the city or town. No such notice shall be sent before all permits, variances, and approvals required by local by-law with respect to the proposed activity, which are obtainable at the time of such notice, have been obtained, except that such notice may be sent, at the option of the applicant, after the filing of an application or applications for said permits, variances, and approvals; provided, that such notice shall include any information submitted in connection with such permits, variances, and approvals which is necessary to describe the effect of the proposed activity on the environment. Upon receipt of any notice hereunder the department of environmental protection, hereinafter called the department, shall designate a file number for such notice and shall send a notification of such number to the person giving notice to the conservation commission, selectmen or mayor to whom the notice was given. Said notification shall state the name of the owner of the land upon which the proposed work is to be done and the location of said land.

Any person filing a notice of intention with a conservation commission shall at the same time give written notification thereof, by delivery in hand or certified mail, return receipt requested, to all abutters within one-hundred feet of the property line of the land where the activity is proposed, at the mailing addresses shown on the most recent applicable tax list of the assessors, including, but not limited to, owners of land directly opposite said proposed activity on any public or private street or way, and in another municipality or across a body of water. When a notice of intent proposes activities on land under water bodies and waterways or on a tract of land greater than 50 acres, written notification shall be given to all abutters within 100 feet of the proposed project site. For the purposes of this section, "project site" shall mean lands where the following activities are proposed to take place: dredging, excavating, filling, grading, the erection, reconstruction or expansion of a building or structure, the driving of pilings, the construction or improvement of roads or other ways and the installation of drainage, sewerage and water systems, and "land under water bodies and waterways" shall mean the bottom of, or land under, the surface of the ocean or an estuary, creek, river stream, pond or lake. When a notice of intent proposes activity on a linear shaped project site longer than 1,000 feet in length, notification shall be given to all abutters within 1,000 feet of the proposed project site. If the linear project site takes place wholly within an easement through another person's land, notice shall also be given to the landowner. Said notification shall be at the applicant's expense, and shall state where copies of the notice of intention may be examined and obtained and where information regarding the date, time and place of the public hearing may be obtained. Proof of such notification, with a copy of the notice mailed or delivered, shall be filed with the conservation commission.

Within twenty-one days of the receipt by a conservation commission of a written request made by any person and sent by certified mail, said commission shall make a written determination as to whether this section is applicable to any land or work thereon. When such person is other than the owner, notice of any such determination shall also be sent to the owner.

The term "applicant" as used in this section shall mean the person giving notice of intention to remove, fill, dredge or alter.

The term "person" as used in this section shall include any individual, group of individuals, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or political subdivision thereof, administrative agency, public or quasipublic corporation or body, or any other legal entity or its legal representative, agents or assigns.

The term "bogs" as used in this section shall mean areas where standing or slowly running water is near or at the surface during a normal growing season and where a vegetational community has a significant portion of the ground or water surface covered with sphagnum moss (*Sphagnum*) and where the vegetational community is made up of a significant portion of one or more of, but not limited to nor necessarily including all, of the following plants or groups of plants: aster (*Aster nemoralis*), azaleas (*Rhododendron canadense* and *R. viscosum*), black spruce (*Picea mariana*), bog cotton (*Eriophorum*), cranberry (*Vaccinium macrocarpon*), high-bush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), laurels (*Kalmia angustifolia* and *K. polifolia*), leatherleaf (*Chamaedaphne calyculata*), orchids (*Arethusa, Calopogon, Pogonia*), pitcher plants (*Sarracenia purpurea*), sedges (*Cyperaceae*), sundews (*Droseraccae*), sweet gale (*Myrica gale*), white cedar (*Chamaecyparis thyoides*).

The term "coastal wetlands", as used in this section, shall mean any bank, marsh, swamp, meadow, flat or other lowland subject to tidal action or coastal storm flowage.

The term "freshwater wetlands", as used in this section, shall mean wet meadows, marshes, swamps, bogs, areas where groundwater, flowing or standing surface water or ice provide a significant part of the supporting substrate for a plant community for at least five months of the year; emergent and submergent plant communities in inland waters; that portion of any bank which touches any inland waters.

The term "swamps", as used in this section, shall mean areas where ground water is at or near the surface of the ground for a significant part of the growing season or where runoff water from surface drainage frequently collects above the soil surface, and where a significant part of the vegetational community is made up of, but not limited to nor necessarily include all of the following plants or groups of plants: alders (*Alnus*), ashes (*Fraxinus*), azaleas (*Rhododendron canadense* and *R. viscosum*), black alder (*Ilex verticillata*), black spruce (*Picea mariana*), button bush (*Cephalanthus occidentalis*), American or white elm (*Ulmus americana*), white Hellebore (*Veratrum viride*), hemlock (*Tsuga canadensis*), highbush blueberry (*Vaccinium corymbosum*), larch (*Larix laricina*), cowslip (*Caltha palustris*), poison sumac (*Toxicodendron vernix*), red maple (*Acer rubrum*), skunk cabbage (*Symplocarpus foetidus*), sphagnum mosses (*Sphagnum*), spicebush (*Lindera benzoin*), black gum tupelo (*Nyssa sylvatica*), sweet pepper bush (*Clethra alnifolia*), white cedar (*Chamaecyparis thyoides*), willow (*Salicaceae*).

The term "wet meadows", as used in this section where ground water is at the surface for a significant part of the growing season and near the surface throughout the year and where a significant part of the vegetational community is composed of various grasses, sedges and rushes; made up of, but not limited to nor necessarily including all, of the following plants or groups of plants: blue flag (*Iris*), vervain (*Verbena*), thoroughwort (*Eupatorium*), dock (*Rumex*), false loosestrife (*Ludwigia*), hydrophilic grasses (*Gramincae*), loosestrife (*Lythrum*), marsh fern (*Dryopteris thelypteris*), rushes (*Juncaceae*), sedges (*Cyperaceae*), sensitive fern (*Onoclea sensibilis*), smartweed (*Polygonum*).

The term "marshes", as used in this section, shall mean areas where a vegetational community exists in standing or running water during the growing season and where a significant part of the vegetational community is composed of, but not limited to nor necessarily including all, of the following plants or groups of plants: arums (*Araceae*), bladder worts (*Utricularia*), bur reeds (*Sparganiaceae*), button bush (*Cephalanthus occidentalis*), cattails (*Typha*), duck weeds (*Lemnaceae*), eelgrass (*Vallisneria*), frog bits (*Hydrocharitaceae*), horsetails (*Equisetaceae*), hydrophilic grasses (*Gramineae*), leatherleaf (*Chamaedaphne calyculata*), pickerel weeds (*Pontederiaceae*), pipeworts (*Eriocaulon*), pond weeds (*Potamogeton*), rushes (*Juncaceae*), sedges (*Cyperaceae*), smartweeds (*Polygonum*), sweet gale (*Myrica gale*) water milfoil (*Halcragaceae*), water lilies (*Nymphaeaceae*), water starworts (*Callitrichaceae*), water willow (*Decodon verticillatus*).

The term "Densely developed areas", as used in this section shall mean, any area of ten acres or more that is being utilized, or includes existing vacant structures or vacant lots formerly utilized as of January first, nineteen hundred and forty-four or sooner for, intensive industrial, commercial, institutional, or residential activities or combinations of such activities, including, but not limited to the following: manufacturing, fabricating, wholesaling, warehousing, or other commercial or industrial activities; retail trade and service activities; medical and educational institutions; residential dwelling structures at a density of three or more per two acres; and mixed or combined patterns of the above. Designation of a densely developed area is subject to the secretary of the executive office of environmental affair's

approval of a city or town's request for such designation. Land which is zoned for intensive use but is not being utilized for such use as of January first, nineteen hundred and ninety-seven or which has been subdivided no later than May first, nineteen hundred and ninety-six shall not be considered a densely developed area for the purposes of this chapter.

The term "Mean annual high-water line", as used in this section, shall mean with respect to a river, the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and which distinguishes between predominantly aquatic and predominantly terrestrial land. The mean high tide line shall serve as the mean annual high water line for tidal rivers.

The term "River", as used in this section, shall mean a natural flowing body of water that empties to any ocean, lake, or other river and which flows throughout the year.

The term "Riverfront area", as used in this section, shall mean that area of land situated between a river's mean annual high-water line and a parallel line located two hundred feet away, measured outward horizontally from the river's mean annual high-water line. This definition shall not create a buffer zone, so-called, beyond such riverfront area. Riverfront areas within municipalities with (i) a population of ninety thousand or more persons or (ii) a population density greater than nine thousand persons per square mile, as determined by the nineteen hundred and ninety federal census; (iii) that are within densely developed areas as defined herein; (iv) land in Waltham between the Charles river on the north, and the Crescent street and Pine street on the south, and the intersection of the Charles river and a line extended from the center line of Walnut street on the west, and the railroad right-of-way now or formerly of the Boston and Maine Railroad on the east; or (v) property located in the town of Milton shown on Milton assessors Map G, Block 56, Lot 13, located on 2 Granite Avenue shall be defined as that area of land situated between a river's mean annual high-water line and a parallel line located twenty-five feet away, measured outward horizontally, from the river's mean annual high-water line. The riverfront area shall not include land now or formerly associated with historic mill complexes including, but not limited to, the mill complexes in the Cities of Holyoke, Taunton, Fitchburg, Haverhill, Methuen and Medford in existence prior to nineteen hundred and forty-six and situated landward of the waterside facade of a retaining wall, building, sluiceway, or other structure existing on the effective date of this act. The riverfront area shall not apply to any mosquito control work done under the provisions of clause (36) of section five of chapter forty, of chapter two hundred and fifty-two or of any special act or to forest harvesting conducted in accordance with a cutting plan approved by the department of environmental management, under the provisions of sections forty to forty-six, inclusive, of chapter one hundred and thirty-two; and shall not include any area beyond one hundred feet of river's mean annual high water mark: in which maintenance of drainage and flooding systems of cranberry bogs occurs; in which agricultural land use or aquacultural use occur; to construction, expansion, repair, maintenance or other work on piers, docks, wharves, boat houses, coastal engineering structures, landings, and all other structures and activities subject to licensing or permitting under chapter ninety-one and its regulations; provided that such structures and activities shall remain subject to statutory and regulatory requirements under chapter ninety-one and section forty of chapter one hundred and thirty-one or is the site of any project authorized by special act prior to January first, nineteen hundred and seventy-three.

The term "Riverfront area boundary line", as used in this section, shall mean the line located at the outside edge of the riverfront area.

The conservation commission, selectmen or mayor receiving notice under this section shall hold a public hearing on the proposed activity within twenty-one days of the receipt of said notice. Notice of the time and place of said hearing shall be given by the hearing authority at the expense of the applicant, not less than five days prior to such hearing, by publication in a newspaper of general circulation in the city or town where the activity is proposed and by mailing a notice to the applicant and to the board of health and the planning board of said city or town. The conservation commission and its agents, officers and employees and the commissioner of environmental protection and his agents and employees, may enter upon privately owned land for the purpose of performing their duties under this section. No conditions shall be imposed, nor shall any determination be rendered by a conservation commission, in reference to this section, unless the conservation commission meets with a quorum present.

If after said hearing the conservation commission, selectmen or mayor, as the case may be, determine that the area on which the proposed work is to be done is significant to public or private water supply, to the groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, to protection of land containing shellfish, to the protection of wildlife habitat or to the protection of fisheries or to the protection of the riverfront area consistent with the following purposes: to protect the private or public water supply; to protect the ground water; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries, such conservation commission, board of selectmen or mayor shall by written order within twenty-one days of such hearing impose such conditions as will contribute to the protection of the interests described herein, and all work shall be done in accordance therewith. If the conservation commission, selectmen or mayor, as the case may be, make a determination that the proposed activity does not require the imposition of such conditions, the applicant shall be notified of such determination within twenty-one days after said hearing. Such order or notification shall be signed by the mayor or a majority of the conservation commission or board of selectmen, as the case may be, and a copy thereof shall be sent forthwith to the applicant and to the department.

If a conservation commission has failed to hold a hearing within the twenty-one day period as required, or if a commission, after holding such a hearing has failed within twenty-one days therefrom to issue an order, or if a commission, upon a written request by any person to determine whether this section is applicable to any work, fails within twenty-one days to make said determination, or where an order does issue from said commission, the applicant, any person aggrieved by said commission's order or failure to act, or any owner of land abutting the land upon which the proposed work is to be done, or any ten residents of the city or town in which said land is located, may, by certified mail and within ten days from said commission's order or failure to act, request the department of environmental protection to determine whether the area on which the proposed work is to be done is significant to public or private water supply, to the groundwater supply, to flood control, to storm damage prevention, to prevention of pollution, to protection of land containing shellfish, to the protection of wildlife habitat or to the protection of fisheries or to the protection of the riverfront area consistent with the following purposes: to protect the private or public water supply; to protect the ground water; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries. The commissioner of environmental protection or his designee also may request such a determination within said ten days. The party making any such request shall

at the same time send a copy thereof by certified mail to the conservation commission, board of selectmen or mayor which conducted the hearing hereunder. If such party is other than the applicant, a copy of such request shall also be sent at the same time by certified mail to the applicant. Upon receipt of such request the department shall make the determination requested and shall by written order issued within seventy days of receipt of such request and signed by the commissioner or his designee, impose such conditions as will contribute to the protection of the interests described herein; provided, however, that said department shall notify the applicant within thirty days of the receipt of such request if his application or request is not in proper form or is lacking information or documentation necessary to make the determination. Such order shall supersede the prior order of the conservation commission, board of selectmen or mayor, and all work shall be done in accordance therewith, but in no event shall any work commence until ten days have elapsed following the issuance of said order. In the case of riverfront areas, no order issued by a conservation commission, board of selectmen, mayor, or the department shall permit any work unless the applicant, in addition to meeting the otherwise applicable requirements of this section, has proved by a preponderance of the evidence that (1) such work, including proposed mitigation measures, will have no significant adverse impact on the riverfront area for the following purposes: to protect the private or public water supply; to protect the ground water; to provide flood control; to prevent storm damage; to prevent pollution; to protect land containing shellfish; to protect wildlife habitat; and to protect the fisheries, and (2) there is no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on such purposes. An alternative is practicable and substantially economically equivalent if it is available and capable of being done after taking into consideration: costs, and whether such costs are reasonable or prohibitive to the owner; existing technology; the proposed use; and logistics in light of overall project purposes. For activities associated with access for one dwelling unit, the area under consideration for practicable alternatives will be limited to the lot; provided, that said lot shall be on file with the registry of deeds as of the August first, nineteen hundred and ninety-six. For other activities including, but not limited to, the creation of a real estate subdivision, the area under consideration shall be the subdivided lots, any parcel out of which the lots were created, and any other parcels that are adjacent to such parcel or adjacent through other parcels formerly or presently owned by the same owner at any time on or after August first, nineteen hundred and ninety-six or any land which can reasonably be obtained; provided, that an ownership interest can reasonably be obtained after taking into consideration: cost, and whether such cost is reasonable or prohibitive to the owner; existing technology; the proposed use; and logistics in light of overall project purposes. At any time prior to a final order of determination by the department, any party requesting a determination may in writing withdraw the request, and such withdrawal shall be effective upon receipt by the department. Notwithstanding the withdrawal, the commissioner or his designee may continue the determination if he notifies all parties within ten days of receipt of the withdrawal. A copy of such order shall be sent to the applicant, to the conservation commission, board of selectmen or mayor which conducted the hearing hereunder. As used in this section the words "wildlife habitat" shall mean those areas subject to this section which, due to their plant community composition and structure, hydrologic regime or other characteristics, provide important food, shelter, migratory or overwintering areas, or breeding areas for wildlife.

No work proposed in any notice of intention shall be undertaken until the final order, determination or notification with respect to such work has been recorded in the registry of deeds, or if the land affected thereby be registered

land, in the registry section of the land court for the district wherein the land lies. If the final order, determination or notification requires the recording of a plan which (1) shows the location of the work, (2) is prepared by a registered professional engineer or land surveyor and (3) is in recordable form, no work proposed in the notice of intention shall be undertaken until such plan has been recorded in the registry of deeds or, if the land affected thereby is registered land, in the registry section of the land court for the district wherein such land lies.

Within twenty-one days of the receipt of a written request, by the applicant or the owner of the property, for a certificate of compliance, the issuer of the final order shall grant such request if the activity, or portions thereof, complies with such final order. The certificate of compliance shall state that the activity, or portions thereof, has been completed in accordance with such order.

Any site where work is being done which is subject to this section shall display a sign of not less than two square feet or more than three square feet bearing the words, "Massachusetts Department of Environmental Protection File Number...." and the sign shall display the file number assigned to the project.

If the department of environmental protection finds that any proposed work would violate the provisions of chapter ninety-one, it shall proceed immediately to enforce the provisions of said chapter.

The provisions of this section shall not apply to any mosquito control work done under the provisions of clause (36) of section five of chapter forty, of chapter two hundred and fifty-two or of any special act; to maintenance of drainage and flooding systems of cranberry bogs, to work performed for normal maintenance or improvement of land in agricultural use or in aquacultural use; or to any project authorized by special act prior to January first, nineteen hundred and seventy-three.

Within one hundred and twenty days of the effective date of this act, the department, upon the advice and consent of the Commissioner of the Department of Food and Agriculture, shall promulgate rules and regulations pursuant to this section which shall establish definitions for the term "normal maintenance or improvement of land in agricultural, or in aquacultural use", for each agricultural commodity, or where appropriate because of similarities in cultural practices, groups or commodities in the Commonwealth. The department shall create a farmland advisory board to be appointed by the commissioner consisting of five persons one a member of the cooperative extension service, one a member of the USDA soil conservation service, one a member of a municipal conservation commission who has demonstrated expertise in agricultural issues, and two commercial farmers with expertise in different agricultural commodities to assist the department in the drafting of rules and regulations pursuant to this paragraph.

The notice of intention required in the first paragraph of this section shall not apply to emergency projects necessary for the protection of the health or safety of the commonwealth which are to be performed or which are ordered to be performed by an agency of the commonwealth or a political subdivision thereof. An emergency project shall mean any project certified to be an emergency by the conservation commission of the city or town in which the project would be undertaken, or if none, by the mayor of said city or the selectmen of said town. If the conservation commission, mayor, or selectmen, as the case may be, fail to act favorably within twenty-four hours of receipt of a request for certification of an emergency project, said project may be so certified by the commissioner or his designee. In no case shall any removal, filling, dredging, or alteration authorized by such certification extend beyond the time necessary to abate the emergency. The permitting and emergency

provisions in this paragraph shall not apply to severe weather emergencies as declared by the commissioner of environmental protection following a destructive weather event requiring widespread recovery efforts, debris cleanup or roadway or utility repair. A severe weather emergency declaration shall allow for emergency related work to occur as necessary for the protection of the health or safety of the residents of the commonwealth. A severe weather emergency declaration by the commissioner shall describe the types of work allowed without filing a notice of intent, any general mitigating measures to condition the work that may be required in performing such work, any notification or reporting requirements, the geographic area of the declaration's effect and the period of time the declaration shall be in effect which, in no event, shall be longer than 3 months unless extended by the commissioner. A severe weather emergency declared by the commissioner shall be sent electronically to all conservation commissions in the geographic area of the severe weather emergency and shall be made widely available to the general public through appropriate channels for emergency communications. A declaration of a severe weather emergency by the commissioner shall not impact the department's ability to enforce any general or special law or rule or regulation that is not altered by the commissioner's declaration.

Notwithstanding the provisions of section fourteen of chapter twenty-one A or any other provision of law to the contrary, the notice of intention required in the first paragraph of this section shall not apply to a maintenance dredging project for which a license has been previously issued within ten years by the division of waterways of the department of environmental protection. A person intending to fill or dredge under such previously issued license shall file a written notice by certified mail to the conservation commission or if none, to the board of selectmen in a town or mayor of a city in which the land upon which such dredging project is located. Such notice shall contain the name and address of the applicant.

If the conservation commission, the board of selectmen or mayor fails to notify the applicant at the applicant's address within twenty days of the receipt of such notice of the specific objections to the commencement of such dredging fill or maintenance dredging contemplated under said license, the applicant may commence such work without any further notice to other agencies of the commonwealth. Notwithstanding failure to notify an applicant, as hereinbefore provided, the conservation commission, the board of selectmen or mayor may at any time designate an area at which spoilage from the dredging may be placed and may require the relocation of shellfish before such maintenance dredging takes place.

If the conservation commission, the board of selectmen or mayor cites specific objections to the notice of intention, such conservation commission, board of selectmen or mayor may order a hearing as provided in this section and all other pertinent provisions of this section shall apply.

Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this section or in violation of any order issued under this section shall forthwith comply with any such order or restore such real estate to its condition prior to any such violation; provided, however, that no action, civil or criminal, shall be brought against such person unless such action is commenced within three years following the recording of the deed or the date of the death by which such real estate was acquired by such person. Any court having equity jurisdiction may restrain a violation of this section and enter such orders as it deems necessary to remedy such violation, upon the petition of the attorney general, the commissioner, a city or town, an owner or occupant of property

which may be affected by said removal, filling, dredging or altering, or ten residents of the commonwealth under the provisions of section seven A of chapter two hundred and fourteen.

Rules and regulations shall be promulgated by the commissioner to effectuate the purposes of this section. However, failure by the commissioner to promulgate rules and regulations shall not act to suspend or invalidate the effect of this section. In addition to the other duties provided for in this section, a conservation commission and its agents, officers, and employees; the commissioner, his agents and employees; environmental officers, and any officer with police powers may issue enforcement orders directing compliance with this section and may undertake any other enforcement action authorized by law. Any person who violates the provisions of this section may be ordered to restore property to its original condition and take other actions deemed necessary to remedy such violations.

No person shall remove, fill, dredge or alter any area subject to protection under this section without the required authorization, or cause, suffer or allow such activity, or leave in place unauthorized fill, or otherwise fail to restore illegally altered land to its original condition, or fail to comply with an enforcement order issued pursuant to this section. Each day such violation continues shall constitute a separate offense except that any person who fails to remove unauthorized fill or otherwise fails to restore illegally altered land to its original condition after giving written notification of said violation to the conservation commission and the department shall not be subject to additional penalties unless said person thereafter fails to comply with an enforcement order or order of conditions.

Whoever violates any provision of this section, (a) shall be punished by a fine of not more than twenty-five thousand dollars or by imprisonment for not more than two years, or both such fine and imprisonment; or (b), shall be subject to a civil penalty not to exceed twenty-five thousand dollars for each violation.

Section 26. In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works by the commonwealth, or by a county, town, authority or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the commonwealth who have been residents of the commonwealth for at least six months at the commencement of their employment who are veterans as defined in clause Forty-third of section 7 of chapter 4 and who are qualified to perform the work to which the employment relates and, within such preference, preference shall be given to service-disabled veterans; and secondly, to citizens of the commonwealth generally who have been residents of the commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or sub-contracting for such works, shall give preference to veterans and citizens who are residents of such county, town, authority or district and, within such preference, preference shall be given to service-disabled veterans. The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the commissioner as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided, further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established; provided further, that in towns where no such rate or rates have been so established, the wages paid to mechanics, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the commonwealth or of a county, town, authority or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriations of more than one thousand dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

Permanent and temporary laborers employed by the state department of highways and by the metropolitan district commission shall receive such salary or compensation as may be fixed under and in accordance with sections forty-five to fifty inclusive of chapter thirty.

Section 27. The commissioner shall prepare, for the use of such public officials or public bodies whose duty it shall be to cause public works to be constructed, a list of the several jobs usually performed on various types of public works upon which mechanics and apprentices, teamsters, chauffeurs and laborers are employed, including the transportation of gravel or fill to the site of said public works or the removal of surplus gravel or fill from such site. The commissioner shall classify said jobs, and he may revise such classification from time to time, as he may deem advisable. Prior to awarding a contract for the construction of public works, said public official or public body shall submit to the commissioner a list of the jobs upon which mechanics and apprentices, teamsters, chauffeurs and laborers are to be employed, and shall request the commissioner to determine the rate of wages to be paid on each job. Each year after the awarding of the contract, the public official or public body shall submit to the commissioner a list of the jobs upon which mechanics and apprentices and laborers are to be employed and shall request that the commissioner update the determination of the rate of wages to be paid on each job. The general contractor shall annually obtain updated rates from the public official or public body and no contactor or subcontractor shall pay less than the rates so established. Said rates shall apply to all persons engaged in transporting gravel or fill to the site of said public works or removing gravel or fill from such site, regardless of whether such persons are employed by a contractor or subcontractor or are independent contractors or owner-operators. The commissioner, subject to the provisions of section twenty-six, shall proceed forthwith to determine the same, and shall furnish said official or public body with a schedule of such rate or rates of wages as soon as said determination shall have been made. In advertising or calling for bids for said works, the awarding official or public body shall incorporate said schedule in the advertisement or call for bids by an appropriate reference thereto, and shall furnish a copy of said schedule, without cost, to any person requesting the same. Said schedule shall be made a part of the contract for said works and shall continue to be the minimum rate or rates of wages for said employees during the life of the contract. Any person engaged in the construction of said works shall cause a legible copy of said schedule and subsequent updates to be kept posted in a conspicuous place at the site of said works during the life of the contract. An apprentice performing work on a project subject to this section shall maintain in his possession an apprentice identification card issued pursuant to section 11W of chapter 23. The aforesaid rates of wages in the schedule of wage rates shall include payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans as provided in said section twenty-six, and such payments shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in said rates of wages, shall pay the amount of said payments directly to each employee engaged in said construction. Whoever shall pay less than said rate or rates of wages, including payments to health and welfare funds and pension funds, or the

equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner, and whoever, for himself, or as representative, agent or officer of another, shall take or receive for his own use or the use of any other person, as a rebate, refund or gratuity, or in any other guise, any part or portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to any such person for work done or service rendered on said public works, shall have violated this section and shall be punished or shall be subject to a civil citation or order as provided in section 27C. The president and treasurer of a corporation and any officers or agents having the management of such corporation shall also be deemed to be employers of the employees of any corporation within the meaning of sections 26 to 27B, inclusive.

Offers of restitution or payment of restitution shall not be considered in imposing such punishment.

When an investigation by the attorney general's office reveals that a contractor or subcontractor has violated this section by failing to pay said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner, or that a contractor or subcontractor has, for himself, or as representative, agent or officer of another, taken or received for his own use or the use of any other person, as a rebate, refund or gratuity, or in any other guise, any portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to any such person for work done or service rendered on said public works, the attorney general may, upon written notice to the contractor or subcontractor and the sureties of the contractor or subcontractor, and after a hearing thereon, order work halted on the part of the contract on which such wage violations occurred, until the defaulting contractor or subcontractor has filed with the attorney general's office a bond in the amount of such penal sum as the attorney general shall determine, conditioned upon payment of said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner.

An employee claiming to be aggrieved by a violation of this section may, 90 days after the filing of a complaint with the attorney general, or sooner if the attorney general assents in writing, and within 3 years after the violation, institute and prosecute in his own name and on his own behalf, or for himself and for others similarly situated, a civil action for injunctive relief, for any damages incurred, and for any lost wages and other benefits. An employee so aggrieved who prevails in such an action shall be awarded treble damages, as liquidated damages, for any lost wages and other benefits and shall also be awarded the costs of the litigation and reasonable attorneys' fees.

Section 27A. Within five days from the date of the first advertisement or call for bids, two or more employers of labor, or two or more members of a labor organization, or the awarding officer or official, or five or more residents of the town or towns where the public works are to be constructed, may appeal to the commissioner or his designee from a wage determination, or a classification of employment as made by the commissioner, by serving on the commissioner a written notice to that effect. Thereupon the commissioner or his designee shall immediately hold a public hearing on the action appealed from. The commissioner or his designee shall render his decision not later than three days after the closing of the hearing. The decision of the commissioner or his designee shall be final and notice thereof shall be given forthwith to the awarding official or public body.

Section 27B. Every contractor, subcontractor or public body engaged in said public works project by an agency, executive office, department, board, commission, bureau, division or authority of the commonwealth or county, or municipality or any subdivision thereof to which sections twenty-seven and twenty-seven A apply shall keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on said works, and the hours worked by, and the wages paid to, each such employee, and shall submit weekly to the awarding authority by mail, first class postage prepaid, or by electronic mail, certified payroll records that shall consist of a complete copy of those records accompanied by a statement signed by the employer that indicates (1) the records are correct; and (2) the rate of wages paid to each performing the work of mechanic, apprentice, teamsters, chauffeurs, and laborers, and shall promptly furnish to the attorney general or his representative, upon his request, a copy of said record, signed by the employer or his authorized agent under the penalties of perjury. For every week in which an apprentice is employed by a contractor, subcontractor or public body subject to this section, a photocopy of the apprentice's apprentice identification card, issued pursuant to section 11W of chapter 23, shall be attached to the records submitted under this section. Such records shall be open to inspection by any authorized representative of the department at any reasonable time, and as often as may be necessary. Every contractor and subcontractor required to keep such a record shall submit a copy of said record to the awarding authority directly on a weekly basis.

Each such contractor, subcontractor or public body shall preserve its payroll records for a period of three years from the date of completion of the contract.

Each such contractor, subcontractor or public body shall furnish to the awarding authority directly within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body or by any authorized officer or employee of the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

statement of compliance
,
(insert year)
I,,
(Name of signatory party)(Title)
do hereby state:
That I pay or supervise the payment of the persons employed by
on the
(Contractor, subcontractor or public body)(Building or project)
and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Laws.
Signature
Title

The above-mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the awarding authority for such inspection and copying.

Part I ADMINISTRATION OF THE GOVERNMENT

Title XXI LABOR AND INDUSTRIES

Chapter 149 LABOR AND INDUSTRIES

Section 27C PENALTIES FOR VIOLATIONS OF CERTAIN SECTIONS BY EMPLOYERS, CONTRACTORS, SUBCONTRACTORS OR THEIR EMPLOYEES

Section 27C. (a)(1) Any employer, contractor or subcontractor, or any officer, agent, superintendent, foreman, or employee thereof, or staffing agency or work site employer who willfully violates any provision of section 26, 27, 27A, 27B, 27F, 27G, 27H, 148, 148A, 148B or 159C or section 1A, 1B or 19 of chapter 151, shall be punished by a fine of not more than $25,000 or by imprisonment for not more than one year for a first offense, or by both such fine and imprisonment and for a subsequent willful offense a fine of not more than $50,000, or by imprisonment for not more than two years, or by both such fine and such imprisonment.

(2) Any employer, contractor or subcontractor, or any officer, agent, superintendent, foreman or employee thereof, or staffing agency or work site employer who without a willful intent to do so, violates any provision of section 26, 27, 27A, 27B, 27F, 27G, 27H, 148, 148A, 148B or 159C or section 1A, 1B or 19 of chapter 151, shall be punished by a fine of not more than $10,000, or by imprisonment for not more than six months for a first offense, and for a subsequent offense by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both such fine and such imprisonment. A complaint or indictment hereunder or under the provisions of the first paragraph may be sought either in the county where the work was performed or in the county where the employer, contractor, or subcontractor has a principal place of business. In the case of an employer, contractor, or subcontractor who has his principal place of business outside the commonwealth, a complaint or indictment may be sought either in the county where the work was performed or in Suffolk county.

(3) Any contractor or subcontractor convicted of willfully violating any provision of section 26, 27, 27A, 27B, 27F, 27G, 27H or 148B shall, in addition to any criminal penalty imposed, be prohibited from contracting, directly or indirectly, with the commonwealth or any of its agencies or political subdivisions for the construction of any public building or other public works, or from performing any work on the same as a contractor or subcontractor, for a period of five years from the date of such conviction. Any contractor or subcontractor convicted of violating any provision of section 26, 27, 27A, 27B, 27F, 27G, 27H or 148B shall, in addition to any criminal penalty imposed, be prohibited from contracting, directly or indirectly, with the commonwealth or any of its agencies, authorities or political subdivisions for the construction of any public building or other public works or from performing any work on the same as a contractor or subcontractor, for a period not to exceed six months from the date of such conviction for a first offense and up to three years from the date of conviction for subsequent offense. After final conviction and disposition of a violation pursuant to this paragraph in any court, the clerk of said court shall send a notice of such conviction to the attorney general, who shall publish written notice to all departments and agencies of the commonwealth which contract for public construction and to the appropriate authorities of counties, authorities, cities and towns that such person is prohibited from contracting, directly or indirectly, with the commonwealth or any of its authorities or

political subdivisions for the period of time required under this paragraph. The attorney general may take such action as may be necessary to enforce the provisions of this paragraph, and the superior court shall have jurisdiction to enjoin or invalidate any contract award made in violation of this paragraph.

(b)(1) As an alternative to initiating criminal proceedings pursuant to subsection (a), the attorney general may issue a written warning or a civil citation. For each violation, a separate citation may be issued requiring any or all of the following: that the infraction be rectified, that restitution be made to the aggrieved party, or that a civil penalty of not more than $25,000 for each violation be paid to the commonwealth, within 21 days of the date of issuance of such citation. For the purposes of this paragraph, each failure to pay an employee the appropriate rate or prevailing rate of pay for any pay period may be deemed a separate violation, and the pay period shall be a minimum of 40 hours unless such employee has worked fewer than 40 hours during that week.

(2) Notwithstanding the foregoing, the maximum civil penalty that may be imposed upon any employer, contractor or subcontractor, who has not previously been either criminally convicted of a violation of the provisions of this chapter or chapter 151 or issued a citation hereunder, shall be no more than $15,000, except that in instances in which the attorney general determines that the employer, contractor or subcontractor lacked specific intent to violate the provisions of this chapter or said chapter 151, the maximum civil penalty for such an employer, contractor or subcontractor who has not previously been either criminally convicted of a violation of the provisions of this chapter or said chapter 151 or issued a citation hereunder shall be not more than $7,500. In determining the amount of any civil penalty to be assessed hereunder, said attorney general shall take into consideration previous violations of this chapter or said chapter 151 by the employer, the intent by such employer to violate the provisions of this chapter or said chapter 151, the number of employees affected by the present violation or violations, the monetary extent of the alleged violations, and the total monetary amount of the public contract or payroll involved.

(3) In the case of a citation for violating any provision of section 26, 27, 27A, 27B, 27F, 27G, 27H or 148B, the attorney general may also order that a bond in an amount necessary to rectify the infraction and to ensure compliance with sections 26 to 27H, inclusive, and with other provisions of law, be filed with said attorney general, conditioned upon payment of said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said public works to any person performing work within classifications as determined by the commissioner. Upon any failure to comply with the requirements set forth in a citation, said attorney general may order the cessation of all or the relevant portion of the work on the project site. In addition, any contractor or subcontractor failing to comply with the requirements set forth in a citation or order, shall be prohibited from contracting, directly or indirectly, with the commonwealth or any of its agencies or political subdivisions for the construction of any public building or other public works, or from performing any work on the same as a contractor or subcontractor, for a period of one year from the date of issuance of such citation or order. Any contractor or subcontractor who receives three citations or orders occurring on three different occasions, each of which includes a finding of intent, within a three year period shall automatically be debarred for a period of two years from the date of issuance of the third such citation or order or a final court order, whichever is later. Any debarment hereunder shall also apply to all affiliates of the contractor or subcontractor, as well as any successor company or corporation that said attorney general, upon investigation, determines to not have a true independent existence apart from that of the violating contractor or subcontractor.

(4) Any person aggrieved by any citation or order issued pursuant to this subsection may appeal said citation or order by filing a notice of appeal with the attorney general and the division of administrative law appeals within ten days of the receipt of the citation or order. Any such appellant shall be granted a hearing before the division of administrative law appeals in accordance with chapter 30A. The hearing officer may affirm or if the aggrieved person demonstrates by a preponderance of evidence that the citation or order was erroneously issued, vacate, or modify the citation or order. Any person aggrieved by a decision of the hearing officer may file an appeal in the superior court pursuant to the provisions of said chapter 30A.

(5) In cases when the decision of the hearing officer of the division of administrative law appeals is to debar or suspend the employer, said suspension or debarment shall not take effect until 30 days after the issuance of such order; provided, however, that the employer shall not bid on the construction of any public work or building during the aforementioned 30 day period unless the superior court temporarily enjoins the order of debarment or suspension.

(6) If any person shall fail to comply with the requirements set forth in any order or citation issued by the attorney general hereunder, or shall fail to pay any civil penalty or restitution imposed thereby within 21 days of the date of issuance of such citation or order or within 30 days following the decision of the hearing officer if such citation or order has been appealed, excluding any time during which judicial review of the hearing officer's decision remains pending, said attorney general may apply for a criminal complaint or seek indictment for the violation of the appropriate section of this chapter.

(7) Notwithstanding the provisions of paragraph (6), if any civil penalty imposed by a citation or order issued by the attorney general remains unpaid beyond the time period specified for payment in said paragraph (6), such penalty amount and any restitution order, together with interest thereon at the rate of 18 per cent per annum, shall be a lien upon the real estate and personal property of the person who has failed to pay such penalty. Such lien shall take effect by operation of law on the day immediately following the due date for payment of such fine, and, unless dissolved by payment, shall as of said date be considered a tax due and owing to the commonwealth, which may be collected through the procedures provided for by chapter 62C. In addition to the foregoing, no officer of any corporation which has failed to pay any such penalty may incorporate or serve as an officer in any corporation which did not have a legal existence as of the date said fine became due and owing to the commonwealth.

(c) Civil and criminal penalties pursuant to this section shall apply to employers solely with respect to their wage and benefit obligations to their own employees.

Section 27D. Wherever used in sections twenty-six to twenty-seven C, inclusive, the words "construction" and "constructed" as applied to public buildings and public works shall include additions to and alterations of public works, the installation of resilient flooring in, and the painting of, public buildings and public works; certain work done preliminary to the construction of public works, namely, soil explorations, test borings and demolition of structures incidental to site clearance and right of way clearance; and the demolition of any building or other structure ordered by a public authority for the preservation of public health or public safety.

Section 34. Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, sub-contractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid; provided, that in contracts entered into by the department of highways for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or sub-contractor for said department, may employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.

Part I ADMINISTRATION OF THE GOVERNMENT

Title XXI LABOR AND INDUSTRIES

Chapter 149 LABOR AND INDUSTRIES

Section 44 SERVICE BY VETERANS ON MEMORIAL DAY

Section 44. No veteran, as defined in section one of chapter thirty-one, in the service of the commonwealth or of any county, city or town therein, except policemen, firemen, and members of the office of public safety and inspections of the division of professional licensure or the division of inspection of the department of fire services doing police duty, shall be required to perform any service on Memorial Day. Such veterans, if employed as policemen or firemen by any city or town, may be granted leave of absence without loss of pay on Memorial Day by the governing authorities in cities and towns.

Section 44A. (1) The words defined in this section shall have the meaning set forth below whenever they appear in sections forty-four A through forty-four H, inclusive, of this chapter unless indicated otherwise or unless the context in which they are used clearly requires a different meaning.

"Commissioner", means the commissioner of the division of capital asset management and maintenance or his designee.

"Public Agency" means a department, agency, board, commission, authority, or other instrumentality of the commonwealth or political subdivision of the commonwealth, or two or more subdivisions thereof but not including the Massachusetts Bay Transportation Authority;

"Responsible" means demonstrably possessing the skill, ability and integrity necessary to faithfully perform the work called for by a particular contract, based upon a determination of competent workmanship and financial soundness in accordance with the provisions of section forty-four D of this chapter;

"Eligible" means able to meet all requirements for bidders or offerors set forth in sections forty-four A through forty-four H of this chapter and not debarred from bidding under section forty-four C of this chapter or any other applicable law, and who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

"Modular Building", a pre-designed building or units of a pre-designed building assembled and equipped with internal plumbing, electrical or similar systems prior to movement to the site where such units are attached to each other and such building is affixed to a foundation and connected to external utilities; or any portable structure with walls, a floor, and a roof, designed or used for the shelter of persons or property, transportable in one or more sections and affixed to a foundation and connected to external utilities.

"Procurement", buying, purchasing, or otherwise acquiring and installing a modular building, and all functions that pertain to the acquisition and installation of a modular building, including description of requirements, selection and solicitation of sources, preparation and award of contract, and all phases of contract administration.

"Proprietary environmental technology systems", systems, in the town of Nantucket, including solid waste related equipment, supporting structures, and buildings, designed, manufactured, and produced under exclusive individual right to sell such product, pertaining to solid waste related environmental protection or remediation. Such systems shall include, but not be limited to, sequential, turnkey, construction management, design/build procurement, and the phasing of such procurement, including approval of design and construction stages as separate or combined phases.

(A) Every contract or procurement for the construction, reconstruction, installation, demolition, maintenance or repair of a building by a public agency estimated to cost less than $10,000 shall be obtained through the

exercise of sound business practices as defined in section 2 of chapter 30B. The public agency shall make and keep a record of each procurement that, at a minimum, shall include the name and address of the person from whom the services were procured. A public agency that utilizes a vendor on a statewide contract procured through the operational services division of the commonwealth, or a blanket contract procured by the public agency pursuant to this subsection, shall be deemed to have obtained the contract through sound business practices.

(B) Every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building estimated to cost not less than $10,000 but not more than $50,000 shall be awarded to the responsible person offering to perform the contract at the lowest price. The public agency shall make public notification of the contract and shall seek written responses from no fewer than 3 persons who customarily perform such work. The solicitation shall include a scope-of-work statement that defines the work to be performed and provides potential responders with sufficient information regarding the objectives and requirements of the public agency and the time period within which the work shall be completed. The public agency shall record the names and addresses of all persons from whom written responses were sought, the names of the persons submitting written responses and the date and amount of each written response. A public agency may utilize a vendor list established through a statewide contract procured through the operational services division to identify 1 or more of the persons from whom it will seek written responses for purposes of this paragraph. A public agency may also procure a blanket contract to establish a listing of vendors in certain defined categories of work that are under contract to provide services for multiple individual tasks of not more than $50,000 each, and from whom written responses will be sought. Any such blanket contract procured by the awarding authority shall be procured pursuant to either section 39M of chapter 30 or sections 44A to 44J, inclusive, of chapter 149 which are applicable to projects over $50,000. For purposes of this paragraph, the term "public notification" shall include, but not be limited to, posting at least 2 weeks before the time specified in the notification for the receipt of responses, the contract and scope-of-work statement: (1) on the website of the public agency, (2) on the COMMBUYS system administered by the operational services division, (3) in the central register published pursuant to section 20A of chapter 9 and (4) in a conspicuous place in or near the primary office of the public agency; provided, however, that if the public agency obtains a minimum of 2 written responses from a vendor list established through a blanket contract or a statewide contract procured through the operational services division, and the lowest of those written responses is deemed acceptable to the public agency, public notification is not required.

(C) Every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency estimated to cost more than $50,000 but not more than $150,000, except for a pumping station to be constructed as an integral part of a sewer construction or water construction project bid under the provisions of section 39M of chapter 30, shall be awarded to the lowest responsible and eligible bidder on the basis of competitive bids publicly opened and read in accordance with the procedure set forth in said section 39M of said chapter 30. The term "pumping station" as used in this section shall mean a building or other structure which houses solely pumps and appurtenant electrical and plumbing fixtures.

(D) Every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency estimated to cost more than $150,000, except for a pumping station to be constructed as an integral part of a sewer construction or water construction

project bid under the provisions of section 39M of chapter 30, shall be awarded to the lowest responsible and eligible general bidder on the basis of competitive bids in accordance with the procedure set forth in section 44A to 44H, inclusive.

(E) When the general court has approved the use of an alternative mode of procurement of construction for a project pursuant to section 7E of chapter 29, the awarding authority responsible for procuring construction services for the project shall follow the policies and procedures of this section and of section 44B to 44H, inclusive, to the extent compatible with the mode of construction procurement selected.

(F) Notwithstanding paragraph (E), a public agency may undertake the procurement of modular buildings, in accordance with section 44E. A public agency may procure site work for modular buildings, including but not limited to, construction of foundations, installations, and attachment to external utilities, or any portion of site work, either in combination with the procurement of modular buildings pursuant to section 44E or on the basis of competitive bids pursuant to the paragraph (E). Notwithstanding the paragraph (E), a public agency may procure energy management services in accordance with section 11C of chapter 25A and regulations promulgated thereunder.

(G) Every contract by a state agency or state assisted contract for design, construction, reconstruction, installation, demolition, maintenance or repair shall set forth the participation goals of minority and women workers to be employed on each such contract and the processes and procedures to ensure compliance with those workforce participation goals, including reporting and enforcement provisions.

(3) The award of every such contract in connection with which approval by an officer, board or agency of the federal government is required shall be made within thirty days, Saturdays, Sundays and legal holidays excluded, after such approval; and the award of every contract subject to this section in connection with which approval by an officer, board or agency of the federal government is not required shall be made within thirty days, Saturdays, Sundays and legal holidays excluded, after the opening of the bids therefor. If the bidder selected as the general contractor fails to perform his agreement to execute a contract in accordance with the terms of his bid and furnish a performance bond and also a labor and materials or payment bond as stated in his bid in accordance with section forty-four E, an award shall be made to the next lowest responsible and eligible bidder, subject to the provisions of sections forty-four A to forty-four H, inclusive, of this chapter. The thirty-day time limit shall not be applicable to a second or subsequent award made after expiration of the time limit with the consent of said next lowest responsible and eligible bidder, and made because the original award made within the time limit was invalid, or because the bidder failed to execute the contract or to provide a performance bond and labor and materials or payment bond.

(4) In cases of extreme emergency, the awarding authority may, with the prior approval of the commissioner, award a contract for that portion of the work necessary to preserve the health or safety of persons or property or to alleviate an imminent security threat on the basis of such competitive bids or proposals as it can obtain in time to care for the extreme emergency and without public opening of the bids or proposals.

Where the nature of the emergency prevents the awarding authority from obtaining the prior approval of the commissioner, the awarding authority may contract for the necessary work without said prior approval; provided, however, that the approval of the commissioner shall still be sought at the earliest possible time; and provided, further, that if the commissioner at that time fails to approve the emergency determination the awarding authority

shall promptly cease all work for which the emergency determination was denied. In such cases, the contractor shall be entitled to payment for the fair value of the labor and materials furnished prior to cessation of the work.

The commissioner shall maintain a record of all contracts awarded pursuant to this subsection, containing a description of the circumstances and the reasons for the commissioner's determination.

(5) (a) Notwithstanding the provisions of this section or any other general or special law to the contrary, a municipality may enter into a contract for proprietary environmental technology systems as defined in subsection (1) of this section without said contract being subject to the competitive bid process as set forth in sections thirty-eight A 1/2 to thirty-eight *O*, inclusive, of chapter seven; this section and sections forty-four B to forty-four H, inclusive, of this chapter, and section thirty-nine M of chapter thirty; provided that the awarding authority meets the conditions set forth and receives the approvals required in paragraph (b) of this subsection.

(b) Prior to the issuance of any request for proposal with respect to the awarding of any contract pursuant to the provisions of paragraph (a) of this subsection, the awarding authority shall meet or obtain each of the following conditions or required approvals: (1) the municipality shall appoint qualified persons to conduct a thorough review of all available environmental technology, including both proprietary and non-proprietary environmental technology, and if the conclusion of this review is that a contract for proprietary environmental technology systems is in the public interest, such conclusion shall be supported by sound documented reasons in writing available for public inspection; (2) the city council, the board of selectmen, or the town meeting shall take a majority vote finding that it is in the public interest to enter into a contract for proprietary environmental technology systems, as defined in subsection (1) of this section, providing such vote is supported by the conclusion of the review conducted pursuant to condition (1); (3) both the attorney general and the commissioner of the department of environmental protection shall grant written approval; (4) said contract shall be subject to any limitation in the waiver of sections thirty-eight A 1/2 to thirty-eight *O*, inclusive, of chapter seven, sections forty-four A to forty-four H of chapter one hundred and forty-nine, and section thirty-nine M of chapter thirty imposed by either the attorney general or the commissioner of the department of environmental protection as a condition for a grant of approval by said officers; and (5) every proprietary environmental technology systems contract shall be as compatible with sections thirty-eight A to thirty-eight *O*, inclusive, of chapter seven, sections forty-four A to forty-four H of chapter one hundred and forty-nine, and section thirty-nine M of chapter thirty as is feasible for the procurement of the proprietary environmental technology systems chosen.

Section 44A 1/2. (a) A public agency, before entering into a contract for design services pursuant to section 38D or section 38K of chapter 7, shall contract for the services of an owner's project manager to serve as the public agency's agent and consultant during the planning, design and implementation of a contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by the public agency estimated to cost not less than $1,500,000. The duties of the owner's project manager shall include, but need not be limited to, providing advice and consultation with respect to design, value engineering, scope of the work, cost estimating, general contractor and subcontractor prequalification, pursuant to section 44D 1/2 or 44D 3/4 when applicable, scheduling, construction and the selection, negotiation with and oversight of a designer and a general contractor for the project, ensuring the preparation of time schedules which shall serve as control standards for monitoring performance of the building project, and assisting in project evaluation including, but not limited to, written evaluations of the performance of the design professional, contractors, and subcontractors. For the purposes of this subsection, the term "owner's project manager" shall mean an individual, corporation, partnership, sole proprietorship, joint stock company, joint venture, or other entity engaged in the practice of providing project management services for the construction and supervision of construction of buildings. The owner's project manager shall be a person who is registered by the commonwealth as an architect or professional engineer and who has at least 5 years experience in the construction and supervision of construction of buildings or a person, if not registered as an architect or professional engineer, who has at least 7 years experience in the construction and supervision of construction of buildings. The owner's project manager shall be independent of the designer, general contractor or any sub-contractor involved in the building project.

(b) Notwithstanding subsection (a), a public agency may assign an existing employee to serve as the owner's project manager, if that employee meets or exceeds the minimum qualifications as outlined in subsection (a) and has experience in the construction and supervision of construction of buildings of similar size and scope of complexity as the project to which he is assigned.

(c) The public agency shall use a qualifications based selection process to procure the services of an owner's project manager.

Section 44J. (1) No public agency or authority of the commonwealth or any political subdivision thereof shall award any contract for which competitive bids are required pursuant to section forty-four A of this chapter or section thirty-nine M of chapter thirty, or for which competitive proposals are required pursuant to subsection (4) of section forty-four E of this chapter or section eleven C of chapter twenty-five A, unless a notice inviting bids or proposals therefor shall have been posted no less than one week prior to the time specified in such notice for the receipt of said bids or proposals in a conspicuous place in or near the offices of the awarding authority, and shall have remained posted until the time so specified, and unless such notice shall also have been published at least once not less than two weeks prior to the time so specified in the central register published by the secretary of state pursuant to section twenty A of chapter nine and in a newspaper of general circulation in the locality of the proposed project, and on the COMMBUYS system administered by the operational services division. Said notice shall also be published at such other times and in such other newspapers or trade periodicals as the commissioner of capital asset management and maintenance may require, having regard to the locality of the work involved.

(2) Said notice shall specify the time and place where plans and specifications of the proposed work may be had; the time and place of submission of general bids; and the time and place for opening of the general bids. For contracts subject to the provisions of sections forty-four A to H, inclusive, of this chapter, said notice shall also specify the time and place for submission of filed sub-bids, where required pursuant to section forty-four F; and the time and place for opening of said filed sub-bids.

Said notice shall also provide sufficient facts concerning the nature and scope of such project, the type and elements of construction, and such other information as will assist applicants in deciding to bid on such contract.

(3) No contract or preliminary plans and specifications shall be split or divided for the purpose of evading the provisions of this section.

(4) General bids and filed sub-bids for any contract subject to this section shall be in writing and shall be opened in public at the time and place specified in the posted or published notice, and after being so opened shall be open to public inspection.

(5) The provisions of this section shall not apply to any transaction between the commonwealth and any public service corporation.

(6) The provisions of this section may be waived in cases of extreme emergency involving the health and safety of the people and their property, upon the written approval of said commissioner. The written approval shall contain a description of the circumstances and the reasons for the commissioner's determination.

(7) Whoever violates any provision of this section shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than three years or in a jail or house of correction for not more than two and one-half years, or by both said fine and imprisonment; and in

the event of final conviction, said person shall be incapable of holding any office of honor, trust or profit under the commonwealth or under any county, district of municipal agency.

Each and every person who shall cause or conspire to cause any contract or preliminary plans and specifications to be split or divided for the purpose of evading the provisions of this section shall forfeit and pay to the commonwealth, a political subdivision thereof or other awarding authority subject to this section, the sum of not more than five thousand dollars and, in addition, such person or persons shall pay, apportioned among them, double the amount of damages which the commonwealth or political subdivision thereof or other awarding authority may have sustained by reason of the doing of such act, together with the costs of the action.

(8) If an awarding authority rejects all general bids or does not receive any general bids, and advertises for a second opening of general bids with the original filed sub-bids as set forth in subsection (1) of section forty-four E the notice for receipt of such general bids may be published in the central register and elsewhere as required not less than one week prior to the time specified for such second opening of general bids.

(9) No request for proposals or invitation for bids issued under sections 38A 1/2 to 38*O*, inclusive, of chapter 7, section 11C of chapter 25A, section 39M of chapter 30, this section and sections 44A to 44H, inclusive, shall be advertised if the awarding authority's cost estimate is greater than 1 year old.

Section 2. The following words and phrases as used in this chapter shall have the following meanings, unless the context clearly requires otherwise:

"A fair wage", a wage fairly and reasonably commensurate with the value of the service or class of service rendered. In establishing a minimum fair wage for any service or class of service under this chapter the commissioner without being bound by any technical rules of evidence or procedure (1) may take into account the cost of living and all other relevant circumstances affecting the value of the service or class of service rendered, (2) may be guided by like considerations as would guide a court in a suit for the reasonable value of services rendered where services are rendered at the request of an employer in the absence of an express contract as to the amount of the wage to be paid, and (3) may consider the wages paid in the commonwealth for work of like or comparable character by employers who voluntarily maintain minimum fair wage standards.

"A mandatory order", an order the violation of which is subject to the penalties prescribed in subsection (2) of section nineteen.

"An oppressive and unreasonable wage", a wage which is both less than the fair and reasonable value of the services rendered and less than sufficient to meet the minimum cost of living necessary for health.

"Commissioner", the director of the department of labor standards.

"Department", the department of labor standards.

"Occupation", an industry, trade or business or branch thereof or class of work therein, whether operated for profit or otherwise, and any other class of work in which persons are gainfully employed, but shall not include professional service, agricultural and farm work, work by persons being rehabilitated or trained under rehabilitation or training programs in charitable, educational or religious institutions, work by seasonal camp counselors and counselor trainees or work by members of religious orders. Occupation shall also not include outside sales work regularly performed by outside salesmen who regularly sell a product or products away from their employer's place of business and who do not make daily reports or visits to the office or plant of their employer.

"Agricultural and farm work", labor on a farm and the growing and harvesting of agricultural, floricultural and horticultural commodities.

APPENDIX B

DEP MEMOS

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF RESOURCE PROTECTION
DIVISION OF MUNICIPAL SERVICES POLICIES

The Division of Municipal Services (DMS) has established the following policies for all Division financially-assisted projects.

POLICY MEMORANDUM NO. CG-1 EASEMENTS AND RIGHTS OF WAY

Prior to the approval of financial assistance for construction, the owner shall obtain and shall thereafter retain, a fee simple or such estate or interest in the site of construction and rights of access as will assure undisturbed use and possession for the purpose of construction and operation for the estimated life of the project. The Division may refuse to approve financial assistance until it has received from the owner sufficient assurances that such interests have been obtained. Unless the Division otherwise notifies the owner, the certificate (under pains and penalties of perjury) of the owner's legal representative shall constitute such sufficient assurance.

Additional cost which result from interruptions of construction or extensions of contract time caused by the owner's failure to obtain the necessary interests in land shall be ineligible for financial assistance, and all such additional costs shall be borne by the owner.

POLICY MEMORANDUM NO. CG-2 PERMITS

The owner shall be responsible for identifying and obtaining all federal, state, local and railroad permits required by the nature and location of construction, including but not limited to building construction permits and permits for street and highway cuts and openings, and all such permits shall be listed in a separate permits section of the contract documents. To the extent possible, such permits shall be obtained by the owner prior to the solicitation of bids for construction, and copies of all permits so obtained shall be included in the said permits section. The status of the application for each permit, including the permit conditions, and costs, not obtained prior to the solicitation of bids shall also be indicated in the contract documents permits section. The Division may refuse to approve financial assistance for construction unless and until it has received from the owner sufficient assurances that all necessary permits have been or will be obtained prior to the commencement of construction.

The contractor shall be responsible for obtaining all permits required of his equipment, work force, or particular operations (such as blasting) in the performance of the contract and not otherwise specified in the two preceding paragraphs as to be obtained by the owner. These permit fees shall be paid by the contractor.

The owner shall be responsible for the payment of all other permit fees required by the construction.

The following permits shall not be eligible for financial participation by the Department of Environmental Protection (DEP).

- Permits and insurance for construction in railroads' rights of way;
- Building permits;
- Permits for opening public streets and other public or municipal rights of way;
- Permits for the use of explosives;
- Permits for the disposal of waste materials;
- Permits and fees for connecting to municipal utilities.

Permits required by extraordinary circumstances and not specifically excluded from eligibility above may be eligible for DEP participation. For such permits to be so eligible, the owner or his representative must notify the DEP project engineer in advance of obtaining such permit and receive from the engineer specific agreement that such permit will be eligible for DEP participation. Eligibility for such participation will not be made retroactively.

Additional costs which result from interruptions of construction or extensions of contract time resulting from the owner's or the contractor's failure to obtain the necessary permits may be ineligible for participation.

POLICY MEMORANDUM NO. CG-3 FIELD CONTROLS

The Owner shall be responsible for indicating on the contract drawings all easement limits and all property and other control lines for locating the principal component parts of the work together with those elevations and bench marks used in the design of the work, all hereinafter referred to as "field controls". Where easement and property limits have not previously been established in the field, the owner shall be responsible for establishment of such limits. From the information provided by the Owner, unless otherwise specified, the Contractor shall develop and make all layouts required for construction, such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.

Whenever he has reason to believe that an error exists or whenever he is otherwise unable to locate the field controls, the contractor shall promptly notify the owner and the owner's engineer of such error with appropriate documentation.

POLICY MEMORANDUM NO. CG-4 **RECORD DRAWINGS:**

The Owner shall be responsible for the preparation of all record drawings required by this contract. This responsibility may be delegated to the Owner's representative. The responsibility for preparation of record drawings shall not be delegated or transferred to the contractor. They may use the contractor's and sub-contractor's certified AS BUILT drawings along with their own marked up set in the preparation of the Record Drawings.

Division approved contract drawings shall be revised upon completion of the contract to reflect any changes made and/or final quantities, as appropriate.

POLICY MEMORANDUM NO. CG-5 **PLAN SCALE**

Unless otherwise approved in advance by the Division, the horizontal scale for construction plans for non-structural facilities shall be 1" = 40'. A larger horizontal scale shall be used where appropriate to show sufficient detail to construct the project. The vertical scale for construction plans for non-structural facilities shall be 1" = 4'. Based on the best information available at the time of their preparation, the location of underground utilities and support structures for overhead utilities shall be shown on the plans.

Unless otherwise exempted in advance by the Division, construction plans shall be updated whenever the date of the advertisement for bids for the construction of such facilities is more than one year after the date of approval by the Division or EPA; and in the case of approval by both such agencies, the later approval date shall be used in determining the need for update.

The consulting engineer shall receive adequate compensation for updating plans and specifications, and such additional cost shall be eligible for assistance to the extent not otherwise prohibited by USEPA and Division regulations and program guidance.

All revision, or review without need for revision, shall be noted and dated on the plans prior to advertisement of the project for bid.

POLICY MEMORANDUM NO. CG-6 **BORINGS LOGS**

All soil borings shall be taken as close as practicable to the construction line, and the location of all such borings shall be clearly indicated on the contract drawings. The plan view shall show the location and boring number of each boring. The profile view shall show the location, elevation, and depth of each soil boring, the location of each change in soil stratum, the groundwater level, and the average of blow counts at each five foot interval. As a minimum, boring logs to be submitted with the plans and specifications shall show the name of the company taking the borings, the soil classification, the number of blows per foot of penetration, the groundwater elevation, and the date on which the borings were taken.

As part of the submission of plans and specification for approval, the owner's representative shall include written justification for the lesser frequency and depth of borings where their interval is more than approximately 300' or their depth is less than 50% below depth of pipe invert.

POLICY MEMORANDUM NO. CG-7 **BREAKDOWN OF BID ITEMS**

The following items shall, where applicable, be listed separately in the bid documents.

1. Mobilization

2. Pavement
   a. Municipal
      i. temporary
      ii. permanent
   b. State
      i. temporary
      ii. permanent

3. Concrete cradle or encasement (to be identified where applicable)

4. Rock-Excavation

5. Wood or steel sheeting left in place

6. Excavation of unsuitable materials below grade.

7. Select and/or borrow material

8. Dewatering

9. Special Dewatering (coffer dam)

Mobilization costs are the costs of initiating the contract, exclusive of the cost of materials. Payment for mobilization shall be a lump sum at the price bid for this item in the proposal and shall be payable when the contractor is operational on the site. For purposes of this policy, "operational" shall mean the substantial commencement of work on site.

The lump sum price bid for mobilization shall not exceed five per centum (5%) of the total amount of the bid.

POLICY MEMORANDUM NO. CG-8 **PAVEMENT**

All roads and trenches therein shall be refilled and repaved in accordance with specifications provided by the owner in the contract documents. Please note that this policy may be excludable on federally assisted projects where bid alternative items may be required (i.e. trench width vs. full width pavement). You are advised to seek project specific clarification.

Loan eligibility shall be limited to the following:

A. Where the depth of the pipe invert is 0 to 8', the maximum pavement widths which shall be eligible for financial assistance are as follows:

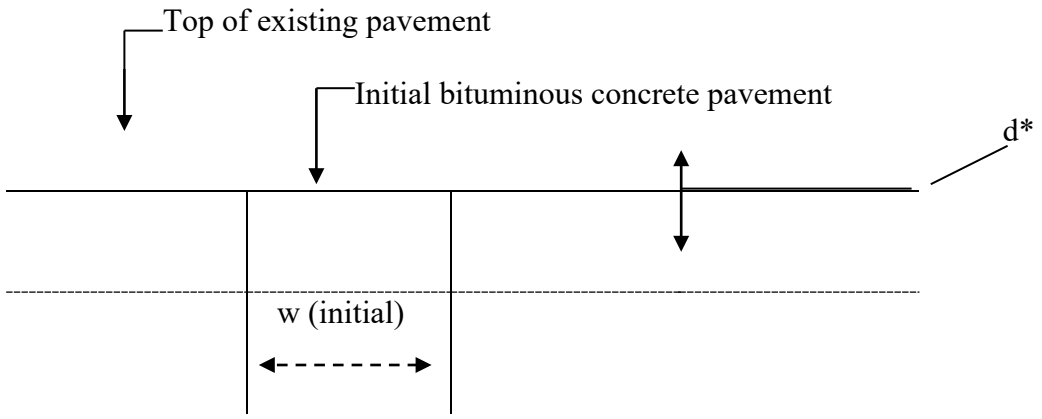
Nominal Pipe Diameter	Maximum Eligible Widths	
	Initial Pavement	Permanent Trench
0-24"	6'-6"	8'-6"

Where the nominal pipe diameter is greater than 24" the maximum eligible width for initial re-paving shall be the nominal diameter of the pipe plus four (4) feet, and for permanent trench re-paving the maximum eligible width shall be the nominal pipe diameter plus six (6) feet.

B. For each additional four (4) feet (or fraction thereof) of pipe invert depth, add three feet to the eligible width limits stated in paragraph A.

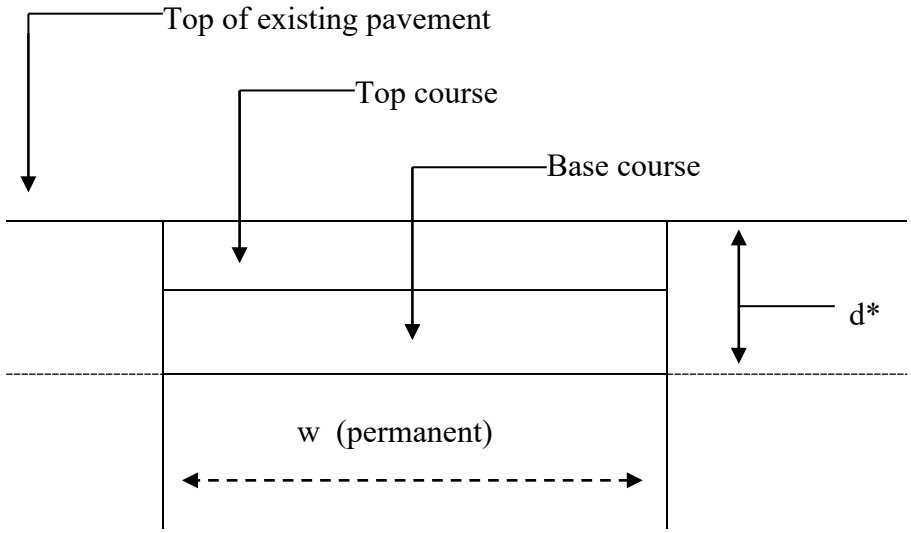
At the design phase of a project the owner has the option to elect either Initial Pavement with Option I (Permanent Trench replacement) or Initial with Option II (curb to curb over initial)

Initial Pavement



d*= depth of existing pavement to a maximum of 3 inches (see general notes #3)
w = maximum eligible Initial pavement width as described in paragraphs "A" & "B" on page DEP-DMS-CG's-P4.

OPTION I Permanent Trench Pavement

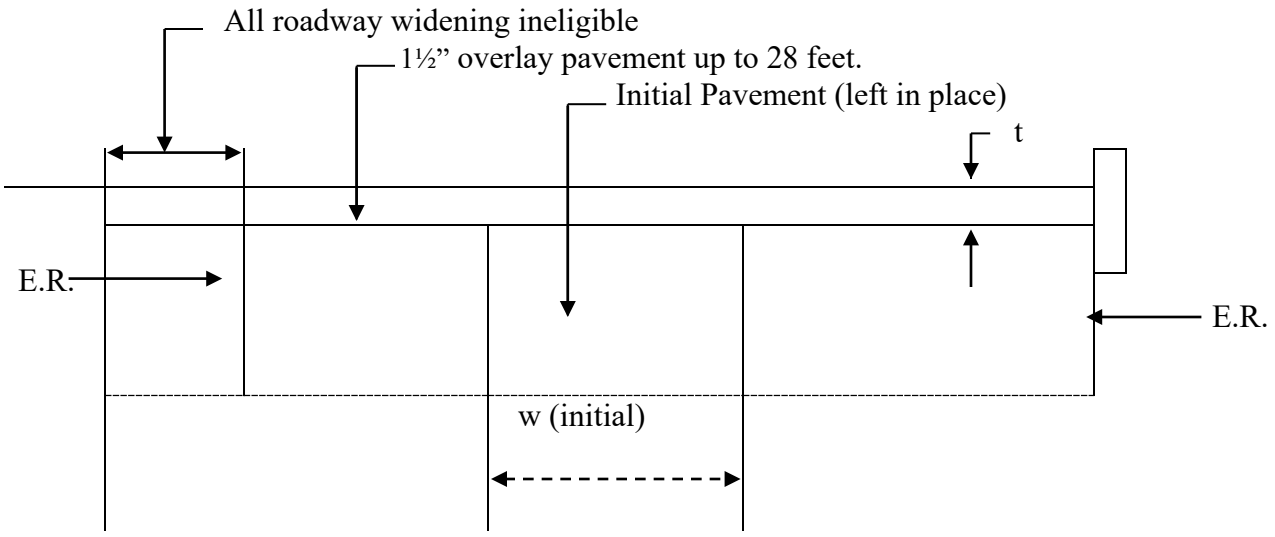


d*= depth of existing pavement trench to a maximum of 3 inches (see general notes #3)
w = maximum eligible permanent pavement width as described in paragraphs "A" & "B". equals initial width plus 2 feet and includes:

- Cutting edges for the permanent trench
- Removal of initial patch plus two feet of existing pavement
- Fine grading/compacting gravel

- Placement of Permanent Trench pavement in two courses.

OPTION II Curb to Curb Pavement (overlay pavement for roadways up to 28 feet)



E.R.= edge of existing paved roadway
t = one and one half inch (1½") overlay of bituminous concrete pavement

GENERAL NOTES:

1. Repavement of settled areas and crown restoration within the trench limits shall be the responsibility of the contractor.
2. Leveling outside the trench limits shall be the responsibility of the owner.
3. Sewer trench re-fill and pavement re-paving on public ways under the jurisdiction of the Massachusetts Department of Public Works, the Metropolitan District Commission, or other such agency shall be in accordance with permit(s) issued therefore by that Department or Commission, as the case may be.
4. The Division will consider requests for increase in the participating pay limits defined in paragraphs A and B, when such increases are, in the Division's opinion, reasonable. Such requests should be documented in writing and submitted to the Division in a timely manner.
5. Projects which deviate from the above options are required to seek Division review and approval.

POLICY MEMORANDUM NO. CG-9 **PIPE TESTING**

Monthly payment estimates shall be prepared in accordance with contract documents. All pipe shall be tested in accordance with the contract documents and sound engineering practice. If, after 60 days following submission of a monthly payment estimate for pipe items, the pipe for which payment is requested has not been successfully tested, the owner may withhold up to 10% of the amount requested for such pipe items until the pipe has been so tested. However, in the case of a major (pipe diameter 24 inches or greater) interceptor pipe installation, sums retained by the owner pursuant to this policy memorandum shall not exceed two per centum (2%) of the costs of such pipe items.

POLICY MEMORANDUM NO. CG-10 **CHANGE ORDERS**

Executed change orders submitted to the Division for review and processing for financial assistance must be prepared on the attached Change Order Forms (CG-10, Attachment 1, pages A-1 & A-2) with a duplicate copy, calculation sheet(s) (CG-10, Attachment 2), and all other supporting documentation necessary for evaluation. Failure to comply with these instructions will result in delays in processing the change order and/or limited financial assistance.

M.G.L. c.44, s.31C requires that the auditor, accountant, or other municipal officer having similar duties must certify that adequate funding in an amount sufficient to cover the total cost of the change order has been made. Change orders will not be processed or approved until this certification is made on the face of the Change Order Form (CG-10 Attachment 1).

Payment of Change Orders:

Payment of all change orders shall be in accordance with the relevant provisions of Massachusetts General laws, Chapter 30, Section 39G for non-building construction and Section 39K for building construction.

Payment of change orders shall be made in accordance with one of the following three methods:

A. Existing unit prices as set forth in the contract; or
B. Agreed upon lump sum or unit prices; or
C. Time and materials

A. Payment for work for which there is a unit price in the contract:

Where the contract contains a unit price for work and the Engineer orders a change for work of the same kind as other work contained in the contract and is performed under similar physical conditions, the contractor may accept full and final payment at the contract unit price(s) for the acceptable quantities.

B. Payment for work or materials for which no price is contained in the contract:

If the Engineer directs, the contractor shall submit promptly in writing to the Engineer and offer to do the required work on a lump sum or unit price basis, as specified by the Engineer. The stated price, either lump sum or unit price, shall be divided so as to show that it is the sum of:

(1) The estimated cost of labor, plus
(2) Direct Labor Cost, plus
(3) Material and Freight Costs, plus
(4) Equipment Costs, plus
(5) An amount not to exceed 20% of the sum of items (1) through (4) for overhead and profit, plus (if applicable),
(6) In the case of work done by a subcontractor an amount not to exceed 7 ½ %, for the general contractor of the sum of items (1) through (4) for his overhead and profit, less, if applicable,
(7) Credits for work deleted from the contract.

C. Payment for work on a time and materials basis:

Unless an agreed lump sum and/or unit price is obtained from above and is so stated in the change price, the contractor shall accept as full payment for which no other agreement is contained in contract, and amount equal to:

(1) The estimated cost of Labor, plus
(2) Direct Labor Cost, plus
(3) Material and Freight Costs, plus
(4) Equipment Costs, plus
(5) An amount not to exceed 20% of the sum of items (1) through (4) for overhead and profit, plus (if applicable),
(6) In the case of work done by a subcontractor an amount not to exceed 7 ½ %, for the general contractor of the sum of items (1) through (4) for his overhead and profit, less, if applicable,
(7) Credits for work deleted from the contract.

Explanation of items (1) through (7) as outlined in "B" and "C":

(1) Labor – Only those workers employed on the project who are doing the extra work, including the foreman in charge, are allowable. General foremen, superintendents, or other supervisory personnel are considered to be included in the overhead markup as provided in items (5) and/or (6). Hourly labor rates in excess of those as listed in the contract wage rates (Federal or State, whichever applies) require documentation. As a minimum, an explanation and the appropriate copy of the certified payroll are required.

(2) Direct Labor Costs - These costs are limited to those which are required in the contract document. Coverage in excess of the contract provisions, secured by the contractor/subcontractor(s) at his option, are ineligible for financial assistance. The following list of typical direct labor charges is provided for your assistance and is in no way intended to be complete or all encompassing:

- Workman's Compensation
- Federal/State: Social Security Tax and Unemployment Tax;
- Health, Welfare and Pension Benefits; (this cost is included in the wage rates appearing in the Mass. Wage Rates of the contract specifications)
- Liability Insurance: Bodily Injury;
  Excess Umbrella;
  Property damage;
  Public Liability
- Blasters Insurance)
- Builders Risk Insurance)
- Experience Modification Insurance) If applied to any required direct labor costs.
- Surcharges)

Following the Notice of Intent to Award, the Owner shall require the Low Bidder to submit the percentage to be used for the Direct Labor Cost markup, along with the breakdown of how it is calculated (this number shall be required and submitted to MassDEP before and Authorization to Award is issued by DMS). This documented direct labor cost may be adjusted upon the submission of new documentation which demonstrates both how and why it has changed.

(3) Material and Freight – Only those materials required as a result of the change order and reasonable freight charges for delivery of same are allowable.

(4) Equipment – Only the equipment required as a result of the change order is allowable. Equipment rental rates shall be governed by the current Nielson/Dataquest Rental Rate bluebook for Construction Equipment (the "Bluebook"). In determining the rental rate the following shall apply:

(a) For equipment already on the project – the monthly prorated rental rate by the hourly use shall be applicable;
(b) For equipment not on the project the daily rate, the weekly rate, or monthly rate will prevail, whichever will prove to be most cost effective. Small tools and manual equipment are examples of costs not allowable under this item. These costs are considered to be included in the overhead markup as provided in items (5) and/or (6) (1 month (normal use) = 176 hours)

(5) & (6) Overhead and Profit – All other costs not previously mentioned are considered to be included in this item, be it for the general contractor or subcontractor(s).

(7) Credits – Work deleted, material and equipment removed from the contractor, stored and/or returned shall be credited to the cost of the change order, less costs.

The Contractor shall furnish itemized statements of the cost of the work ordered and shall give the Engineer access to all accounts, bills and vouchers relating thereto; and unless the Contractor shall furnish such itemized statements, and access to all accounts, bills and vouchers, he shall not be entitled to payment for any items of extra work for which such information is sought by the Engineer. Deviations from any of the above will be reviewed for financial assistance on a case-by-case basis.

The change order will be prepared in such manner as to clearly separate Eligible and Ineligible Costs.

CHANGE ORDER FORM

SRF Number _____
Public Entity _____
Contract Number _____
Change Order Number _____

Contract Amount (As Bid) $ _____

Net Change in Contract Price (this change order) $ _____

Total Adjusted Contract Price (including this and all other change orders) $ _____

This change order extends the time to complete the work by _____ calendar days.

The extended completion date is _____

This change order checked by _____ _____
(Chief) Resident Engineer Date

This change order is requested by: _____

This change order is recommended by: _____

_____ _____ _____
Consultant Engineer P.E. Number Date

The undersigned agree to the terms of the change order.

_____ _____
Contractor Date

_____ _____
Owner Date

Certification of Appropriation under M.G.L. c.44, §31C: Adequate funding in an amount sufficient to cover the total cost of this change order is available.

By: _____ _____
Certification Officer (Auditor, accountant, treasurer) Date

Do not write below: this space reserved for STATE AGENCY APPROVAL

DEP/DMS

CHANGE ORDER FORM (Continued)

Public Entity _____

SRF No: _____ Contract No. _____ Change Order No. _____

Contract Title: _____

Owner's Name: _____

Owner's Address: _____

Contractor's Name: _____

Contractor's Address: _____

Description of Change

Reason for Change

CALCULATION SHEET

(1) Labor

Foreman	10 hrs @ $10.00/hr.	$ 100.00	
Engineer	10 hrs @ 8.50/hr	85.00	
Operator	10 hrs @ 9.50/hr	95.00	
Laborers	24 hrs @ 7.00/hr	168.00	
			$448.00

(2) Direct Labor Cost (use the agreed upon Direct Labor Cost)

*	(30)% of $448	
*	(Used for example purposes only)	134.00

(3) Materials & Freight

150 l.f. of 12" pipe @ $2.00/l.f.	$ 300.00	
15 v.f. precast SMH	1,700.00	
Freight (slip # _____ Enclosed)	25.00	
		2,025.00

(4) Equipment

1 Backhoe 10 hrs @ $80.00/hr	$ 800.00	
1 Truck-crane 10 hrs @ $100.00/hr	1,000.00	
		1,800.00
Total (Items 1 through 4)		4,407.00

(5) 15% markup for Overhead, Profit

15% of $4,407	661.00

(6) 5% markup for general contractor (if subcontractor is involved)

5% of $4,407	220.00

(7) Credits (deductibles)		- 323.00
Total Cost	$	4,965.00

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence, Calculation, photographs, reports …….

EXAMPLE

POLICY MEMORANDUM NO. CG-11 **UTILITY RELOCATION**

The construction of treatment facilities, sewers, pumping stations, force mains and appurtenant work can cause the relocation of utilities. Costly relocation can sometimes be minimized by early communication and cooperation of the representatives of the municipality (owner) and the utilities.

Every possible effort should be made by the owner and each utility to establish the location of existing utilities in the vicinity of the proposed construction. The owner or its consulting engineer should make every reasonable effort to design the proposed construction so that relocation of existing utilities is minimized whenever possible. If the proposed construction is in an area of many existing utilities or in an otherwise critical area, the utilities are encouraged to mark the location of their existing utilities at the site during the design phase of the project.

During the design phase of the project, the municipality should provide timely notice to all utilities known or thought to have facilities in or proximate to the site of such future construction.

POLICY MEMORANDUM NO. CG-12 **REFUNDABLE DEPOSITS FOR PLANS AND SPECIFICATIONS**

For each set of project plans and specifications provided, the owner may require a deposit in form of cash or other appropriate security, in an amount sufficient to cover the costs of production of such plans and specifications.

Upon return of the plans and specifications to the owner within a reasonable time and in good condition, such deposit shall be refunded.

Actual mailing costs, if any, shall be borne by the party requesting such plans and specifications.

POLICY MEMORANDUM NO. CG-13 **BID OPENING PROCEDURES**

As a minimum, bid documents shall be reviewed/inspected for conformance to the following bid opening procedure in the order presented below. Failure to comply with any of these steps shall render the bid non-responsive and upon determination of such non-responsiveness, such bid shall be rejected immediately, set aside, and shall receive no further consideration.

Bid Opening Procedure

Step #1. Timeliness – The bid must be filed at the place and within the time specified therefore in the invitation to bid, and no bid shall be accepted after such time. The time at which a bid is filed should be time/date stamped or otherwise prominently noted on the bid;

Step #2. Bid Security – Properly executed bid security, in the amount and terms specified in the invitation to bid (equal to 5% of Base Bid or Highest Possible Amount considering all alternatives) shall be placed in a seal envelope and attached to the outside of the envelope containing the bid at the time of its submission;

A. Bid Bond

The Bid bond must be dated On or Before the Bid Date;
Issued by a Bonding Company Licensed in Massachusetts;
Accompanied by a Current Power of Attorney;
Signed by Surety;

B. Check

The Check must be a Certified, Cashiers or Bank Treasurer's;
Dated On or Before the Bid Date;

Step #3. Bid Signature – The bid and all accompanying documents so required shall be signed by the bidder or its authorized representative before submission;

Step #4. Addenda – All addenda shall be sent certified mail, return receipt requested, by the owner to all individuals and organizations which have received plans and specifications and shall be mailed not later than five days prior to the date established for submission of bids. All bidders shall include with their bids written acknowledgement of receipt of all addenda, which acknowledgement may be on a form provided therefore by the owner.

Alternates – Any Alternates shall be acknowledged.

Step #5. Written Dollar Amounts – The total dollar amount of each bid shall be read, and the three lowest bids shall be selected for further consideration. The remaining bids shall then be set aside. The three apparent low bids shall be read to determine whether the unit price for each line item of each bid has been written therein in words. If it has not, such bid shall be rejected and shall receive no further consideration. ***Bid amounts shall be consistent (words vs. numbers) and if words and numbers differ, the words govern.*** This procedure shall then be repeated with the next apparent low bid until three are acceptable which have all the unit prices written in words, at which time the lowest bid shall be announced as the apparent low bidder, and the bid opening procedure shall be closed.

The Division recommends that this policy memorandum be included in all contract specifications and that the owner's evaluator(s) use the attached form (CG-13 Attachment #1) for bid opening procedures.

The Contractor's Bid Opening Checklist also attached hereto, is for use by each contractor to assure that his bid conforms with this policy memorandum. It is recommended that the checklist (CG-13 Attachment #2) be included in information for bidders, or at the end of the bid proposal, or in some other prominent part of the bid specifications

FORM FOR BID OPENING PROCEDURES

(to be completed by the owner's evaluator(s))

CONTRACT NO.: _____ DATE: _____

CONTRACT NAME: _____ BID OPENING TIME: _____

All non-responsive bids shall be rejected forthwith by the awarding authority upon determination of such bids' non-responsiveness at the time bids are opened and read. Failure to comply with any one of the requirements shall render the bid non-responsive, and upon determination of such non-responsiveness such bid shall be rejected and receive no further consideration.

A = Acceptable N-R = Non-Responsive (explain reasons on supplemental sheet & attach)

BIDDER		1. TIMELINESS	2. BID SECURITY	3. SIGNATURE	4. ADDENDA ALTERNATIVES	5. WRITTEN DOLLAR AMOUNTS	COMPLIANCE (CIRCLE ONE)	
1							YES	NO
2							YES	NO
3							YES	NO
4							YES	NO
5							YES	NO
6							YES	NO
7							YES	NO
8							YES	NO
9							YES	NO
10							YES	NO
11							YES	NO
12							YES	NO

DEP/DMS

Evaluator(s) _____

_____

_____

CG-13 Attachment #1

BID OPENING PROCEDURES
CONTRACTORS CHECKLIST

CONTRACT NO.: _____ BIDDER: _____ DATE: _____

All non-responsive bids shall be rejected forthwith by the awarding authority upon determination of such bids' non-responsiveness at the time bids are opened and read. Failure to comply with one or more of the following requirements shall render the bid non-responsive, and upon determination of such non-responsiveness such bid shall be rejected and receive no further consideration.

ITEM	REQUIREMENTS	COMPLIANCE (CIRCLE 1)		REASONS FOR REJECTION
1. Timeliness	Bid filed w/in time specified	Yes	No; Rejected	
2. Bid Security	Appropriate and properly Executed security w/bid.	Yes	No; Rejected	
3. Signature	Bid signed by authorized Representative	Yes	No; Rejected	
4. Addenda	All addenda acknowledge Any alternative	Yes	No; Rejected	
5. Dollar Amount	Dollar amount in words Specified for each line item in bid	Yes	No; Rejected	

DEP/DMS Attachment #2 Policy Memo No. CG-13

POLICY MEMORANDUM NO. CG-14 **PAYMENT FOR ROCK EXCAVATION**

There shall be in the contract documents a separate pay item for rock excavation. For such purposes, "rock" shall mean igneous, sedimentary, metamorphic, and conglomerate rock, which for excavation must be drilled, blasted, broken, or ripped by power tools. Boulders and concrete structures one cubic yard or greater, however removed, are included within this definition of rock for payment purposes. At the option of the owner or his representative a separate pay item for boulders, concrete structures, or concrete road base may be used.

Depth From Ground Surface To Invert Pipe	Pay Width (Nominal Pipe Diameter)	
	0-24"	Over 24"
* 0 – 12'	5'0"	D+3'0"
* Over 12' – 20'	7'0"	D+5'

Engineer's plans and specifications shall establish pay limits below pipe and structures.

- See CG-14 Attachment #1 (typical cross section)

Payment width for depths over twenty feet (20') shall be determined on a case-by-case basis consistent with the foregoing chart.

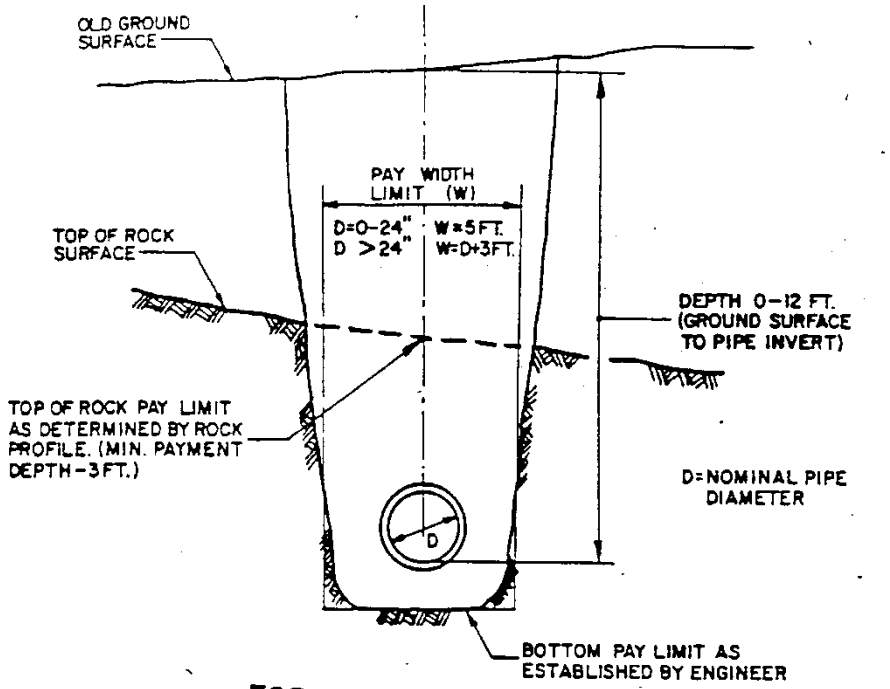
The pay limit for rock removal outside proposed manholes shall commence one foot (1') outside the widest dimension of the structure of shall be the maximum connecting trench width, whichever is greater.

Payment depth for rock which is encountered in a trench shall be no less than three feet (3') when removal can be accomplished only by drilling and blasting or by use of jack (air or hydraulic) hammers.

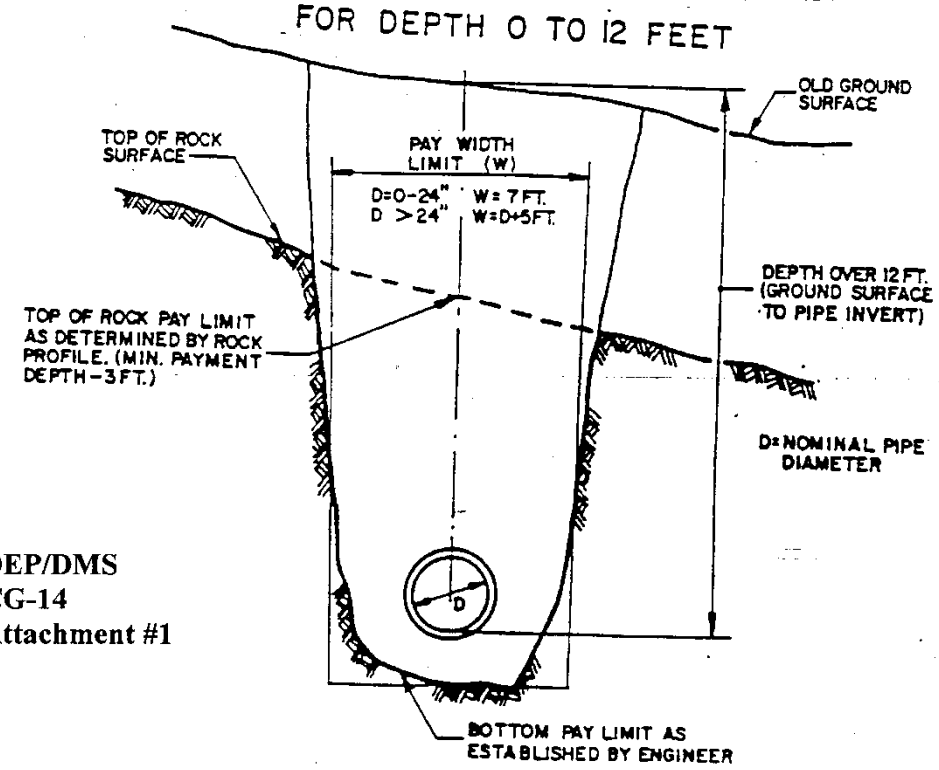
Payment for rock removed, using the same or equal equipment as utilized for normal trench excavation, shall be limited to the actual depth removed within the limits established by the contract documents.

Boulders encountered within the pay limits of excavation, whose volume is one cubic yard or greater, part of which extends outside said limits shall be paid in accordance with the actual volume excavated.

CG-14 ROCK EXCAVATION



FOR DEPTH 0 TO 12 FEET



FOR DEPTH OVER 12 FEET AND UP TO 20 FEET

DEP/DMS
CG-14
Attachment #1

POLICY MEMORANDUM NO. CG-15 **TRAFFIC POLICE**

The reasonable costs for police details required for traffic control on a construction project which receives financial assistance shall be considered as an eligible administrative cost. A police detail item shall not be included as a bid item in the contract documents.

"Police" as used in this memorandum includes local, county, capital, state, regular and auxiliary police.

Owner's Responsibility

It shall be the owner's responsibility to submit in writing the hourly rate of pay to be established for detailed traffic police and each change in rate during the course of the project. It is the owner's responsibility to arrange, document and pay for such police details. The owner or its representative shall meet with the police chief or other officer in charge of police detail duty to review contract needs. The owner shall maintain a daily record of the following:

a. Officer's name
b. Hours worked
c. Location of assignment
d. Hourly rate

POLICY MEMORANDUM NO. CG-16 **DOCUMENTATION REQUIRED TO SUBSTANTIATE CONTRACT QUANITITES**

Unit	Documentation required
Acres (A)	Location, station, offset and calculations. Location = Street right-of-way, etc; Station = Point on Baseline; Offset = Distance left or right of Baseline
Cubic Yard (C.Y.)	Location, stations, widths, depths, calculations and Cross sections as necessary
Each (Ea.)	Location, station, and offset.
Gallon (Gal.)	Location, stations, calculations (if appropriate) and delivery slips.
Hour (Hr.)	Hours and location.
Linear Feet (L.F.)	Location, stations, and offsets.
Month (Mo.)	Location, period of time and calculations if applicable.

1000 Foot Board Measure (MFBM)	Location, stations, offset, elevations, grade, and calculations. Attach invoices where applicable.
Pound (Lb.)	Locations, stations, and calculations (if applicable). Attach Delivery weight slips.
Square Feet (S.F.)	Locations, stations and calculations
Square Yard (S.Y.)	Locations, stations and calculations
Ton	Locations, stations and calculations (if applicable). Attach Delivery weight slips.
Vertical Feet (V.F.)	Locations, stations, elevations, and offsets.

Note:

1. All of the above, that apply must be submitted with a final payment request or change order as applicable.
2. Where in place measurement is not possible or practical, delivery slips may be used to substantiate quantities.
3. Change orders – See CG-10 in which some of the above may be applicable in justifying materials, equipment and labor.
4. When necessary, itemized quantities must be separated into eligible and non-eligible units with separate calculations to justify eligible costs.
5. Overruns and underruns of any specific item shall be explained with an appropriate sentence or paragraph.
6. On all quantities, units of payment shall be maintained at the project site and shall be updated daily so that upon field inspection by the C.O.E., EPA or DMS, the quantities paid to date can be substantiated.
7. In the case of unforeseen conditions, photos should be submitted with the applicable item in addition to the recommended documentation.
8. Documentation of units of payment shall be clearly legible and cross referenced to the applicable sheets of the record drawings.
9. For record drawings policy, please see CG-4.

DMS Policies 1 through 16 Approved By:

Steven J. McCurdy
Division of Municipal Services

DWS POLICY 88-02
DEPARTMENT OF ENVIRONMENTAL PROTECTION
POLICY FOR REVIEW OF SEWER LINE/WATER SUPPLY PROTECTION

The Department of Environmental Protection seeks to protect existing and potential water supplies from the potentially negative effects of leaking sewer lines through the adoption of a Department policy on this subject.

The following restrictions will apply to new sewer construction statewide:

Gravel Packed Wells

~ Within the 400 foot radius protective distance around gravel packed wells, all sewer lines and appurtenances are prohibited, unless they are necessary to eliminate existing and/or potential sources of pollution to the well.

Tubular Wells

~ Within the 250 foot radius protective distance around tubular wells, all sewer lines and appurtenances are prohibited, unless they are necessary to eliminate existing and/or potential sources of pollution to the well.

Gravel Packed and Tubular Wells

~ Within a minimum radius of 2,640 feet or unless otherwise documented by an appropriate study specifically defining the area of influence and approved by the Division of Water Supply, all sewer lines and appurtenances will be designed and constructed for maximum water tightness.

○ Force Mains or Pressure Sewers: shall be tested at 150% above maximum operating pressure or 150 p.s.i. whichever is greater. Testing shall conform to the requirements of the American Water works Association (AWWA) standard c 600.

○ Gravity Sewers: shall be tested by approved methods which will achieve test results for infiltration or exfiltration of less than 100 gallons/inch diameter/mile/24 hours.

○ Manholes: shall be installed with watertight covers with locking or bolted and gasketed assembles. Testing for infiltration/exfiltration shall conform to the same standards as the maximum allowed for pipes in the manhole as required for gravity sewers, indicated above.

○ Satisfactory test results for Force Mains, Manholes and Gravity Sewers shall be performed prior to the expiration of the contractor's one year guarantee period.

○ All pumping stations within this zone shall have standby power high water alarms telemetered to an appropriated location that is manned at all times. An emergency contingency plan must be developed by the owner and approved by the BRP.

○ A minimum of Class B bedding as defined by WPCF-MOP9 must be used for all piping.

○ Service connections (laterals and house connections) shall be rigidly inspected by the appropriate municipal official. Certified inspection reports shall be submitted to the BRP.

Bedrock Wells

The above requirements are the same for bedrock wells, with the Department reserving the right to require more stringent controls on a case-by-case basis.

Surface Water Supplies

~ Within 100 feet of all surface water supplies and tributaries all sewer lines and appurtenances are prohibited except as required to cross tributaries or to eliminate existing or potential pollution to the water supply. In the latter case, watertight construction methods shall be use.

~ Tributary stream crossings shall employ watertight construction methods of sewer lines and manholes. Watertight construction must extend 100 feet to either side of the stream.

~ Within 1,000 feet of surface water supplies and tributaries, all pumping stations shall have standby power and high water alarms telemetered to an appropriate location that is manned at all times. An emergency contingency plan must be developed by the owner of the wastewater treatment facility and submitted to the BRP for approval.

~ Beyond 1,000 feet and within the watershed of surface water supplies the Department may in specific circumstances after review, require additional controls.

Potential Public Water Supplies

The above requirements also apply to potential public water supplies.

Baseline Date Requirements

Two (2) copies of an appropriately scaled map(s) shall be submitted to the Department which details the proposed sewers and/or appurtenances and also includes the following:

(1) the location of all nearby existing or potential surface water supplies, tributaries thereto, and watershed boundaries;

(2) the location of existing and potential public and municipal potable groundwater supply wells.

The Department reserves the right to impose more restrictive measures than those contained in this policy as deemed appropriate.

Definitions

- Appurtenances – all attachments to sewer lines necessary for the transport and operation and maintenance of sewer lines, including manholes, pumping station, siphons, etc.

- Area of influence – that area of an aquifer which contributes water to a well under the most severe recharge and pumping condition that can be realistically anticipated (i.e. pumping at the safe yield of the well for 180 days without any natural recharge occurring). It is bounded by the groundwater divides which result from pumping the well and by the contact of the edge of the aquifer with less permeable materials such as till and bedrock. At some locations, streams and lakes may form recharge boundaries.

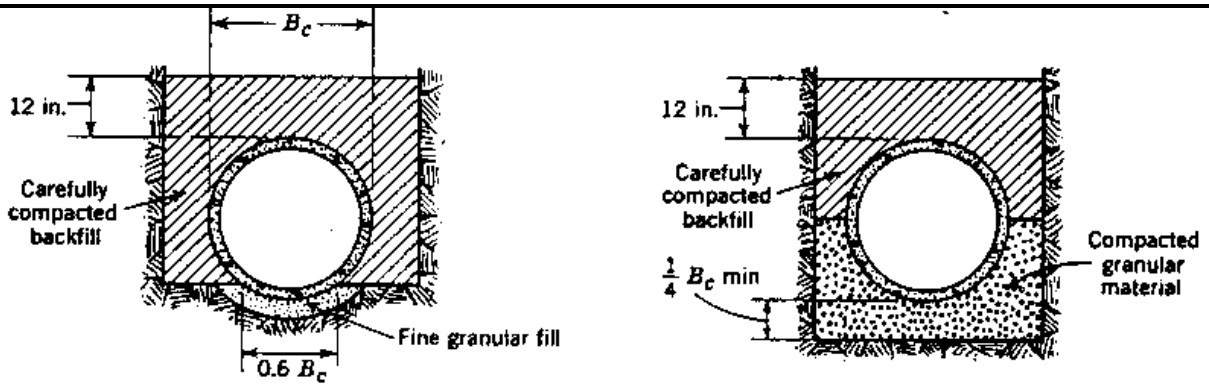
- Potential public water supply – areas designated by communities for water supply purposes where land has been set aside and Department approved pump tests conducted and surface water supplies as defined below.

- Surface Water Supply – Waters classified as Class A by the DWPC.

- Public Water Supply Systems – as defined in 310 CMR 22.02 (DEP Drinking Water Regulations).

- Class B Bedding – as defined in WPCF Manual of Practice No. 9.

APPROVED: (Signature on File)



Shaped bottom with tamped backfill, load factor 1.9

Compacted granular bedding, load factor 1.9

Class B---First-Class Bedding – Class B bedding may be achieved by either of two construction methods:

a. Shaped Bottom with Tamped Backfill. The bottom of the trench excavation shall be shaped to conform to a cylindrical surface with a radius at least 2 in. (5 cm) greater than the radius to the outside of the pipe and with a width sufficient to allow six-tenths of the width of the pipe barrel to be bedded in fine granular fill placed in the shaped excavation. Carefully compacted backfill shall be placed at the sides of the pipe to a thickness of at least 12 in. (30 cm) above the top of the pipe. Shaped trench bottoms are difficult to achieve under current construction conditions.

b. Compacted Granular Bedding with Tamped Backfill. The pipe shall be bedded in compacted granular material placed on a flat trench bottom. The granular bedding shall have a minimum thickness of one-fourth the outside pipe diameter and shall extend halfway up the pipe barrel at the sides. The remainder of the side fills and a minimum depth of 12 in. (30 cm) over the top of the pipe shall be filled with carefully compacted material.

Davis Bacon Act Requirements

Construction projects on the 2012 Intended Use Plans are subject to the Davis Bacon wage rate requirements and must include the appropriate sections of the following document in its entirety in the contract documents.

The vast majority of SRF projects will be bid by Governmental Entities (i.e., Cities, Towns, Authorities, Water Districts, Wastewater Districts). These projects must include the following language in construction contracts:

I.3. Contract and Subcontract Provisions
I.4. Contract Provisions for Contracts in Excess of $100,000 (if applicable)
I.5. Compliance Verification

This language may be found on pages DB-3-DB-11.

In certain cases, SRF projects may be bid by non-Governmental Entities (i.e., private water companies, private PWSs, etc.). These projects must include the following language in construction contracts:

II.3. Contract and Subcontract Provisions
II.4. Contract Provisions for Contracts in Excess of $100,000 (if applicable)
II.5. Compliance Verification

This language my be found on pages DB-11-DB-21
Wage Rate Requirements Under FY 2012 Appropriations Act

Preamble

With respect to the Clean Water and Safe Drinking Water State revolving Funds, EPA provides capitalization grants to each State which in turn provides subgrants or loans to eligible entities within the State. Typically, the subrecipients are municipal or other local governmental entities that manage the funds. For these types of recipients, the provisions set forth under Roman Numeral I, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section 3(ii)(A), below and for compliance as described in Section I-5.

Occasionally, the subrecipient may be a private for profit or not for profit entity. For these types of recipients, the provisions set forth in Roman Numeral II, below, shall apply. Although EPA and the State remain responsible for ensuring subrecipients' compliance with the wage rate requirements set forth herein, those subrecipients shall have the primary responsibility to maintain payroll records as described in Section II-3(ii)(A), below and for compliance as described in Section II-5.

I. Requirements under FY 2012 Appropriations Act For Subrecipients That Are Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under the

FY 2012 Appropriations Act with respect to State recipients and subrecipients that are governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient. If a State recipient needs guidance, the recipient may contact Valerie Marshall at EPA Region 1 (617-918-1674) for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's web site at http://www.dol.gov/esa/whd/recovery/

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2012 Appropriations Act, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the subrecipient shall monitor www.wdol.gov weekly to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

(ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of $2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the actslisted in § 5.1 or the FY 2012 Appropriations Act, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the
Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section
1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §

5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein:
Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-
Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site,
www.dol.gov.

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
(2) The classification is utilized in the area by the construction industry; and
(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the
Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The subrecipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved

programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA , the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of
Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor

Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may by appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29
CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of $100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient**,** upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the subrecipient should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(d) The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at http://www.dol.gov/esa/contacts/whd/america2.htm.

II. Requirements under FY 2012 Appropriations Act For Subrecipients That Are Not Governmental Entities

The following terms and conditions specify how recipients will assist EPA in meeting its DB responsibilities when DB applies to EPA awards of financial assistance under the FY2012 Full-Year Continuing Appropriation Act with respect to subrecipients that are not governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a State recipient needs guidance, the recipient may contact Valerie Marshall at EPA Region 1 (617-918-1674) for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's web site at http://www.dol.gov/esa/whd/recovery/ **Under these terms and conditions, the subrecipient must submit its proposed DB wage determinations to the State recipient for approval prior to including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.**

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2012 Full-Year Continuing Appropriation, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation

at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients must obtain proposed wage determinations for specific localities at www.wdol.gov. After the Subrecipient obtains its proposed wage determination, it must submit the wage determination to (insert contact information for State recipient DB point of contact for wage determination) for approval prior to inserting the wage determination into a solicitation, contract or issuing task orders, work assignments or similar instruments to existing contractors (ordering instruments unless subsequently directed otherwise by the State recipient Award Official.

(b) Subrecipients shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the subrecipient shall monitor www.wdol.gov. on a weekly basis to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

(ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(c) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subecipient shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(d) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(e) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if

DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of $2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2011 Full-Year Continuing Appropriation, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-
Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site,

www.dol.gov. .

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient(s) to the State award official. The State award official will transmit the report, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request, and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the
Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The subrecipient(s) shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy

received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor isresponsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA , the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may by appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29

CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of $100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient shall upon the request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal

contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a). The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the subrecipient should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c). The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its

assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(d). The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at http://www.dol.gov/esa/contacts/whd/america2.htm.

APPENDIX C

PREVAILING WAGE RATES

MINIMUM HOURLY WAGE RATES

The CONTRACTOR and every subcontractor shall post in a prominent and accessible place at the site of the Work, a legible copy of the Federal Wage Determination Rate Schedule (if such is included in the Contract Documents).

The rates established by each schedule are minimum, and all employees shall be paid no less than the established rate listed for each trade or occupation. In case of conflict between schedules in any one trade or occupation, the higher rate listed shall control and such higher rate shall be considered to be the minimum.

State: The minimum rates of wages and schedule of supplements to be provided for the various trades shall be in accordance with the Prevailing Wage Rate Schedule which is included herein.

Minimum Wage Rates as determined by the Commissioner of Department of Labor and Industries under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this project. It is the responsibility of the contractor, before bid opening, to request if necessary, any additional information on minimum wage rates for those tradespeople who may be employed for the proposed work under this contract.

Federal: The minimum rates of wages and schedule of supplements to be provided for the various trades shall be in accordance with the Davis Bacon Wage rates which are included herein.

MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS

Prevailing Wage Rates

As determined by the Director under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES
Secretary

MICHAEL FLANAGAN
Director

Awarding Authority: Town of Uxbridge DPW

Contract Number:

City/Town: UXBRIDGE

Description of Work: Pipe lining - 2 segments and manhole frame and cover replacement

Job Location: River Rd, Uxbridge, MA

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- **The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor.** For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to http://www.mass.gov/dols/pw.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Issue Date: 03/12/2024 **Wage Request Number:** 20240312-035

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$38.95	$15.07	$18.67	$0.00	$72.69
	06/01/2024	$39.95	$15.07	$18.67	$0.00	$73.69
	12/01/2024	$39.95	$15.07	$20.17	$0.00	$75.19
	01/01/2025	$39.95	$15.57	$20.17	$0.00	$75.69
	06/01/2025	$40.95	$15.57	$20.17	$0.00	$76.69
	12/01/2025	$40.95	$15.57	$21.78	$0.00	$78.30
	01/01/2026	$40.95	$16.17	$21.78	$0.00	$78.90
	06/01/2026	$41.95	$16.17	$21.78	$0.00	$79.90
	12/01/2026	$41.95	$16.17	$23.52	$0.00	$81.64
	01/01/2027	$41.95	$16.77	$23.52	$0.00	$82.24
(3 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.02	$15.07	$18.67	$0.00	$72.76
	06/01/2024	$40.02	$15.07	$18.67	$0.00	$73.76
	12/01/2024	$40.02	$15.07	$20.17	$0.00	$75.26
	01/01/2025	$40.02	$15.57	$20.17	$0.00	$75.76
	06/01/2025	$41.02	$15.57	$20.17	$0.00	$76.76
	12/01/2025	$41.02	$15.57	$21.78	$0.00	$78.37
	01/01/2026	$41.02	$16.17	$21.78	$0.00	$78.97
	06/01/2026	$42.02	$16.17	$21.78	$0.00	$79.97
	12/01/2026	$42.02	$16.17	$23.52	$0.00	$81.71
	01/01/2027	$42.02	$16.77	$23.52	$0.00	$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.14	$15.07	$18.67	$0.00	$72.88
	06/01/2024	$40.14	$15.07	$18.67	$0.00	$73.88
	12/01/2024	$40.14	$15.07	$20.17	$0.00	$75.38
	01/01/2025	$40.14	$15.57	$20.17	$0.00	$75.88
	06/01/2025	$41.14	$15.57	$20.17	$0.00	$76.88
	12/01/2025	$41.14	$15.57	$21.78	$0.00	$78.49
	01/01/2026	$41.14	$16.17	$21.78	$0.00	$79.09
	06/01/2026	$42.14	$16.17	$21.78	$0.00	$80.09
	12/01/2026	$42.14	$16.17	$23.52	$0.00	$81.83
	01/01/2027	$42.14	$16.77	$23.52	$0.00	$82.43
ADS/SUBMERSIBLE PILOT *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$103.05	$9.40	$23.12	$0.00	$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
	06/01/2024	$39.94	$9.65	$17.14	$0.00	$66.73
	12/01/2024	$41.27	$9.65	$17.14	$0.00	$68.06
	06/01/2025	$42.66	$9.65	$17.14	$0.00	$69.45
	12/01/2025	$44.04	$9.65	$17.14	$0.00	$70.83
	06/01/2026	$45.48	$9.65	$17.14	$0.00	$72.27
	12/01/2026	$46.92	$9.65	$17.14	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS WORKER (PIPES & TANKS) *HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)*	12/01/2023	$40.80	$14.50	$11.05	$0.00	$66.35
	06/01/2024	$41.80	$14.50	$11.05	$0.00	$67.35
	12/01/2024	$42.80	$14.50	$11.05	$0.00	$68.35
	06/01/2025	$43.80	$14.50	$11.05	$0.00	$69.35
	12/01/2025	$44.80	$14.50	$11.05	$0.00	$70.35
ASPHALT RAKER *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER *LABORERS - ZONE 2*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
	06/01/2024	$39.94	$9.65	$17.14	$0.00	$66.73
	12/01/2024	$41.27	$9.65	$17.14	$0.00	$68.06
	06/01/2025	$42.66	$9.65	$17.14	$0.00	$69.45
	12/01/2025	$44.04	$9.65	$17.14	$0.00	$70.83
	06/01/2026	$45.48	$9.65	$17.14	$0.00	$72.27
	12/01/2026	$46.92	$9.65	$17.14	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER *BOILERMAKERS LOCAL 29*	01/01/2024	$48.12	$7.07	$20.60	$0.00	$75.79

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *BOILERMAKER - Local 29*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	$31.28	$7.07	$13.22	$0.00	$51.57
2	65	$31.28	$7.07	$13.22	$0.00	$51.57
3	70	$33.68	$7.07	$14.23	$0.00	$54.98
4	75	$36.09	$7.07	$15.24	$0.00	$58.40
5	80	$38.50	$7.07	$16.25	$0.00	$61.82
6	85	$40.90	$7.07	$17.28	$0.00	$65.25
7	90	$43.31	$7.07	$18.28	$0.00	$68.66
8	95	$45.71	$7.07	$19.32	$0.00	$72.10

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) *BRICKLAYERS LOCAL 3 (WORCESTER)*	02/01/2024	$60.26	$11.49	$22.90	$0.00	$94.65
	08/01/2024	$62.36	$11.49	$22.90	$0.00	$96.75
	02/01/2025	$63.66	$11.49	$22.90	$0.00	$98.05
	08/01/2025	$65.81	$11.49	$22.90	$0.00	$100.20
	02/01/2026	$67.16	$11.49	$22.90	$0.00	$101.55
	08/01/2026	$69.36	$11.49	$22.90	$0.00	$103.75
	02/01/2027	$70.76	$11.49	$22.90	$0.00	$105.15

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *BRICK/PLASTER/CEMENT MASON - Local 3 Worcester*

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$30.13	$11.49	$22.90	$0.00	$64.52
2	60	$36.16	$11.49	$22.90	$0.00	$70.55
3	70	$42.18	$11.49	$22.90	$0.00	$76.57
4	80	$48.21	$11.49	$22.90	$0.00	$82.60
5	90	$54.23	$11.49	$22.90	$0.00	$88.62

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$31.18	$11.49	$22.90	$0.00	$65.57
2	60	$37.42	$11.49	$22.90	$0.00	$71.81
3	70	$43.65	$11.49	$22.90	$0.00	$78.04
4	80	$49.89	$11.49	$22.90	$0.00	$84.28
5	90	$56.12	$11.49	$22.90	$0.00	$90.51

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$45.48	$9.65	$18.22	$0.00	$73.35
	06/01/2024	$46.96	$9.65	$18.22	$0.00	$74.83
	12/01/2024	$48.43	$9.65	$18.22	$0.00	$76.30
	06/01/2025	$49.93	$9.65	$18.22	$0.00	$77.80
	12/01/2025	$51.43	$9.65	$18.22	$0.00	$79.30
	06/01/2026	$52.98	$9.65	$18.22	$0.00	$80.85
	12/01/2026	$54.48	$9.65	$18.22	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$44.33	$9.65	$18.22	$0.00	$72.20
	06/01/2024	$45.81	$9.65	$18.22	$0.00	$73.68
	12/01/2024	$47.28	$9.65	$18.22	$0.00	$75.15
	06/01/2025	$48.78	$9.65	$18.22	$0.00	$76.65
	12/01/2025	$50.28	$9.65	$18.22	$0.00	$78.15
	06/01/2026	$51.83	$9.65	$18.22	$0.00	$79.70
	12/01/2026	$53.33	$9.65	$18.22	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$44.33	$9.65	$18.22	$0.00	$72.20
	06/01/2024	$45.81	$9.65	$18.22	$0.00	$73.68
	12/01/2024	$47.28	$9.65	$18.22	$0.00	$75.15
	06/01/2025	$48.78	$9.65	$18.22	$0.00	$76.65
	12/01/2025	$50.28	$9.65	$18.22	$0.00	$78.15
	06/01/2026	$51.83	$9.65	$18.22	$0.00	$79.70
	12/01/2026	$53.33	$9.65	$18.22	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
CARPENTER *CARPENTERS -ZONE 2 (Eastern Massachusetts)*	03/01/2024	$47.12	$9.83	$19.97	$0.00	$76.92
	09/01/2024	$48.37	$9.83	$19.97	$0.00	$78.17
	03/01/2025	$49.62	$9.83	$19.97	$0.00	$79.42
	09/01/2025	$50.87	$9.83	$19.97	$0.00	$80.67
	03/01/2026	$52.12	$9.83	$19.97	$0.00	$81.92
	09/01/2026	$53.37	$9.83	$19.97	$0.00	$83.17
	03/01/2027	$54.62	$9.83	$19.97	$0.00	$84.42

Apprentice - *CARPENTER - Zone 2 Eastern MA*

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	$21.20	$9.83	$1.73	$0.00	$32.76
2	45	$21.20	$9.83	$1.73	$0.00	$32.76
3	55	$25.92	$9.83	$3.40	$0.00	$39.15
4	55	$25.92	$9.83	$3.40	$0.00	$39.15
5	70	$32.98	$9.83	$16.51	$0.00	$59.32
6	70	$32.98	$9.83	$16.51	$0.00	$59.32
7	80	$37.70	$9.83	$18.24	$0.00	$65.77
8	80	$37.70	$9.83	$18.24	$0.00	$65.77

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	$21.77	$9.83	$1.73	$0.00	$33.33
2	45	$21.77	$9.83	$1.73	$0.00	$33.33
3	55	$26.60	$9.83	$3.40	$0.00	$39.83
4	55	$26.60	$9.83	$3.40	$0.00	$39.83
5	70	$33.86	$9.83	$16.51	$0.00	$60.20
6	70	$33.86	$9.83	$16.51	$0.00	$60.20
7	80	$38.70	$9.83	$18.24	$0.00	$66.77
8	80	$38.70	$9.83	$18.24	$0.00	$66.77

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME *CARPENTERS-ZONE 3 (Wood Frame)*	10/01/2023	$25.55	$7.02	$4.80	$0.00	$37.37
	10/01/2024	$26.65	$7.02	$4.80	$0.00	$38.47
	10/01/2025	$27.75	$7.02	$4.80	$0.00	$39.57
	10/01/2026	$28.85	$7.02	$4.80	$0.00	$40.67

All Aspects of New Wood Frame Work

Apprentice - *CARPENTER (Wood Frame) - Zone 3*

Effective Date - 10/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$15.33	$7.02	$0.00	$0.00	$22.35
2	60	$15.33	$7.02	$0.00	$0.00	$22.35
3	65	$16.61	$7.02	$1.00	$0.00	$24.63
4	70	$17.89	$7.02	$1.00	$0.00	$25.91
5	75	$19.16	$7.02	$4.80	$0.00	$30.98
6	80	$20.44	$7.02	$4.80	$0.00	$32.26
7	85	$21.72	$7.02	$4.80	$0.00	$33.54
8	90	$23.00	$7.02	$4.80	$0.00	$34.82

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$15.99	$7.02	$0.00	$0.00	$23.01
2	60	$15.99	$7.02	$0.00	$0.00	$23.01
3	65	$17.32	$7.02	$1.00	$0.00	$25.34
4	70	$18.66	$7.02	$1.00	$0.00	$26.68
5	75	$19.99	$7.02	$4.80	$0.00	$31.81
6	80	$21.32	$7.02	$4.80	$0.00	$33.14
7	85	$22.65	$7.02	$4.80	$0.00	$34.47
8	90	$23.99	$7.02	$4.80	$0.00	$35.81

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 $18.52/ 3&4 $21.07/ 5&6 $28.70/ 7&8 $31.26

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING *BRICKLAYERS LOCAL 3 (WORCESTER)*	01/01/2024	$49.33	$13.00	$23.57	$1.30	$87.20

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *CEMENT MASONRY/PLASTERING - Worcester*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.67	$13.00	$15.93	$0.00	$53.60
2	60	$29.60	$13.00	$18.57	$1.30	$62.47
3	65	$32.06	$13.00	$19.57	$1.30	$65.93
4	70	$34.53	$13.00	$20.57	$1.30	$69.40
5	75	$37.00	$13.00	$21.57	$1.30	$72.87
6	80	$39.46	$13.00	$22.57	$1.30	$76.33
7	90	$44.40	$13.00	$23.57	$1.30	$82.27

Notes:

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$56.13	$15.00	$16.40	$0.00	$87.53
	06/01/2024	$57.45	$15.00	$16.40	$0.00	$88.85
	12/01/2024	$58.93	$15.00	$16.40	$0.00	$90.33
	06/01/2025	$60.26	$15.00	$16.40	$0.00	$91.66
	12/01/2025	$61.73	$15.00	$16.40	$0.00	$93.13
	06/01/2026	$63.06	$15.00	$16.40	$0.00	$94.46
	12/01/2026	$64.54	$15.00	$16.40	$0.00	$95.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$35.62	$15.00	$16.40	$0.00	$67.02
	06/01/2024	$36.47	$15.00	$16.40	$0.00	$67.87
	12/01/2024	$37.42	$15.00	$16.40	$0.00	$68.82
	06/01/2025	$38.27	$15.00	$16.40	$0.00	$69.67
	12/01/2025	$39.22	$15.00	$16.40	$0.00	$70.62
	06/01/2026	$40.08	$15.00	$16.40	$0.00	$71.48
	12/01/2026	$41.03	$15.00	$16.40	$0.00	$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2024	$56.06	$9.95	$23.95	$0.00	$89.96
	07/01/2024	$57.26	$9.95	$23.95	$0.00	$91.16
	01/01/2025	$58.46	$9.95	$23.95	$0.00	$92.36

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 - BRIDGES/TANKS*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$28.03	$9.95	$0.00	$0.00	$37.98
2	55	$30.83	$9.95	$6.66	$0.00	$47.44
3	60	$33.64	$9.95	$7.26	$0.00	$50.85
4	65	$36.44	$9.95	$7.87	$0.00	$54.26
5	70	$39.24	$9.95	$20.32	$0.00	$69.51
6	75	$42.05	$9.95	$20.93	$0.00	$72.93
7	80	$44.85	$9.95	$21.53	$0.00	$76.33
8	90	$50.45	$9.95	$22.74	$0.00	$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$28.63	$9.95	$0.00	$0.00	$38.58
2	55	$31.49	$9.95	$6.66	$0.00	$48.10
3	60	$34.36	$9.95	$7.26	$0.00	$51.57
4	65	$37.22	$9.95	$7.87	$0.00	$55.04
5	70	$40.08	$9.95	$20.32	$0.00	$70.35
6	75	$42.95	$9.95	$20.93	$0.00	$73.83
7	80	$45.81	$9.95	$21.53	$0.00	$77.29
8	90	$51.53	$9.95	$22.74	$0.00	$84.22

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN *LABORERS - ZONE 2*	12/01/2023	$44.48	$9.65	$18.07	$0.00	$72.20

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR *LABORERS - ZONE 2*	12/01/2023	$45.48	$9.65	$18.07	$0.00	$73.20

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS *LABORERS - ZONE 2*	12/01/2023	$45.23	$9.65	$18.07	$0.00	$72.95

For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER *LABORERS - ZONE 2*	12/01/2023	$45.48	$9.65	$18.07	$0.00	$73.20

For apprentice rates see "Apprentice- LABORER"

DEMO: JACKHAMMER OPERATOR *LABORERS - ZONE 2*	12/01/2023	$45.23	$9.65	$18.07	$0.00	$72.95

For apprentice rates see "Apprentice- LABORER"

DEMO: WRECKING LABORER *LABORERS - ZONE 2*	12/01/2023	$44.48	$9.65	$18.07	$0.00	$72.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DIRECTIONAL DRILL MACHINE OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$68.70	$9.40	$23.12	$0.00	$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$49.07	$9.40	$23.12	$0.00	$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$73.60	$9.40	$23.12	$0.00	$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$103.05	$9.40	$23.12	$0.00	$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) *DRAWBRIDGE - SEIU LOCAL 888*	07/01/2020	$26.77	$6.67	$3.93	$0.16	$37.53
ELECTRICIAN *ELECTRICIANS LOCAL 96*	09/03/2023	$45.99	$13.00	$18.84	$0.00	$77.83
	09/01/2024	$47.05	$13.99	$19.22	$0.00	$80.26
	09/07/2025	$48.16	$14.98	$19.60	$0.00	$82.74
	09/06/2026	$49.38	$15.96	$20.00	$0.00	$85.34

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *ELECTRICIAN - Local 96*

Effective Date - 09/03/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$18.40	$13.00	$0.55	$0.00	$31.95
2	45	$20.70	$13.00	$0.62	$0.00	$34.32
3	48	$22.08	$13.00	$15.49	$0.00	$50.57
4	55	$25.29	$13.00	$15.94	$0.00	$54.23
5	65	$29.89	$13.00	$16.59	$0.00	$59.48
6	80	$36.79	$13.00	$17.55	$0.00	$67.34

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$18.82	$13.99	$0.56	$0.00	$33.37
2	45	$21.17	$13.99	$0.64	$0.00	$35.80
3	48	$22.58	$13.99	$15.79	$0.00	$52.36
4	55	$25.88	$13.99	$16.26	$0.00	$56.13
5	65	$30.58	$13.99	$16.91	$0.00	$61.48
6	80	$37.64	$13.99	$17.90	$0.00	$69.53

Notes:

Steps 1-2 are 1000 hrs; Steps 3-6 are 1500 hrs.

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR *ELEVATOR CONSTRUCTORS LOCAL 41*	01/01/2024	$61.98	$16.18	$20.96	$0.00	$99.12
	01/01/2025	$62.83	$16.28	$21.36	$0.00	$100.47
	01/01/2026	$63.68	$16.38	$21.76	$0.00	$101.82
	01/01/2027	$64.53	$16.48	$22.16	$0.00	$103.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *ELEVATOR CONSTRUCTOR - Local 41*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$30.99	$16.18	$0.00	$0.00	$47.17
2	55	$34.09	$16.18	$20.96	$0.00	$71.23
3	65	$40.29	$16.18	$20.96	$0.00	$77.43
4	70	$43.39	$16.18	$20.96	$0.00	$80.53
5	80	$49.58	$16.18	$20.96	$0.00	$86.72

Effective Date - 01/01/2025

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$31.42	$16.28	$0.00	$0.00	$47.70
2	55	$34.56	$16.28	$21.36	$0.00	$72.20
3	65	$40.84	$16.28	$21.36	$0.00	$78.48
4	70	$43.98	$16.28	$21.36	$0.00	$81.62
5	80	$50.26	$16.28	$21.36	$0.00	$87.90

Notes:
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio:1:1

ELEVATOR CONSTRUCTOR HELPER *ELEVATOR CONSTRUCTORS LOCAL 41*	01/01/2024	$43.39	$16.18	$20.96	$0.00	$80.53
	01/01/2025	$43.98	$16.28	$21.36	$0.00	$81.62
	01/01/2026	$44.58	$16.38	$21.76	$0.00	$82.72
	01/01/2027	$45.17	$16.48	$22.16	$0.00	$83.81
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2023	$50.30	$14.50	$16.15	$0.00	$80.95
	05/01/2024	$51.54	$14.50	$16.15	$0.00	$82.19
	11/01/2024	$52.83	$14.50	$16.15	$0.00	$83.48
	05/01/2025	$54.27	$14.50	$16.15	$0.00	$84.92
	11/01/2025	$55.56	$14.50	$16.15	$0.00	$86.21
	05/01/2026	$57.00	$14.50	$16.15	$0.00	$87.65
	11/01/2026	$58.29	$14.50	$16.15	$0.00	$88.94
	05/01/2027	$59.72	$14.50	$16.15	$0.00	$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2023	$51.87	$14.50	$16.15	$0.00	$82.52
	05/01/2024	$53.12	$14.50	$16.15	$0.00	$83.77
	11/01/2024	$54.42	$14.50	$16.15	$0.00	$85.07
	05/01/2025	$55.87	$14.50	$16.15	$0.00	$86.52
	11/01/2025	$57.17	$14.50	$16.15	$0.00	$87.82
	05/01/2026	$58.62	$14.50	$16.15	$0.00	$89.27
	11/01/2026	$59.92	$14.50	$16.15	$0.00	$90.57
	05/01/2027	$61.37	$14.50	$16.15	$0.00	$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2023	$24.93	$14.50	$16.15	$0.00	$55.58
	05/01/2024	$25.66	$14.50	$16.15	$0.00	$56.31
	11/01/2024	$26.42	$14.50	$16.15	$0.00	$57.07
	05/01/2025	$27.27	$14.50	$16.15	$0.00	$57.92
	11/01/2025	$28.03	$14.50	$16.15	$0.00	$58.68
	05/01/2026	$28.88	$14.50	$16.15	$0.00	$59.53
	11/01/2026	$29.64	$14.50	$16.15	$0.00	$60.29
	05/01/2027	$30.49	$14.50	$16.15	$0.00	$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER *ELECTRICIANS LOCAL 96*	09/03/2023	$45.99	$13.00	$18.84	$0.00	$77.83
	09/01/2024	$47.05	$13.99	$19.22	$0.00	$80.26
	09/07/2025	$48.16	$14.98	$19.60	$0.00	$82.74
	09/06/2026	$49.38	$15.96	$20.00	$0.00	$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINT/COMMISSIONING *ELECTRICIANS LOCAL 96*	09/03/2023	$45.99	$13.00	$18.84	$0.00	$77.83
	09/01/2024	$47.05	$13.99	$19.22	$0.00	$80.26
	09/07/2025	$48.16	$14.98	$19.60	$0.00	$82.74
	09/06/2026	$49.38	$15.96	$20.00	$0.00	$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIREMAN (ASST. ENGINEER) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$44.47	$15.00	$16.40	$0.00	$75.87
	06/01/2024	$45.53	$15.00	$16.40	$0.00	$76.93
	12/01/2024	$46.71	$15.00	$16.40	$0.00	$78.11
	06/01/2025	$47.77	$15.00	$16.40	$0.00	$79.17
	12/01/2025	$48.94	$15.00	$16.40	$0.00	$80.34
	06/01/2026	$50.00	$15.00	$16.40	$0.00	$81.40
	12/01/2026	$51.18	$15.00	$16.40	$0.00	$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$25.48	$9.65	$17.14	$0.00	$52.27
	06/01/2024	$26.51	$9.65	$17.14	$0.00	$53.30
	12/01/2024	$26.51	$9.65	$17.14	$0.00	$53.30
	06/01/2025	$27.59	$9.65	$17.14	$0.00	$54.38
	12/01/2025	$27.59	$9.65	$17.14	$0.00	$54.38
	06/01/2026	$28.71	$9.65	$17.14	$0.00	$55.50
	12/01/2026	$28.71	$9.65	$17.14	$0.00	$55.50
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
FLOORCOVERER *FLOORCOVERERS LOCAL 2168 ZONE II*	03/01/2024	$49.47	$8.83	$20.27	$0.00	$78.57

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *FLOORCOVERER - Local 2168 Zone II*

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.74	$8.83	$1.76	$0.00	$35.33
2	55	$27.21	$8.83	$1.76	$0.00	$37.80
3	60	$29.68	$8.83	$3.52	$0.00	$42.03
4	65	$32.16	$8.83	$3.52	$0.00	$44.51
5	70	$34.63	$8.83	$16.75	$0.00	$60.21
6	75	$37.10	$8.83	$16.75	$0.00	$62.68
7	80	$39.58	$8.83	$18.51	$0.00	$66.92
8	85	$42.05	$8.83	$18.51	$0.00	$69.39

Notes: Steps are 750 hrs.
% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
Step 1&2 $32.63/ 3&4 $39.28/ 5&6 $59.86/ 7&8 $66.52

Apprentice to Journeyworker Ratio:1:1

FORK LIFT/CHERRY PICKER *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$35.62	$15.00	$16.40	$0.00	$67.02
	06/01/2024	$36.47	$15.00	$16.40	$0.00	$67.87
	12/01/2024	$37.42	$15.00	$16.40	$0.00	$68.82
	06/01/2025	$38.27	$15.00	$16.40	$0.00	$69.67
	12/01/2025	$39.22	$15.00	$16.40	$0.00	$70.62
	06/01/2026	$40.08	$15.00	$16.40	$0.00	$71.48
	12/01/2026	$41.03	$15.00	$16.40	$0.00	$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) *GLAZIERS LOCAL 35 (ZONE 2)*	01/01/2024	$45.56	$9.95	$23.95	$0.00	$79.46
	07/01/2024	$46.76	$9.95	$23.95	$0.00	$80.66
	01/01/2025	$47.96	$9.95	$23.95	$0.00	$81.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *GLAZIER - Local 35 Zone 2*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$22.78	$9.95	$0.00	$0.00	$32.73
2	55	$25.06	$9.95	$6.66	$0.00	$41.67
3	60	$27.34	$9.95	$7.26	$0.00	$44.55
4	65	$29.61	$9.95	$7.87	$0.00	$47.43
5	70	$31.89	$9.95	$20.32	$0.00	$62.16
6	75	$34.17	$9.95	$20.93	$0.00	$65.05
7	80	$36.45	$9.95	$21.53	$0.00	$67.93
8	90	$41.00	$9.95	$22.74	$0.00	$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.38	$9.95	$0.00	$0.00	$33.33
2	55	$25.72	$9.95	$6.66	$0.00	$42.33
3	60	$28.06	$9.95	$7.26	$0.00	$45.27
4	65	$30.39	$9.95	$7.87	$0.00	$48.21
5	70	$32.73	$9.95	$20.32	$0.00	$63.00
6	75	$35.07	$9.95	$20.93	$0.00	$65.95
7	80	$37.41	$9.95	$21.53	$0.00	$68.89
8	90	$42.08	$9.95	$22.74	$0.00	$74.77

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *OPERATING ENGINEERS - Local 4*

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$30.27	$15.00	$0.00	$0.00	$45.27
2	60	$33.02	$15.00	$16.40	$0.00	$64.42
3	65	$35.77	$15.00	$16.40	$0.00	$67.17
4	70	$38.52	$15.00	$16.40	$0.00	$69.92
5	75	$41.27	$15.00	$16.40	$0.00	$72.67
6	80	$44.02	$15.00	$16.40	$0.00	$75.42
7	85	$46.78	$15.00	$16.40	$0.00	$78.18
8	90	$49.53	$15.00	$16.40	$0.00	$80.93

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$30.98	$15.00	$0.00	$0.00	$45.98
2	60	$33.80	$15.00	$16.40	$0.00	$65.20
3	65	$36.61	$15.00	$16.40	$0.00	$68.01
4	70	$39.43	$15.00	$16.40	$0.00	$70.83
5	75	$42.25	$15.00	$16.40	$0.00	$73.65
6	80	$45.06	$15.00	$16.40	$0.00	$76.46
7	85	$47.88	$15.00	$16.40	$0.00	$79.28
8	90	$50.70	$15.00	$16.40	$0.00	$82.10

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) *SHEETMETAL WORKERS LOCAL 63*	01/01/2024	$43.80	$10.64	$17.54	$2.05	$74.03
	07/01/2024	$45.05	$10.64	$17.54	$2.05	$75.28
	01/01/2025	$46.30	$10.64	$17.54	$2.05	$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS) *ELECTRICIANS LOCAL 96*	09/03/2023	$45.99	$13.00	$18.84	$0.00	$77.83
	09/01/2024	$47.05	$13.99	$19.22	$0.00	$80.26
	09/07/2025	$48.16	$14.98	$19.60	$0.00	$82.74
	09/06/2026	$49.38	$15.96	$20.00	$0.00	$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR) *SHEETMETAL WORKERS LOCAL 63*	01/01/2024	$43.80	$10.64	$17.54	$2.05	$74.03
	07/01/2024	$45.05	$10.64	$17.54	$2.05	$75.28
	01/01/2025	$46.30	$10.64	$17.54	$2.05	$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) *PLUMBERS LOCAL 4*	03/01/2024	$53.95	$9.90	$17.42	$0.00	$81.27
	09/01/2024	$55.35	$9.90	$17.42	$0.00	$82.67
	03/01/2025	$56.75	$9.90	$17.42	$0.00	$84.07
	09/01/2025	$58.15	$9.90	$17.42	$0.00	$85.47
	03/01/2026	$59.55	$9.90	$17.42	$0.00	$86.87

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC *PLUMBERS LOCAL 4*	03/01/2024	$53.95	$9.90	$17.42	$0.00	$81.27
	09/01/2024	$55.35	$9.90	$17.42	$0.00	$82.67
	03/01/2025	$56.75	$9.90	$17.42	$0.00	$84.07
	09/01/2025	$58.15	$9.90	$17.42	$0.00	$85.47
	03/01/2026	$59.55	$9.90	$17.42	$0.00	$86.87
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS *LABORERS - ZONE 2*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.61	$9.65	$17.14	$0.00	$65.40
	06/01/2024	$39.94	$9.65	$17.14	$0.00	$66.73
	12/01/2024	$41.27	$9.65	$17.14	$0.00	$68.06
	06/01/2025	$42.66	$9.65	$17.14	$0.00	$69.45
	12/01/2025	$44.04	$9.65	$17.14	$0.00	$70.83
	06/01/2026	$45.48	$9.65	$17.14	$0.00	$72.27
	12/01/2026	$46.92	$9.65	$17.14	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) *HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)*	09/01/2023	$48.15	$14.75	$19.61	$0.00	$82.51
	09/01/2024	$51.23	$14.75	$19.61	$0.00	$85.59
	09/01/2025	$54.31	$14.75	$19.61	$0.00	$88.67
	09/01/2026	$57.38	$14.75	$19.61	$0.00	$91.74

Apprentice - *ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Worcester*

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.08	$14.75	$14.32	$0.00	$53.15
2	60	$28.89	$14.75	$15.37	$0.00	$59.01
3	70	$33.71	$14.75	$16.43	$0.00	$64.89
4	80	$38.52	$14.75	$17.49	$0.00	$70.76

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.62	$14.75	$14.32	$0.00	$54.69
2	60	$30.74	$14.75	$15.37	$0.00	$60.86
3	70	$35.86	$14.75	$16.43	$0.00	$67.04
4	80	$40.98	$14.75	$17.49	$0.00	$73.22

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER *IRONWORKERS LOCAL 7 (WORCESTER AREA)*	03/16/2023	$52.42	$8.35	$26.70	$0.00	$87.47
	03/16/2024	$53.67	$8.35	$26.70	$0.00	$88.72

Apprentice - *IRONWORKER - Local 7 Worcester*

Effective Date - 03/16/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$31.45	$8.35	$26.70	$0.00	$66.50
2	70	$36.69	$8.35	$26.70	$0.00	$71.74
3	75	$39.32	$8.35	$26.70	$0.00	$74.37
4	80	$41.94	$8.35	$26.70	$0.00	$76.99
5	85	$44.56	$8.35	$26.70	$0.00	$79.61
6	90	$47.18	$8.35	$26.70	$0.00	$82.23

Effective Date - 03/16/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$32.20	$8.35	$26.70	$0.00	$67.25
2	70	$37.57	$8.35	$26.70	$0.00	$72.62
3	75	$40.25	$8.35	$26.70	$0.00	$75.30
4	80	$42.94	$8.35	$26.70	$0.00	$77.99
5	85	$45.62	$8.35	$26.70	$0.00	$80.67
6	90	$48.30	$8.35	$26.70	$0.00	$83.35

Notes:

Apprentice to Journeyworker Ratio:1:4

JACKHAMMER & PAVING BREAKER OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER *LABORERS - ZONE 2*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65

Apprentice - *LABORER - Zone 2*

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$22.72	$9.65	$16.89	$0.00	$49.26
2	70	$26.50	$9.65	$16.89	$0.00	$53.04
3	80	$30.29	$9.65	$16.89	$0.00	$56.83
4	90	$34.07	$9.65	$16.89	$0.00	$60.61

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65
	06/01/2024	$39.19	$9.65	$17.14	$0.00	$65.98
	12/01/2024	$40.52	$9.65	$17.14	$0.00	$67.31
	06/01/2025	$41.91	$9.65	$17.14	$0.00	$68.70
	12/01/2025	$43.29	$9.65	$17.14	$0.00	$70.08
	06/01/2026	$44.73	$9.65	$17.14	$0.00	$71.52
	12/01/2026	$46.17	$9.65	$17.14	$0.00	$72.96

Apprentice - *LABORER (Heavy & Highway) - Zone 2*

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$22.72	$9.65	$17.14	$0.00	$49.51
2	70	$26.50	$9.65	$17.14	$0.00	$53.29
3	80	$30.29	$9.65	$17.14	$0.00	$57.08
4	90	$34.07	$9.65	$17.14	$0.00	$60.86

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$23.51	$9.00	$16.89	$0.00	$49.40
2	70	$27.43	$9.00	$16.89	$0.00	$53.32
3	80	$31.35	$9.00	$16.89	$0.00	$57.24
4	90	$35.27	$9.00	$16.89	$0.00	$61.16

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER *LABORERS - ZONE 2*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER *LABORERS - ZONE 2*	12/01/2023	$38.36	$9.40	$16.89	$0.00	$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER *LABORERS - ZONE 2*	12/01/2023	$37.95	$9.65	$17.20	$0.00	$64.80
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MULTI-TRADE TENDER *LABORERS - ZONE 2*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER *LABORERS - ZONE 2*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2024	$47.89	$11.49	$21.37	$0.00	$80.75
	08/01/2024	$49.57	$11.49	$21.37	$0.00	$82.43
	02/01/2025	$50.61	$11.49	$21.37	$0.00	$83.47
	08/01/2025	$52.33	$11.49	$21.37	$0.00	$85.19
	02/01/2026	$53.41	$11.49	$21.37	$0.00	$86.27
	08/01/2026	$55.17	$11.49	$21.37	$0.00	$88.03
	02/01/2027	$56.29	$11.49	$21.37	$0.00	$89.15

Apprentice - *MARBLE & TILE FINISHER - Local 3 Marble & Tile*

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.95	$11.49	$21.37	$0.00	$56.81
2	60	$28.73	$11.49	$21.37	$0.00	$61.59
3	70	$33.52	$11.49	$21.37	$0.00	$66.38
4	80	$38.31	$11.49	$21.37	$0.00	$71.17
5	90	$43.10	$11.49	$21.37	$0.00	$75.96

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.79	$11.49	$21.37	$0.00	$57.65
2	60	$29.74	$11.49	$21.37	$0.00	$62.60
3	70	$34.70	$11.49	$21.37	$0.00	$67.56
4	80	$39.66	$11.49	$21.37	$0.00	$72.52
5	90	$44.61	$11.49	$21.37	$0.00	$77.47

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE MASONS,TILELAYERS & TERRAZZO MECH *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2024	$62.42	$11.49	$23.56	$0.00	$97.47
	08/01/2024	$64.52	$11.49	$23.56	$0.00	$99.57
	02/01/2025	$65.82	$11.49	$23.56	$0.00	$100.87
	08/01/2025	$67.97	$11.49	$23.56	$0.00	$103.02
	02/01/2026	$69.32	$11.49	$23.56	$0.00	$104.37
	08/01/2026	$71.52	$11.49	$23.56	$0.00	$106.57
	02/01/2027	$72.92	$11.49	$23.56	$0.00	$107.97

Apprentice - *MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile*

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$31.21	$11.49	$23.56	$0.00	$66.26
2	60	$37.45	$11.49	$23.56	$0.00	$72.50
3	70	$43.69	$11.49	$23.56	$0.00	$78.74
4	80	$49.94	$11.49	$23.56	$0.00	$84.99
5	90	$56.18	$11.49	$23.56	$0.00	$91.23

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$32.26	$11.49	$23.56	$0.00	$67.31
2	60	$38.71	$11.49	$23.56	$0.00	$73.76
3	70	$45.16	$11.49	$23.56	$0.00	$80.21
4	80	$51.62	$11.49	$23.56	$0.00	$86.67
5	90	$58.07	$11.49	$23.56	$0.00	$93.12

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MILLWRIGHT (Zone 2) *MILLWRIGHTS LOCAL 1121 - Zone 2*	01/01/2024	$42.76	$10.08	$21.47	$0.00	$74.31
	01/06/2025	$45.09	$10.08	$21.47	$0.00	$76.64
	01/05/2026	$47.42	$10.08	$21.47	$0.00	$78.97

Apprentice - *MILLWRIGHT - Local 1121 Zone 2*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$23.52	$10.08	$5.50	$0.00	$39.10
2	65	$27.79	$10.08	$6.50	$0.00	$44.37
3	75	$32.07	$10.08	$18.97	$0.00	$61.12
4	85	$36.35	$10.08	$19.97	$0.00	$66.40

Effective Date - 01/06/2025

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$24.80	$10.08	$5.50	$0.00	$40.38
2	65	$29.31	$10.08	$6.50	$0.00	$45.89
3	75	$33.82	$10.08	$18.97	$0.00	$62.87
4	85	$38.33	$10.08	$19.97	$0.00	$68.38

Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 $5.72, Step 2 $6.66)
Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:4

MORTAR MIXER *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES,GRADALLS) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$24.41	$15.00	$16.40	$0.00	$55.81
	06/01/2024	$25.01	$15.00	$16.40	$0.00	$56.41
	12/01/2024	$25.67	$15.00	$16.40	$0.00	$57.07
	06/01/2025	$26.27	$15.00	$16.40	$0.00	$57.67
	12/01/2025	$26.93	$15.00	$16.40	$0.00	$58.33
	06/01/2026	$27.52	$15.00	$16.40	$0.00	$58.92
	12/01/2026	$28.19	$15.00	$16.40	$0.00	$59.59

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$29.86	$15.00	$16.40	$0.00	$61.26
	06/01/2024	$30.58	$15.00	$16.40	$0.00	$61.98
	12/01/2024	$31.38	$15.00	$16.40	$0.00	$62.78
	06/01/2025	$32.10	$15.00	$16.40	$0.00	$63.50
	12/01/2025	$32.90	$15.00	$16.40	$0.00	$64.30
	06/01/2026	$33.62	$15.00	$16.40	$0.00	$65.02
	12/01/2026	$34.42	$15.00	$16.40	$0.00	$65.82

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
OTHER POWER DRIVEN EQUIPMENT - CLASS II *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2024	$56.06	$9.95	$23.95	$0.00	$89.96
	07/01/2024	$57.26	$9.95	$23.95	$0.00	$91.16
	01/01/2025	$58.46	$9.95	$23.95	$0.00	$92.36

Apprentice - *PAINTER Local 35 - BRIDGES/TANKS*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$28.03	$9.95	$0.00	$0.00	$37.98
2	55	$30.83	$9.95	$6.66	$0.00	$47.44
3	60	$33.64	$9.95	$7.26	$0.00	$50.85
4	65	$36.44	$9.95	$7.87	$0.00	$54.26
5	70	$39.24	$9.95	$20.32	$0.00	$69.51
6	75	$42.05	$9.95	$20.93	$0.00	$72.93
7	80	$44.85	$9.95	$21.53	$0.00	$76.33
8	90	$50.45	$9.95	$22.74	$0.00	$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$28.63	$9.95	$0.00	$0.00	$38.58
2	55	$31.49	$9.95	$6.66	$0.00	$48.10
3	60	$34.36	$9.95	$7.26	$0.00	$51.57
4	65	$37.22	$9.95	$7.87	$0.00	$55.04
5	70	$40.08	$9.95	$20.32	$0.00	$70.35
6	75	$42.95	$9.95	$20.93	$0.00	$73.83
7	80	$45.81	$9.95	$21.53	$0.00	$77.29
8	90	$51.53	$9.95	$22.74	$0.00	$84.22

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.*PAINTERS LOCAL 35 - ZONE 2*	01/01/2024	$46.96	$9.95	$23.95	$0.00	$80.86
	07/01/2024	$48.16	$9.95	$23.95	$0.00	$82.06
	01/01/2025	$49.36	$9.95	$23.95	$0.00	$83.26

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 Zone 2 - Spray/Sandblast - New*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.48	$9.95	$0.00	$0.00	$33.43
2	55	$25.83	$9.95	$6.66	$0.00	$42.44
3	60	$28.18	$9.95	$7.26	$0.00	$45.39
4	65	$30.52	$9.95	$7.87	$0.00	$48.34
5	70	$32.87	$9.95	$20.32	$0.00	$63.14
6	75	$35.22	$9.95	$20.93	$0.00	$66.10
7	80	$37.57	$9.95	$21.53	$0.00	$69.05
8	90	$42.26	$9.95	$22.74	$0.00	$74.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.08	$9.95	$0.00	$0.00	$34.03
2	55	$26.49	$9.95	$6.66	$0.00	$43.10
3	60	$28.90	$9.95	$7.26	$0.00	$46.11
4	65	$31.30	$9.95	$7.87	$0.00	$49.12
5	70	$33.71	$9.95	$20.32	$0.00	$63.98
6	75	$36.12	$9.95	$20.93	$0.00	$67.00
7	80	$38.53	$9.95	$21.53	$0.00	$70.01
8	90	$43.34	$9.95	$22.74	$0.00	$76.03

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2024	$45.02	$9.95	$23.95	$0.00	$78.92
	07/01/2024	$46.22	$9.95	$23.95	$0.00	$80.12
	01/01/2025	$47.42	$9.95	$23.95	$0.00	$81.32

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$22.51	$9.95	$0.00	$0.00	$32.46
2	55	$24.76	$9.95	$6.66	$0.00	$41.37
3	60	$27.01	$9.95	$7.26	$0.00	$44.22
4	65	$29.26	$9.95	$7.87	$0.00	$47.08
5	70	$31.51	$9.95	$20.32	$0.00	$61.78
6	75	$33.77	$9.95	$20.93	$0.00	$64.65
7	80	$36.02	$9.95	$21.53	$0.00	$67.50
8	90	$40.52	$9.95	$22.74	$0.00	$73.21

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.11	$9.95	$0.00	$0.00	$33.06
2	55	$25.42	$9.95	$6.66	$0.00	$42.03
3	60	$27.73	$9.95	$7.26	$0.00	$44.94
4	65	$30.04	$9.95	$7.87	$0.00	$47.86
5	70	$32.35	$9.95	$20.32	$0.00	$62.62
6	75	$34.67	$9.95	$20.93	$0.00	$65.55
7	80	$36.98	$9.95	$21.53	$0.00	$68.46
8	90	$41.60	$9.95	$22.74	$0.00	$74.29

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2024	$45.56	$9.95	$23.95	$0.00	$79.46
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.*PAINTERS LOCAL 35 - ZONE 2*	07/01/2024	$46.76	$9.95	$23.95	$0.00	$80.66
	01/01/2025	$47.96	$9.95	$23.95	$0.00	$81.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER - Local 35 Zone 2 - BRUSH NEW*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$22.78	$9.95	$0.00	$0.00	$32.73
2	55	$25.06	$9.95	$6.66	$0.00	$41.67
3	60	$27.34	$9.95	$7.26	$0.00	$44.55
4	65	$29.61	$9.95	$7.87	$0.00	$47.43
5	70	$31.89	$9.95	$20.32	$0.00	$62.16
6	75	$34.17	$9.95	$20.93	$0.00	$65.05
7	80	$36.45	$9.95	$21.53	$0.00	$67.93
8	90	$41.00	$9.95	$22.74	$0.00	$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.38	$9.95	$0.00	$0.00	$33.33
2	55	$25.72	$9.95	$6.66	$0.00	$42.33
3	60	$28.06	$9.95	$7.26	$0.00	$45.27
4	65	$30.39	$9.95	$7.87	$0.00	$48.21
5	70	$32.73	$9.95	$20.32	$0.00	$63.00
6	75	$35.07	$9.95	$20.93	$0.00	$65.95
7	80	$37.41	$9.95	$21.53	$0.00	$68.89
8	90	$42.08	$9.95	$22.74	$0.00	$74.77

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2024	$43.62	$9.95	$23.95	$0.00	$77.52
	07/01/2024	$44.82	$9.95	$23.95	$0.00	$78.72
	01/01/2025	$46.02	$9.95	$23.95	$0.00	$79.92

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 Zone 2 - BRUSH REPAINT*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$21.81	$9.95	$0.00	$0.00	$31.76
2	55	$23.99	$9.95	$6.66	$0.00	$40.60
3	60	$26.17	$9.95	$7.26	$0.00	$43.38
4	65	$28.35	$9.95	$7.87	$0.00	$46.17
5	70	$30.53	$9.95	$20.32	$0.00	$60.80
6	75	$32.72	$9.95	$20.93	$0.00	$63.60
7	80	$34.90	$9.95	$21.53	$0.00	$66.38
8	90	$39.26	$9.95	$22.74	$0.00	$71.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$22.41	$9.95	$0.00	$0.00	$32.36
2	55	$24.65	$9.95	$6.66	$0.00	$41.26
3	60	$26.89	$9.95	$7.26	$0.00	$44.10
4	65	$29.13	$9.95	$7.87	$0.00	$46.95
5	70	$31.37	$9.95	$20.32	$0.00	$61.64
6	75	$33.62	$9.95	$20.93	$0.00	$64.50
7	80	$35.86	$9.95	$21.53	$0.00	$67.34
8	90	$40.34	$9.95	$22.74	$0.00	$73.03

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$37.86	$9.65	$17.14	$0.00	$64.65
	06/01/2024	$39.19	$9.65	$17.14	$0.00	$65.98
	12/01/2024	$40.52	$9.65	$17.14	$0.00	$67.31
	06/01/2025	$41.91	$9.65	$17.14	$0.00	$68.70
	12/01/2025	$43.29	$9.65	$17.14	$0.00	$70.08
	06/01/2026	$44.73	$9.65	$17.14	$0.00	$71.52
	12/01/2026	$46.17	$9.65	$17.14	$0.00	$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PANEL & PICKUP TRUCKS DRIVER *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$38.78	$15.07	$18.67	$0.00	$72.52
	06/01/2024	$39.78	$15.07	$18.67	$0.00	$73.52
	12/01/2024	$39.78	$15.07	$20.17	$0.00	$75.02
	01/01/2025	$39.78	$15.57	$20.17	$0.00	$75.52
	06/01/2025	$40.78	$15.57	$20.17	$0.00	$76.52
	12/01/2025	$40.78	$15.57	$21.78	$0.00	$78.13
	01/01/2026	$40.78	$16.17	$21.78	$0.00	$78.73
	06/01/2026	$41.78	$16.17	$21.78	$0.00	$79.73
	12/01/2026	$41.78	$16.17	$23.52	$0.00	$81.47
	01/01/2027	$41.78	$16.77	$23.52	$0.00	$82.07

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) *PILE DRIVER LOCAL 56 (ZONE 2)* For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	$46.11	$9.40	$23.12	$0.00	$78.63
PILE DRIVER *PILE DRIVER LOCAL 56 (ZONE 2)*	08/01/2020	$46.11	$9.40	$23.12	$0.00	$78.63

Apprentice - *PILE DRIVER - Local 56 Zone 2*

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	$0.00	$0.00	$0.00	$0.00	$0.00

Notes: Apprentice wages shall be no less than the following Steps;
(Same as set in Zone 1)
1$57.06/2$61.96/3$66.87/4$69.32/5$71.78/6$71.78/7$76.68/8$76.68

Apprentice to Journeyworker Ratio:1:5

PIPELAYER *LABORERS - ZONE 2* For apprentice rates see "Apprentice- LABORER"	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
PIPELAYER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PLUMBER & PIPEFITTER *PLUMBERS LOCAL 4*	03/01/2024	$53.95	$9.90	$17.42	$0.00	$81.27
	09/01/2024	$55.35	$9.90	$17.42	$0.00	$82.67
	03/01/2025	$56.75	$9.90	$17.42	$0.00	$84.07
	09/01/2025	$58.15	$9.90	$17.42	$0.00	$85.47
	03/01/2026	$59.55	$9.90	$17.42	$0.00	$86.87

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PLUMBER/PIPEFITTER - Local 4*

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$21.58	$9.90	$0.00	$0.00	$31.48
2	50	$26.98	$9.90	$0.00	$0.00	$36.88
3	60	$32.37	$9.90	$0.00	$0.00	$42.27
4	70	$37.77	$9.90	$7.71	$0.00	$55.38
5	80	$43.16	$9.90	$7.71	$0.00	$60.77

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$22.14	$9.90	$0.00	$0.00	$32.04
2	50	$27.68	$9.90	$0.00	$0.00	$37.58
3	60	$33.21	$9.90	$0.00	$0.00	$43.11
4	70	$38.75	$9.90	$7.71	$0.00	$56.36
5	80	$44.28	$9.90	$7.71	$0.00	$61.89

Notes:
Steps - 2000 hrs; Step 4 w/lic 75%, Step 5 w/lic 85%
Step 4 w/lic $52.59, Step 5 w/lic $57.44

Apprentice to Journeyworker Ratio:1:3

PNEUMATIC CONTROLS (TEMP.) *PLUMBERS LOCAL 4*	03/01/2024	$53.95	$9.90	$17.42	$0.00	$81.27
	09/01/2024	$55.35	$9.90	$17.42	$0.00	$82.67
	03/01/2025	$56.75	$9.90	$17.42	$0.00	$84.07
	09/01/2025	$58.15	$9.90	$17.42	$0.00	$85.47
	03/01/2026	$59.55	$9.90	$17.42	$0.00	$86.87
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER *LABORERS - ZONE 2*	12/01/2023	$38.86	$9.65	$17.14	$0.00	$65.65
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$39.36	$9.40	$16.89	$0.00	$65.65
	06/01/2024	$40.69	$9.40	$16.89	$0.00	$66.98
	12/01/2024	$42.02	$9.40	$16.89	$0.00	$68.31
	06/01/2025	$43.41	$9.40	$16.89	$0.00	$69.70
	12/01/2025	$44.79	$9.40	$16.89	$0.00	$71.08
	06/01/2026	$46.23	$9.40	$16.89	$0.00	$72.52
	12/01/2026	$47.67	$9.40	$16.89	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWER SHOVEL/DERRICK/TRENCHING MACHINE *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$35.62	$15.00	$16.40	$0.00	$67.02
	06/01/2024	$36.47	$15.00	$16.40	$0.00	$67.87
	12/01/2024	$37.42	$15.00	$16.40	$0.00	$68.82
	06/01/2025	$38.27	$15.00	$16.40	$0.00	$69.67
	12/01/2025	$39.22	$15.00	$16.40	$0.00	$70.62
	06/01/2026	$40.08	$15.00	$16.40	$0.00	$71.48
	12/01/2026	$41.03	$15.00	$16.40	$0.00	$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER *TEAMSTERS 170 - Dauphinais (Bellingham)*	01/01/2024	$27.00	$10.76	$5.45	$0.00	$43.21
	12/01/2024	$27.60	$11.26	$6.15	$0.00	$45.01
	01/01/2025	$27.60	$11.26	$6.15	$0.00	$45.01
RECLAIMERS *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg) *ROOFERS LOCAL 33*	02/01/2024	$50.03	$12.78	$21.45	$0.00	$84.26
	08/01/2024	$51.53	$12.78	$21.45	$0.00	$85.76
	02/01/2025	$52.78	$12.78	$21.45	$0.00	$87.01
	08/01/2025	$54.28	$12.78	$21.45	$0.00	$88.51
	02/01/2026	$55.53	$12.78	$21.45	$0.00	$89.76

Apprentice - *ROOFER - Local 33*

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.02	$12.78	$6.21	$0.00	$44.01
2	60	$30.02	$12.78	$21.45	$0.00	$64.25
3	65	$32.52	$12.78	$21.45	$0.00	$66.75
4	75	$37.52	$12.78	$21.45	$0.00	$71.75
5	85	$42.53	$12.78	$21.45	$0.00	$76.76

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.77	$12.78	$6.21	$0.00	$44.76
2	60	$30.92	$12.78	$21.45	$0.00	$65.15
3	65	$33.49	$12.78	$21.45	$0.00	$67.72
4	75	$38.65	$12.78	$21.45	$0.00	$72.88
5	85	$43.80	$12.78	$21.45	$0.00	$78.03

Notes: ** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1
Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.
(Hot Pitch Mechanics' receive $1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

ROOFER SLATE / TILE / PRECAST CONCRETE *ROOFERS LOCAL 33*	02/01/2024	$50.28	$12.78	$21.45	$0.00	$84.51
	08/01/2024	$51.78	$12.78	$21.45	$0.00	$86.01
	02/01/2025	$53.03	$12.78	$21.45	$0.00	$87.26
	08/01/2025	$54.53	$12.78	$21.45	$0.00	$88.76
	02/01/2026	$55.78	$12.78	$21.45	$0.00	$90.01
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER *SHEETMETAL WORKERS LOCAL 63*	01/01/2024	$43.80	$10.64	$17.54	$2.05	$74.03
	07/01/2024	$45.05	$10.64	$17.54	$2.05	$75.28
	01/01/2025	$46.30	$10.64	$17.54	$2.05	$76.53

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *SHEET METAL WORKER - Local 63*

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	$19.71	$4.79	$4.76	$0.92	$30.18
2	50	$21.90	$5.32	$5.29	$1.03	$33.54
3	55	$24.09	$5.85	$5.82	$1.13	$36.89
4	60	$26.28	$6.38	$6.35	$1.23	$40.24
5	65	$28.47	$6.92	$6.88	$1.33	$43.60
6	70	$30.66	$7.45	$7.41	$1.44	$46.96
7	75	$32.85	$7.98	$7.94	$1.54	$50.31
8	80	$35.04	$8.51	$15.42	$1.64	$60.61
9	85	$37.23	$9.04	$15.95	$1.74	$63.96
10	90	$39.42	$9.58	$16.48	$1.85	$67.33

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	$20.27	$4.79	$4.76	$0.92	$30.74
2	50	$22.53	$5.32	$5.29	$1.03	$34.17
3	55	$24.78	$5.85	$5.82	$1.13	$37.58
4	60	$27.03	$6.38	$6.35	$1.23	$40.99
5	65	$29.28	$6.92	$6.88	$1.33	$44.41
6	70	$31.54	$7.45	$7.41	$1.44	$47.84
7	75	$33.79	$7.98	$7.94	$1.54	$51.25
8	80	$36.04	$8.51	$15.42	$1.64	$61.61
9	85	$38.29	$9.04	$15.95	$1.74	$65.02
10	90	$40.55	$9.58	$16.48	$1.85	$68.46

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.24	$15.07	$18.67	$0.00	$72.98
	06/01/2024	$40.24	$15.07	$18.67	$0.00	$73.98
	12/01/2024	$40.24	$15.07	$20.17	$0.00	$75.48
	01/01/2025	$40.24	$15.57	$20.17	$0.00	$75.98
	06/01/2025	$41.24	$15.57	$20.17	$0.00	$76.98
	12/01/2025	$41.24	$15.57	$21.78	$0.00	$78.59
	01/01/2026	$41.24	$16.17	$21.78	$0.00	$79.19
	06/01/2026	$42.24	$16.17	$21.78	$0.00	$80.19
	12/01/2026	$42.24	$16.17	$23.52	$0.00	$81.93
	01/01/2027	$42.24	$16.77	$23.52	$0.00	$82.53

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.53	$15.07	$18.67	$0.00	$73.27
	06/01/2024	$40.53	$15.07	$18.67	$0.00	$74.27
	12/01/2024	$40.53	$15.07	$20.17	$0.00	$75.77
	01/01/2025	$40.53	$15.57	$20.17	$0.00	$76.27
	06/01/2025	$41.53	$15.57	$20.17	$0.00	$77.27
	12/01/2025	$41.53	$15.57	$21.78	$0.00	$78.88
	01/01/2026	$41.53	$16.17	$21.78	$0.00	$79.48
	06/01/2026	$42.53	$16.17	$21.78	$0.00	$80.48
	12/01/2026	$42.53	$16.17	$23.52	$0.00	$82.22
	01/01/2027	$42.53	$16.77	$23.52	$0.00	$82.82
SPRINKLER FITTER *SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1*	03/01/2024	$69.75	$10.90	$23.20	$0.00	$103.85
	10/01/2024	$71.55	$10.90	$23.20	$0.00	$105.65
	03/01/2025	$73.35	$10.90	$23.20	$0.00	$107.45

Apprentice - *SPRINKLER FITTER - Local 550 (Section A) Zone 1*

Effective Date - 03/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$24.41	$10.90	$12.80	$0.00	$48.11
2	40	$27.90	$10.90	$13.60	$0.00	$52.40
3	45	$31.39	$10.90	$14.40	$0.00	$56.69
4	50	$34.88	$10.90	$15.20	$0.00	$60.98
5	55	$38.36	$10.90	$16.00	$0.00	$65.26
6	60	$41.85	$10.90	$16.80	$0.00	$69.55
7	65	$45.34	$10.90	$17.60	$0.00	$73.84
8	70	$48.83	$10.90	$18.40	$0.00	$78.13
9	75	$52.31	$10.90	$19.20	$0.00	$82.41
10	80	$55.80	$10.90	$20.00	$0.00	$86.70

Effective Date - 10/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$25.04	$10.90	$12.80	$0.00	$48.74
2	40	$28.62	$10.90	$13.60	$0.00	$53.12
3	45	$32.20	$10.90	$14.40	$0.00	$57.50
4	50	$35.78	$10.90	$15.20	$0.00	$61.88
5	55	$39.35	$10.90	$16.00	$0.00	$66.25
6	60	$42.93	$10.90	$16.80	$0.00	$70.63
7	65	$46.51	$10.90	$17.60	$0.00	$75.01
8	70	$50.09	$10.90	$18.40	$0.00	$79.39
9	75	$53.66	$10.90	$19.20	$0.00	$83.76
10	80	$57.24	$10.90	$20.00	$0.00	$88.14

Notes: Apprentice entered prior 9/30/10:
40/45/50/55/60/65/70/75/80/85
Steps are 850 hours

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
STEAM BOILER OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TERRAZZO FINISHERS *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2024	$61.34	$11.49	$23.59	$0.00	$96.42
	08/01/2024	$63.44	$11.49	$23.59	$0.00	$98.52
	02/01/2025	$64.74	$11.49	$23.59	$0.00	$99.82
	08/01/2025	$66.89	$11.49	$23.59	$0.00	$101.97
	02/01/2026	$68.24	$11.49	$23.59	$0.00	$103.32
	08/01/2026	$70.44	$11.49	$23.59	$0.00	$105.52
	02/01/2027	$71.84	$11.49	$23.59	$0.00	$106.92

Apprentice - *TERRAZZO FINISHER - Local 3 Marble & Tile*

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$30.67	$11.49	$23.59	$0.00	$65.75
2	60	$36.80	$11.49	$23.59	$0.00	$71.88
3	70	$42.94	$11.49	$23.59	$0.00	$78.02
4	80	$49.07	$11.49	$23.59	$0.00	$84.15
5	90	$55.21	$11.49	$23.59	$0.00	$90.29

Effective Date - 08/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$31.72	$11.49	$23.59	$0.00	$66.80
2	60	$38.06	$11.49	$23.59	$0.00	$73.14
3	70	$44.41	$11.49	$23.59	$0.00	$79.49
4	80	$50.75	$11.49	$23.59	$0.00	$85.83
5	90	$57.10	$11.49	$23.59	$0.00	$92.18

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING DRILLER *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$48.33	$9.65	$18.22	$0.00	$76.20
	06/01/2024	$49.81	$9.65	$18.22	$0.00	$77.68
	12/01/2024	$51.28	$9.65	$18.22	$0.00	$79.15
	06/01/2025	$52.78	$9.65	$18.22	$0.00	$80.65
	12/01/2025	$54.28	$9.65	$18.22	$0.00	$82.15
	06/01/2026	$55.83	$9.65	$18.22	$0.00	$83.70
	12/01/2026	$57.33	$9.65	$18.22	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$44.45	$9.65	$18.22	$0.00	$72.32
	06/01/2024	$45.93	$9.65	$18.22	$0.00	$73.80
	12/01/2024	$47.40	$9.65	$18.22	$0.00	$75.27
	06/01/2025	$48.90	$9.65	$18.22	$0.00	$76.77
	12/01/2025	$50.40	$9.65	$18.22	$0.00	$78.27
	06/01/2026	$51.95	$9.65	$18.22	$0.00	$79.82
	12/01/2026	$53.45	$9.65	$18.22	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER *LABORERS - FOUNDATION AND MARINE*	12/01/2023	$44.33	$9.65	$18.22	$0.00	$72.20
	06/01/2024	$45.81	$9.65	$18.22	$0.00	$73.68
	12/01/2024	$47.28	$9.65	$18.22	$0.00	$75.15
	06/01/2025	$48.78	$9.65	$18.22	$0.00	$76.65
	12/01/2025	$50.28	$9.65	$18.22	$0.00	$78.15
	06/01/2026	$51.83	$9.65	$18.22	$0.00	$79.70
	12/01/2026	$53.33	$9.65	$18.22	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$54.43	$15.00	$16.40	$0.00	$85.83
	06/01/2024	$55.71	$15.00	$16.40	$0.00	$87.11
	12/01/2024	$57.15	$15.00	$16.40	$0.00	$88.55
	06/01/2025	$58.43	$15.00	$16.40	$0.00	$89.83
	12/01/2025	$59.87	$15.00	$16.40	$0.00	$91.27
	06/01/2026	$61.15	$15.00	$16.40	$0.00	$92.55
	12/01/2026	$62.59	$15.00	$16.40	$0.00	$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.82	$15.07	$18.67	$0.00	$73.56
	06/01/2024	$40.82	$15.07	$18.67	$0.00	$74.56
	12/01/2024	$40.82	$15.07	$20.17	$0.00	$76.06
	01/01/2025	$40.82	$15.57	$20.17	$0.00	$76.56
	06/01/2025	$41.82	$15.57	$20.17	$0.00	$77.56
	12/01/2025	$41.82	$15.57	$21.78	$0.00	$79.17
	01/01/2026	$41.82	$16.17	$21.78	$0.00	$79.77
	06/01/2026	$42.82	$16.17	$21.78	$0.00	$80.77
	12/01/2026	$42.82	$16.17	$23.52	$0.00	$82.51
	01/01/2027	$42.82	$16.77	$23.52	$0.00	$83.11

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - COMPRESSED AIR *LABORERS (COMPRESSED AIR)*	12/01/2023	$56.56	$9.65	$18.67	$0.00	$84.88
	06/01/2024	$58.04	$9.65	$18.67	$0.00	$86.36
	12/01/2024	$59.51	$9.65	$18.67	$0.00	$87.83
	06/01/2025	$61.01	$9.65	$18.67	$0.00	$89.33
	12/01/2025	$62.51	$9.65	$18.67	$0.00	$90.83
	06/01/2026	$64.06	$9.65	$18.67	$0.00	$92.38
	12/01/2026	$65.56	$9.65	$18.67	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) *LABORERS (COMPRESSED AIR)*	12/01/2023	$58.56	$9.65	$18.67	$0.00	$86.88
	06/01/2024	$60.04	$9.65	$18.67	$0.00	$88.36
	12/01/2024	$61.51	$9.65	$18.67	$0.00	$89.83
	06/01/2025	$63.01	$9.65	$18.67	$0.00	$91.33
	12/01/2025	$64.51	$9.65	$18.67	$0.00	$92.83
	06/01/2026	$66.06	$9.65	$18.67	$0.00	$94.38
	12/01/2026	$67.56	$9.65	$18.67	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR *LABORERS (FREE AIR TUNNEL)*	12/01/2023	$48.63	$9.65	$18.67	$0.00	$76.95
	06/01/2024	$50.11	$9.65	$18.67	$0.00	$78.43
	12/01/2024	$51.58	$9.65	$18.67	$0.00	$79.90
	06/01/2025	$53.08	$9.65	$18.67	$0.00	$81.40
	12/01/2025	$54.58	$9.65	$18.67	$0.00	$82.90
	06/01/2026	$56.13	$9.65	$18.67	$0.00	$84.45
	12/01/2026	$57.63	$9.65	$18.67	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) *LABORERS (FREE AIR TUNNEL)*	12/01/2023	$50.63	$9.65	$18.67	$0.00	$78.95
	06/01/2024	$52.11	$9.65	$18.67	$0.00	$80.43
	12/01/2024	$53.58	$9.65	$18.67	$0.00	$81.90
	06/01/2025	$55.08	$9.65	$18.67	$0.00	$83.40
	12/01/2025	$56.58	$9.65	$18.67	$0.00	$84.90
	06/01/2026	$58.13	$9.65	$18.67	$0.00	$86.45
	12/01/2026	$59.63	$9.65	$18.67	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL *TEAMSTERS JOINT COUNCIL NO. 10 ZONE B*	01/01/2024	$39.24	$15.07	$18.67	$0.00	$72.98
	06/01/2024	$40.24	$15.07	$18.67	$0.00	$73.98
	12/01/2024	$40.24	$15.07	$20.17	$0.00	$75.48
	01/01/2025	$40.24	$15.57	$20.17	$0.00	$75.98
	06/01/2025	$41.24	$15.57	$20.17	$0.00	$76.98
	12/01/2025	$41.24	$15.57	$21.78	$0.00	$78.59
	01/01/2026	$41.24	$16.17	$21.78	$0.00	$79.19
	06/01/2026	$42.24	$16.17	$21.78	$0.00	$80.19
	12/01/2026	$42.24	$16.17	$23.52	$0.00	$81.93
	01/01/2027	$42.24	$16.77	$23.52	$0.00	$82.53
VOICE-DATA-VIDEO TECHNICIAN *ELECTRICIANS LOCAL 96*	09/03/2023	$34.49	$13.00	$17.22	$0.00	$64.71
	09/01/2024	$35.29	$13.99	$17.57	$0.00	$66.85
	09/07/2025	$36.12	$14.98	$17.91	$0.00	$69.01
	09/06/2026	$37.04	$15.96	$18.27	$0.00	$71.27

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *VOICE-DATA-VIDEO TECHNICIAN - Local 96*

Effective Date - 09/03/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$17.25	$13.00	$4.31	$0.00	$34.56
2	55	$18.97	$13.00	$4.36	$0.00	$36.33
3	60	$20.69	$13.00	$16.81	$0.00	$50.50
4	65	$22.42	$13.00	$16.86	$0.00	$52.28
5	70	$24.14	$13.00	$16.91	$0.00	$54.05
6	75	$25.87	$13.00	$16.97	$0.00	$55.84
7	80	$27.59	$13.00	$17.02	$0.00	$57.61
8	85	$29.32	$13.00	$17.07	$0.00	$59.39

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$17.65	$13.99	$4.41	$0.00	$36.05
2	55	$19.41	$13.99	$4.46	$0.00	$37.86
3	60	$21.17	$13.99	$17.15	$0.00	$52.31
4	65	$22.94	$13.99	$17.20	$0.00	$54.13
5	70	$24.70	$13.99	$17.25	$0.00	$55.94
6	75	$26.47	$13.99	$17.30	$0.00	$57.76
7	80	$28.23	$13.99	$17.36	$0.00	$59.58
8	85	$30.00	$13.99	$17.41	$0.00	$61.40

Notes:

Apprentice to Journeyworker Ratio:1:1

WAGON DRILL OPERATOR *LABORERS - ZONE 2*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) *LABORERS - ZONE 2 (HEAVY & HIGHWAY)*	12/01/2023	$38.11	$9.65	$17.14	$0.00	$64.90
	06/01/2024	$39.44	$9.65	$17.14	$0.00	$66.23
	12/01/2024	$40.77	$9.65	$17.14	$0.00	$67.56
	06/01/2025	$42.16	$9.65	$17.14	$0.00	$68.95
	12/01/2025	$43.54	$9.65	$17.14	$0.00	$70.33
	06/01/2026	$44.98	$9.65	$17.14	$0.00	$71.77
	12/01/2026	$46.42	$9.65	$17.14	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2023	$55.03	$15.00	$16.40	$0.00	$86.43
	06/01/2024	$56.33	$15.00	$16.40	$0.00	$87.73
	12/01/2024	$57.78	$15.00	$16.40	$0.00	$89.18
	06/01/2025	$59.08	$15.00	$16.40	$0.00	$90.48
	12/01/2025	$60.53	$15.00	$16.40	$0.00	$91.93
	06/01/2026	$61.83	$15.00	$16.40	$0.00	$93.23
	12/01/2026	$63.28	$15.00	$16.40	$0.00	$94.68

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER *PLUMBERS LOCAL 4*	03/01/2024	$53.95	$9.90	$17.42	$0.00	$81.27
	09/01/2024	$55.35	$9.90	$17.42	$0.00	$82.67
	03/01/2025	$56.75	$9.90	$17.42	$0.00	$84.07
	09/01/2025	$58.15	$9.90	$17.42	$0.00	$85.47
	03/01/2026	$59.55	$9.90	$17.42	$0.00	$86.87
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)
Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

** Multiple ratios are listed in the comment field.
*** APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.
**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

APPENDIX D

NOTIFICATION OF UTILITIES

NOTIFICATION OF UTILITIES

In accordance with Chapter 502 of the Acts of 1980 the Contractor shall notify the applicable Water District or Company, and COM/Electric 72 hours, Saturdays, Sundays and holidays excluded prior to commencing work on the site.

Utility companies which may maintain underground lines or equipment in the project area may be contacted for the required notification of excavation by a single call to DIG-SAFE CENTER 1-888-344-7233.

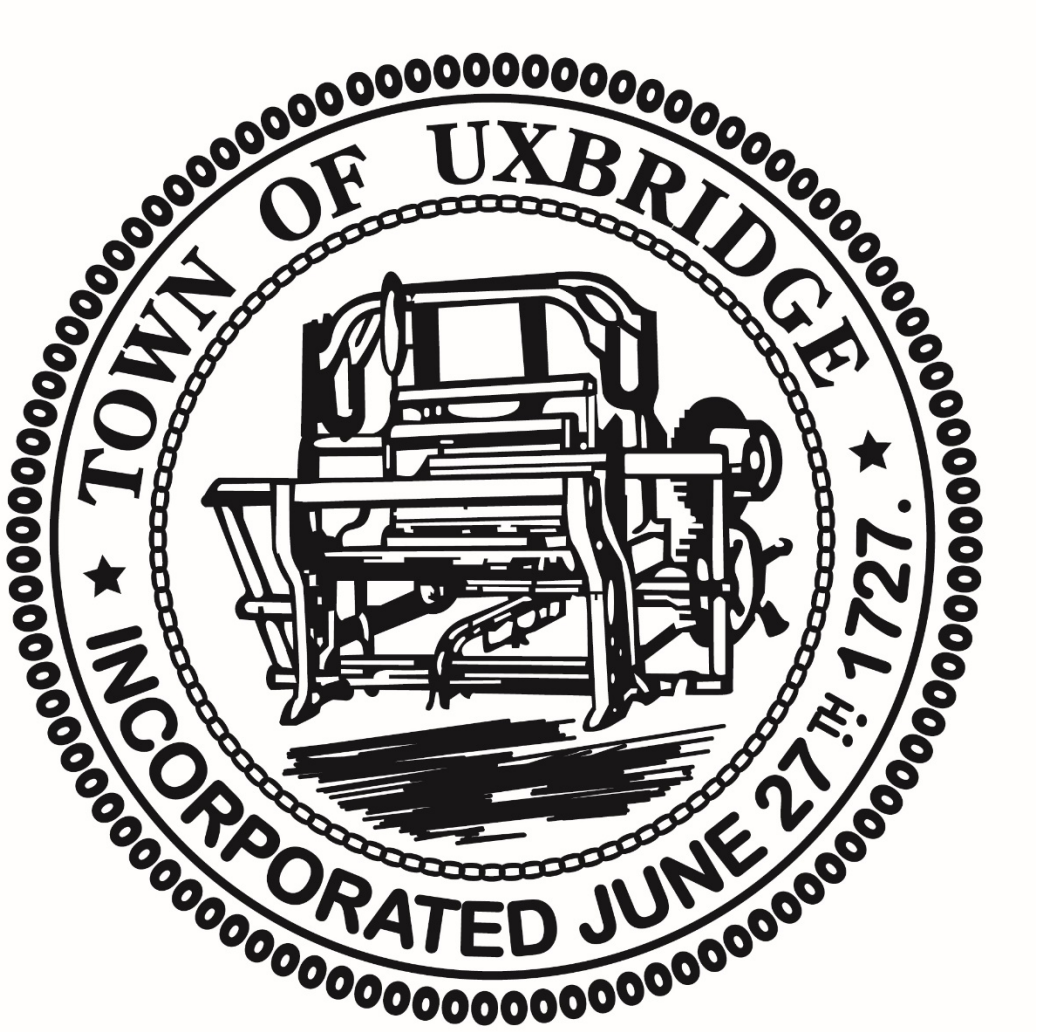
In addition, direct contact must be made with the applicable Water Company or District Office and Cable Company.

Dig-Safe can **no** longer be relied upon to locate electric utilities that are "privately" owned. This can include electric cables located in public ways that run from utility poles to buildings.

It is therefore incumbent upon all contractors to ascertain if any electric cables are located in any area prior to excavation. This will be done at the contractor's expense.

APPENDIX E

UXBRIDGE SEWER REGULATIONS



TOWN OF UXBRIDGE
DEPARTMENT OF PUBLIC WORKS
MINIMUM STANDARDS FOR SEWER CONSTRUCTION AND RELATED REGULATIONS

REVISED SEPTEMBER 2016

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SECTION 1

APPLICABLE REGULATIONS AND CODES, DEFINITIONS AND TERMS

A. These regulations represent minimum requirements. The Contractor shall adhere to all federal, state, and local laws, codes, and regulations.

B. The Town is responsible for adhering to federal and state laws, codes and regulations and thus the Contractor will be responsible and the Town makes the Contractor responsible for any applicable laws, codes and regulations. The minimum requirements the Town is held responsible for meeting (and by extension the Contractor shall adhere to) include:

1. 314 CMR 7.00: Sewer Extension and Connection Permit Program

2. 314 CMR 12.00 Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges

C. Guidelines

1. All work associated with the sewer collection, pumping and treatment system shall be in accordance with Guides for the Design of Wastewater Treatment Works (TR-16)

D. Definitions and Terms

Unless the content specifically indicates otherwise, the meaning of terms used in this article shall be as follows:

Board — Shall mean the Board of Selectmen who also act as the Water and Sewer Commissioners.

BOD (denoting "biochemical oxygen demand") — Shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five days at 20° C, expressed in milligrams per liter.

Building drain — Shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five feet (1.5 meters) outside the inner face of the building wall.

Building sewer — Shall mean the extension from the building drain to the public sewer or other place of disposal.

Combined sewer — Shall mean a sewer receiving both surface runoff and sewerage.

“Department of Environmental Protection” or “DEP” — Shall mean the Massachusetts Department of Environmental Protection, established pursuant to

M.G.L. Chapter 21, Section 26 or, where appropriate, the Administrator, Director or other duly authorized official of said agency.

Department of Public Works or DPW — Shall mean an authorized representative of the Town's Department of Public Works.

Depths — any depth measurement shall be as measured from the finished grade.

Director — Shall mean the Director of the Department of Public Works.

"Environmental Protection Agency", or "EPA" — Shall mean the United States Environmental Protection Agency, or, where appropriate, the Administrator or other duly authorized official of said Agency.

Garbage — Shall mean solid wastes from the domestic and commercial preparation, cooking, and dispensing of food, and from the handling, storage, and sale of produce.

Industrial Waste — Shall mean the liquid wastes from industrial manufacturing processes, trade, or business as distinct from sanitary sewerage.

Natural outlet — Shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface or groundwater.

Person— Shall mean any individual, firm, company, association, society, corporation, partnership, or group.

pH — Shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

Pollutant — Shall mean a substance in the liquid, solid, or gas phase that contaminates. A pollutant may be artificial or naturally occurring substances.

Properly Shredded Garbage — Shall mean the wastes from the preparation, cooking, and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than 1/2 inch (1.27 centimeters) in any dimension.

Public Sewer — Shall mean a sewer in which all owners of abutting properties have equal rights, and is controlled by public authority.

Sanitary sewer — Shall mean a sewer which carries sewage and to which storm-, surface, and ground waters are not intentionally admitted.

Septage — Shall mean material physically removed from any part of an on-site system including, but not limited to, the solids, semi-solids, scum, sludge, and liquid contents of a septic tank, privy, chemical toilet, cesspool, holding tank, or other sewage waste receptacle.

Sewage — Shall mean a combination of the water-carried wastes from residences, business buildings, institutions, and industrial establishments, together with such ground, surface, and storm waters as may be present.

Sewage treatment plant or wastewater treatment facility — Shall mean any arrangement of devices and structures used for treating sewage.

Sewage works — Shall mean all facilities for collecting, pumping, treating, and disposing of sewage.

Sewer — Shall mean a pipe or conduit for carrying sewage.

Shall;may — Shall is mandatory; may is permissive.

Slug — Shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than 15 minutes, more than five times the average twenty-four-hour concentration or flows during normal operation.

Storm drain — Shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and industrial wastes, other than unpolluted cooling water.

Suspended solids — Shall mean solids that either float on the surface of, or are in suspension of water, sewage, or other liquids, and which are removable by laboratory filtering.

Town — Shall mean the Town of Uxbridge, Massachusetts.

Watercourse — Shall mean a channel in which a flow of water occurs, either continuously or intermittently.

SECTION 2

GENERAL PROVISIONS

2.1. SURVEYS

A. The Contractor shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the work together with a suitable number of benchmarks adjacent to the work. The Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations, and other working points, lines, elevations, and cut sheets. Plans and profiles shall be 1"=40' horizontal scale and profiles shall be 1"=4' vertical scale.

B. The Contractor shall provide three (3) copies of design plans and documents to the Department of Public Works for approval. No changes to approved plans will be permitted without prior written approval of the Department of Public Works. Following the completion of construction and prior to acceptance by the Town, the Contractor shall furnish three (3) copies of as-built drawings to the Department of Public Works, which shall indicate any deviations from the original plans and specifications.

C. The Contractor shall carefully preserve benchmarks, reference points, and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance. Contractor shall replace any damaged benchmarks, reference points, or stakes.

2.2. PERMITS

A. The Contractor is required to obtain all necessary federal, state, and local permits.

B. Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor. Permits, licenses, and easements for facilities shall be secured and paid for by the Contractor, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations.

C. The Contractor shall be required to obtain, for example, a trench permit and DPW Road Opening Permit prior to any excavations within a public way. All work within the public way shall be conducted in accordance with the Department of Public Works Standards for Utility Cuts which is contained within the "Town of Uxbridge Design and Construction Standards Manual".

2.3. LOCAL REGULATIONS

A. Installations of sewers in the public way shall be prohibited between the dates of November 15th and March 15th unless extenuating circumstances exist and written approval is provided by the Department of Public Works.

2.4. PROTECTION OF WORK, PROPERTY AND PERSONS

A. The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The Contractor will take all necessary protection to prevent damage, injury, or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

B. The Contractor will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. The Contractor will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when prosecution of the work may affect them. The Contractor will remedy all damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

2.5. SUPERVISION BY CONTRACTOR

A. The Contractor will supervise and direct the work. The Contractor will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor will employ and maintain on the work site a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The Supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

2.6. INSURANCE

A. The Contractor shall purchase and maintain such insurance as will protect him from claims which may arise out of or result from the Contractor's execution of the work, whether such execution be by the Contractor or by any subcontractor or by anyone for whose acts any of them may be liable.

B. Certificates of Insurance acceptable to the Town shall be filed with the Town prior to commencement of the work. These certificates shall contain a provision that coverage afforded under the policies will not be canceled unless at least fifteen (15) days prior written notice has been given to the Town.

C. The Contractor shall procure and maintain, at his own expense, during the contract time, liability insurance as deemed adequate by the Department of Public Works. See Appendix A.

2.7. CONTRACT SECURITY

A. The Contractor shall furnish the Town with a Performance Bond and a Payment Bond in penal sums equal to the project cost, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions, and agreements. The Contractor and a corporate surety company licensed to transact such business in the Commonwealth of Massachusetts shall execute such bonds. The expense of these bonds shall be borne by the Contractor. If at any time a surety on any such bond is declared bankrupt or loses its right to do business in the Commonwealth, the Contractor shall, within ten (10) days after notice from the Town to do so, substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the Town. The Contractor shall pay the premiums on such bond.

2.8. INDEMNIFICATION

A. The Contractor will indemnify and hold harmless the Town, its agents, and employees from and against all claims, damages, losses, and expenses including attorney's fees provided that any such claims, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including or in part by any negligent or willful act or omission of the Contractor, and subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

B. In any and all claims against the Town or its agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Workmen's Compensation Acts, disability benefit acts, or other employee benefits acts.

2.9. GUARANTEE

A. The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of substantial completion (date of substantial completion shall be defined as the date of acceptance by the Town). The Contractor shall warrant and guarantee for a period of one (1) year from the date of substantial completion of the system that the completed system is free from all defects due to faulty materials or workmanship, and the Contractor shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The Town will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments, or other work that may be made necessary by such defects, the Town may do so and charge the Contractor the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

2.10. INSPECTIONS AND TESTING

A. All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards and as specified herein. The Department of Public Works or their agent will provide an inspector on the job at all times. All costs associated with the inspection will be billed to the Contractor and shall be paid by the Contractor within thirty (30) days.

B. The Town will at all times have access to the work. In addition, authorized representatives and agents of any participating agencies shall be permitted to inspect all work.

C. If any work is covered prior to inspection by the Town or contrary to the written instructions of the Town it must, if requested by the Town, be uncovered for observation and restored at the Contractor's expense.

2.11. EXTENSIONS

A. Whenever a sewer extension has been constructed in a public or private way, upon satisfactory completion of inspection and testing, said extension shall be available for use or further extension by the public.

2.12. NEW SERVICES

A. When property is developed on streets where there are existing sewer lines but no service connection to the property, the person developing the property is responsible for all costs for sewer installation from the new building to the existing sewer main, including the actual tap and saddle. Requirements for the tap and saddle may be obtained from the Sewer Division of the DPW.

2.13. RECORD DRAWINGS (AS-BUILTS)

A. The Contractor shall be responsible for obtaining all data for the Record Drawings. The Contractor shall submit Record Drawings of all sewer main construction. Record Drawings shall show 40 scale plan views and shall be prepared on standard size Mylar sheets, 24 x 36 inches in size. Record Drawings shall be prepared by a registered professional engineer and, at a minimum, shall show a plan view, with accurate locations of public sewer main, lateral connections and manholes, including all invert elevations. A minimum of three (3) ties shall be provided to all sewer laterals at the property line, taken to permanent existing features, and including the depth to the top of the pipe.

2.14. SEPTIC SYSTEMS AND SEPTIC SYSTEM WASTE

A. Septic systems must be abandoned in accordance with the Title V Sanitary Code.

B. Discharge of septage or holding tank waste into the Town sewer system is prohibited.

2.15. EASEMENTS

A. Easements for municipal sewers outside of the street layout shall be at least 20 feet wide.

2.16. RIGHT OF ENTRY; PROTECTION FROM DAMAGE

A. The Department of Public Works and other duly authorized employees of the Town bearing proper credentials and identification shall be permitted to enter all properties for the purposes of inspection, observation, measurement, sampling, and testing in accordance with the provisions of this article. The Department of Public Works shall have no authority to inquire into any processes including metallurgical, chemical, oil, refining, ceramic, paper, or other industries beyond that point having a direct bearing on the kind and source of discharge to the sewers or waterways or facilities for wastes treatment.

B. While performing the necessary work on private properties referred to in Subsection A above, the Department of Public Works or duly authorized employee of the Town shall observe all safety rules applicable to the premises established by the company and the company shall be held harmless for injury or death to the Town employees and the Town shall indemnify the company against loss or damage to its property by Town employees and against liability claims and demands for personal injury or property damage asserted against the company and growing out of the gauging and sampling operation, except as such may be caused by negligence or failure of the company to maintain safe conditions as required in § 289-12H.

C. The Department of Public Works and other duly authorized employees of the Town bearing proper credentials and identification shall be permitted to enter all private properties through which the Town holds a duly negotiated easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the sewage works lying within said easement. All entry and subsequent work, if any, on said easement, shall be done in full accordance with the terms of the duly negotiated easement pertaining to the private property involved.

2.17. INDEPENDENT CONSULTANT

A. In order to protect the interests of the Town, the Town reserves the right to hire independent consultants or attorneys as required. The Town may require a Contractor to pay for these services. Town shall notify Contractor of this need prior to engaging an independent consultant. Services may include, but are not limited to, the following:

1. Review and/or verification of design, especially if Contractor does not meet referenced standards.

2. Updating of a model (for example SEWER CADD or similar model).

SECTION 3

GENERAL CONSTRUCTION

3.1 PROTECTION OF UNDERGROUND STRUCTURES

A. All existing gas pipes, conduits, water pipes, sewers, drains or other structures, which are uncovered by the excavation, shall be carefully supported and protected from injury by the Contractor, and if injured or removed, the Contractor shall restore them with identical material.

B. The Contractor shall provide suitable temporary channels for the flow of all water courses and shall hold the Town harmless against all claims for damages growing out of obstruction to the flow in sewers, drains or gutters, or because of injury to gas, water or other pipes or conduits to the proprietors of such pipes or fixtures in time to permit them to cooperate in protecting their property. Whenever it becomes necessary to change the location of any water pipe, sewer, drain or other structure uncovered by the excavation, the Contractor shall do the whole or such portions by making such changes as the Town may direct at the Contractor's expense.

3.2 CONSTRUCTION STANDARDS MANUAL

A. The Contractor shall adhere to all applicable details contained within the "Town of Uxbridge Design and Construction Standards Manual". Contractor may obtain a copy of the manual from the Department of Public Works.

SECTION 4

DESIGN AND CONSTRUCTION OF SEWERS

4.1. DESIGN OF SEWERS - GENERAL

Sewage collection systems shall be designed separately from stormwater systems. Sewage collection systems shall not allow for the introduction of rain water, noncontact cooling water, and groundwater from foundation drains, sump pumps, surface drainage or any other source of inflow. Overflows from wastewater collection systems shall also not be permitted.

New sanitary sewers and all extensions to sanitary sewers owned and operated by the Town of Uxbridge shall be either gravity sewers or low pressure sewers in accordance with the Town's approved comprehensive wastewater management plan or wastewater treatment facility plan, and shall be designed by a professional engineer licensed to practice in the Commonwealth of Massachusetts, in accordance with the Guides for the Design of Wastewater Treatment Works (TR-16), and in strict accordance with appropriate Massachusetts codes and the Town of Uxbridge regulations. Plans and specifications shall be submitted to and approved by the Director before initiating any construction. The design shall anticipate and allow for flows from all possible future extensions or development within the immediate drainage area in conformance with Town planning documents.

A. ALTERNATIVE SEWER COLLECTION SYSTEMS:

Sewer collection systems not stated in these Rules and Regulations of the Sewer Department shall only be permitted with the Director's conditional approval.

B. COLLECTION SYSTEM IMPACT STUDY

Each new sewer extension is subject to a collection system impact study to be performed by the Director who may hire an independent consultant. Any negative impacts found as a result of the impact study may be the responsibility of the Contractor to address as part of any approved sewer extension.

4.2. DESIGN CAPACITY AND DESIGN FLOW

A. DESIGN FACTORS:

- Peak hourly sewage flow
- Additional peak flows of industrial and commercial wastes
- Maximum groundwater infiltration
- Topography of the immediate area
- Difficulty of installation

B. DESIGN PERIOD:

Sewage collection systems shall be designed for a life span of 50 years; and interceptor sewers shall be designed to handle the maximum capacity of uses in the drainage area as determined by the Director.

C. DESIGN FLOW:

Submit a detailed description of the procedures used for calculating sewer design flow to the Director.

The Massachusetts 310 CMR 15.000, the State Environmental Code, Title 5, shall be used for calculating the design flow for sewers. If the Massachusetts 310 CMR 15.000, the State Environmental Code, Title 5, does not have a flow rate for the proposed use, the following methods may be used with the approval of the Director:

- Flow Related to Water Consumption. When available, use existing sewage flow and/or consumption data as a basis for sewer design. If such data are not available, using flow data from a similar community or users.
- Per Capita Flow. Where actual flow data cannot be obtained, base residential flows from new collection systems on an average daily per capita flow of not less than 70 gallons per day (0.27 m3/day). Add an appropriate allowance for infiltration to this flow. In all cases, add a minimum allowance of 250-500 gpd/in. diameter/mile of sewer (0.24-0.48 m3/cm of pipe diameter/km/day) for infiltration to the water consumption, per capita flow or any other calculation method required by the Director.

4.3. PIPE SIZE

A. Minimum pipe shall be not less than 8” diameter for sewer main construction and, outside of ten feet from the house, minimum 6” diameter for house or, if a pipe larger than 6” is called for in the Plumbing Code for the house connection, that pipe size shall be matched, or unless otherwise approved by the Department of Public Works. The Town may require larger diameter pipe when conditions or location require it.

B. Should the Town master sewerage plan show larger mains to be installed in the future than are required to serve the extensions within the limits of the subdivision not required to service said subdivision, then the Town of Uxbridge may enter into an agreement whereby the developer shall install such mains or other improvements according to such plan and that he may be compensated by the Town for differential in cost incurred beyond that necessary to service the subdivision.

4.4. PIPE MATERIAL

A. PVC pipe manufactured to meet ASTM specification D-3034-SDR 35 shall be acceptable to depths of 13 feet (including laterals). Ductile iron pipe will be required for depths over 13 feet.

B. The use of existing previously abandoned or unused sewer pipes is prohibited.

4.5. PIPE INSTALLATION

A. Specifications for installation shall be those of the manufacturer in accordance with ASTM D2321, "Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe."

B. Where high groundwater conditions are anticipated, the buoyancy of sewers shall be considered, and the floatation of pipe shall be prevented with appropriate design and construction of the sewer.

C. SLOPE:

All sewers shall be designed and constructed to give a velocity (when flowing full) of not less than 2.0 feet per second (0.61 m/s) based on Manning's formula using an "n" value of 0.013. The Director may permit the use of other "n" values if deemed justified on the basis of research or field data.

D. Velocities greater than 12 feet per second (3.7 m/s) shall not be permitted under any flow conditions, unless the Director approves special provisions that will protect against pipe erosion and impact.

E. STEEP SLOPE PROTECTION:

Securely anchor sewers on 15 percent slopes, or greater, to prevent displacement.

F. IMPERVIOUS DAMS:

Impervious dams shall be installed every 300 feet to control the flow of groundwater within the pipe bedding material, when:

- The surrounding native material is considerably less impervious than the pipe bedding material;
- The pipe bedding could produce a hydraulic head of 25 feet on the pipe gaskets and joints during periods of high groundwater flow; and/or
- The sewer is constructed downstream of a waterway or wetland crossings.

G. ALIGNMENT:

Sewers shall be laid out in a straight line and alignment, and shall be checked with a laser beam.

H. Laterals shall be provided for each buildable lot that is passed by the new sewer. Buildable lots shall be as defined by the Town. Each lateral shall be provided up to the property line that the lateral shall serve.

4.6. PIPE LAYING

A. Pipe shall be carefully laid to the lines and grades as shown on the plans submitted. The Contractor shall provide laser beam aligning equipment for use in pipe laying.

B. All pipe is to be laid on a good foundation and first class construction methods must be followed by the Contractor to prevent settlement. Should the material at grade prove unsatisfactory for a suitable foundation, additional depth must be excavated and refilled with acceptable material.

C. In general, the bottom of the trench shall be excavated to a flat grade, 4 inches below the pipe invert for trenches in earth and 6 inches below the pipe invert for trenches in rock. Crushed stone or pea gravel bedding shall be placed and compacted to form a stable base for pipe. Pipe shall be laid to grade and bedding carried half way up pipe barrel, to the full width of the trench. Bedding material shall be carefully laid to grade and bedding carried half way up pipe barrel, to the full width of the trench. Bedding material shall be carefully and lightly tamped under pipe to provide uniform support. The granular bedding material shall be crushed stone which will pass 3/4 inch sieve but will be retained on #4, or equal material approved by the Town. Bedding material shall extend 4 to 6 inches above the pipe. The remainder of the backfill up to a minimum depth of 12 inches over the top of the pipe shall be made of processed gravel material carefully compacted in layers as placed.

D. When a sewer pipe joins another pipe of a larger diameter, the invert of the larger sewer shall be lowered sufficiently to maintain the same energy gradient.

E. When pipe laying is not actively in progress, the open ends of the pipe shall be closed by temporary watertight plugs or by other approved means. If water is in the trench when work resumes, the plug shall not be removed until the trench has been properly dewatered. Groundwater shall not be permitted to enter the pipeline.

F. All sewer pipes shall be deep enough to drain basement fixtures and shall have a minimum vertical depth of four (4) feet as measured from grade to the crown of the pipe to prevent freezing. If the pipe cannot be four feet or more in depth, insulation shall be provided around the pipe and if this pipe is in a roadway or any other areas where vehicles travel or park, the pipe shall be made of ductile iron.

4.7. BACKFILLING

A. The trenches and other excavations shall be backfilled, unless otherwise directed by the Town, as soon as the laying of the pipe or the completion of other structures will permit. The area below the pipe and extending half way up the pipe barrel or both sides shall be backfilled with crushed stone as specified and thoroughly tamped by light tampers as placed. The remainder of the side fill to a minimum depth of twelve (12) inches over the top of the pipe shall be of selected material approved by the Town, carefully compacted in layers as placed, and, if necessary, suitable material shall be moved from other sections of the work for this purpose. The remainder of the trench above an elevation twelve (12) inches higher than the top of the pipes shall be backfilled with selected material, thoroughly tamped with mechanical rammers or vibrators in layers not exceeding one (1) foot in depth. No rock will be permitted in backfilling until there is at least two (2) feet of suitable earth fill over the sewer, and no rock fragment weighing more than 100 pounds will be used for refilling trenches. In depositing rock, care shall be taken that no injury is caused to the sewer or other structures. All voids in rock backfill must be completely filled with earth.

B. When, in the opinion of the Town, the backfilling at elevations higher than one (1) foot above crown of pipe can be compacted in a suitable manner by flooding, jetting, or puddling with water, the Contractor will be permitted to do so.

C. In trenches within street surfaces, the top 18 inches of trench backfill shall be a road-base quality gravel, approved by the Town, placed during backfilling operation, and obtained from trench excavated material if possible. Bank gravel shall consist of inert material that is hard durable stone and coarse sand, free from loam, clay or surface coatings. The trench backfill shall be thoroughly compacted, carried to about 18 inches below the surface, and the trench puddled to induce settlement with jet pipes or as otherwise approved by the Town. Gravel then shall be placed, compacted, graded, and treated with calcium chloride to maintain the surface until the resurfacing is placed.

D. Specifications for resurfacing shall conform to the “Town of Uxbridge Design and Construction Standards Manual”.

4.8. BUILDING/HOUSE SERVICE CONNECTIONS

A. GENERAL REQUIREMENTS

1. No authorized person shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Department of Public Works. Any person proposing a new discharge into the system or a substantial change in the volume or character of pollutants that are being discharged into the system shall notify the Department of Public Works at least 45 days prior to the proposed change or connection. No person shall break, cut, or remove any pipe of the public sanitary sewer, or make or cause to be made any connection to said sewer except through the connection branches provided for that purpose, unless in another manner approved by the Board.

2. There shall be two classes of building sewer permits: a) for residential and commercial service, and b) for service to establishments producing industrial wastes. In either case, the owner or his/her agent shall make application on a special form furnished by the Town. The permit application shall be supplemented by any plans, specifications, or other information considered to be pertinent in the judgement of the Department of Public Works. The permit and inspection fee for a residential or commercial building sewer permit or for an industrial building sewer permit shall be paid to the Town at the time the application is filed.

3. All costs and expenses incidental to the installation and connections of the building sewer shall be borne by the owner. The owner shall indemnify the Town from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

4. Old building sewers may not be used in connection with new buildings.

5. The size, slope, alignment, materials of construction of a building sewer, and the methods to be used in excavating, placing of the pipe, jointing, testing, and backfilling the trench, shall all conform to the requirements of the building and plumbing code or other applicable rules and regulations of the Town. In the absence of code provisions or in amplification thereof the materials and procedures set forth in appropriate specifications of the American Society for Testing Materials and Water Pollution Control Federation Manual of Practice No. 9 shall apply.

6. Whenever possible, the building sewer shall be brought to the building at an elevation below the basement floor. In all buildings in which any building drain is too low to permit gravity flow to the public sewer, sanitary sewage carried by such building drain shall be lifted by an approved means and discharged to the building sewer.

7. No person shall make connection of roof downspouts, exterior foundation drains, areaway drains, or other sources of surface runoff or groundwater to a building sewer or building drain which in turn is connected directly or indirectly to a public sanitary sewer.

8. The connection of the building sewer into the public sewer shall conform to the requirements of the building and plumbing code or other applicable rules and regulations of the Town, or the procedures set forth in appropriate specifications of the American Society for Testing of Materials and Water Pollution Control Federation Manual of Practice No. 9. All such connections shall be made gastight and watertight. Any deviation from the prescribed procedures and materials must be approved by the Department of Public Works before installation.

9. The applicant for the building sewer permit shall notify the Department of Public Works when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Department of Public Works.

10. All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways, and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Town.

B. SPECIFIC REQUIREMENTS

1. House service connections shall be constructed from the main sewer to the sideline of the street layout, generally one connection for each dwelling unit or vacant lot, as directed by the Town. Connection to main sewer pipe shall be made with a PVC wye, made by the same manufacturer as the main pipe, and of the same class.

2. One or more separate and independent building sewer(s) shall be provided for every building, except where one building stands at the rear of another on an interior lot and no private sewer is available or can be constructed to the rear of the building through an adjoining alley, court, yard, or driveway, in which instance the building sewer from the front of the building may be extended to the rear building and considered as one (1) building sewer. This common building sewer shall be considered as two sewer connections. The arrangements for the construction of the sewer(s) shall be provided for by an easement between the property owners. The technical requirements of the sewers shall be subject to review and approval of the department. It is recommended that each building sewer contain a backwater valve to prevent backups. In addition, the Town does not and will not assume any obligation or responsibility for damage caused by or resulting from any shared connection.

3. Cleanouts

a. House service connections that exceed 100 feet in length shall include a cleanout extended to grade with a removable end cap.

b. All sewer service lines shall have a six (6) inch cleanout at a minimum distance of ten (10) feet from the outside of the foundation wall, facing in the direction of the sewer main, unless there is a cleanout immediately inside the building. Sewer service lines that change direction more than 45 degrees in addition to the above cleanout shall have six (6) inch cleanout installed, facing the direction of flow at each change of direction.

c. All sewer service lines that are one hundred (100) feet or longer shall have a six (6) inch cleanout installed, facing in the direction of flow, at a fifty (50) foot point for one hundred (100) foot services, or every one hundred (100) feet for longer services, in addition to any cleanouts designated above or elsewhere. A sewer manhole shall be required in place of a cleanout when two (2) or more services join together. The pipe size from this manhole to the sewer main shall be increased to a minimum of eight (8) inches.

d. All sewer cleanouts shall be brought up to one (1) foot below finished grade and equipped with a watertight removable cap. Any sewer service cleanouts that are in a driveway, walkway, or roadway shall be furnished with a metal cover providing access at grade to the sewer service cleanout.

4. End caps shall be PVC and sized to match the lateral. All service pipes and fittings shall be installed in accordance with manufacturer's instructions, or as directed by the Town and left uncovered for inspection and measurement. A 2-inch x 2-inch marker shall be placed at the property line of every connection, extending to six (6) inches above the ground service. Contractor shall take care with installation of end caps to prevent blow-offs during air testing. All house laterals will be brought to the inside of the sidewalk or to the property line, whichever is applicable.

4.9. CLEANING

A. After laying of the pipe is completed between manhole sections, the interior of the sewer pipeline shall be thoroughly cleaned from construction debris or other foreign matter and the section closed off by bulkheads at the outlet side of the manholes sufficient to prevent the wash of mud or dirt into the completed section of pipeline, and upon completion of the entire line, it shall be left free and clean of such debris and the bulkheads removed. Once cleaned, all lines shall be mandrelled to ensure roundness.

4.10. TESTING

A. An air test shall be conducted by the Contractor at his expense and witnessed by the Town or their agent on all sewer pipes installed. The test shall be conducted only after the backfilling and compaction operation has been completed, and the test shall be made under the observation of the Town. The Contractor may, at his/her option, run an air test on a line before it is completely backfilled for his own information and requirements, but the official testing shall be done after the backfilling and compaction have been completed.

B. The testing equipment shall meet the following requirements:

1. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
2. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
3. All air used shall pass through a single control panel.
4. Three individual hoses shall be used for the following connections:
   a. From panel to pneumatic plugs for inflation.
   b. From panel to sealed line for introducing the low air pressure.
   c. From sealed line to panel for continually monitoring the air pressure rise in the sealed line.

C. The Town will permit other types of air testing equipment subject to approval, and upon demonstration by the Contractor that such method can be employed safely and without damage to pipe or fittings.

D. Pipe shall be tested between manholes by installing pneumatic plugs in each end and inflating plugs to 25 psig. Low air pressure shall be introduced into this sealed line until the internal air pressure reaches 5 psig greater than the average backpressure of the ground water. A period of two minutes shall be required for stabilization (3.5 psig minimum pressure in the pipe), at which time the air supply shall be disconnected. The portion of line being tested shall be termed acceptable if the time required, in minutes, for the pressure to decrease from 4.5 psig to 3.5 psig (greater than the average backpressure of any ground water that may be over the pipe) shall not be less than one (1) minute per inch of diameter.

E. The Contractor shall determine the average height of the ground water above the invert of the main pipe at the time of testing.

4.11. CHIMNEYS

A. Chimneys shall be installed when sewer mains exceed 12' in depth and as ordered by the Town, encased in reinforced concrete or pea stone and carefully backfilled. Pipe bedding shall be extended to provide a base for chimney and concrete encasement shall encompass the main tee, leaving the joints exposed for flexibility. The riser pipe encasement may be formed using a Sonotube which may be left in place. A vertical hardwood 2" x 2" stake shall be placed next to the chimney, extending to within one (1) foot of the ground surface, to be used as a marker.

4.12. PROTECTION OF WATER SUPPLIES

A. CROSS CONNECTIONS:

No physical connection shall exist between a public or private potable water supply system and a sewer or any appurtenance that would permit the passage of wastewater or polluted water into the potable supply. No sewer shall come into contact with a water pipe and no water pipe shall pass through any part of a sewer manhole or any part of the sewer system.

B. RELATION TO WATER WORKS STRUCTURES:

Sewers shall be located as far as possible from public water supply wells or other potable water supply sources and structures.

Engineering plans shall show all existing waterworks units, such as treatment facilities, basins, pipes, wells, or other waterworks units that are within 50 feet of the proposed sewer or to within the minimum distances required by the Director.

C. WATER MAINS' RELATION:

1. Horizontal Separation: Lay out sewers at least 10 feet (3.0 m) from any existing or proposed water main. If local conditions prevent a lateral Separation of 10 feet, the issue will need to be reviewed with the Director.

2. Vertical Separation: Whenever sewers must cross water mains, lay out the sewer so that the top of the sewer is at least 18 inches (46 cm) below the bottom of the water

main. The sewer joints should be equidistant and located as far away as possible from the water main joints. When the sewer cannot meet the above requirements, relocate the water main to provide for this separation or reconstruct it with mechanical-joint pipe for a distance of 10 feet (3.0 m) on each side of the sewer. One full-length (20 feet) water main pipe shall be centered over the sewer so that both joints will be as far from the sewer as possible.

When it is impossible to achieve horizontal and/or vertical separation as stipulated above, review with the Director.

4.13. LOW PRESSURE SEWER DESIGN AND CONSTRUCTION

A. LAYOUT:

The branched configuration of a pressure sewer is required. Looped piping shall not be permitted. Pipe routing shall include long radius sweeps no less than those recommended by the pipe manufacturer.

Pressure pipes shall be designed and installed so that a minimum of five (5) feet of cover material exists over the crown of the pipe at all times. Appurtenances such as isolation valves, air release valves, and clean-outs shall be provided as required by the Director.

Pipe Size: The diameter of the pressure sewer shall be calculated so that it provides a cleansing velocity based on the average daily flow of the system. Force Mains shall have a minimum velocity of three feet per second, 3ft/sec.

Minimum low pressure sewer pipe sizes shall be as follows (unless there is a significant change in grade):

NUMBER OF HOMES OR EQUIVALENT	MINIMUM PIPE SIZE
1-3	1.5
4-9	2
10-18	2.5
19-30	3 (model recommended)
>30	Must be modeled

B. ISOLATION VALVES:

Isolation valves shall be required to allow isolation of individual grinder units, system expansion, and at key locations such as at the property line.

Ball valves for low pressure sewer manholes shall be true union type constructed from PVC Type I cell classification with EPDM O-rings. All valve components shall be replaceable. Ball valves 2 inches and smaller shall be pressure rated to 235 psi, while valves larger than 2 inches shall be rated to 150 psi. Ball valves shall have a Safe-T-Block seal carrier to stop flow in either direction, allowing safe removal of the downstream union nut for system

service or modification. Ball valve ends shall be as needed to connect to Schedule 430 PVC pipe in low pressure sewer manholes. Ball valves shall be true union ball valves as manufactured by Spears Manufacturing.

C. CURB STOP VALVE:

Curb stop valves shall be located at the property line of the street or easement of the sewer main. Curb stop valves shall be of brass or bronze construction and two rubberized O-ring seals to provide pressure-tight seal. Curb stop valves shall be figure H-15204 as manufactured by Mueller-Oriseal, B22 as manufactured by Ford Meter Box Company, Hayes, Nuseal, or equal. Curb boxes shall be 2-1/2-inch shaft size two-piece screw type. They shall be adjustable from 48-inch to 72-inch. Curb boxes shall be constructed of cast iron and thoroughly coated with two coats of asphaltum varnish. Curb box rods shall be stainless steel supplied with a hole in the "U" portion for the insertion of a stainless steel pin. Pins shall be supplied and shall be made of stainless steel. Curb boxes shall be labeled with an "S" for sewer. Curb boxes shall be as manufactured by Ford Meter Box Company, Mueller Company, or equal.

D. AIR RELEASE VALVES:

Air and vacuum valves shall be installed on low pressure mains. The air and vacuum valves shall be designed to release air from the main when the main is being filled and/or air becomes entrapped in the main, and to admit air into the sewer main when pumps are stopped and the main is being drained by gravity. The body and cover of air and vacuum valve shall be cast iron, floats of stainless steel, protective hood of steel, seats of Buna-N, and miscellaneous internal parts of stainless steel, Manufacturer-Crispin, or equal. Air and vacuum valves shall be located in a manhole or structure with a diameter of 60 inches to allow access for repairs and maintenance.

E. CLEANOUT CONNECTIONS:

Cleanouts shall be installed on the pressure mains at sags and other locations where debris can accumulate and clog the lines, and proper valving to conduct required maintenance shall be provided.

F. MISCELLANEOUS

Magnetic marking tape two (2) inches wide with the words "SANITARY SEWER BELOW," shall be installed not more than 2 feet below finished grade on all mainline and service laterals.

4.14. FORCE MAINS

A. MINIMUM SIZE:

Force mains shall have a minimum velocity per Section 4.13 A.

Force Main Pipe Material: Force main pipe material shall as specified in Article IV, Construction Technical Specification, Section 14:

B. VELOCITY:

At design average flow, velocity in excess of that indicated in Section 4.13 A shall be maintained.

When the daily average design detention time, in the force main, exceeds 20 minutes, the manhole and sewer line receiving the force main discharge or the sewage shall be treated so that corrosion of the manhole and the exiting line are prevented. The corrosion is caused by sulfuric acid biochemically produced from hydrogen sulfide anaerobically produced in the force main.

C. VARIABLE TERRAIN:

As far as possible, the alignment and depth of a force main should provide a constant upgrade profile. All force mains shall be designed and installed so that a minimum of five (5') feet of cover material is over the crown (top) of the pipe at all times.

D. AIR RELIEF VALVE:

An automatic air relief valve shall be placed at all relative high points in the force main and at 400 feet intervals on level force main runs. All air relief valves shall be protected from freezing.

E. DRAIN VALVES:

Drain valves at all relative low points in the force main shall be provided. These valves shall be connected to gravity sewers or provided with connections for vacuum pumper trucks. All drain valves shall be protected from freezing.

F. TERMINATION:

Force mains shall enter the gravity sewer at a point not more than 2 feet (0.61 m) above the exit line of the receiving manhole. The receiving manhole shall be dedicated to receiving the force main and shall have no other flows entering.

G. TESTING:

Leakage Testing shall be conducted.

4.15. GRINDER PUMP SYSTEMS:

Pumping equipment shall include an integral grinder capable of handling a reasonable quantity of foreign objects that may find their way into a building's sewerage system. The grinder pump shall be capable of processing foreign objects without jamming, stalling, or

overloading, and without making undue noise. The grinder shall provide a positive flow of solids into the grinding zone. Grinder pump stations shall be of the wet well type.

4.16. DESIGN OF PUMP STATION:

A. ACCESS:

Outside installation shall be designed with the service manhole constructed of the same material, and at least as thick as the tank. The manhole shall have an opening at the surface with a minimum inside diameter of 30 inches (76 cm); its cover shall be securely lockable. The size of the manhole shall allow for the performance of maintenance and repair functions.

B. TANK:

Construct each tank of concrete or custom-molded, fiberglass reinforced polyester resin using a filament wound process, layup and spray technique, or other approved process that will ensure a smooth and resin rich interior surface that is designed for two times the maximum loading.

The basin shall be concrete, fiberglass-reinforced polyester resin, or other material meeting the minimum strength specifications herein. The basin shall be furnished with one PVC closet flange or one flexible inlet flange suitable for connection to the household gravity line. At a minimum, the basin wall and bottom shall withstand two times the anticipated maximum pressure exerted on the basin, either from soil loadings or buoyancy forces. All station components must function normally when exposed to these loadings. All seals and joints shall pass factory tests to ensure that they are water tight.

C. ELECTRICAL EQUIPMENT:

Wiring and electrical connections shall be NEMA rated for the environment in which they are to be placed. System shall include an emergency generator plugin connection.

D. PUMPS:

1. Pump Removal: The grinder pump shall be readily removable without the need for manual disconnection of piping.

2. Grinder: The grinder shall be positioned immediately below the pumping elements, securely fastened to the pump motor shaft, and driven directly by the same motor. The grinder shall be a rotating type with a stationary hardened and ground stainless steel shredding ring that carries stainless steel cutter bars. This assembly shall be dynamically balanced and run without objectionable noises or vibrations over the entire range of recommended operating pressures.

3. Pump Opening: The grinder shall be capable of reducing all components in normal domestic sewage or the sewage to be discharged from the building drain, including a reasonable amount of foreign objects (e.g., paper, wood, plastic, glass, and rubber).

Objects shall be reduced to finely divided particles that will pass through the passages of the pump and a minimum 1.25 inch (3.2 cm) diameter discharging pipe.

4. Intake: The grinder shall be positioned so that solids are fed into it from the bottom in an upward flow, reducing the possibility of overloading or jamming. In addition, sufficient turbulence shall be created to keep the tank bottom free of permanent deposits or sludge banks.

E. CHECK VALVE:

The grinder pump shall be equipped with a check valve that is installed in a horizontal position on the discharge pipe. This valve shall provide a full- ported passageway when open.

F. VENTILATION:

Adequate ventilation shall be provided in accordance with local and national codes.

G. CONTROLS:

Sensing devices to detect wastewater levels for initiating pump operation and to detect high water levels shall be installed. Level sensing devices shall only be used and shall not be located near flows entering the well.

SECTION 5

MANHOLES

5.1. SIZE

A. Manholes shall be 48" I.D. for sewer mains up to 24" diameter and 60" I.D. for sewer mains 24" and larger. Transition rings may be used to reduce to 48" six (6) feet above invert.

B. Manholes shall be located at all angles, all termination points and no greater distance than 300'.

C. Frame and covers will be 24" for 48" manholes and 30" for 60" manholes.

5.2. MATERIALS

A. Manholes shall be constructed of reinforced precast concrete monolithic base section, barrel sections and dome section, meeting the latest applicable requirements of A.S.T.M. Spec. C478-70T, or latest revision thereto. Pipe to manhole connection shall be made with a flexible rubber boot and stainless steel type connector. Joint between manhole sections shall be made with a butyl rubber compound. Red clay brick for table and invert shall be hard burned, of uniform Grade B, and subject to approval by the Department of Public Works. Manhole steps shall be either aluminum alloy 6-61 T6, extruded, safety type or polypropylene coated grade 60 reinforcing bar, per ASTM C-478 and OSHA (STD 1-1.9). Frame and cover shall be cast iron meeting the requirements of ASTM specifications for gray iron castings, class 20.

5.3. CONSTRUCTION

A. Manhole base sections shall be installed upon a compacted crushed stone sub-base, 6 inches in depth, leveled and secured. The Department of Public Works may order an additional depth of sub-base. Barrel and dome section shall be carefully placed upon base section, with a butyl rubber strip used as a jointing compound.

B. Red clay brick shall be used for frame grade adjustment and frames shall be set upon a full bed of mortar. Mortar shall also be placed around manhole flange. Completed frames and covers shall be kept 1/4 inch below finished roadway surface.

C. For straight-line manholes, the pipe shall be laid through the manhole the bottom half of the pipe forming the invert and the top half being removed. Angle or junction manholes shall have the inverts formed with red clay brick, set on edge and smoothly rounded in the direction of flow. A red clay brick table shall be constructed in all manholes, sloping toward the channel.

D. Manhole manufacturer shall install aluminum or polypropylene steps.

E. All manholes shall be waterproofed at the construction site, to allow inspection of concrete, prior to installation of waterproofing compound. Any damage to the waterproofing caused by construction activities shall be repaired prior to backfilling.

F. Flat top slabs are permitted only where shallow manhole depths prohibit use of dome section.

G. Basis for entire manhole structure design shall be H-20 loading.

H. All drop manholes shall be of the internal type. Drop manholes shall be a minimum 60" diameter.

5.4. JOINTING

A. The joints between the precast sections of the manholes shall be made using a flexible type sealing gasket such as Ram-neck or Kent-Seal No. 2 applied in accordance with manufacturer's instructions.

B. The joint between the manhole base and the sewer pipe shall be of flexible sleeve type for pipe size 12 inches and smaller, and shall be of the press wedge 11 gasket type for pipe sizes larger than 12-inch diameter. The gasket or sleeve shall be cast in the manhole base sections at the time of manufacture. Sleeve type shall be provided with stainless steel strap to clamp the sleeve to the pipe.

C. A pipe joint shall be installed within 24 inches of exterior wall of manhole. Other flexible types of wall to pipe joints will be permitted subject to approval by the Department of Public Works.

5.5. STEPS

A. Aluminum or polypropylene steps shall be cast in place, 12 inch on center. For aluminum steps, the portion of step embedded in concrete, plus 2 inches, shall be coated with aluminum oxide.

5.6. FRAMES AND COVERS

A. Frames shall be set on full bed of cement mortar and adapter rings of brick shall be used for grade adjustment. Cast iron covers shall be marked with an "S" and frame and covers shall meet the requirements of ASTM. Specification for gray iron castings, Cast Iron Class 20.

B. Maximum grade adjustment for frame and cover shall be one foot (1'). Frames shall be fully encased in concrete within 2" of finish grade.

C. All Covers are to be non-vented type.

D. Frames and covers shall be manufactured in the United States of America by EJ (formerly East Jordan Iron Works) Catalog #1258Z 1258A1 Assembly to match existing. Any frames

and covers manufactured outside of the United States that are provided by a Contractor shall be removed and replaced at the Contractor's expense.

5.7. FIELD CORING

A. Field coring of manholes shall not be permitted unless approved by the Town. Any approved field coring shall be completed with an appropriate coring machine. Patching of holes cast by the manufacturer or holes cored in the field that are in error and will not be used, shall be plugged solid with brick and mortar and parged with hydraulic cement.

5.8. CONCRETE REPAIRS

A. Field repairs of minor concrete cracks, spalls or minor concrete defects shall be completed using hydraulic cement, such as Water Plug by Thoro or Equal. Any defects considered by the Town to be major will require replacement of the entire manhole section.

5.9. TESTING

A. A leakage test shall be conducted on each manhole constructed prior to use, by the Contractor, at his expense and under the observation of the Department of Public Works. The test shall be either an exfiltration or an infiltration test as determined by applicable conditions and as directed by the Department of Public Works.

B. If the ground water elevation is higher than 30" above pipe invert grade, the test will be an exfiltration test. The Contractor shall install water tight plugs in all pipe openings in the manhole, then fill the manhole with water to the top of the manhole dome section, and the drop in water level observed over 4-hour period, or less. If the quantity lost is less than a rate of 1/4 gallon per foot of depth the test will be deemed acceptable. If this rate is exceeded, the Contractor shall make all necessary repairs to reduce the rate of exfiltration to the specified rate. All visible points of leakage shall be repaired in any case.

C. An infiltration test will be conducted by vacuum testing of manholes. The Contractor shall install water tight plugs in all pipe openings in the manhole and install a manhole vacuum test plug in the opening of the top section of the manhole. The manhole vacuum test plug shall include an inflatable bladder and pressure gauge, a vacuum gauge and a frame to restrain the plug to the manhole. The bladder shall be inflated to 25 psi. A vacuum pump shall be used to create a vacuum of 10 inches of mercury (Hg) in the manhole, within a period of five minutes. The vacuum pump will be disconnected when a vacuum of 10 inches of mercury is obtained within the manhole. The vacuum gauge will be observed for one minute and the test will be considered acceptable if the vacuum, after one minute, is not less than 9 inches of mercury. If more than one inch of mercury vacuum is lost, the Contractor shall make all necessary repairs to reduce the rate of vacuum loss to within acceptable limits. Vacuum testing will be repeated after any required repairs are completed.

SECTION 6

USE OF PUBLIC SEWERS

A. No person shall discharge or cause to be discharged any stormwater, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water, or unpolluted industrial process waters to any sanitary sewer.

B. Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the Department of Public Works. Industrial cooling water or unpolluted process waters may be discharged, on approval of the Department of Public Works, to a storm sewer, combined sewer, or natural outlet.

C. Prohibitions and Standards for Discharge to sanitary waste streams

1. General Prohibitions. No person shall discharge or cause to be discharged to a POTW or septic system any substances, materials, or wastewaters that can: harm the sewers, wastewater treatment process, or equipment; have an adverse effect on the receiving waters; or otherwise endanger life, limb, public property, or constitute a nuisance. In determining the acceptability of these wastewaters, consideration shall be given to such factors as the quantities of such wastewaters in relation to flows and velocities in the sewers, construction of or materials comprising sewers, nature of the wastewater treatment process, capacity of the wastewater treatment process, degree of treatability of such wastewaters in the wastewater treatment plant, and other pertinent factors. Pollutants introduced into POTW's by a non-domestic source shall not pass through the POTW or interfere with the operation or performance of the treatment works. These general prohibitions and the specific prohibitions in 314 CMR apply to all non-domestic sources introducing pollutants into a POTW whether or not the source is subject to other pretreatment standards or any other federal, state, or local pretreatment requirements.

2. Specific Prohibitions. In addition, the following pollutants shall not be introduced into a waste stream:

a. Pollutants which create a fire or explosion hazard in the POTW.

b. Pollutants which will cause corrosive structural damage to the POTW, and in no case discharges with pH lower than 5.5, unless the works is specifically designed to accommodate such discharges.

c. Solid or viscous pollutants, including fats, oils and grease in amounts which will cause obstruction to the flow in the POTW resulting in interference.

d. Any pollutant, including oxygen demanding pollutants released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.

e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, and in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104 F), unless the Department of Environmental Protection, upon request of the POTW, approves alternate temperature limits.

f. More than one part per billion (ppb) of mercury. In the event a local mercury limit established under 314 CMR 12.09(1) is applicable to an indirect discharge to a POTW, the most stringent mercury standard shall apply.

g. Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure to interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant.

h. Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of 100 mg/l or containing substances which may solidify or become viscous at temperatures between 32° and 150° F. (0° and 65° C.).

i. Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the typical concentrations found in municipal wastewater or the typical concentrations seen at the existing wastewater treatment facility or the limits established by the Department of Public Works for such materials, whichever is lower.

j. Any waters or wastes containing phenols or other taste or odor producing substances, in such concentrations exceeding the typical concentrations found in municipal wastewater or the typical concentrations seen at the existing wastewater treatment facility or limits which may be established by the Department of Public Works as necessary, after treatment of the composite sewage to meet the requirements of the state, federal, or other public agencies or jurisdiction for such discharge to the receiving waters.

k. Materials which exert or cause:

   i. Unusual concentrations of inert suspended solids (such as, but not limited to, fuller's earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate).

   ii. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions).

   iii. Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works.

iv. Unusual volume of flow or concentration of wastes constituting "slugs" as defined herein.

l. Waters or wastes containing substances which are not amenable to treatment or reduction by the sewage treatment process employed, or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

m. Any radioactive wastes or isotopes of such half-life or concentration as may exceed the typical concentrations found in municipal wastewater or the typical concentrations seen at the existing wastewater treatment facility or limits established by the Department of Public Works in compliance with applicable state or federal regulations.

n. Any waters or wastes having a pH in excess of 9.5.

3. Solid materials discharged to the waste stream:

a. Unless otherwise noted, only properly shredded garbage is allowed to be discharged to the waste stream. Exceptions to this include: Solid or viscous substances in quantities or of such size capable of causing obstruction to the flow of sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ash, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, underground garbage, whole blood, paunch manure, hair and fleshing's, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders.

b. Any other products added to the waste stream must be dispersible. Outside of human generated materials, the only product that is dispersible is two-ply toilet paper.

c. Non dispersible items are strictly prohibited. Non-dispersible items that are prohibited from being disposed of into the waste stream include, but are not limited to, the following:

i. diapers,
ii. baby wipes,
iii. cotton swabs,
iv. household cleaning wipes,
v. floss, and
vi. other similar non dispersible products.

D. If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in Subsection D of this section, and which, in the judgment of the Department of Public Works, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life of constitute a public nuisance, the Department of Public Works may: a) reject the wastes, b) require pretreatment to an

acceptable condition for discharge to the public sewers, c) require control over the quantities and rates of discharge, and/or d) require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of Subsection J of this section. If the Department of Public Works permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the Department of Public Works, and subject to the requirements of all applicable codes, ordinances, and laws.

E. Grease, oil, and sand interceptors shall be provided when, in the opinion of the Department of Public Works, they are necessary for the proper handling of liquid wastes containing grease in excess amounts, or any flammable wastes, sand, or other harmful ingredients; except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Department of Public Works, and shall be located as to be readily and easily accessible for cleaning and inspection.

F. Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his/her expense.

G. When required by the Department of Public Works, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole together with such necessary meters, and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the Department of Public Works. The manhole shall be installed by the owner at his/her expense, and shall be maintained by him/her so as to be safe and accessible at all times. These manholes shall receive flow from no other location than the force main.

H. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this article shall be determined in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater," published by the American Public Health Association, and shall be determined at the control manhole provided, or upon suitable examples taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb, and property. The particular analyses involved will determine whether a twenty-four-hour composite of all outfalls of a premise is appropriate or whether a grab sample or samples should be taken. Normally, but not always, BOD and suspended solids analyses are obtained from twenty-four-hour composites of all outfalls whereas pHs are determined from periodic grab samples.

1. All industries discharging into a public sewer shall perform such monitoring of their discharges as the Department of Public Works and/or duly authorized employees of the Town may reasonably require, including installation, use, and maintenance of

monitoring equipment, keeping records and reporting the results of such monitoring to the Department of Public Works. Such records shall be made available upon request by the Department of Public Works to other agencies having jurisdiction over discharges to the receiving waters.

I. No statement contained in this article shall be construed as preventing any special agreement or arrangement between the Town and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the Town for treatment, subject to payment therefor, by the industrial concern.

J. Pretreatment or Surcharge Requirements

1. Any non-residential applicant who connects to the sewer is subject to providing the Town with specific details of the quantity and quality of wastewater they are or plan to discharge.

2. A discharger who conveys or proposes to convey any waste product that contains contaminant loads that are higher than residential contaminant loads (as defined by TR-16), is subject to pretreatment requirements and/or surcharges for the high loads. These loads may include, but are not limited to, BOD, TSS, Nitrogen (total nitrogen, TKN, nitrate, nitrite), Phosphorus and pH. In addition, the Town reserves the right to receive a characterization of the waste and/or to request specific data on characteristics including, but not limited to, COD, dissolved solids, aluminum, concentrations of known chemicals, etc.

SECTION 7

PUMP STATIONS

7.1 GENERAL

A. The Contractor shall adhere to all applicable standards contained with the "Town of Uxbridge Design and Construction Standards Manual"

B. The design of all pump stations shall conform to the requirements set forth in "**TR-16 Guides for the Design of Wastewater Treatment Works"**

SECTION 8

WASTEWATER TREATMENT

8.1 GENERAL

A. The Contractor shall adhere to all applicable standards contained with the "Town of Uxbridge Design and Construction Standards Manual"

B. The design of all pump stations shall conform to the requirements set forth in "**TR-16 Guides for the Design of Wastewater Treatment Works"**

SECTION 9

SEWER CHARGES AND FEES

A. The Town may, at its discretion, charge a fee for each connection to the Town sewer.

B. If a residential, commercial or industrial customer has a drinking water well instead of potable water supplied by the Town and that residence is connected to the Town sewer, the residence is required to install and maintain a water meter on the well water supply pipe. The DPW shall determine the water meter size and there will be no charge for one standard 1" meter. The cost of larger meters (meter and its installation) shall be borne by the resident. The meter shall be provided at the owner's expense. The Department shall record water usage from this meter as a basis for billing sewer use fees to the property owner. The cost of any replacement meter, its installation, and its reinstallation shall be borne by the resident.

C. If a house has no water meter and chooses not to have one installed, the resident shall pay the "Sewer Flat Rate" established by the Water and Sewer Commissioners. This only applies to residential customers. The flat rate does not apply to commercial or industrial customers.

SECTION 10

FLOW NEUTRAL CONTROLS

10.1. BACKGROUND

The Town of Uxbridge completed a Comprehensive Wastewater Management Plan (CWMP) that was approved by the Secretary of the Executive Office of Energy and Environmental Affairs (EEA). The CWMP outlines the existing and future wastewater needs of the Town and identifies three (3) Sewer Service Areas (SSAs) with apportioned wastewater flow. Figure 6-1 in the CWMP shows the three SSAs and is attached and made part of this sewer use regulation.

Existing and future wastewater flows were calculated for each of the three Study Areas. 'Table 1 - Sewer Service Areas Approved Wastewater Flow Allocations' outlines approved wastewater flow allocations outlined in the CWMP. Existing and future wastewater needs for the Town of Uxbridge are 1.5 million gallons per day (MGD), as indicated in the Town's National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency (USEPA) for the wastewater treatment facility. The NPDES permit includes approved water quality and volume discharge limits.

10.2. WASTEWATER FLOW ALLOCATIONS

Existing and future wastewater allocations, outlined in the approved 2016 CWMP are listed below:

Table 1 – Sewer Service Areas Approved Wastewater Flow Allocations

Sewer Service Area	Existing Allocated Flow (MGD)	New Allocated Flow (MGD)	Total Allocated Flow (MGD)
1	0.00	0.02	0.02
2	0.47	0.24	0.71
3	0.53	0.24	0.77
Total	1.00	0.5	1.5

10.3. SMART GROWTH CONTROLS

The SSA wastewater flow allocations have been reserved as outlined in the approved CWMP. In no case shall flow be allocated in excess of the Total Allocated Flow. This regulation effectively establishes flow neutral growth controls and allows the Board of Sewer Commissioners to provide definite limits to uses of the wastewater system.

The Board of Selectmen, acting as Sewer Commissioners shall reserve the right to reallocate the flows within the SSAs provided that the following provisions are met:

- Reallocation of flow occurs within the Table 1 Sewer Service Areas Approved Wastewater Flow Allocations.
- Reallocation of flow does not result in an exceedance of the Total Allocated Flow outlined in the CWMP approved by the Secretary of EEA.

10.4. CONNECTIONS AND EXTENSIONS FOR THE WASTEWATER SYSTEM

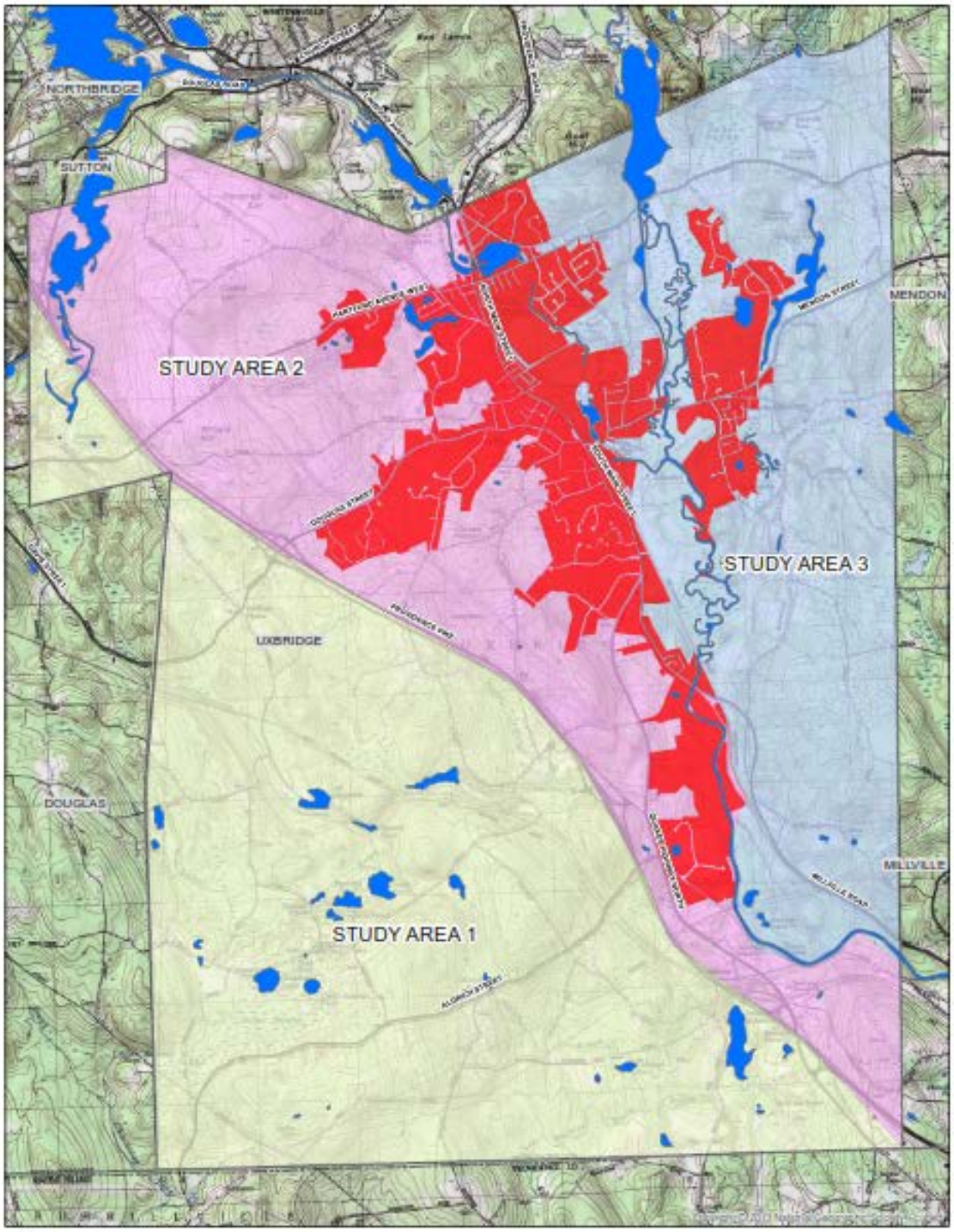
The Town of Uxbridge Director of Public Works (Director) and the Board of Sewer Commissioners will use information and recommendations included in the CWMP as a guide when considering applications for new connection and extension permits and thereby manage the capacity within the SSAs to serve the needs of the Town for the 20 year planning period (2015 – 2035).

10.5. PLAN OF TOWN AND SEWER AREAS

Figure 6-1 illustrates the SSAs outlined in the CWMP.

10.6. ABANDONMENT OF SYSTEMS

Existing on-site septic systems that are connected to the Town's sewer system shall comply with Commonwealth of Massachusetts – Department of Environmental Protection Regulations 310 CMR 15.354 – Abandonment of Systems.


NORTHBRIDGE
SUTTON
MENDON
STUDY AREA 2
STUDY AREA 3
UXBRIDGE
DOUGLAS
MILLVILLE
STUDY AREA 1
Legend
Surface Waters
Parcels within the existing collection system area
Major Roadways
Study Area
STUDY AREA 1
STUDY AREA 2
STUDY AREA 3
Town of Uxbridge, Massachusetts
Comprehensive Wastewater Management Plan
Job Number 86-14914
Revision A
Date 16 Dec 2015
STUDY AREAS
Figure 6-1

SECTION 11

SEPTAGE

A. The Town of Uxbridge Wastewater Treatment Facility (WWTF), under normal operating conditions, will accept all domestic septage generated in the Town of Uxbridge. Domestic septage generated outside of the Town of Uxbridge will be on a first-come first-served basis.

B. All haulers must apply for and be granted from the Uxbridge Board of Health a permit to carry septage in the Town of Uxbridge before being allowed to dispose at the Uxbridge WWTF.

C. Unless a functional automated measuring system is in place, all trucks disposing of liquid waste at the Uxbridge WWTF will be considered full.

D. Septage and non-hazardous industrial waste may be introduced into the treatment plant at a designated receiving area within the treatment plant. Such wastes shall not violate Section 6 of these regulations or any other requirements established by the Town

E. All non-domestic hauled wastes must have prior consent from the Town for disposal at the treatment plant. The Town may collect samples of each load to ensure compliance with applicable standards. The Town may require the hauler to provide a waste analysis of any load prior to discharge. The driver will collect a sample from each load

F. Waste haulers must provide all required information on an official Town of Uxbridge Septage Receiving Form for every load. This form shall include, at a minimum, the name and address of the waste hauler, truck and trailer identification, source(s) of waste, owner, address, contact info e.g., phone number and/or email address, volume and characteristic of waste. In addition, for hauled non-hazardous industrial or commercial wastes, the form shall identify the sources of waste, and known or suspected waste constituents. RCRA hazardous wastes, as defined in MassDEP Hazardous Waste Regulations, are prohibited discharges. Septage forms must be filled out completely with all required addresses and phone numbers, as the Uxbridge WWTF reserves the right to verify any and all loads brought to the facility. If the vehicle registration number is not provided the hauler will be billed for the truck in their fleet with the largest capacity. Septage forms can be obtained at the Wastewater Treatment Facility. Any load containing grease, industrial or commercial byproducts originating in the Town of Uxbridge will only be accepted with prior knowledge and approval. Additionally, non-residential loads will only be accepted Monday thru Thursday before 12:00 Noon, Fridays before 9:00 A.M. Any load containing grease or industrial or commercial byproducts originating outside of the Town of Uxbridge will not be accepted

G. In all cases, the Town reserves the right to accept or reject any waste as it deems necessary. The Town may stop a discharge operation from a truck in progress at any time.

H. A hauled waste hauler's ability to discharge hauled waste may be suspended or revoked immediately for any violations of these regulations.

I. The Town shall have authority to prohibit the disposal of hauled wastes.

J. Any hauler found to be bringing improper loads to the Uxbridge WWTF will be subject to reduction or termination of dumping privileges.

K. The volume of each truck will be determined by the data plate on each tank. If no data plate is available, the Town of Uxbridge will determine the tank capacity. The Wastewater Treatment Facility will keep a daily log of all disposals by hauler and will bill monthly per the disposal log. The fee will be based on measured flows, if a flow meter is present, or 80% of the capacity of the truck, if the flow meter is not present or not functional. Payment will be due within 20 days of billing. Any hauler with an outstanding balance will not be allowed to discharge septage until payment is made in full.

L. The Uxbridge WWTF reserves the right, at times it deems necessary, to temporarily rescind any or all portions of this policy.

Approved by:

Board of Selectmen/Water and Sewer Commissioners

Chairman Jennifer Modica

Vice Chair Jeff Shaw

Clerk Jim Hogan

Selectman Peter Baghdasarian

Selectman

10/11/16
Date

Original Document Date: July 22, 1985
Revision #1 Document Date: November 24, 1986
Revision #2 Document Date: March 9, 1998
Revision #3 Document Date: December 15, 1999
Revision #4 Document Date: March 13, 2000
Revision #5 Signatures Date: 2004
Revision #6 Document Date: September 2016

APPENDIX A

INSURANCE REQUIREMENTS

INSURANCE TO BE MAINTAINED BY VENDOR

1. Insurance: It is the responsibility of the vendor to provide the Town with a Certificate of Insurance showing insurance coverage for General Liability, automobile and Workman's Compensation (Statutory). It is the Vendor's responsibility to purchase and maintain adequate insurance to protect the Vendor and the Town from all claims as follows:

a. Workmen's Compensation Employers Liability	Statutory
BI Each Accident	$100,000
BI Disease-aggregate	500,000
BI Disease - Each employee	100,000

b. Comprehensive General Liability
Owner's Protective Liability
Comprehensive Public Liability

Bodily Injury:	Any one Person/Aggregate $1,000,000/$2,000,000
Property Damage:	Per Occurrence/Aggregate $1,000,000/$2,000,000

The Liability Policy should be Broad Form and include coverage for Premises and Operations and Product Liability.

c. Comprehensive Automobile Liability:

Bodily Injury:	Any one Person/Aggregate $1,000,000/$2,000,000
Property Damage:	Per Occurrence/Aggregate $500,000/$1,000,000

The Comprehensive Automobile Liability Insurance should be written to include owned, hired and non-owned vehicles and it shall provide Extra Territorial Coverage.

d. The Town of Uxbridge, MA should be named as an additional insured on the Vendor's policy. No insurance shall be subject to cancellation without at least thirty (30) days prior written notice forwarded by registered or certified mail to the Town of Uxbridge. All parties shall also be notified of the attachment of any restrictive amendments to the policies.

e. The Board of Selectmen reserves the right to amend the insurance requirements specified above to protect the interests of the Town. Any deviation from the insurance requirements must be noted by the Contractor in writing.

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Work covered by Contract Documents.

B. Contractor's use of site.

C. Limits of work area.

D. Construction permits and regulatory requirements.

E. Owner occupancy.

F. Sequence of work and constraints.

G. Operation of existing facilities.

H. Connections to existing facilities.

I. Renovations to existing facilities

J. Alteration project procedures.

K. Cutting and patching.

L. Facility outages.

M. Continuity of service plan.

N. Requests to work outside normal working hours.

1.02. WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract is identified in the two Specification Attachments – Construction Notes and Uxbridge Southern System Lining and Manhole Repairs – and in the Bid Item Description pages of Section 01025 and Section 01026 and all other specifications.

B. Work not specifically identified in the Bid Item Descriptions, but nevertheless required in the Contract Documents, shall be performed as shown and/or specified as part of the base bid work.

1.03. CONTRACTOR USE OF SITE

A. All work will take place in easements. Coordinate the use of the Site with the Owner and the Engineer.

B. Contractor shall assume full responsibility for the security of his/her Subcontractor's materials and equipment stored on the site, as well as his own.

C. If directed by the Owner or Engineer, move any stored items which interfere with the operations of the Owner or other Contractors.

1.04. LIMITS OF WORK AREA

A. Confine construction operations within the limits described on the Construction Notes.

B. Contractor shall be responsible procuring and coordinating staging areas for the work as necessary.

C. Occupying Private Land

1. The Contractor is responsible for obtaining off-site staging / storage areas as required if these areas are insufficient for his activities. If Contractor intends to occupy private land other than land owned by Owner, land owned by Contractor, or land covered by easements and rights-of-way obtained by the Owner for the performance of the Work by the Contractor, then Contractor shall obtain written consent from the owner of the land the Contractor intends to occupy.

2. Contractor shall obtain written consent before Contractor enters or occupies the private land with equipment, tools, materials, or Contractor's personnel.

3. Contractor shall provide copies of written consent to the Owner before Contractor enters or occupies the private land.

4. Contractor shall obtain required permits for use of private lands including erosion and sedimentation control plan approval at no additional cost to Owner.

1.05. CONSTRUCTION PERMITS AND REGULATORY REQUIREMENTS

A. Contractors shall obtain and pay for necessary construction permits from those authorities or agencies having jurisdiction over land areas, utilities, or structures which are located within the Contract Limits and which will be occupied, encountered, used, or temporarily interrupted by Contractor's operations. Those permits issued by the Town of Uxbridge shall have their fees waived by the Town. Contractor is responsible for payment of all other permit fees.

B. When construction permits are accompanied by regulations or requirements issued by a particular authority or agency, it shall be Contractor's responsibility to familiarize himself and comply with such regulations or requirements as they apply to his operations on this Project. All costs associated with additional field supervision or inspection by authorities or agencies having jurisdiction over land areas, utilities, or structures shall be Contractor's responsibility.

C. Contractor shall keep an approved set of permitted construction plans on site at all times.

1.06. OWNER OCCUPANCY

A. The Owner will occupy the existing wastewater collection system during entire period of construction.

B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.

C. Schedule the Work to accommodate Owner occupancy.

1.07. SEQUENCE OF WORK AND CONSTRAINTS

A. General

1. Provide an intended sequence of construction in accordance with Section 01300, Progress Schedule.

2. Contractor shall be solely responsible for the means, manpower, methods, techniques, sequences, and procedures of construction unless specifically identified in the Contract Documents.

3. Contractor shall be responsible for sequencing and coordinating the Work in accordance with the Contract Documents.

4. Contractor may proceed simultaneously with work in multiple areas or on multiple systems. Contractor is responsible for coordinating parallel work items so as to expedite progress while minimizing interference with plant operations.

5. Contractor shall provide temporary facilities to maintain continuous operation of all existing facilities and utilities unless scheduled facility shutdowns are identified in the Contract Documents.

6. Work shall be performed in a manner that minimizes impact to normal operation of existing facilities and utilities.

7. Contractor's operations shall not cause Owner to violate permit requirements.

8. If Contractor's operations cause Owner to receive a notice of violation for a sewage spill or erosion and sedimentation practices, all costs including fines, legal notices, mailings, administrative tasks, and engineering associated with resolving the notice shall be borne by Contractor. Contractor shall pay all costs associated with such notice within 10 days of receipt of written notification from the state, local or applicable agency.

9. General Sequencing Requirements

a. The site constraints and the need to maintain flow during construction requires the Contractor to carefully and fully develop a sequence of construction that allows for the timely construction of all facilities. It will also require the Contractor to communicate and coordinate with the operating personnel, the Owner, and the Engineer.

b. A minimum of seven calendar days' written notice is required from Contractor to Owner for any work requiring changes in operating procedures or removal of equipment or structures from service.

c. Contractor is responsible for maintaining uninterrupted wastewater flow at all times.

d. Contractor shall complete work in accordance with the Contract Time limitations in the Agreement.

e. The Contractor shall perform all work between the hours of 7:00 a.m. and 3:00 p.m. Any operator time required by the Contractor outside of these hours shall be reimbursed to the Owner at a rate of $125/man-hour (or actual

rates – whichever is less). Contractor is responsible for the cost of police details outside of the hours of 7:00 a.m. to 3:00 p.m., unless authorized in writing by Owner.

f. When required, the Contractor shall provide temporary pumping, piping and/or piping accessories (valves, plugs, tapping sleeves, blind flanges, etc.) to accomplish proper sequencing of work. The Contractor is responsible for providing temporary piping and accessories as required to meet the requirements of the specifications and as required by his sequencing of work. All temporary facilities that remain connected to permanent facilities (e.g., valves, etc.) shall be in accordance with permanent facilities described within the Contract Documents.

g. All work that can be completed on a system without taking a unit or process out of service shall be completed prior to the shutdown so as to minimize down time.

h. No work shall be conducted between December 1 and April 15, unless otherwise allowed by Owner.

B. Temporary Provisions

1. All temporary facilities (e.g. bypass pumping, etc.), whether required by sequencing to maintain operations, or provided by the Contractor as part of his own preferences for sequencing of work, shall be designed, installed, and operated by the Contractor and no additional compensation will be made other than that listed in the Contract. All temporary facilities shall be removed when their need is completed, unless specifically allowed to remain by the Owner.

2. Contractor shall furnish and install temporary equipment including pumps, piping, valves, bulkheads, electrical equipment, and all system components necessary to complete the Work.

1.08. CONNECTIONS TO EXISTING FACILITIES

A. Contractor shall provide all cutting and patching required for connection to existing facilities.

1.09. REQUESTS TO WORK OUTSIDE OF NORMAL WORKING HOURS

A. Submit requests for written permission to work outside normal working hours at least one week in advance. Requests to work outside normal working hours must be approved in advance by Owner and Engineer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01019

CONTRACT CONSIDERATIONS

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Definitions.

B. Schedule of Values.

C. Application for Payment.

D. Change procedures.

E. Alternates.

F. Safety and Health.

G. Standard forms.

H. American Iron and Steel requirements.

1.02. DEFINITIONS

A. Mobilization - Mobilization includes, but is not limited to, performance of preparatory construction operations, including the movement of personnel and equipment to the Project Site; application, fee payment, and acquisition of all required permits (e.g., erosion and sediment control plans, temporary and permanent building and trade permits); preparation of Progress Schedule; utility connections, etc.; insurance and bonds; and the establishment of Engineer's and Contractor's offices, buildings, and other facilities required at the Site in order to begin work on a substantial phase of the Contract.

1.03. SCHEDULE OF VALUES

A. Submit three (3) hard copies of Schedule of Values, provided on the attached EJCDC Form 620, and one (1) electronic copy in Microsoft Excel of Schedule of Values in accordance with the timeframes identified in General and Supplemental Conditions.

B. Line items shall be subdivided into the Bid Items shown on the Bid Form.

C. The sum of all line items in the Schedule of Values shall equal the Total Bid Price included on the Bid Form.

D. Each line item shall include a directly proportional amount of the Contractor's overhead and profit.

E. Schedule of Values shall serve as a breakdown of Work used to establish progress payments. Progress payments for lump sum items will be made based on the percentages of completion of the work items included in the Schedule of Values for each lump sum item. Progress payments for Unit Price Work will be based on actual quantities of work performed. Progress payments for Contingent Unit Price work will only be made if work is authorized by

Owner and/Engineer. Progress payments for Allowances will be made as described elsewhere in the Contract Documents.

F. For Lump Sum Bid Items, the following format shall be followed when developing the Schedule of Values.

1. Mobilization shall be identified in the Bid Form as a separate Bid Item.

a. Lump sum line item shall include all work described in the definition of mobilization included herein.

b. Costs for bonds and insurance shall be included in the lump sum mobilization line item.

c. Mobilization cost shall not be greater than five (5) percent of the Total Bid Price.

2. Include separate line items for demobilization and contract closeout.

3. Site work shall be subdivided into itemized quantities and unit cost for all individual construction components. Items shall be separated according to Specification section titles listed in the Table of Contents:

a. Site work shall not include earthwork (such as excavation) or structural work (such as foundations) specific to a particular structure or process.

b. Include erosion and sediment control under site work.

c. Include dewatering under site work.

d. Include site restoration.

G. Revise Schedule of Values to include executed Change Orders with each Application for Payment. List each Proposed Change Order (PCO) that is incorporated into executed Change Orders.

1.04. APPLICATIONS FOR PAYMENT

A. Submit six (6) original signature versions of each application on forms furnished by Engineer.

B. Contractor must have all record documents as identified in General Conditions Article 6.12 current and up to date prior to submitting Applications for Payment.

C. With the draft application for payment, the following shall be provided. Engineer will not approve pay application without the following documentations:

1. Required documents and Contractor’s back-up data, including updated Schedule and all invoices for stored materials.

2. Verification that all certified payrolls for Contractor and all subcontractors through the “period ending date” in the pay application shall be current and are being submitted as required by federal and state requirements.

3. Up-to-date monthly progress photos and as-built/record drawings.

D. Engineer shall have a minimum of five business days after the “period ending date” to approve draft application for payments.

1.05. INFORMATION REQUESTS

A. Contractor shall present questions regarding the Contract intent or interpretation to the Engineer via a Request for Information (RFI) form. Responses to the Contractor’s questions will be provided on this same form.

B. Contractor may propose changes by submitting an RFI including a request for change to Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation.

1.06. CHANGE PROCEDURES

A. Change procedures shall be per M.G.L. and these Contract Documents.

B. The Engineer will advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Times by issuing supplemental instructions in a Field Order, as provided in Paragraph 9.04 of the General Conditions.

C. The Engineer may issue a Proposal Request or Notice of Change through an Engineer’s RFI, which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit an estimate within 14 calendar days or receiving the request or as specified in the General and Supplementary Conditions.

D. The Contractor may propose changes by submitting an RFI including a request for change to the Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other subcontractors.

E. Work Change Directive - Engineer may issue a directive, on EJCDC C-940 Work Change Directive signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Price or Contract Time. Promptly execute the change.

F. Lump Sum/Price Change Order - Based on Proposal Request or Notice of Change and Contractor’s fixed or estimated price quotation.

G. Unit Price Change Order - For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not predetermined, execute Work under a Work Change Directive. Changes in Contract Price or Contract Time will be computed as specified for Time and Material Change Order.

H. Time and Material Change Order - Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Price and Contract Time as provided in the Contract Documents.

I. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

J. Change Orders shall be executed on the attached Change Order Form (sample attached at the end of this section).

K. Execution of Change Orders - Engineer will issue Change Orders for signatures of parties in the following order: Engineer, Contractor, Owner.

1.07. ALTERNATES

A. Bid alternates identified on the Bid Form will be reviewed and accepted or rejected at the Owner's discretion prior to execution of the Agreement. Accepted Alternates will be identified in the Agreement and included in the Work.

1.08. SAFETY AND HEALTH

A. These construction documents and the construction hereby contemplated are to be governed, at all times, by applicable provisions of the Federal Law(s) including, but not limited to, the latest amendments of the following:

1. Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-596.

2. Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Requirements.

3. Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

4. Part 1910 - Safety and Health Regulations for Construction, Chapter VII of Title 29, Confined Space Entry and Permits as amended.

B. This project is subject to all of the safety and health regulations (see 29 CFR 1926, as amended) as promulgated by the U.S. Department of Labor on June 24, 1974. Contractors are urged to make themselves familiar with the requirements of these regulations.

C. Contractor shall designate a Health & Safety Officer (with the appropriate training and certification) and shall prepare a Health and Safety Plan and make it available on-site for his employees. Neither the Owner nor the Engineer shall formally review the Contractor's Health and Safety Plan, but Contractor shall present the plan if Owner or Engineer so requests.

1.09. STANDARD FORMS

A. Use standard forms attached to this section.

1.10. TERMS

A. Throughout these Contract Documents, reference may be made to certain trades, subcontractors, and contractors preceded by a descriptive term such as "Electrical." All such terms shall refer to the respective filed sub-bid subcontractor when used.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

Section 01019, Contract Considerations

Attachments

Contractor's Application for Payment No.

	Application Period:	Application Date:
To (Owner): Town of Uxbridge	From (Contractor):	Via (Engineer): GHD Inc.
Project:	Contract: Construction	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.: 8(11144264

Application For Payment Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY CHANGE ORDERS		

1. **ORIGINAL CONTRACT PRICE..... $** _____
2. **Net change by Change Orders..... $** _____
3. **Current Contract Price (Line 1 ± 2)..... $** _____
4. **TOTAL COMPLETED AND STORED TO DATE**
   (Column F on Progress Estimate)..... $ _____
5. **RETAINAGE:**
   - **a. X** _____ **Work Completed..... $** _____
   - **b. X** _____ **Stored Material..... $** _____
   - **c. Total Retainage (Line 5a + Line 5b)..... $** _____
6. **AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)..... $** _____
7. **LESS PREVIOUS PAYMENTS (Line 6 from prior Application)..... $** _____
8. **AMOUNT DUE THIS APPLICATION..... $** _____
9. **BALANCE TO FINISH, PLUS RETAINAGE**
   (Column G on Progress Estimate + Line 5 above)..... $ _____

Contractor's Certification

The undersigned Contractor certifies that to the best of its knowledge: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By:	Date:

Payment of: $ _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____ _____
(Engineer) (Date)

Payment of: $ _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____ _____
(Owner) (Date)

Approved by: _____ _____
Funding Agency (if applicable) (Date)

Endorsed by the Construction Specifications Institute.
EJCDC C-620 Contractor's Application for Payment
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Progress Estimate — Contractor's Application

For (contract):	Application Number:
Application Period:	Application Date:

A		B	Work Completed		E	F		G
Item		Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (F) B	Balance to Finish (B - F)
Specification Section No.	Description		From Previous Application (C+D)	This Period				
	Totals							

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Progress Estimate

Contractor's Application

For (contract):							Application Number:			
Application Period:							Application Date:			
A				B	C	D	E	F		
Item		Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Presently Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F) B	Balance to Finish (B - F)
Bid Item No.	Description									
	Totals									

EJCDC C-620 Contractor's Application for Payment
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Stored Material Summary

Contractor's Application

For (contract):	Application Number:
Application Period:	Application Date:

A	B	C	D		E		F		G
Invoice No.	Shop Drawing Transmittal No.	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage ($) (D + E - F)
			Date (Month/Year)	Amount ($)	Amount ($)	Subtotal	Date (Month/Year)	Amount ($)	
		Totals							

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Certificate of Substantial Completion

Project:	Collection System Rehabilitation Phase 3	
Owner:	Town of Uxbridge	Owner's Contract No.:
Contract:		Engineer's Project No.: 11144264

This [tentative] [definitive] Certificate of Substantial Completion applies to:

☐ All Work under the Contract Documents: ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

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

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

☐ Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

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

Executed by Engineer	Date
Accepted by Contractor	Date
Accepted by Owner	Date

Field Order No. _____

Date of Issuance: _____ Effective Date: _____

Project: Collection System Rehabilitation – Phase 3	Owner: Town of Uxbridge, MA	Owner's Contract No.: 2020-11
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 11144264

Attention:

You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.04.A, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: _____ _____

(Specification Section(s)) (Drawing(s) / Detail(s))

Description:

Attachments:

cc:	Engineer:
	Name Title
Receipt Acknowledged by Contractor:	Date:

Copy to Owner

Work Change Directive
No. _____

Date of Issuance: _____ Effective Date: _____

Project: Collection System Rehabilitation – Phase 3	Owner: Town of Uxbridge, MA	Owner's Contract No.: 2024-28
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 11144264

Contractor is directed to proceed promptly with the following change(s):

Item No.	Description

Attachments (list documents supporting change):

Purpose for Work Change Directive:

Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- ☐ Non-agreement on pricing of proposed change.
- ☐ Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price $_____ (increase/decrease) Contract Time _____ (increase/decrease) days

Recommended for Approval by Engineer:	Date:
Authorized for Owner by:	Date:
Received for Contractor by:	Date:
Received by Funding Agency (if applicable):	Date:

CHANGE ORDER FORM

SRF Number _____
Public Entity Town of Uxbridge, MA
Contract Number 2024-28
Change Order Number _____

Contract Amount (As Bid) $ _____

Net Change in Contract Price (this change order) $ _____

Total Adjusted Contract Price (including this and all other change orders) $ _____

This change order extends the time to complete the work by _____ calendar days.

The extended completion date is _____

This change order checked by _____ _____
(Chief) Resident Engineer Date

This change order is requested by: _____

This change order is recommended by: _____

_____ _____ _____
Consultant Engineer P.E. Number Date

The undersigned agree to the terms of the change order.

_____ _____
Contractor Date

_____ _____
Owner Date

Certification of Appropriation under M.G.L. c.44, §31C: Adequate funding in an amount sufficient to cover the total cost of this change order is available.

By: _____ _____
Certification Officer (Auditor, accountant, treasurer) Date

Do not write below: this space reserved for STATE AGENCY APPROVAL

DEP/DMS

CHANGE ORDER FORM (Continued)

Public Entity _____

SRF No: _____ Contract No. _____ Change Order No. _____

Contract Title: _____

Owner's Name: _____

Owner's Address: _____

Contractor's Name: _____

Contractor's Address: _____

Description of Change

Reason for Change

REQUEST FOR INFORMATION
NO. _____

PROJECT:	Collection System Rehabilitation – Phase 3		
OWNER:	Town of Uxbridge, MA	**CONTRACT NO.:**	2024-28
ENGINEER:	GHD Inc.	**ENGINEER PROJECT NO.:**	11144264
CONTRACTOR:		**CONTRACTOR PROJECT NO.:**	
SUBJECT:		**SPECIFICATION REFERENCE:**	
		DRAWING REFERENCE:	

Information/Clarification Requested:

Name | Signature | Date

Engineer's Response:

Name | Signature | Date

Distribution: Contractor
Engineer
Field Office File

SECTION 01025

UNIT PRICE ITEMS
(BID ITEM DESCRIPTIONS)

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Price make-up.

B. Elements of Bid Item Description page.

C. List of unit price items.

D. Bid Item Descriptions - Attached pages.

1.02. PRICE MAKE-UP

A. Unit prices bid by Contractor are deemed to be full compensation for all required labor, products, tools, equipment, plant, transportation, testing, inspection, services, incidentals, administrative, procedures, applicable taxes, permit fees, overhead, profit, and other miscellaneous expenses.

1.03. ELEMENTS OF BID ITEM DESCRIPTION PAGE

A. Identification of unit price item, as set forth in the Bid Form.

B. Brief statement of work involved in the item.

C. Listing of components of work which make-up the item including reference to the Specification section(s) covering each component.

D. Cross-references to associated work not included in the item.

E. Criteria to be applied in measuring number of completed units, for payment purposes.

F. Limitations, if any, imposed on the measurement of completed units, for payment purposes.

1.04. LIST OF UNIT ITEMS – CONTRACT NO. 2024-28 – COLLECTION SYSTEM REHABILITATION PHASE 3

Bid Item No. and Title		Bid Item Description Number
D	Manhole Frame and Cover Replacement	D

1.05. BID ITEM DESCRIPTIONS

A. Bid Item Description pages are attached at the end of this Specification section.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

BID ITEM DESCRIPTION D

UNIT PRICE ITEM BID ITEM D

Manhole Frame and Cover Replacement (ADD ALTERNATE)

A.	DESCRIPTION	Under this item, furnish all materials, labor, tools, temporary facilities, and all the testing necessary rehabilitate manhole frames and covers.
B.	WORK INCLUDED UNDER THIS ITEM	Work in the following specifications related to this lump sum item: Demolition (Section 02030) Protection of Existing Facilities (02205) Manholes (Frame and Cover Replacement) (02605) Site Rehabilitation (02980) All work not included in other bid items (Bid Items A, B, and C)
C.	ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM	All other Bid Items
D.	METHOD OF PAYMENT	Payment shall be the unit price per manhole frame and cover replaced, in accordance with the Contractor's bid item breakdown.
E.	MEASUREMENT AND LIMITS	The quantity for which payment will be made shall be each manhole frame and cover replaced (existing demolished and new installed).

SECTION 01026

LUMP SUM ITEMS
(BID ITEM DESCRIPTIONS)

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Price make-up.

B. Elements of Bid Item Description page.

C. List of lump sum items.

D. Bid Item Descriptions.

1.02. PRICE MAKE-UP

A. Lump sum prices bid by Contractor are deemed to be full compensation for all required labor, products, tools, equipment, plant, transportation, testing, inspection, services, incidentals, administrative procedures, applicable taxes, permit fees, overhead, profit, and other miscellaneous expenses.

1.03. ELEMENTS OF BID ITEM DESCRIPTION PAGE

A. Identification of lump sum item, as set forth in the Bid Form.

B. Brief statement of work involved in the item.

C. Listing of components of work which make-up the item including reference to the Section(s) covering each component.

D. Cross-references to associated work not included in the item.

1.04. LIST OF LUMP SUM ITEMS - CONTRACT NO. 2024-28 – COLLECTION SYSTEM REHABILITATION PHASE 3

Bid Item No. and Title		Bid Item Description Number
A	General Conditions	A
B	Line SSMH-829 to SSMH-830	B
C	Line SSMH-831 to SSMH-832	C

1.05. BID ITEM DESCRIPTIONS

A. Bid Item Description pages are attached at the end of this specification section.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

BID ITEM DESCRIPTION A

LUMP SUM ITEM BID ITEM A

GENERAL CONDITIONS

A. DESCRIPTION

Under this Item, the General Contractor shall provide general administration and supervision of the entire project, including shop drawings, progress photographs, schedules, progress meetings, reporting requirements for all regulatory agencies, mobilization, demobilization, bonds, insurance, and other items listed below.

B. WORK INCLUDED UNDER THIS ITEM

Mobilization
Demobilization
Insurance and Bonds (General and Supplementary Conditions)
Summary of Work (Section 01010)
Contract Considerations (Section 01019)
Coordination (Section 01039)
Erosion Control (Section 01564)
Submittals (Section 01300)
Progress Schedules (Section 01310)
Construction Documentation (Section 01380)
Quality Control (Section 01400)
Record Documents (Section 01700)
All work not included in other bid items (Bid Items B, C, and D)

C. ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM

All other Bid Items

D. METHOD OF PAYMENT

Payment will be made on a lump sum basis in accordance with the General Contractor's Schedule of Values which shall include, as a minimum, all items listed herein under A, broken down into sufficient detail for Engineer to adequately review progress payment amounts. Refer to Section 01019 for details.

BID ITEM DESCRIPTION B

LUMP SUM ITEM BID ITEM B

Line SSMH-829 to SSMH-830

A.	DESCRIPTION	Under this Item, the General Contractor shall line a segment of piping as defined in the Contract Documents
B.	WORK INCLUDED UNDER THIS ITEM	Work in the following specifications related to this lump sum item: Demolition (Section 02030) Protection of Existing Facilities (02205) Sanitary Sewer Cleaning (02711) Sanitary Sewer Flow Control (02715) Sanitary Sewer Rehab – CIPPL (02772) Site Rehabilitation (02980) All work not included in other bid items (Bid Items A, C, and D)
C.	ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM	All other Bid Items
D.	METHOD OF PAYMENT	Payment will be made on a lump sum basis in accordance with the General Contractor's Schedule of Values which shall include, as a minimum, all items listed herein under B, broken down into sufficient detail for Engineer to adequately review progress payment amounts. Refer to Section 01019 for details.

BID ITEM DESCRIPTION C

LUMP SUM ITEM BID ITEM C

Line SSMH-831 to SSMH-832

A.	DESCRIPTION	Under this Item, the General Contractor shall line a segment of piping as defined in the Contract Documents
B.	WORK INCLUDED UNDER THIS ITEM	Work in the following specifications related to this lump sum item: Demolition (Section 02030) Protection of Existing Facilities (02205) Sanitary Sewer Cleaning (02711) Sanitary Sewer Flow Control (02715) Sanitary Sewer Rehab – CIPPL (02772) Site Rehabilitation (02980) All work not included in other bid items (Bid Items A, B, and D)
C.	ASSOCIATED WORK NOT INCLUDED UNDER THIS ITEM	All other Bid Items
D.	METHOD OF PAYMENT	Payment will be made on a lump sum basis in accordance with the General Contractor's Schedule of Values which shall include, as a minimum, all items listed herein under C, broken down into sufficient detail for Engineer to adequately review progress payment amounts. Refer to Section 01019 for details.

SECTION 01039

COORDINATION

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Coordination.

B. Field engineering.

C. Preconstruction conference.

D. Site mobilization conference.

E. Progress meetings.

F. Preinstallation conferences.

G. Start-up conference.

H. Electronic communication requirements.

1.02. COORDINATION

A. Coordinate scheduled work sequences and related operations beforehand with appropriate local, county, or state officials and agencies including affected property owners, when Project is to be located in or adjacent to a public right-of-way.

B. Coordinate scheduling, submittals, and Work of the various Specification sections to assure efficient and orderly sequence of installation of interdependent construction elements.

C. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. Coordinate completion and cleanup of work of separate sections in preparation for Substantial Completion.

F. After Owner use of facilities, coordinate access to Site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner’s activities.

G. It is the General Contractor’s responsibility to coordinate all Work on the project. When work involving interaction of more than one filed sub-bid contractor is shown, it is the General Contractor’s responsibility to coordinate all work and to identify conflicts before materials are ordered.

1.03. FIELD ENGINEERING

A. The Contractor shall provide field surveying and field engineering services for work required in execution of the work and for preparation of the Project Record Documents.

B. The Contractor shall provide correct lines, grades, locations, and elevations for construction of all Project components.

C. The Engineer reserves the right to inspect or check results of the Contractor's field engineering services specified herein for conformance with the Contract Documents.

1.04. PRECONSTRUCTION CONFERENCE

A. Engineer will schedule a conference after the Effective Date of Agreement.

B. Attendance Required - Owner, Engineer, and Contractor.

C. Agenda

1. Distribution of extra sets of Contract Documents.

2. Submission of list of Subcontractors, list of products, Schedule of Submittals, Schedule of Values, and Progress Schedule.

3. Designation of personnel representing the parties in Contract and Engineer.

4. Procedures and processing of field decisions, submittals, substitutions, Applications for Payments, proposal requests, Change Orders, and Contract closeout procedures.

5. Scheduling.

6. Scheduling activities of testing laboratory and procedures for testing.

7. Requirements of regulatory agencies.

8. Use of premises by Owner and Contractor.

9. Temporary facilities to be provided by Owner and by Contractor.

10. Security and housekeeping procedures.

11. Procedures for maintaining record documents and progress photos.

12. Maintenance of vehicular traffic.

13. Periodic cleanup of Site.

14. Notification of utilities' owners.

15. Equipment startup.

D. Engineer will record minutes and distribute copies after meeting to participants and to those affected by decisions made.

1.05. SITE MOBILIZATION CONFERENCE

A. Engineer will schedule a conference at the Project site prior to Contractor occupancy. This meeting may be combined with the preconstruction conference.

B. Attendance Required - Owner, Engineer, Contractor, Contractor's Superintendent, and major Subcontractors.

C. Agenda

1. Use of premises by Owner and Contractor.

2. Owner's requirements and partial occupancy.

3. Temporary utilities.

4. Survey and facility layout.

5. Security and housekeeping procedures.

6. Schedule.

7. Procedures for testing / Contractor's testing plan.

8. Procedures for maintaining record documents.

9. Requirements for start-up of equipment.

10. Inspection and acceptance of equipment put into service during construction period.

11. Material safety data sheet files – notification of location.

D. Engineer will record minutes and distribute copies after meeting to participants and to those affected by decisions made.

1.06. PROGRESS MEETINGS

A. Engineer will schedule and administer meetings throughout progress of the Work at minimum monthly intervals.

B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies to participants and those affected by decisions made.

C. Attendance Required - Owner, Engineer, Job superintendent, Contractor's project manager, major Subcontractors and Suppliers, as appropriate to agenda topics for each meeting.

D. Agenda

1. Review minutes of previous meetings.

2. Review of Work progress.

3. Field observations, problems, and decisions.

4. Identification of problems which impede planned progress.

5. Review of submittals schedule and status of submittals.

6. Review of off-site fabrication and delivery schedules.

7. Maintenance of Progress Schedule.

8. Corrective measures to regain projected schedules.

9. Planned progress during succeeding work period.

10. Coordination of projected progress.

11. Maintenance of quality and work standards.

12. Effect of proposed changes on Progress Schedule and coordination.

13. Other business relating to Work.

1.07. ELECTRONIC COMMUNICATION REQUIREMENTS

A. Contractor shall submit the items subsequently described herein. Detailed procedures will be discussed during the Preconstruction Conference.

1. Submittals - In addition to the hard copy Shop Drawing requirements specified under Section 01300, Submittals, submit each Shop Drawings in electronic format via email. This is required for submittals requiring review including but not limited to shop drawings, O&M Manuals, and paperwork associated with required Samples. The electronic copy of the Shop Drawing shall be in .PDF format. This procedure must be complete prior to sending hard copies.

2. Requests for Information (RFI)

a. Submit each RFI in electronic format via email. The electronic copy of the RFI shall be in Microsoft Word format.

b. Use RFI form attached to Section 01019.

3. Proposed Change Orders - In addition to the hard copy, submit each Proposed Change Order in electronic format via email. The electronic copy of the Proposed Change order shall be in .PDF format. This procedure must be complete prior to sending hard copies.

B. Submit all letters and memorandums not related to items previously described in this Article in .PDF form via email.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Submittal procedures.

B. Review of submittals.

C. Schedule of submittals.

D. Construction progress schedules.

E. Proposed products list.

F. Shop drawings.

G. Product data.

H. Samples.

I. Manufacturer’s instructions.

J. Manufacturer's certification.

1.02. SUBMITTAL PROCEDURES

A. Transmit each required submittal in hard copy and electronic form using an Engineer accepted form.

B. Number the submittals as follows:

1. First: Specification section number.

2. Submittal number within the Specification section.

3. Review cycle number.

4. Title of submittal.

5. For example:

a. 15060-01-01 – Field lock gaskets for DIP (first review cycle)

b. 15060-01-02 - Field lock gaskets for DIP (second review cycle)

c. 15060-02-01 – Flange pipe and fittings (first review cycle)

d. 15060-02-02 – Flange pipe and fittings (second review cycle)

e. 15060-02-03 – Flange pipe and fittings (third review cycle)

C. Identify Project, Contractor, Subcontractor, and Supplier; pertinent Drawing number and detail number(s), and Specification sections, as appropriate.

D. Apply stamp, signed or initialed providing certification required by General Condition Article 6.17.C.2. At a minimum, stamp shall include the following information:

1. Submittal Number _____
2. Deviations: None_____; As Listed _____
3. Reference Specification Section _____
4. Reference Drawing Number _____
5. Space Requirement: As Designed_____ Different, As Listed _____
6. Representation is made to Owner and Engineer that Contractor has satisfied the requirements of General Conditions Article 6.17.C.1.a through d and that the Contractor hereby approves this submittal.
   Contractor _____
   Signature _____
   Date _____
   Date _____
   NOTE TO CONTRACTOR: All line numbers must be filled out (those lines with multiple options require only one of the options to be filled out). Failure to complete all the lines or to complete the lines below the certification statement will result in the return of the unreviewed shop drawing submittal.

E. Schedule submittals to expedite the Project, and deliver to parties in the quantities specified in this Section and at the locations identified during the Preconstruction Conference.

F. Identify deviations from Contract Documents in accordance with General Conditions Article 6.17.C.3.

G. Identify product and/or system limitations which may be detrimental to successful performance of the completed Work.

H. Identify space requirements which differ from those designed and/or shown on the Contract Documents.

I. Provide space for Contractor Accepted review stamps.

J. Revise and resubmit in accordance with General Conditions Article 6.17.E. Identify all changes made since previous submittal in a cover letter or memorandum.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

L. Submittals not required will not be recognized or processed.

M. Items shall not be fabricated or delivered without fully accepted Shop Drawings.

N. Ensure no associated work begins until associated Shop Drawings are fully accepted.

O. Fabrication prior to receiving an “Accepted” or “Accepted as Corrected – No Resubmittal Required” is at Contractor’s risk.

P. All products provided by the Contractor or his subcontractors for the project requires a shop drawing submittal. This includes any products provided as part of change orders and products only shown on the Contract Drawings.

Q. The Owner reserves the right to hold the Contractor responsible for the Engineer's costs to review more than two submittals (one resubmittal) on any one product.

1.03. REVIEW OF SUBMITTALS

A. Review of submittals will be in accordance with General Conditions Article 6.17.D.

B. Review Times

6. No less than 30 days shall be allowed for Engineer's review of complete submittals and resubmittals unless otherwise specified in the Contract Documents.

C. Review Codes

1. Accepted

2. Accepted as Corrected – No Resubmittal Required

3. Accepted as Corrected – Resubmittal Required

4. Accepted as Corrected – Resubmit Written Responses and Requested Information

5. Revise and Resubmit

6. Not Accepted

7. Not Reviewed

8. Informational Purposes Only

D. Payment for items requiring resubmittals shall not be made in full (100 percent of the line item) until all submittals are coded Accepted or Accepted as Corrected – No Resubmittal Required.

1.04. SCHEDULE OF SUBMITTALS

A. Submit three copies of preliminary Schedule of Submittals in accordance with General Conditions Article 2.05.

B. The Schedule of Submittals shall be reviewed by the Engineer. Contractor shall revise and resubmit the schedule, if required, until acceptable to Engineer.

1.05. CONSTRUCTION PROGRESS SCHEDULES

A. Submit detailed baseline progress schedule within 30 days after date indicated in the Notice to Proceed for Engineer review.

B. Submit monthly updates to construction progress schedules with each Application for Payment identifying changes since previous version.

C. Owner and Contractor shall share float.

1.06. PROPOSED PRODUCT LIST

A. Within 10 days after date indicated in the Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product, and appropriate Specification Section Number.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.07. SHOP DRAWINGS

A. Provide information in accordance with General Conditions Article 6.17 as supplemented herein and as required by individual Specification sections.

B. Shop Drawing submittals shall include all descriptive data, performance characteristics, material specifications, spare parts list, drawings, piping diagrams, wiring schematics, and shall be complete and accurate to indicate item-by-item compliance with the Contract Documents.

C. Shop Drawings shall be drawn at scales matching those on the Drawings depicting the same items.

D. All catalog cuts, manufacturer's specifications, drawings, and verbal descriptions shall be clearly marked to allow identification of the specific products used.

E. If the submittal deviates from the requirements of the Specifications in any way, it shall be clearly marked in the submittal with the justifying reason stated for evaluation by Engineer.

F. Electrical and control submittals shall include a verbal description of the functions, metering equipment, alarm points, alarm sequences, and any other specific features provided.

G. Submit one electronic copy and four opaque reproductions to Engineer, three copies of which will be retained by the Engineer.

H. The specifications contained in this set of Contract Documents have been specifically tailored to the needs of the project. The manufacturer's standard offering is only acceptable if it meets the requirements of the specifications in full.

I. The Contractor shall adhere to all applicable requirements in "Related Sections". When conflicts are present, defer to the parent specification.

J. When fewer than three named manufacturers appear in these specifications, it was only done because additional names were not known. Contractor may propose additional manufactures.

K. All proposed products, including those only shown on drawings, are required to be submitted for a shop drawing.

1.08. PRODUCT DATA

A. Submit at least four copies to Engineer, three copies of which will be retained by the Engineer. The remainder will be returned to contractor. One electronic copy shall be submitted of each submittal and resubmittal.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

C. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.09. SAMPLES

A. Provide in accordance with General Conditions Article 6.17 as supplemented herein and as required by individual Specification sections.

B. Submit Samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate Sample submittals for interfacing work.

C. Submit Samples of finishes in custom colors selected, textures, and patterns for Engineer's selection.

D. Include identification on each Sample, with full Project information.

E. Submit the number or samples specified in individual Specification sections; one of which will be retained by Engineer.

F. Reviewed samples which may be used in the Work are indicated in individual Specification sections.

1.10. MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing, in quantities specified for Shop Drawings.

B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.11. MANUFACTURER'S CERTIFICATES

A. When specified in individual specification Sections, submit manufacturer's certificate to Engineer for review, in quantities specified for Product Data.

B. Indicate that material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01380

CONSTRUCTION DOCUMENTATION

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Construction photographs.

B. Reuse of construction documentation.

1.02. DESCRIPTION

A. Contractor shall take construction record photographs prior to mobilization and periodically during the course of the Work and following completion of construction.

B. All construction photography taken prior to construction and after construction (pre- and post-construction photography).

1.03. REUSE OF CONSTRUCTION DOCUMENTATION

A. All construction documentation furnished to Owner shall become the property of the Owner and cannot be copyright or otherwise protected in a manner that prevents free reuse by either the Owner and/or Engineer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01. DELIVERY OF IMAGES

A. Preconstruction images on CD/DVD shall accompany the first Application for Payment. This Application for Payment will not be approved without receipt of such materials.

B. Monthly construction images on CD/DVD shall accompany each monthly Application for Payment. Monthly Applications for Payment will not be approved without receipt of such materials.

C. Final construction images shall accompany the final Application for Payment. This Application for Payment will not be approved without receipt of such materials.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Quality assurance and control of installation.

B. References and standards.

C. Tolerances.

D. Field samples.

E. Testing by Contractor.

F. Manufacturers' field services and reports.

1.02. QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over Suppliers, manufacturers, products, services, Site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions.

C. Verify that field measurements are as indicated on Shop Drawings and as instructed by the manufacturer.

D. If manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

E. Comply with specified standards as a minimum quality for the Work except when code requirements or equipment manufacturer requires more stringent standards.

F. Perform Work by persons qualified to produce workmanship of specified quality.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

1.03. REFERENCES AND STANDARDS

A. For products and workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified and/or are required by applicable codes.

B. Obtain copies of standards where required by individual Specification sections.

C. If specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

1.04. TOLERANCES

A. Monitor fabrication and installation tolerance control to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. If manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.05. FIELD SAMPLES

A. Furnish field Samples at the Site as required by individual Specification sections.

B. Acceptable Samples represent a quality level for the Work.

C. Where field Sample is specified in individual Specification sections to be removed, clear area after field Sample has been accepted by Engineer.

1.06. TESTS AND INSPECTIONS – CONTRACTOR PROVIDED

A. Contractor shall employ and pay for the services of an independent testing laboratory to perform inspections, tests, and approvals in accordance with the individual specific sections.

B. The Contractor shall accept all test results reported by the testing laboratory. Any disputed results shall be validated by an independent testing laboratory hired by the Contractor at their expense.

C. Independent testing laboratory will:

1. Perform inspections, tests, and other services specified in the individual specification sections and as required by Engineer and Owner.

2. Perform inspecting, testing and source quality control which may occur on or off project site, as required by Engineer or Owner.

3. Prepare and submit reports to the Engineer, in duplicate, indicating observations and results of test and indicating compliance or non-compliance with Contract Documents. Engineer will forward copy of report(s) to Contractor.

D. Contractor shall:

1. Cooperate with independent firm; furnish samples of materials; furnish design mix, equipment, tools, storage, and assistance as requested.

2. Notify Engineer and independent firm 48 hours prior to expected time for operations requiring services (Engineer will NOT schedule any tests).

3. Make arrangements with independent firm and pay for additional samples and tests required for Contractor's own use.

4. Provide Engineer and independent firm a minimum of 24 hours of any cancellation to scheduled appointments.

5. Compensate independent firm directly for the cost of retesting of failed tests.

6. Compensate independent firm directly for the cost of improper cancellation by the Contractor.

E. Retesting required because of non-conformance to specific requirements shall be performed, on instructions by the Engineer, by the same independent firm which performed the initial tests and inspections.

1.07. MANUFACTURERS' FIELD SERVICES

A. When additional manufacturer services are specified in other individual Specification sections, require material or product Suppliers or manufacturers to provide qualified personnel to observe Site conditions, conditions of surfaces and installation, quality of workmanship, testing and adjusting as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Engineer a minimum of 30 days in advance of required observations. Observers are subject to approval of Owner.

C. Report observations, Site conditions, or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

D. Submit report to Engineer in duplicate within 30 days of observation.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01564

EROSION CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Installation of sedimentation and erosion control barriers.

B. Anchoring all topsoil stockpiles with straw mulch and ringing with hay bales.

C. Protection of catch basins with hay bale rings, silt fence, tubular sediment barrier or filter fabric bags.

D. Inspection of all erosion measures after each rainfall and at least daily during prolonged rainfall.

E. Repairing immediately any failed sedimentation and erosion control barrier.

F. Removing and disposing sediment deposits in a manner that does not result in additional erosion or pollution.

G. Removal of hay bales, silt fences, and other erosion control measures after completion of construction and permanent stabilization of erosion.

H. Removal of sedimentation barriers after completion of construction.

1.02 RELATED SECTIONS

A. Section 01026 – LUMP SUM ITEMS

B. Section 02980 - SITE REHABILITATION

1.03 PERFORMANCE REQUIREMENTS

A. Observe government policy established by United States Environmental Protection Agency (USEPA) and NPDES program requirements.

B. Observe requirements set forth by the Federal Highway Administration FHWA-HI-095-038 “Geosynthetic Design and Construction Guidelines.”

C. Conform to all erosion and sedimentation control measures of the Commonwealth of Massachusetts.

D. Temporary erosion and sediment control measures shall be installed as the first step in construction and shall not be removed until permanent cover is completely established and stabilized.

E. Conform to all erosion and sedimentation control measures required by the Wetland Protection Act during maintenance activities.

PART 2 MATERIAL AND PRODUCTS

2.01 MATERIALS

A. Hay/Straw Bales - Shall be securely tied and measure 14 inches by 18 inches by 30 inches long or greater. Straw rolls may be used in lieu of bales.

B. Tubular sediment control barriers (silt socks)

1. Tubular sediment control barrier shall have a minimum diameter of 12 inches.

2. Tubular sediment barriers shall be Filtrexx Silt Sock, Groundscapes Express FilterMitt, L&M Supply Company Silt Snake Compost Filter Sock, or approved equivalent.

3. Tubes shall be burlap or approved biodegradable material.

4. Organic matter content of filter media shall be between 20 and 100 percent (dry weight basis) as determined by ASTM D2974 (method A) Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils.

C. Silt Fence With Woven Wire Mesh

1. Hardwood stakes shall be a minimum 48 inch by 2 inch by 2 inch. Metal stakes shall be steel Type T or U. Stakes shall be spaced 8 to 10 feet apart for posts.

2. Synthetic fabric 48 inches wide for fencing material.

a. Height - $\pm$30 inches above ground.

b. Minimum 8” set in ground.

3. Woven wire fence shall be 14.5 gauge with 6” mesh spacing, set 8” in ground.

D. Stakes and Fasteners

1. Shall be two #3 rebar or two 2-inch by 2-inch minimum hardwood stakes for each hay/straw bale.

2. Shall be a minimum of 2-inch by 2-inch minimum by 48-inch hardwood post, or 48-inch long steel post for silt fences.

E. Erosion Control Blanket - North American Green Type S150 or SC150, or approved equal shall be used.

2.02 PRODUCTS

A. Sediment Barriers - Sediment barriers shall be hay or straw bales, stone, silt fences or other approved materials that will prevent migration of silts and sediment to receiving waters.

B. Mulch and Seeding - Mulch and seeding shall be in accordance with requirements of Tables 1 and 2 below and per the Contract Drawings.

TABLE 1

MULCH MATERIALS, RATES AND USES

MULCH MATERIAL	QUALITY STANDARDS	APPLICATION PER 1,000 SQ.FT.	RATES PER ACRE	DEPTHS OF APPLICATION
Straw or hay	Air-dried Free from coarse	75-100 lbs. 2-3 bales	1.5-2.5 tons 90-120 bales	Lightly cover 75 to 90% of surface
Wood chips	Green or air-dried	500-900 lbs.	10-20 tons	2" - 7"

TABLE 2

TEMPORARY SEEDINGS FOR EROSION CONTROL OF CONSTRUCTION SITES

MULCH MATERIAL	QUALITY STANDARDS
Annual Rye Grass	10%
Creeping Red Fescue	35%
Little Bluestem	35%
Canada Wild Rye	10%
Perennial Rye Grass	10%

Apply temporary erosion control seed mix at a rate of 1 lb/1250 sf.

C. Diversion Terraces - Diversion terraces shall be installed on the uphill side of the disturbed areas to divert surface runoff away from unstabilized slopes.

D. Interceptor Channels - Interceptor channels shall be installed across disturbed areas where the slope is running parallel to the direction of trenches.

E. Trench Barriers - Trench barriers shall be used where the disturbed area is sloped in direction of the pipeline, when the slope exceeds 15 percent.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

A. General drawings do not show all of the necessary erosion control measures to prevent erosion and sedimentation.

1. It is the Contractor’s responsibility to design, implement and maintain erosion and sedimentation control measures which effectively prevent accelerated erosion and sedimentation.

2. It is the Contractor’s responsibility to install additional erosion control measures, including additional dewatering measures, as needed to prevent impacts to on or off-site water resources.

B. Earthmoving activities shall be conducted in such a manner as to prevent accelerated erosion and sedimentation.

C. All erosion and sedimentation control measures shall be inspected by the Contractor daily and immediately after periods of rainfall.

1. Repair and/or maintenance of sedimentation and erosion control measures will be made as soon as needed.

2. The Contractor will be held responsible for the implementation and maintenance of all control measures on this site.

D. Land disturbance shall be kept to a minimum.

1. Restabilization will be scheduled immediately after any disturbance.

E. Catch basins will be protected with silt socks, silt fences, or hay bales throughout the construction sequence and until all disturbed areas are stabilized.

G. Erosion and sedimentation control measures will be installed prior to all construction activities.

H. Sediment removal from control structures shall be the responsibility of the Contractor.

1. Sediment shall be disposed of in a manner which is consistent with overall intent of plan and which does not result in additional erosion.

I. The erosion and sedimentation control measures described herein are intended as a general guide for the Contractor.

1. It is the Contractor's responsibility to provide any and all work necessary to prevent erosion of soil from the construction site and to provide silt fences, hay bales or other control measures as the need arises during construction at no additional cost to Owner.

J. Remove all sedimentation and erosion control barriers after completion of construction and permanent stabilization of erosion.

3.02 DIVERSION DIKES

A. Diversion dikes shall be used as a temporary measure installed on the uphill side of the disturbed areas to divert surface runoff away from unstabilized slopes, and the project area.

B. Recommended Minimum Dimensions

Height - 1.5 feet
Top Width - 2 feet
Side Slopes - 2:1 or flatter
Material - Soil

3.03 DIVERSION CHANNELS

A. Diversion channels shall be used across disturbed areas where the slope is running parallel to the direction of trenches.

B. Diversion channels reduce erosion by intercepting storm runoff and diverting it to outlets on the lower side of the disturbed area where it can be disposed of having minimum erosion impact.

C. Recommended Dimensions and Materials

Depth - 0.5 feet
Width - 2 to 4 feet
Side Slopes - 2:1 or flatter
Spacing - Where required
Material - Stable on-site material

3.04 TRENCH BARRIERS

A. Trench barriers shall be used where the disturbed area is sloped in the direction of the pipeline, when the slope exceeds 15 percent.

B. Trench barriers shall be earth-filled sacks or piled stone, stacked to the top of the trench after installation of the sewer and prior to backfill, if backfill is delayed.

C. Trench barriers shall act as an erosion check by preventing the washout of the trench.

D. Recommended Dimensions and Materials

Height - To top of trench
Spacing - Approximately every 150 feet
Material - Earth-filled sacks or piled stones

3.05 SEDIMENT BARRIERS

A. Sediment barriers shall be used at storm drain inlets; across minor swales and ditches; protection of resource areas and at other applications where the structure is of a temporary nature and structural strength is not required.

1. Sediment barriers are temporary berms, diversions, or other barriers that are constructed to retain sediment on-site by retarding and filtering storm runoff.

B. Barrier Types

1. Hay or Straw Bales

a. Bales should be bound with twine.

b. Bales should be anchored to the ground with fence posts, wood pickets, or #3 rebar. Two anchors per bale are required.

c. Bales shall be installed so that runoff cannot escape freely under the bales.

d. Height - 1.5 feet
Width - 1.5 to 3.0 feet
Cross-Sectional Area Required Per Tributary Acre - 50 square feet

2. Stone

Height - 1.5 to 2.0 feet (uniform top elevation) top
Width - 3 to 5 feet
Side Slopes - 3:1 or flatter
Cross-Sectional Area Required Per Tributary Acre - 20 square feet
Material - Coarse rock or stone

3. Brush

a. Brush should be bound with twine.

b. Brush should be anchored such that it does not move and runoff cannot escape freely under the barrier.

c. Height - 1.5 to 2.0 feet
Cross-Sectional Area Required Per Tributary Acre - 15 square feet

4. Silt Fence - As specified in Part 2.

5. Tubular Sediment Barriers - As specified in Part 2.

3.06 MULCH

A. Used alone or in conjunction with other structural or vegetative erosion control measure, mulch is applied on any disturbed area which is subject to erosion, for protection of disturbed soil or newly reseeded areas.

3.07 EROSION CONTROL BLANKET

A. Erosion control blanket shall be used on slopes greater than 10 percent. Prior to installation of the erosion control blanket, the underlying layer is to be graded as shown on the Drawings.

3.08 VEGETATION

A. Temporary Vegetation

1. The planting of temporary vegetative cover shall be performed on disturbed areas where the earthmoving activities will be ceased for a period of more than 45 days.

a. The vegetation shall provide short-term rapid cover for the control of surface runoff and erosion, until permanent vegetation can be established or earthmoving activities can resume.

2. Table 2 gives recommended types of temporary vegetation, corresponding rates of applications, and planting seasons.

a. In situations where other cover is desired, the recommendations of the Owner and local Conservation Commission shall be followed.

B. Permanent Vegetation

1. Planting of various permanent vegetative covers shall be performed on disturbed areas where the earthmoving activities have ceased. The vegetation shall reestablish ground cover for the control of surface runoff and erosion.

2. The seed bed for permanent vegetative cover shall be prepared by using lime and fertilizer.

a. If the time of the seeding occurs during a dry period, mulch shall be applied to conserve soil moisture.

3. Permanent seeding shall be as shown on the Contract Drawings. Apply temporary erosion control seed mix at a rate of 1 lb/1250 sf.

3.09 SPECIAL CONDITIONS

A. Prohibited Construction Practices - Prohibited construction practices include but shall not be limited to the following:

1. Dumping of spoil material into any stream corridor, any wetlands or wetland buffer, any surface waters or at unspecified locations, even with permission of the property owner.

2. Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, any wetlands or any surface waters.

3. Pumping of silt-laden water from trenches or other excavations into any surface waters, any stream corridors or any wetlands.

4. Damaging vegetation adjacent to or outside of the access road or the right-of-way.

5. Disposal of trees, brush and other debris in any stream corridors, any wetlands, any surface water or at unspecified locations.

6. Permanent or unspecified alteration of the flow line of the stream.

7. Open burning of construction project debris.

B. Defective Devices - Any erosion and sediment control devices which become damaged, clogged or otherwise non-functional shall be immediately replaced by the Contractor, without additional compensation.

C. Adjustment

1. If the planned measures do not result in effective control of erosion and sediment runoff to the satisfaction of the regulatory agencies having jurisdiction over the project, the Contractor shall immediately adjust his program and/or institute additional measures so as to eliminate excessive erosion and sediment-runoff.

2. 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.

END OF SECTION

SECTION 01700

RECORD DOCUMENTS

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Closeout procedures.

B. Record documents.

1.02. CLOSEOUT PROCEDURES

A. Contract closeout procedures shall be in accordance with GC-14.07.

1.03. RECORD DOCUMENTS

A. The following supplements the requirements of GC-6.12:

1. Record, keep, and monitor up to date record documents of work constructed in the field. Legibly mark in red ink or red pencil to show all changes in, or directly associated with, the Work of this Contract. Keep entire set or record documents current on a day-to-day basis. Record documents shall be kept on hand in the Contractor's field office and shall be available for periodic examination by Engineer upon request.

2. Examples of annotations that could occur are as follows:

a. Change in location or elevation of structures.

b. Change in dimensions of structures.

c. Elimination of structures.

d. Unforeseen modifications to existing structures.

e. Relocation of equipment.

f. Additions to or expansion of structures.

g. Changes in mechanical trades components (electrical, heating, ventilating, plumbing).

h. Measured location of internal utilities or mechanical trade items, which are to be concealed from view, referenced to visible and accessible features of the structure.

i. Change in location or elevations of Underground Facilities installed under this Contract.

j. Change in materials, such as pipe materials.

k. Relocation of existing Underground Facilities.

l. Change in topographical contours of finished earth and paved surfaces.

m. Change in elevations of finished surfaces along route of installed Underground Facilities.

3. Show measurement of pipeline location from edge of pavement, at a minimum of 100-foot intervals.

B. At Substantial Completion, affix Contractor's red identification stamp to front cover of each set of record documents and label them as "Record Documents". One hard copy and one electronic set of record documents shall be given to Engineer no later than 14 days after the date of Substantial Completion. Engineer will either approve record documents or return them to Contractor with comments. Contractor shall resubmit record documents until Engineer has no further comments. Affix Contractor's identification stamp, together with the label "Record Documents," as follows:

1. On each Drawing, just above the Engineer's title block.

2. On each Shop Drawing, just above the preparer's title block.

3. On the front cover or front page of all other documents.

C. Final payment to Contractor will not be considered until acceptable record documents have been turned over to Owner.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 02030

DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Demolition and removal of frames and covers and any materials that are necessary to demolish in order to complete the Work.

1.02 REGULATORY REQUIREMENTS

A. Conform to applicable codes for demolition of structures, protection of adjacent structures, dust control, runoff control, and disposal of materials.

B. Obtain required permits from authorities.

C. Notify affected utility companies before starting demolition operations and comply with their requirements.

D. Do not close or obstruct roadways, sidewalks, hydrants, and parking areas without required permits.

E. Conform to applicable regulatory procedures if a hazardous environmental condition is encountered at site or if hazardous material disposal is required.

1.03 HAZARDOUS ENVIRONMENTAL CONDITIONS

A. If an unknown unforeseeable hazardous environmental condition is encountered at the site, or if Contractor or anyone for whom Contractor is responsible creates a hazardous environmental condition, immediately:

1. Secure or otherwise isolate such condition;

2. Stop all Work in connection with such condition and in any area affected thereby; and

3. Notify Owner and Engineer (and promptly thereafter confirm such notice in writing).

B. Resume Work in connection with such condition or in any affected area only after Owner has obtained any required permits related thereto and delivered to Contractor a written notice specifying under what special conditions Work may be resumed safely.

1.04 SEQUENCING

A. Sequence demolition work to conform with provisions of Section 01010.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 PREPARATION

A. One week prior to performing any demolition, there shall be a coordination meeting between the Contractor, Owner, and Engineer to discuss the Contractor's Demolition Plan and related procedures. Items to be discussed shall be, but not limited to, dust control, sequence of work, removal of material, protection of existing equipment, access and egress of material, etc. Demolition procedures must be coordinated with the Owner's operating personnel and operations, and adjusted accordingly, if necessary.

   Following the coordination meeting, begin demolition operations after obtaining written authorization to proceed from the Owner.

B. Notify Owner and Engineer at least 48 hours in advance of intended start of demolition operations in each affected area.

C. All work shall be performed in accordance with all federal, state, and local codes and requirements.

D. Provide, erect, and maintain temporary barriers, signs, and security devices at locations indicated on drawings.

E. Protect existing facilities.

F. Protect existing structures, equipment, appurtenances, architectural features, and materials that are not to be demolished.

G. Protect existing site-related items such as pavements, walkways, parking areas, curbs, aprons, and landscaping features that are not to be demolished.

H. Mark location of underground utilities.

I. No burning of debris will be allowed on or off the site.

J. Furnish and install all safety barriers and warning signs.

K. Furnish and install dust control facilities.

L. Restore surfaces and facilities damaged or destroyed during the performance of the work.

M. Remove and dispose of any demolition materials in an off-site location chosen by the Contractor.

3.02 DEMOLITION REQUIREMENTS

A. Confine demolition operations within the contract limits.

B. Conduct operations to minimize interference with adjacent and occupied building areas. Maintain protected egress and access at all times.

C. Cease operations immediately if adjacent structures appear to be in danger. Notify Engineer. Do not resume operations until directed.

D. All materials and equipment shall be removed from site and properly disposed of.

E. Dispose of rubble and non-metallic scrap off-site.

F. Dispose of designated hazardous materials in accordance with the nature of the material, required handling and disposal procedures, regulatory requirements, and applicable permits.

3.03 DEMOLITION

A. Remove and dispose of demolished materials as work progresses. Do not burn materials; do not bury materials. Upon completion of work, leave areas in clean condition.

B. Patch and refinish existing visible surfaces that are to remain.

C. Paint designated metal surfaces and reinforcing steel exposed by demolition operations.

D. Remove temporary barricades, partitions, signs, etc.

E. Remove and dispose of residual materials such as grit, sludge, debris, trash, and other scrap.

F. Upon completion of demolition operations, leave areas in a clean condition.

END OF SECTION

SECTION 02205

PROTECTION OF EXISTING FACILITIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Location of facilities.

B. Notification of owners and authorities.

C. Coordination and preparation.

D. Protection of facilities.

E. Relocation of facilities.

F. Protection of sewers and storm drains.

G. Protection of water mains near sewers.

H. Abandonment of utilities.

I. Restoration of property markers.

1.02 RELATED SECTIONS

A. General Conditions: Article 4, Paragraphs 4.02, 4.03, and 4.04; Article 6, Paragraph 6.20.

B. Section 01039 – COORDINATION

C. Section 01300 – SUBMITTALS

D. Section 01380 – CONSTRUCTION DOCUMENTATION

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 LOCATION OF FACILITIES

A. Prior to construction, verify location of existing underground facilities near or adjacent to project.

1. Consult with Dig Safe System, Inc. and local utilities (water, sewer, and stormwater) and arrange for field stake-out or other markings to show locations.

2. Perform exploratory excavation at key junctures and other critical points to aid in ascertaining locations.

B. Report field stake-out findings and results of exploratory excavations to Engineer if possible changes in project location or design are indicated because of suspected interferences with existing facilities. Allow Engineer sufficient time to determine magnitude of change and to formulate instructions in that regard.

C. If location of an existing underground facility is uncertain, apply careful excavation and probing techniques during construction to locate and avoid damage to same.

3.02 NOTIFICATIONS OF OWNERS AND AUTHORITIES

A. Prior to construction, notify owners of existing facilities, including local Police and Fire Departments, of general scope, nature, and planned progress schedule of the Work.

B. Notify owners of nearby underground facilities when excavating or blasting is to take place in a particular area, allowing them reasonable time to institute precautionary procedures or preventive measures which they deem necessary for protection of their facilities.

C. Notify Water Department, Fire Department, and all water users affected by the turning off of the water supply. Notification shall be delivered to affected water users a minimum of 24 hours prior to turning off the water supply. Notice shall be in a form acceptable to the Water Department. Service interruption should not exceed 4 hours unless otherwise agreed upon with the Owner and the affected property owner.

D. When existing utilities, such as sewer, water, gas, telephone, or electric power are damaged or disturbed during construction, immediately notify affected utility Owner and Project Owner.

E. Notify Police and Fire Departments, including affected owners, immediately if hazardous conditions are created or have the potential for occurring, as a result of damage to an existing facility or as a result of other activities at project site. Hazardous conditions could be created from: fire, explosion, escape of gas, escape of fuel oil, gasoline or industrial fluids, downed electrical wires, and disrupted underground electrical cables.

3.03 COORDINATION AND PREPARATION

A. Discuss anticipated work schedule with local authorities and owners of utilities at preconstruction meeting, including procedures to be followed if one or more utilities are damaged or disrupted. Develop contingency plans to address Contractor’s role in repair of damaged utilities.

B. Make preparations beforehand to repair and restore damaged utilities, including arrangements for standby materials and equipment to be promptly assembled at site and utilized immediately.

C. Adjust work schedules and personnel assignments as necessary to conform to requirements of utility owner whose utility is to be temporarily interrupted during construction at no additional cost to the Owner. Cooperate with utility owner in this regard to minimize the time of interruption.

D. Make preparations for and conform to applicable federal, state, and local regulations regarding use of proper safeguards and procedures when excavation and/or blasting is to take place in close proximity to existing facilities and structures.

3.04 PROTECTION OF FACILITIES

A. Plan and conduct construction operations so that operation of existing facilities near or adjacent to the Work, including electric, telephone, sewer, water, gas, or drainage utilities, are sustained insofar as the requirements of the project will permit.

B. Protect existing facilities from damage or movement through installation of adequate support systems and use of proper equipment, including application of careful excavation and backfilling techniques in sensitive areas.

C. In locations where blasting is to take place, and in cooperation with owners of nearby facilities, provide special protection and support of underground facilities which may be vulnerable to damage by virtue of their physical location or condition, and which could create hazardous conditions if damaged.

D. Existing utilities and other facilities which are damaged by the Contractor’s construction operations shall be promptly repaired by Contractor to the satisfaction of the affected owner or, if he so elects, that owner will perform the repairs with his own forces. Under either arrangement, such repair work shall be done at Contractor's expense.

E. When aboveground visible facilities such as poles, wires, cables, fences, signs, or structures constitute an unavoidable interference, notify Engineer and consult with affected owner regarding temporary removal and later restoration of the interfering item. Arrange with that owner to remove and later restore the interfering item to the satisfaction of the owner, subject to approval of the project Owner; or allow affected owner to perform such work with his own forces. Under either arrangement, such work shall be done at Contractor’s expense.

F. Take all necessary precautions to prevent fires at or adjacent to the work, buildings, and other facilities. No burning of trash or debris is permitted. If permanent fire extinguishers are used, they shall be recharged and in new condition when turned over to Owner.

G Protect all traffic controls and devices and associated utilities from damage or movement. Contractor will be responsible for the repair or replacement of all such traffic controls, devices, and utilities damaged by construction activities associated with the work.

3.05 RELOCATION OF FACILITIES

A. If the location or position of an existing gas or water pipe, public or private sewer or drain, conduit or structure be such as, in the opinion of Engineer, to require its removal, realignment or change, Contractor may be paid for the work of removal, realignment, or change if not previously identified on the Contract Drawings.

B. Uncovering, supporting, and sustaining such facility before its removal or before and after its realignment or change, shall be the Contractor’s responsibility as part of the work of his Contract.

C. Contractor shall be entitled to extension of time for completion of entire Work if the Engineer determines that the entire Work was delayed by the removal, realignment, or change of such obstruction.

3.06 PROTECTION OF SEWERS AND STORM DRAINS

A. Where existing sanitary sewers or storm drain systems are being replaced or interrupted provide temporary bypass pumping or piping to maintain flow around that segment of the Work such that no back-ups occur in existing systems.

B. Existing sanitary sewer laterals damaged in the work or temporarily disconnected shall be restored to operation by the end of each workday. Existing sanitary sewer laterals crossing over new pipelines shall be protected and shall be restored to original condition if damaged or in accordance with details shown on the Drawings.

C. Maintain existing manholes, catch basins, and other utility structures in their pre-work condition. Any material or debris entering same due to the Contractor's operation shall be promptly removed.

3.07 PROTECTION OF WATER MAINS NEAR SEWERS

A. Where a minimum 10-foot horizontal separation or minimum 18-inch vertical separation (bottom of water pipe to top of gravity sewer pipe) cannot be maintained between a water main and sewer line, one of the following remedies shall be incorporated in the work:

1. When water services are crossed, the water service pipe shall be sleeved with PE pipe for a length of 10 feet on either side of the water main.

2. One full length of sewer main shall be centered over the water line, so that both joints will be as far from each other as possible.

3. Construct sewer as a force main of pressure type pipe tested to 100 psi minimum.

4. Relocate water main to obtain 18-inches minimum vertical separation.

3.08 ABANDONMENT OF UTILITIES

A. Remove existing utilities to be abandoned within limits of trench excavation, or impinging on trench limits.

B. Open ends of abandoned utilities, or those scheduled for abandonment, shall be bulkheaded by brick masonry or 4,000 psi mix concrete; or by cast iron plugs or caps in small diameter water mains.

C. Abandoned manholes and water valve casings shall be backfilled to grade with approved trench backfill material.

D. Frames, covers, grates, water valve casing, sections of water piping, hydrants (including standpipe and boot) valves and other items to be abandoned shall, if ordered by Owner, be salvaged for reuse, and be delivered to Owner's property yard.

3.09 RESTORATION OF PROPERTY MARKERS

A. Property corner markers, boundary monuments, etc., disturbed or moved by the Contractor's operation shall be restored, in conformance with the property deed description, by a Massachusetts-licensed land surveyor. Restoration of the property corner markers or boundary monuments shall be certified by said surveyor on a map prepared by him which

shows the work accomplished. One copy of the map shall be given to the property owner and one copy given to the project Owner.

END OF SECTION

SECTION 02605

MANHOLES (FRAME AND COVER REPLACEMENT)

PART 1 GENERAL

1.01. RELATED DOCUMENTS

A. Drawings and general provision of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02. SUBMITTALS

A. Submit shop drawings or catalogue cuts, as appropriate, for materials listed under Article 2.1 of this Section. Submit only those materials that are actually to be used in the work. These will usually be as follows:

1. Frame and cover.

2. Stainless steel anchors, washers, and nuts.

3. Butyl Rubber sealant.

B. Submit manufacturer's Certification of Compliance in accordance with Section 01300 - Submittals.

C. Make submittals prior to start of construction. Make submittals to ENGINEER.

1.03. DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle manhole frames, covers, and appurtenances in accordance with the manufacturer's recommendations, and in such manner as to protect the materials from damage.

B. All materials shall be thoroughly inspected for defects prior to their being installed. Any defective, damaged, or unsound material shall be repaired or replaced as directed.

PART 2 PRODUCTS

2.01. MATERIALS

A. Manholes:

1. Sealing Frame to Concrete Manhole Top:

a. Flexible plastic gasket-type sealant shall be butyl rubber (plastic) sealant shall meet the requirements of Federal Specification SS-S-210A (3.4 Adhesion & Hydrostatic Pressure) and shall conform with the applicable requirements specified in Section 5.7 of ASTM C361.

b. The sealing compound shall not leak at the joints (while being tested at 10 psi) for a period of 24 hours. Requirements for sag and flow resistance (vertical and overhead 1"-wide joints) shall be such that no sagging is detected (while being

tested at 135 degrees F) for a period of 5 days. Requirements for chemical resistance shall be such that no visible deterioration of the sealing compound occurs (when immersed separately in a solution of acid, alkalies and saturated hydrogen sulfide) for a period of 30 days.

c. The sealing compound shall be supplied in extruded rope form of suitable cross-section. The size of the sealing compound shall be in accordance with the manufacturer's recommendations and sufficient to obtain squeeze-out of the material around the entire interior and exterior circumference when the joint is completed. The sealing compound shall be protected by a suitable removable two-piece wrapper. The two-piece wrapper shall be so designed that one-half may be removed longitudinally without disturbing the other half to facilitate application of the sealing compound. The sealing compound contained within the joint shall be the sole element utilized in sealing the joint from internal and external hydrostatic pressure. Joint surfaces shall be primed, sealing compound applied, and joint made in strict conformance with the written specifications of the sealing compound manufacturer.

2. Frame Hold Down Bolts:

   a. Inserts, bolts, nuts, and washers shall be stainless steel in accordance with ASTM A307 and ASTM A276.

3. Manhole Castings:

   a. Castings for manhole frames and covers shall be composite material.

   b. Castings shall be of uniform quality, free of blow holes, shrinkage distortion, or other defects.

   c. Designed for AASHTO highway loading class H25 (25,000 lb).

   d. All castings shall be manufactured true to pattern; component parts shall fit together in a satisfactory manner. Frames and covers shall have continuously machined bearing surfaces to prevent rocking.

   e. As-cast dimensions may vary one half the maximum shrinkage characteristic of the metal or $\pm$ 1/16 inch.

   f. All castings shall be cleaned by means of sand blast, neatly finished, and have one coat of black asphaltum paint applied at the factory.

   g. Manhole Casting Schedule:

      1) Watertight (Bolt Down) frame and cover:

         a) Total weight, 290 pounds minimum.

         b) Lid shall be self-sealing with Type “B” pattern.

         c) Clear opening to be 30-inches.

         d) The words *"SANITARY SEWER"* shall be cast appropriately in the center of the cover. Lettering shall be a minimum of 2-inches high.

e) Two concealed pick holes shall be provided. Gasketed seal cover.

f) Drill four 1-inch diameter holes in frame flange equally spaced.

g) Stainless Steel Bolts and Washers (4).

h) Manufacturer: East Jordan Iron Works Assembly number 2006ZPT/A1PT. (no substitutes allowed).

4. Cement Grout:

a. Cement grout shall be non-shrink non-metallic.

b. Use Type I cement where grout is not in contact with sewage.

c. Use Type II (Sulfate Resistant) where grout is in contact with sewage. Grout shall be sealed with the Manhole Coating System material after application and curing.

PART 3 EXECUTION

3.01. MANHOLE CONSTRUCTION

A. Manhole Frames and Covers:

1. Demolish existing frame and cover clean existing surface and install new frame and cover.

2. The area between the bottom of the frame and the top existing manhole section shall be made with preformed plastic sealing compound, minimum of 2 rows and shall be sealed on the outside surface using non-shrink grout.

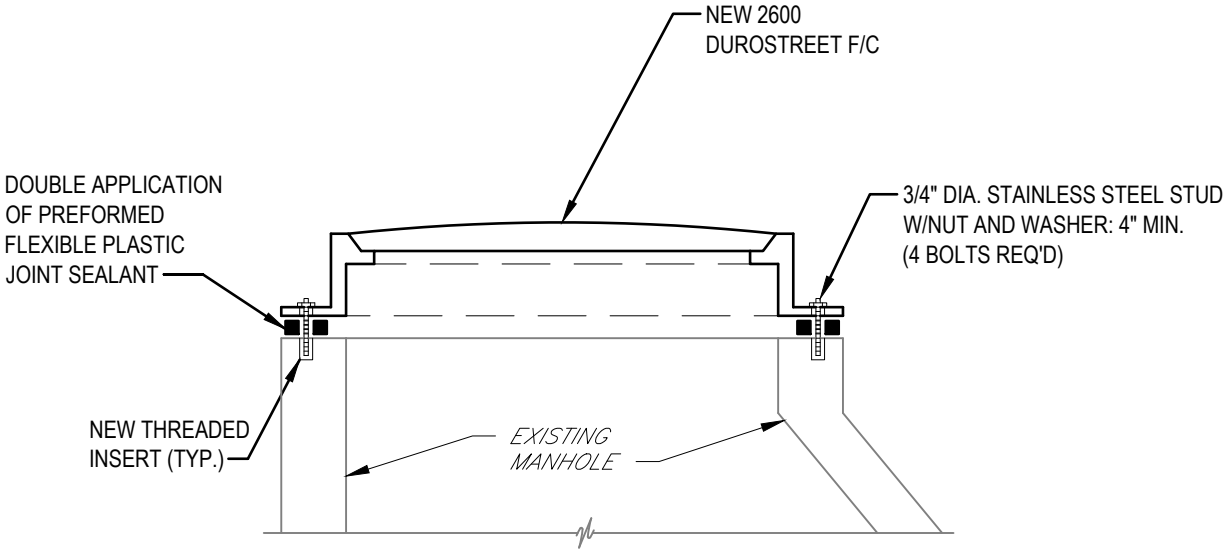
3. Frames for all manholes shall be bolted to the manhole as shown on the attached details. Inserts, studs, nuts, and washers shall be of stainless steel. Bolts shall have a sufficient number of proper sized threads for proper connection. See attached figure.

4. Bolt frames to top manhole cone and/or flat top section. See attached figure.

5. Secure covers to frame as shown on the attached detail.

6. All existing frames and covers shall be given to the Owner. Frames and covers shall be delivered to the WWTF and/or a location designated by the Owner.

(CPONTINUED)



SECTION

NOTES:

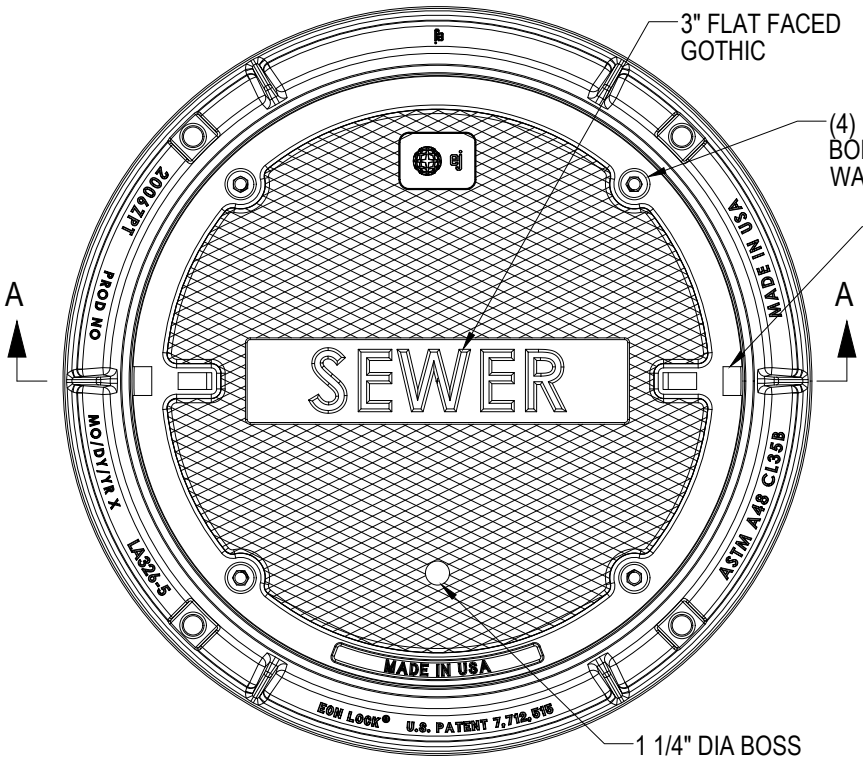
1. REMOVE OLD ANCHORS.
2. DRILL/INSTALL NEW THREADED INSERT.

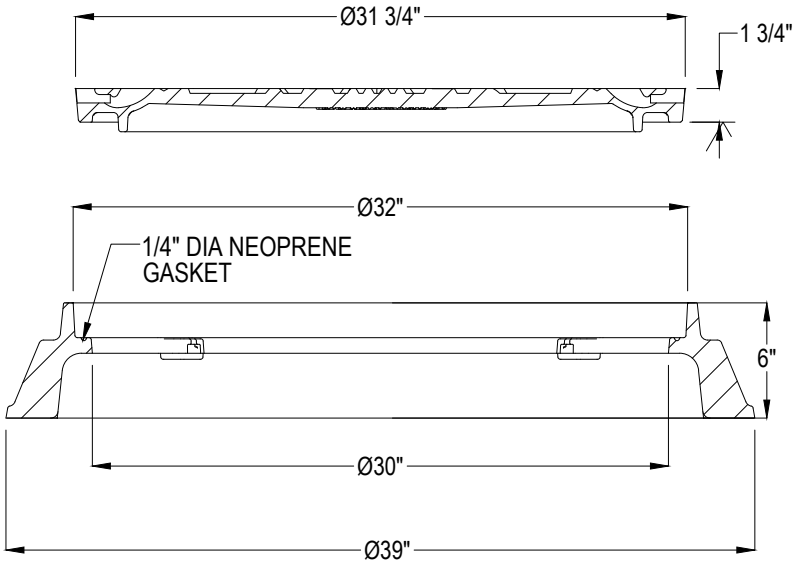
TOWN OF UXBRIDGE
INFILTRATION INFLO PROJECT

FRAME AND COVER REPLACEMENT DETAIL

Project No. **11144264**
Date **2/12/24**

1





SECTION A-A

Product Number
00200649W01

Design Features
-Materials
Frame
Gray Iron (CL35B)
Cover
Gray Iron (CL35B)
-Design Load
Heavy Duty
-Open Area
n/a
-Coating
Undipped

Certification
-ASTM A48
-Country of Origin: USA

Major Components
00200613
00200649

Disclaimer
Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

CONFIDENTIAL: This drawing is the property of EJ Group, Inc. and embodies confidential information, registered marks, patents, trade secret information, and/or know-how that is the property of EJ Group, Inc. Copyright © 2023 EJ Group, Inc. All rights reserved.

2006ZPT APT Assembly

- √Designates Machined Surface

TOWN OF UXBRIDGE
INFILTRATION INFLO PROJECT

FRAME AND COVER DETAIL

Project No. **11144264**
Date **2/27/24**

Filename: N:\US\Hyannis\Projects\564\11144264\Digital_Design\ACAD 2022\Sheets\Civil\FRAME-COVER-REP-DETAIL.dwg
Plot Date: 27 February 2024 8:56 AM

SECTION 02711

SANITARY SEWER CLEANING

PART 1 GENERAL

1.01. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications.

B. Division 2 Specifications as applicable, including proprietary specifications of individual system and product manufacturers.

1.02. WORK INCLUDED

A. The work includes sewer cleaning and removal and disposal of materials cleaned from the sewers. The intent of sewer cleaning is to remove sludge, dirt, sand, rocks, grease, roots, and other materials from the sewers as required for televising/video taping, air testing, and performing internal repairs.

1.03. WATER FOR SEWER CLEANING

A. The Contractor is responsible for providing water for the cleaning and curing processes.

1.04. QUALITY ASSURANCE

A. Refer to the final acceptance provisions under Part 3 - Execution of this Section.

1.05. WORK ON PRIVATE PROPERTY OR IN RIGHTS-OFWAY

A. Permission to work on private property or obtaining rights-of-way, if required, shall be secured by the OWNER.

B. If, for the CONTRACTOR’s convenience (e.g., material storage areas, staging areas, additional site access, etc.), CONTRACTOR desires permission to work on private property (other than properties where permission to work and/or rights-of-ways have been secured by the OWNER), CONTRACTOR shall secure permission and provide OWNER with appropriate documentation.

C. The CONTRACTOR shall protect from damage all property, including land, trees, shrubs, fences, and other existing improvements and replace in kind all those damaged as a result of the CONTRACTOR’s operations.

D. The CONTRACTOR shall pay all claims for property damage and trespass/occupation for damage outside the immediate work area or rights-of-way, as designated by the OWNER/ENGINEER.

1.06. SPECIAL PRECAUTIONS

A. When hydraulically propelled cleaning tools (which depend upon water pressure to provide their cleaning force) or tools which retard the flow in the sewer line are used, CONTRACTOR shall take all precautions to ensure that the water pressure created does not damage or cause flooding of public or private property being served by the sewer. Any damage or flooding shall be properly cleaned up by the CONTRACTOR and reported immediately to the OWNER.

CONTRACTOR shall be responsible for all damage incurred to public or private property caused by CONTRACTOR cleaning the sewer.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01. SEWER CLEANING

A. The designated sewer sections shall be cleaned using high-velocity jet, combination high-velocity jet/vacuum machinery, or mechanically powered equipment, equipped with mechanical measuring device capable of determining distance of travel into the pipeline. Selection of the equipment used shall be based on the conditions of lines at the time the work commences. The equipment shall be capable of removing sludge, dirt, sand, rocks, grease, and other materials and obstructions from the sewers and manholes. If cleaning of an entire section cannot be successfully performed from one manhole, the equipment shall be set up on the other manhole and cleaning attempted again. If successful cleaning cannot be performed or the equipment fails to traverse the entire manhole section after this setup, it will be assumed that a major blockage exists, and the cleaning effort shall be abandoned. Cleaning shall be to the satisfaction of the OWNER's representative.

3.02. MATERIAL REMOVAL

A. All sludge, dirt, sand, rocks, grease, roots, and other solid or semisolid material resulting from the cleaning operation shall be removed at the downstream manhole of the section being cleaned. Passing material from manhole section to manhole section, which could cause line stoppages, accumulations of grit in wet wells, or damage pumping equipment shall not be permitted.

3.03. DISPOSAL OF MATERIALS

A. All solids, semisolids, and liquids resulting from the cleaning operations shall be removed from the site and disposed of at an approved landfill site in accordance with DEP requirements. All material shall be removed from the site no less often than at the end of each workday. Under no circumstances will the CONTRACTOR be allowed to accumulate debris, etc., on the site of work beyond the stated time, except in totally enclosed containers and as approved by the OWNER.

3.04. FINAL ACCEPTANCE

A. Acceptance of sewer cleaning shall be made upon the successful completion of the television inspection and shall be to the satisfaction of the OWNER's representative. If the television inspection shows the cleaning to be unsatisfactory, the CONTRACTOR shall be required to re-clean and inspect the sewer until the cleaning is shown to be satisfactory. Particular attention should be given to the adequacy of the cleaning to ensure that proper seating of the sealing packer can be achieved.

END OF SECTION

SECTION 02715

SANITARY SEWER FLOW CONTROL

PART 1 GENERAL

1.01. RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications.

B. Specifications, as applicable, including proprietary specifications of individual system and product manufacturers.

1.02. WORK REQUIRED

A. The Contractor shall furnish all materials, labor, equipment, power, and maintenance to implement a temporary system for conveying the existing wastewater flow past the work area for the time required to complete the sanitary sewer system maintenance/rehabilitation operations.

1.03. SUBMITTALS

A. Flow Control System Plan – The Contractor shall submit a flow control system plan to the Owner/Engineer for review and discussion purposes prior to initiating work on the project.

B. Submit a specific detailed description of each proposed temporary pumping system at least 14 days prior to intended use. The submittal shall include, but not be limited to, the following:

1. A written description of the plan.

2. Quantity, capacity, and location of all pumping equipment.

3. Pump performance curves and head capacity curves demonstrating the capability to meet all required flows.

4. The size, type and routing of all suction and discharge piping and the means of connecting the system.

5. Description of controls and emergency power source.

C. Engineer's review will be limited to verification of compliance with performance requirements only. Owner will review temporary pumping system submittals with respect to maintenance of plant operations.

1.04 PERFORMANCE REQUIREMENTS

A. Design the installation and operation of temporary pumping systems in accordance with Laws and Regulations, including local noise and light ordinances.

B. Provide fuel supply for 48 hours of operation on Site and stored in accordance with Laws and Regulations. Assume responsibility for all spills and regulatory fines due to failure of the temporary pumping system.

C. Temporary pumping systems shall be designed to pump peak capacity with largest unit out of service as follows:

D. Provide a backup pump on-site and ready for operation of the same capacity as the largest temporary bypass pump. In addition, one of the following two conditions must be met:

1. The temporary pumping system must be manned continuously (24 hours per day, 7 days per week) during operation by a representative of the Contractor trained and certified by the pump Supplier. In the event of a pump failure, the Owner shall be notified within 15 minutes and the temporary backup pump shall be placed into service within one hour of the pump failure.

2. As an alternative to 24/7 manned operation, install, test, and maintain remote telemetry to monitor operation of the temporary pump(s) and the wet well level(s). Notify Owner within 15 minutes of a pump and/or system failure. Report to Site within 30 minutes of a pump and/or system failure, and place the temporary backup pump in service within one hour of a pump and/or system failure. The telemetry system shall notify up to 6 individuals in a specific order and the contact phone numbers shall be coordinated with and provided to the Owner.

3. For temporary pumping system with automatic backup pump operation, report to Site within 30 minutes of a pump failure to ensure the automatic backup system is operating properly.

E. Temporary pumping systems shall be equipped with noise reduction features that limit the noise output to 65 db[A] within 50 feet of the equipment or to 60 db[A] at the nearest residence property line, whichever is less.

F. Provide variable speed pumps or drives where required to meet temporary pumping requirements.

G. See Section 01010, Summary of Work, for facility outage requirements and constraints.

1.05 QUALITY ASSURANCE

A. The design, installation, and operation of the temporary flow control system shall be the Contractor’s responsibility. The flow control system shall meet the requirements of all codes and regulatory agencies having jurisdiction.

B. In developing the temporary flow control system plan, the Contractor shall take into account pump performance data/curves; quantity, capacity, and location of all equipment; size, type and routing of all suction and discharge pipes; and means of connecting the system.

C. When bypass pumping is required, the Contractor shall include one standby pump equivalent in size to the single largest pump in service. The standby pump shall be fully connected and ready for operation so that, upon starting the motor, the standby pump will convey the flow.

1.06 WORK ON PRIVATE PROPERTY OR IN RIGHTS-OF-WAY

A. Permission to work on private property or obtaining rights-of-way, if required, shall be secured by the Owner.

B. If, for the Contractor’s convenience (e.g. material storage areas, staging areas, additional site access, etc.), Contractor desires permission to work on private property (other than properties

where permission to work and/or rights-of-ways have been secured by the Owner), Contractor shall secure permission and provide Owner with appropriate documentation.

C. The Contractor shall protect from damage all property, including land, trees, shrubs, fences, and other existing improvements and replace in kind all those damaged as a result of the Contractor's operations.

D. The Contractor shall pay all claims for property damage and trespass/occupation for damage outside the immediate work area or rights-of-way, as designated by the Owner/Engineer.

1.07 SPECIAL PRECAUTIONS

A. The Contractor shall give notice of sewer system interruption to the Owner and affected property owners.

B. When flow in a sewer is plugged, blocked, or bypassed, sufficient precautions shall be taken to protect the sewer from damage that could potentially result from sewer surcharging. As a guide, the Contractor shall endeavor to limit the level of surcharging to 5 psi (11.6 feet), a standard test pressure for new sewers. Further, precautions shall be taken to ensure that temporary flow control measures do not cause flooding or damage to public or private property served by the sewers.

C. The Contractor shall take care to prevent spills and discharges of raw wastewater to the ground, trenches, and State waters. Any spills and discharges shall be properly cleaned up and reported immediately to the Owner.

D. If any spills of raw wastewater occur, due to failure of the Contractor to maintain the temporary flow control system, the Contractor shall be responsible for the cost of spill cleanup and any fines levied on the Owner by the state, federal, or any other applicable agency.

E. Contractor shall provide subcontractor(s) or personnel experienced in the cleanup of sewage spills satisfactory to Owner.

1.08 TEMPORARY PUMPING COORDINATION MEETING

A. After Owner and Engineer review of temporary pumping system submittal(s), and at least 7 days prior to intended use, schedule a coordination meeting with the Owner, Engineer, Contractor, and Subcontractor or temporary pump Supplier, if applicable.

B. No temporary pumping shall take place until after satisfactory completion of the associated coordination meeting.

C. Due to short duration of bypass pumping event, confine this event to a period that is acceptable to owner when rain is expected to be minimal.

1.09 SPECIAL PRECAUTIONS

A. Contractor is responsible for fines levied on Owner by state, federal, and/or other agencies due to spills caused by failure of temporary pumping systems.

B. Provide Jersey barriers in all locations where temporary pumps, piping, and other accessories are located in roadways, driveways, and other vehicle-accessed areas.

C. Provide security fencing for all temporary pumps where not located within a secured area.

PART 2 PRODUCTS

2.01. PLUGS

A. Plugs shall be inflatable, designed for sanitary sewer applications.

B. All plugs shall be equipped with a steel cable for firm attachment to a stationary object at ground level to prevent loss of the plug in the sewer.

2.02. PUMPS

A. Pumps shall be capable of pumping wastewater, grit, and other debris normally present in sanitary sewers. Pumping equipment shall be of adequate capacity to maintain sewer flows within the limits set forth in Part 3 – Execution of this section.

B. Pumps shall be complete with suction and discharge piping and fittings and all other appurtenances for a complete installation.

C. The pumps and drives shall be rated for continuous duty and shall be capable of pumping the required flow ranges without surging, cavitation, or vibration. Where required pumping rates are not specified, coordinate with Engineer to determine required pumping range prior to submitting associated Shop Drawings. Pumps shall not overload drivers at any point on the pump operating curve. Pumps shall be suitable for use with raw unscreened sewage and trash being pumped. Pumps shall be self-contained units designed for temporary use.

D. Pumps shall either have fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system, or they shall be submersible.

E. The pumps shall be diesel powered or powered by a diesel-powered generator.

F. Provide the necessary start/stop and level controls for each pump.

2.03 PIPING

A. In order to prevent the accidental spillage, all temporary piping must be constructed of rigid or semi-rigid pipe with positive, leak-proof connections. All pipe materials and joints for temporary piping systems must be accepted by Engineer prior to use.

B. Pipe 12 inches and larger shall be ductile iron or fused joint high density polyethylene pipe to provide a leak-proof piping system. Flanged joints shall be used for exposed or submerged ductile iron pipe. Pipe joints shall be accepted by Engineer prior to use for temporary ductile iron pipe.

C. Provide heat tracing of temporary piping as required to prevent freezing.

PART 3 EXECUTION

3.01. GENERAL

A. Flow control shall be performed as required to comply with these specifications. No discharge of sewage onto the ground or into the trench will be allowed.

B. When sewer depth of flow at the upstream manhole of the sewer section being worked on is above the maximum allowable for television inspection/videotaping, air testing, or sewer lining,

the flow shall be reduced by plugging, blocking, or bypass pumping. Unless otherwise stipulated by the liner manufacturer, depth of flow shall not exceed 25 percent of the pipe diameter as measured in the manhole.

C. The Contractor shall cease temporary flow control measures and re-establish gravity flow conditions at the end of each workday. Contractor shall follow the details on the Contract Drawings regarding temporary tie-ins of sewage.

3.02. PLUGGING OR BLOCKING

A. When plugging or blocking is required, a sewer plug shall be inserted into the sewer upstream of the section being worked on. The plug shall be designed so that all or any portion of the wastewater can be released. Flow shall be reduced to the limits specified above.

B. Plugs shall be firmly attached to a stationary object at ground level to prevent loss of the plug in the sewer.

3.03. BYPASS PUMPING

A. When bypass pumping is required, the Contractor shall set up and operate pumps, suction and discharge piping, plugs, and other equipment to divert the wastewater flow around the work area.

1. Average Daily Flow Rate 1.1 mgd, Instantaneous Peak Flow 4 mgd.

B. The Contractor shall include one standby pump equivalent in size to the single largest pump in service. The standby pump shall be fully connected and ready for operation so that, upon starting motor, the standby pump will convey the flow.

C. The Contractor shall furnish oil, fuel, grease, lubricants, tools, and spare parts that may be required to maintain the operation of the pumps throughout the work period, as recommended by the manufacturer. The Contractor shall be solely responsible for maintaining the temporary bypass pumps and appurtenances.

D. The Contractor shall maintain adequate hoisting equipment for the pumps and ancillary equipment at the site.

E. The Contractor shall ensure that a responsible operator is on hand at all times when pumps are operating.

F. At the end of the work period, the Contractor shall remove the pumps and appurtenances and restore the site to the satisfaction of the Owner.

END OF SECTION

SECTION 02772

SANITARY SEWER REHABILITATION - CURED-IN-PLACE PIPE LINING

PART 1 GENERAL

1.01. DESCRIPTION

A. Provide all materials, equipment, labor and incidentals for the installation of cured-in-place pipe lining (CIPPL) within the sewer main and storm sewer.

B. The work includes rehabilitation of a structurally damaged or leaking gravity sanitary sewer main through installation at a cured-in-place pipe liner.

C. The CIPPL shall extend the full length of the original pipe, cure into a hard, impermeable liner of the specified thickness, and form a structurally sound liner pipe with a uniformly smooth interior. The CIPPL shall be continuous and tight fitting.

1.02. REFERENCE STANDARDS

A. Comply with applicable provisions and recommendations of the following:

1. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

2. ASTM F1216-22 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube. For fully deteriorated condition.

3. ASTM F1743 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pull In and Inflate and Curing of a Resin-Impregnated Tube.

4. ASTM D543 -Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents.

5. ASTM D5813 – Standard Specification for Cured-in-Place Thermosetting Resin Sewer Piping Systems.

1.03. QUALIFICATIONS

A. For each method of installation and curing used on this project, Contractor shall have a history of at least 150,000 linear feet of CIPPL work in sewers using a similar resin and flexible tube and using the specific method of installation and curing being used.

B. For each method of installation and curing used on this project, the CIPPL Work shall be supervised by a foreman having previously supervised a minimum of 50,000 linear feet of CIPPL using a similar resin and flexible tube and using the specific method of installation and curing method proposed.

C. The entity performing the wet-out of the CIPPL shall have been performing this type of work for a minimum of three years and previously wet-out at least 350,000 linear feet of CIPPL.

1.04. DELIVERY, STORAGE AND HANDLING

A. Care shall be taken in shipping, handling and storage to avoid damaging the liner. Any liner damaged in shipment shall be replaced as directed by the Owner/Engineer at no additional cost to Owner.

B. While stored, the CIPPL shall be adequately supported and protected. The CIPPL shall be stored in a manner as recommended by the manufacturer.

1.05. QUALITY CONTROL

A. No change of material, design values, or procedures as developed before bidding the contract may be made during the course of the Work without the prior written approval of the Engineer.

B. All liner to be installed under this Work may be inspected at the manufacturer plant(s) and wet-out facility for compliance with these Specifications by Owner or Engineer. The Contractor shall require the wet-out facility's cooperation in these inspections. The cost of inspection will be the responsibility of the Owner.

C. At the time of manufacture, inspect each lot of liner for defects. At the time of delivery, the liner shall be homogeneous throughout, uniform in color, free of cracks, holes, foreign materials, blisters, or deleterious faults.

D. All materials shall be accompanied by test reports certifying conformance to the ASTM standards listed herein.

E. Acceptance Testing:

1. General:

a. Lined pipes shall be CCTV after installation to assure no defects.

b. Any damage caused to properties due to wastewater handling and/or wastewater backup while lining shall be the responsibility of the Contractor.

1.06. WARRANTY

A. All lining work shall be fully guaranteed by the Contractor for a period of 3 years from the date of Final Acceptance unless otherwise stipulated in writing by the Owner prior to the date of Conditional Acceptance. During this period, all serious defects discovered by the Owner or Engineer shall be removed and replaced by the Contractor in a satisfactory manner at no cost to the Owner. Owner may conduct independent television inspections, at its own expense, of the lining Work at any time prior to the completion of the guarantee period.

1.07. SUBMITTALS

A. Contractor shall submit the information listed below, following the format and guidelines consistent with Specification Section 01300 – Submittals.

B. Cured-In-Place Pipe:

1. Independent third-party testing of at least 100 lined manhole to manhole segments with results that meet the product's reported structural properties of the proposed product.

2. Independent third-party certified laboratory test reports demonstrating that the exact resin/liner combination to be used for this project meets the requirements for initial structural properties and chemical resistance and that the resin and liner are compatible.

3. Resin manufacturer product specific data for the resin and initiator cocktail system, including:

   a. Resin trade name with formulation specific numbering.

   b. Resin Infrared Spectrographic documentation.

   c. Resin physical properties testing documentation.

   d. Material safety data sheets (MSDS) for resin material.

4. Structural design calculations and specification data sheets listing all parameters used in the liner design and thickness calculations

C. Hydrophilic end seal sleeves to be used and method of installation.

D. Contingency plan, including methods and equipment to be used to repair unacceptable liner defects and for removing failed liners. Plan for availability and accessibility of backup equipment such as two lateral reinstatement cutters per truck.

E. Contractor Qualifications.

F. Bypass Pumping Plan consistent with the requirements in Sections 02715 – Sanitary Sewer Flow Control demonstrating how the existing flows stated in the contract documents will be adequately maintained throughout the construction, including a description of the Contractor's approach to managing any flow from live laterals.

G. Grout for joint sealing.

PART 2 PRODUCT

2.01. DESIGN REQUIREMENTS

A. The CIPPL shall extend continuously from one manhole to the next manhole without joints or from one inlet/junction manhole to the next inlet/junction manhole; be designed for remote reinstatement of existing service laterals and for external tapping of new service laterals; and provide for complete structural integrity independent of the load-bearing capacity of the host pipe.

B. The CIPPL lining shall be a resin-impregnated flexible tube which is inserted into the sewer to be rehabilitated and cured-in-place by an acceptable curing method. The tube may have a suitable polyurethane membrane coating for protection of the interior surface and to provide a uniform, smooth flow surface and may be removed after installation and curing is completed. The resin shall be a liquid thermosetting resin and shall be suitable for the design conditions as well as the curing process.

C. A hydrophilic seal system shall be installed at both ends of the host pipe before and after the liner is installed to create a seal at both ends of the liner both inside the pipe and at the connection with the manhole.

D. Structural Properties:

1. The CIPPL shall have as a minimum the structural properties listed below:

Flexural Strength	ASTM D-790	4,500 psi
Flexural Modulus (Short Term)	ASTM D-790	250,000 psi

2.02. LINER TUBE

A. The tube shall consist of one or more layers of flexible needled felt or an equivalent non-woven or woven material, or a combination of non-woven and woven materials, capable of carrying resin and withstanding installation pressures and curing temperatures. The tube shall be compatible with the resin system used. The material shall be able to stretch to fit irregular pipe sections and negotiate bends. The outside layer of the tube shall be plastic coated with a material that is compatible with the resin system used. The tube shall be fabricated to a size that, when installed, will tightly fit the internal circumference and the length of the host pipe. Allowance shall be made for circumferential stretching during installation.

B. The tube shall be to the minimum length to effectively span the distance between manholes, in accordance with actual distances as field verified by the CONTRACTOR prior to impregnation of the liner tube.

C. Acceptable Manufacturers:

1. Insituform Technologies®, Inc.

2. Perma-Liner Industries, Inc.

3. C.I.P.P. Corporation.

4. National Liner®.

5. N-Liner™.

6. OWNER/ENGINEER approved equal.

2.03. RESIN

A. A resin system that is compatible with the liner tube materials and installation process shall be used. The resin shall be able to cure in the presence of water. The initiation temperature for cure shall be less than 180° F.

B. The resin shall have proven resistance to normal municipal wastewater, especially sulfuric acid corrosion and hydrogen sulfide gas.

2.04. HYDROPHILIC END SEAL SLEEVE

A. LMK Insignia End Seal Sleeves shall be installed within the host pipe entering and existing the manholes. The mechanical fastener shall be adjusted prior to installation of the liner to provide a compression seal to the end of the pipe at the manhole.

B. “de neef Swellseal WA” or SikaSwell shall be installed at the following locations:

1. Between the manhole wall and the LMK Insignia End Seal Sleeve within the existing

pipe.

2. Along the bottom of the manhole channel from the manhole wall to the end of the pipe liner.

3. From the outside edge of the pipe liner that protrudes into the manhole for 1-inch along the manhole wall in all directions to seal any water from entering the manhole from between the existing host pipe and the liner in the annular space.

C. No substitute products will be accepted.

D. Install products per manufactures instructions.

2.05. CHEMICAL GROUT

A. Used to reduce the infiltration at pipe joints, as recommended by the CIPPL manufacturer, by sealing the pipe joint with chemical grout prior to installing liner where deemed necessary for a satisfactory installation. Provide all labor, materials, tools, and equipment required to grout leaking pipe joints and lateral reinstatements by using the packer injection method or by a manned entry method.

B. Grout by pressure injection of chemical grout into the soils encompassing the exterior of pipe joint, or into the void space between the liner and the host pipe. Inject adequate volume to form an effective seal based upon pipe size and field conditions.

C. Chemical sealant constituent, initiator and catalyst designed for sealing leaks in the sanitary sewer lines. Solution shall have ability to tolerate dilution of up to 50% by volume of groundwater and react in moving water. After final reaction, it shall be a stiff, impermeable, yet flexible gel at chemical concentrations as low as 0.4 lbs per gallon of water that is able to break away from the joint sealing packer when the packer is deflated.

D. True solution at concentrations as high as three pounds per gallon of water.

E. Acceptable Manufacturers:

1. Avanti.

2. Deneef Construction Chemicals, Inc.

3. American Chemical Grout.

4. Or equal.

PART 3 EXECUTION

3.01. PREPARATION

A. Clean mainline pipes prior to Pre-Construction Inspection, such that the pipes are free of roots, grease, sand, rocks/bricks, sludge, tuberculation (to a tolerance of 0.25 inches projection) and other debris.

B. For pipe segments found to have any actively leaking defects that would be categorized as Runners or Gushers by the PACP Defect Rating Codes, leaks must be grouted prior to lining to the satisfaction of the Engineer and/or Owner.

C. Contractor to keep work site clean and site shall be restored to pre-work conditions at the end of each day.

3.02. BYPASS PUMPING

A. As required, provide for continuous flow around the section of pipe that is to be lined. The pump and bypass lines shall be of adequate capacity and size to handle the flow of the sewers.

B. Maintain bypass pumping until post lining televising report and video is completed. Post lining inspection shall be done immediately following re-instatement of laterals but prior to resuming sanitary flow in the newly lined reach.

3.03. PRE-INSTALLATION TELEVISION INSPECTION

A. The CONTRACTOR shall perform a closed-circuit television inspection to confirm the inside diameter, alignment, and condition of the host pipe. If conditions are uncovered during the inspection that materially differ from those ordinarily encountered, the CONTRACTOR shall notify the OWNER/ENGINEER.

B. The closed-circuit television inspection shall be performed using a pan and tilt 360-degree optical lens camera capable of viewing the complete circumference of the pipe. The camera light head shall include a high intensity side viewing lighting system to provide illumination of internal portions of the pipe.

C. The CONTRACTOR shall document the condition of the pipe on color DVD, accompanied by written inspection reports.

D. Contractor shall inspect cleaned line, by use of closed-circuit TV cameras, prior to start of lining to confirm that the lines are adequately cleaned. Insertion of the liner by the Contractor shall serve as evidence of his acceptance of the condition of the pipe and the suitability of the liner insertion within the host pipe. Failure of the liner system due to inadequately cleaned host pipes shall be repaired by the Contractor at no cost to the Owner.

3.04. CIPPL INSTALLATION PROCEDURES

A. General:

1. The CONTRACTOR shall install and process the cured-in-place pipe liner in accordance with the manufacturer’s specific detailed instructions, which are summarized in this paragraph 3.03. The CONTRACTOR shall maintain a detailed process control log to document the installation and curing process.

2. The completed pipe liner shall fit tightly against the inside wall of the host pipe, be locked into the joints of the host pipe, and have distinct dimples at the locations of existing service lateral connections to the host pipe.

B. Resin Impregnation:

1. Unless otherwise approved by the OWNER/ENGINEER, the liner tube shall be impregnated with resin (“wet-out”) using a vacuum pump and set of calibration rollers under controlled conditions. Thorough saturation of the liner tube with resin shall be visibly evident.

2. The volume of resin used shall be sufficient to fill all voids in the tube material at nominal thickness and diameter, and seal the ends at the insertion and termination points. The volume shall be adjusted by adding excess resin in accordance with the manufacturer's recommendations to account for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints of the host pipe.

C. Insertion:

1. The "wet-out" tube shall be inserted through an existing manhole or other approved access by application of a hydrostatic head, compressed air, or other means approved by the manufacturer sufficient to fully extend it to the next designated manhole or termination point.

2. The internal pressure shall be sufficient to hold the tube tight to the host pipe wall, producing dimples at the service connections.

3. The CONTRACTOR shall ensure that the internal pressure in the tube exceeds both groundwater pressure and pressure due to wastewater in the laterals.

D. Curing:

1. After insertion, a suitable heat source/distribution system shall be used to circulate hot water, air, and/or steam throughout the pipe section, as recommended by the manufacturer. The equipment shall be capable of delivering hot water, air, and/or steam throughout the section to uniformly raise the temperature above that required to cure the resin. The appropriate temperature shall be maintained for the cure period, as determined by the liner manufacturer.

2. The heat source/distribution system shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing curing medium.

E. Cool Down:

1. The liner material shall be cooled to a temperature below 100° F before relieving pressure on the tube.

3.05. SERVICE CONNECTION REINSTATEMENT

A. Service Connections: Reopen all of the existing active service connections in each length of sewer immediately following installation of the liner. Reopen active service connections from inside the sewer by means of a remote controlled, CCTV assisted cutting device appropriate for the liner material and the rehabilitated sewer pipe. Each active service connection shall be cut completely open and shall have smooth edges with no protruding material capable of hindering flow or catching and holding solids contained in the flow stream. If the service connection cannot be fully reopened due to time constraints, open each service connection to a minimum of 75% before the end of each working day. The clear opening in the pipe liner shall match the inside diameter of the existing service connection.

B. Inactive Service Connections: Do not reopen capped or inactive lateral connections. The Owner or Engineer will determine locations of inactive service connections.

3.06. TRIMMING AT MANHOLES

A. Neatly and smoothly trim the finished ends of the liner to a maximum of 2" beyond the end of

the lined pipe. Do not leave any rough edges that may catch debris. Leave a small portion of CIPPL within the manhole channel.

B. Provide a smooth transition between the existing manhole channel invert and the influent and effluent liner using cement grout or beveling to prevent settling of sediments or debris from catching on the liner. If the conditions warrant, the Owner/Engineer may require the Contractor to form a continuous invert through the manhole. If CIPPL is installed through an intermediate manhole, the CIPPL within the manhole shall be cut and removed above the top of the existing channel. The bench and the channel shall be grouted and shaped as necessary to support the CIPPL, at no additional cost to the Owner.

C. No water shall be able to migrate between the CIPPL and the host pipe; otherwise, the GRP-CIPPL installation shall be considered defective and shall be repaired or replaced at no additional cost.

3.07. POST-INSTALLATION INSPECTION OF COMPLETED WORK

A. Clean pipes prior to Post-Construction Inspection, such that the pipes are free of grease, and other debris.

B. To document the quality of the Liner installation, the Contractor shall perform a closed-circuit television inspection.

C. The Contractor shall document the condition of the pipe in color in digital format to be provided to Owner on an external hard drive. The external hard drive will be used to transport electronic video recordings and inspection logs onto the Authority’s electronic storage system. The external hard drive will be returned to the Contractor after the project. No DVDs or hard copies of the inspection reports shall be submitted by the Contractor.

D. Correct all defects discovered during the television inspection before Conditional Acceptance. After the defects are corrected, repeat the post-construction Inspection for that sewer line.

E. Owner will perform a CCTV inspection of every lined mainline approximately 1 year after installation to check for defects.

3.08. FINAL CLEANUP

A. Upon completion of rehabilitation work, the Contractor shall promptly remove equipment from the job site and restore rights-of-ways, streets, yards and other disturbed areas to a condition better than or equal to its condition prior to construction. This includes any necessary seeding and mulching in easements and other non-paved areas.

3.09. CIPPL ACCEPTANCE

A. Acceptance of the CIPPL shall be based on the Engineer’s evaluation of the resin impregnation quality control reports, curing logs, post-construction inspection video, air testing of the main, and laboratory test results (if required) for the installed pipe samples, which shall demonstrate:

1. Compliance with the required CIPPL physical properties and thickness.

2. Observed groundwater infiltration of the liner is zero.

3. All active service connections are open and clear.

4. There is no evidence of excessive wrinkles, splits, cracks, breaks, lifts, kinks, scalds, blisters, delaminations, crazing or other defects in the liner.

B. If any defective liner is discovered after it has been installed, it shall be removed and replaced with either a sound liner or a new pipe at no additional cost to the Owner. The Contractor shall be responsible for costs of additional testing required to confirm compliance with these requirements. Obtain approval of the Engineer for method of repair prior to repair.

C. For liners with defects, if the Contractor elects to excavate in order to repair defects in the liner, cut and remove the defective section of liner plus the host pipe to a minimum of two feet beyond each end of the defective liner. Use SDR 35 PVC to replace the removed liner and host pipe. Align invert of point repair with invert of CIPPL. On either side of the proposed repair, carefully remove the host pipe from around the existing sound liner to expose a minimum of five inches of sound liner or as needed for repair coupling. Use mechanical couplings to connect the new PVC directly to the sound liner. Provide repair couplings custom fabricated specifically to fit the outside diameter of the host pipe and CIPPL to assure a watertight connection. Haunch all exposed liner and new PVC pipe to the spring line with pipe bedding material. Place AASHTO #57 bedding, as approved by the Engineer a minimum of eight inches on either side of the pipe from spring line of new PVC pipe and 1 foot above the pipe.

D. If the Contractor elects to repair defects in the liner using trenchless methods, remove the defective sections of liner for the full circumference to a minimum of six inches beyond each end of the defective liner or as approved by the Engineer. Install a cured-in-place point repair that matches or exceeds the short and long-term material properties of the existing liner and must have the appropriate thickness to withstand the criteria for that particular liner. A minimum of twelve inches of overlap is required on either end of the repair, with hydrophilic bands placed six inches from either end of the repair (i.e., centered on each overlap). Should the proposed cured-in-place point repair and hydrophilic end seals reduce the inside diameter of pipe to an unacceptable diameter, the Owner retains the right to require alternative materials for the repair or to have the Contractor perform an excavated repair, at no additional cost to the Owner.

END OF SECTION

SECTION 02980

SITE REHABILITATION

PART 1 GENERAL

1.01. SECTION INCLUDES

A. Site rehabilitation of lawns, existing cultivated or landscape items such as trees, shrubs, hedges, saplings, vines, ground cover vegetation, gardens, etc.

B. Restoration of uncultivated lands

C. Restoration of miscellaneous areas between edge of right of way and edge of property, including non-paved driveway aprons

D. Topsoil, fertilizer, seeding, mulching, and planting.

E. Site rehabilitation of walls, terraces, fences, ditches, drains, culverts, drives, posts, patios, outdoor recreational equipment, garden decorations and appurtenances, small structures, and all other artificial features.

F. Site modifications and development to meet new conditions.

G. Removal and disposal of all excess materials, equipment, trash, and debris used for, or resulting from, the work included in this Section.

1.02. RELATED SECTIONS

A. Section 01025 - Unit Price Item.

B. Section 01039 – Coordination.

C. Section 01300 – Submittals.

1.03. REFERENCES

A. The American Association of Nurserymen Standards - ANSI Standard 2-60.1, “Nursery Stock.”

1.04. QUALITY ASSURANCE

A. Areas and features to be restored:

1. All areas, including natural features occurring thereon, which are damaged or disturbed by the Contractor’s operations, shall be restored, repaired, or replaced to the same or superior condition which existed prior to construction or as modified herein or as shown on the Drawings.

2. Artificial features shall be restored equal to a new condition or as modified herein or as shown on the Drawings.

1.05. SUBMITTALS

A. Submit under provisions of Section 01300 - Submittals.

B. Topsoil - Submit sieve analysis and characteristics of topsoil as listed in PART 2 - PRODUCTS.

C. Submit seed mixture data.

1.06. QUALIFICATIONS

A. All planting material to be furnished from a nursery which meets the requirements of the American Association of Nurserymen.

1.07. PACKING AND SHIPPING

A. All seed furnished for this project shall be delivered in standard size unopened bags of the vendor, showing weight, mixture, vendor's name, and guaranteed analysis.

1.08. STORAGE

A. Seed shall be properly stored in dry conditions at the site of the work.

1. Any seed damaged or spoiled during storage shall be replaced by the Contractor.

1.09. ENVIRONMENTAL CONDITIONS

A. Topsoil shall not be delivered or placed in a frozen or muddy condition.

B. Seeding is to be done on dry or moderately dry soil.

1. Seeding is to be done when the wind velocity does not exceed 5 miles per hour.

1.10. SCHEDULE (NOT APPLICABLE)

1.11. GUARANTEE

A. Any new, reestablished, replaced, or disturbed plant material that fails to respond properly within the one-year guarantee period shall be replaced as specified above at no additional cost to the Owner.

PART 2 PRODUCTS

2.01. MATERIAL

A. Topsoil:

1. Topsoil shall be natural, fertile, friable agricultural soil capable of sustaining healthy vegetative growth.

2. Topsoil shall meet the following gradation requirements free of stones, roots, sticks, and other foreign substances:

TABLE 1

GRADATION OF TOPSOIL

GRAIN DIAMETER	SIEVE SIZE	PERCENT PASSING BY WEIGHT
6.3 mm	6.3 mm	100
4.75 mm	No. 4	60-85
.075 mm	No. 200	20-45
.002 mm	--	7-27

a. Topsoil shall contain less than 52 percent sand.

3. The pH of topsoil shall be between 5.0 and 7.0.

4. Topsoil shall contain no less than 6.0 percent organic matter.

5. Topsoil may be from previously excavated, stockpiled, and protected materials, provided the materials meet the requirements for topsoil.

B. Fertilizer:

1. General Fertilizer:

a. Fertilizer shall be as indicated on the landscaping drawings.

2. Plant Fertilizer - As recommended by local Soil Conservation District of the Department of Agriculture for the type(s) of soil(s) and plant(s).

C. Seed:

1. All seed shall be fresh, recleaned, and of the latest crop year.

2. Each component shall meet or exceed the minimum State and Federal requirements for purity and germination for that component.

3. The weed content of each component shall not exceed 0.1 percent.

4. The seed mix for lawns and other areas shall be as follows:

TABLE 2

PERMANENT SEEDINGS

SPECIES	PERCENT BY WEIGHT
Creeping Red Fescue	35%
Kentucky Bluegrass	25%
Perennial Ryegrass	40%

5. Variations may be recommended by qualified personnel but shall not be used without approval by the Engineer.

6. For uncultivated areas furnish perennial rye grass seed.

D. Mulch for Tree or Shrub Plantings - Mulch shall be as indicated on the landscaping Drawings.

E. Mulch for Seeded Areas - Mulch shall be oat straw, or hay, free from noxious weeds and other materials which may interfere with the establishment of a healthy stand of grass.

PART 3 EXECUTION

3.01. EXAMINATION

A. Determine that surface area is ready for fine grading and/or to receive topsoil and seeding or plantings.

1. Remove trash, debris, large stones, and other foreign materials from surface areas to be restored or rehabilitated.

2. Topsoil shall be free of frozen fragments, debris, large stones, and other foreign materials.

3.02. PREPARATION

A. Fine Grading - Areas requiring topsoil shall be loosened to a depth of 12 inches; and fine graded to within 6 inches of finished grade, to provide a minimum compacted thickness of 6 inches of topsoil at all locations.

1. All such areas, whether in cut or fill, shall be raked to a depth of 1 inch, be parallel to finished grade as shown or required and shall be free of all stones, larger than 1 inch, roots, rubbish, and other deleterious material.

3.03. INSTALLATION

A. The Contractor shall reestablish all existing cultivated or landscape items, trees, shrubs, vines, and ground covers as practicable.

1. Contractor shall provide additional or modify existing vegetation depending on extent of disturbance due to Contractor’s operations.

2. Existing trees, plants, shrubs, saplings, ground cover, vines, etc., which are disturbed or damaged by the Contractor’s operations shall be replaced with new plant materials.

B. Permanent Vegetation

1. Planting of various permanent vegetative covers shall be performed on disturbed areas where the earthmoving activities have ceased. The vegetation shall reestablish ground cover for the control of surface runoff and erosion.

2. The seedbed for permanent vegetative cover shall be prepared by using lime and fertilizer.

a. If the time of the seeding occurs during a dry period, mulch shall be applied to conserve soil moisture.

3.04. TOPSOILING

A. Topsoil shall be furnished and spread in the required areas to a depth of approximately 6 inches.

1. Stockpiled topsoil may be used if it is acceptable to the Engineer.

2. In the event this topsoil is not satisfactory, or is inadequate to cover the required areas, the Contractor shall furnish the required amount of satisfactory topsoil from approved sources off the site.

3.05. FERTILIZING

A. The fertilizer shall be uniformly spread by a mechanical spreader at the rate of 25 pounds per 1,000 square feet.

1. The fertilizer shall be incorporated into the upper 2 inches of topsoil immediately after spreading.

2. Other commercial fertilizers, such as 20-10-10 or 12-6-6 may be used at rates adjusted to provide the same quantity of nitrogen per 1,000 square feet.

3.06. SEEDING

A. Seed shall be applied at a rate of not less than 5 pounds per 1,000 square feet, using a mechanical spreader.

1. Upon completion of the seeding, the area shall be raked lightly and rolled with a light hand roller.

B. The process of spraying grass seeds, water, fertilizer, and mulch known as hydro-seeding or hydro-mulching may be utilized provided that water hazards are minimized.

1. Presoaking, the spraying of the materials and watering after spraying shall be in strict accordance with the manufacturer’s instructions.

2. All materials, protection, maintenance, etc., shall be in conformance with this specification.

3. The mulch may be a wood fiber material compatible with the spray equipment.

3.07. PLANTING

A. All new plant materials which are to replace existing damaged plant materials shall be of the same genus and species as the original and shall be placed in the same location as the item being replaced.

1. The size of the new plant materials shall, if practical, match that of the item being replaced, consistent with normally available sizes from nursery stock.

2. Depending on the size and type of material, and when ordered by the Engineer, guy wires, stakes, anchors, and wrappings shall be furnished and installed in a proper manner to brace and protect the plant.

3. The Contractor shall, as soon as practicable, water and maintain all reestablished, replaced, or disturbed plant materials until final acceptance of total.

B. Plant shall be set plumb and true.

1. Shape area around saucer to form drainage grades to match existing.

3.08. MULCHING AND PROTECTION

A. The Contractor shall protect and maintain seeded areas to assure a full even stand of grass.

1. Immediately after seeding and rolling, the Contractor shall apply oat, wheat or rye straw, or hay, free from noxious weeds, as a mulch, to a loose depth of about 1 inch.

2. The Contractor shall perform all watering and reseeding as necessary for a minimum of 30 days and until final acceptance of the Contract, to ensure the establishment of a uniform stand of specified grasses.

3.09. MAINTENANCE

A. Any portion of seeded areas failing to produce a full uniform stand of grass from any cause shall be reseeded at full rate and re-fertilized at one-half rate and protected and maintained until such a full stand has been obtained.

B. Plantings to be maintained for one year.

3.10. RESTORATION OF UNCULTIVATED LANDS AND MISCELLANEOUS AREAS

A. Areas of uncultivated land shall be restored as follows:

1. The disturbed surfaces shall be rough graded to the original elevations (±1 inch) and general appearance which existed prior to construction (or to the new elevations and grades which are required), all debris, loose stones over 1 inch, boulders, etc., being removed in the process.

2. The surface shall then be seeded with perennial rye grass, being spread at the rate of 1 lb. per 800 square feet.

3. The area need not be raked or rolled after completion of seeding.

B. Miscellaneous areas including non-paved driveway aprons and areas between edge of right of way and edge of property shall be restored to original or better condition. Contractor may also use salvageable or reused on-site materials including but not limited to gravel, cobbles, shell, and stone to match existing. Loam and seed shall be per this Section.

3.11. SPECIAL CONDITIONS

A. Damaged Trees - Vegetation which has been damaged by site preparation activities and deemed non-functional by the Owner or engineer, shall be replaced by the Contractor with vegetation of the same caliper, genus, and species at no additional compensation to the Contractor.

END OF SECTION

Specification Attachments

Construction Notes

1. CONTRACTOR SHALL CONFINE ALL WORK TO THE UNPAVED EASEMENT ACCESSWAY. COORDINATE LOCATION OF LARGE EQUIPMENT AND ACCESS BEYOND THE UNPAVED ACCESSWAY WITH OWNER.

2. THE WORK IN THIS PROJECT IS CONSIDERED TO BE MAINTENANCE WORK ALLOWED IN THE WETLAND PROTECTION ACT. CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS OF THIS ACT. PROVIDE SEDIMENT AND EROSION CONTROL MEASURES TO PREVENT THE EROSION OF ANY MATERIAL DISRUPTED BY CONSTRUCTION ACTIVITIES. SEE SECTION 01540.

3. CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS BEFORE STARTING WORK.

4. CONTRACTOR SHALL PROVIDE AT LEAST 24 HOURS NOTICE TO RESIDENTS BEFORE BEGINNING ANY WORK ON PROPERTY.

5. THE CONTRACTOR SHALL HAVE A COMPLETE SET OF CONTRACT DOCUMENTS AS WELL AS ALL APPROVALS ON THE JOB SITE AT ALL TIMES.

6. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH TOWN OF UXBRIDGE STANDARDS, DETAILS AND SPECIFICATIONS.

7. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION UNLESS NOTED OTHERWISE.

8. CONTRACTOR SHALL COORDINATE STAGING AREAS WITH OWNER.

9. CONTRACTOR SHALL CONTACT DIG SAFELY MASSACHUSETTS PRIOR TO ANY EXCAVATION.

10. APPROXIMATE LOCATION OF MAINLINE UTILITIES ARE SHOWN ON DRAWINGS, AND NONE OF THE INDIVIDUAL SERVICES ARE SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO STARTING WORK.

11. CONTRACTOR SHALL CONTACT UTILITY COMPANIES WHEN EXCAVATING IN THE VICINITY OF EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY EXISTING UTILITIES DAMAGED DUE TO HIS OPERATION.

12. CONTRACTOR SHALL SUPPORT/OR PROTECT EXISTING SEWER, STORM, WATER MAIN, GAS, ELECTRIC, FIBER OPTIC / TELECOMMUNICATION, OR ANY OTHER EXISTING UTILITIES WHERE NECESSARY, IN ACCORDANCE WITH UTILITY OWNER'S REQUIREMENTS.

13. TOWN STAFF ARE ONLY ABLE TO COMMUNICATE IN ENGLISH. FOR SAFETY REASONS, CONTRACTOR CREW SHALL HAVE AT LEAST ONE MEMBER AVAILABLE AT ALL TIMES WHO IS ABLE TO COMMUNICATE IN ENGLISH.

14. CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO COMMENCING WORK.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ACCESS TO ANY MANHOLES LOCATED REMOTELY THAT ARE SCHEDULED FOR REHABILITATION IN EASEMENTS OR OFF ROAD.

16. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS, TYPES OF MATERIALS AND PIPE INVERTS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

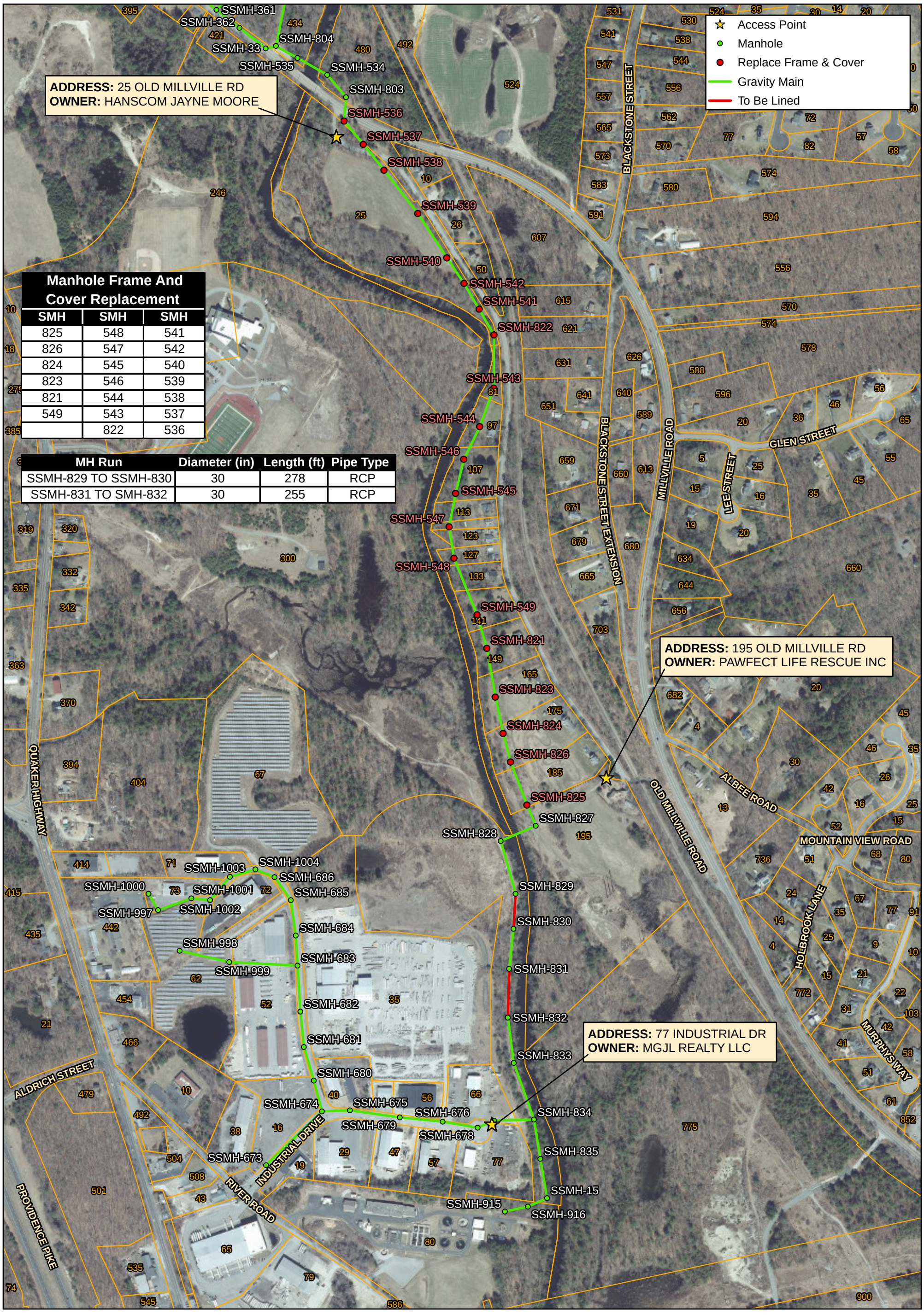
17. THE CONTRACTOR SHALL PERFORM WORK BETWEEN THE HOURS OF 7:00 A.M. AND 3:00 P.M. UNLESS AUTHORIZED OTHERWISE IN WRITING BY THE ENGINEER.

18. OWNER HAS LIMITED STAGING AREA. THE CONTRACTOR IS RESPONSIBLE FOR SECURING A STAGING AREA, IF NEEDED.

19. THE WORK AREA HAS THREE ACCESS POINTS. CONTRACTOR SHALL MAKE USE OF THOSE ACCESS POINT ONLY. THESE REQUIRE OWNER TO UNLOCK.

20. ANY DEMOLITION MATERIALS INCLUDING, BUT NOT LIMITED TO, EXISTING FRAMES AND COVERS, SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

21. ALL WORK IS LOCATED ADJACENT TO A RIVER AND ACCESS TO MANHOLES IS LIMITED AND MAY REQUIRE THE USE OF STAGING, LIFTING MECHANISMS, ETC TO ACCOMMODATE THE WORK AREA.



Manhole Frame And Cover Replacement

SMH	SMH	SMH
825	548	541
826	547	542
824	545	540
823	546	539
821	544	538
549	543	537
	822	536

MH Run	Diameter (in)	Length (ft)	Pipe Type
SSMH-829 TO SSMH-830	30	278	RCP
SSMH-831 TO SMH-832	30	255	RCP

Paper Size ANSI B

0 500

US Feet

Map Projection: Lambert Conformal Conic
Horizontal Datum: NAD 1983 2011
Grid: NAD 1983 2011 StatePlane Massachusetts Mnld FIPS 2001 FtUS

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TOWN OF UXBRIDGE, MA
CCTV INSPECTION PROGRAM

SOUTHERN SYSTEM LINING & MANHOLE COVER REPLACEMENT WITH ACCESS POINTS

Project No. 11144264
Revision No. -
Date 3/5/2024

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Print date: 05 Mar 2024 - 13:46

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