Weston & Sampson

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WESTON & SAMPSON ENGINEERS, INC.
5 Centennial Drive
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CONTRACT DOCUMENTS

City of Woburn

Clapp School Demolition

40 Hudson Street, Woburn
Massachusetts

Contract No. IFB 18-10
March 2018

Duane C Himes 3/27/18

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SECTION 00100

ADVERTISEMENT FOR BIDS

City of Woburn, Massachusetts

Sealed bids for **the Clapp School Demolition** for the City of Woburn, Massachusetts, will be received at the Purchasing Department, 10 Common Street, Woburn, Massachusetts 01801 until 11:00 AM prevailing time, on 04/19/2018 at which time and place said bids will be publicly opened and read aloud.

The scope of work includes the abatement and demolition of one two-story school building and associated miscellaneous site features. The building is located at 40 Hudson Street in Woburn, Massachusetts. The scope of work also includes utility disconnection, abandonment and capping; abatement and disposal of all hazardous materials, including asbestos containing materials (ACM); building demolition; disposal/recycling of all building materials; demolition of all subsurface structures (basements, foundations, footings, and frost walls); and demolition of all ancillary items and site features within the Limit of Work, backfilling and site restoration with loam and seed unless otherwise specified.

The required contract completion period is 100 consecutive days.

Estimated construction cost: $728,175 - $847,355

General Contractor's CATEGORIES OF CERTIFICATION: DEMOLITION AND ASBESTOS REMOVAL

Bid Security in the form of a bid bond, cash, certified check, treasurer's or cashier's check payable to the Owner, is required in the amount of five percent of the bid, in accordance with Section 00200 – INSTRUCTION TO BIDDERS.

The Instructions to Bidders, Form of General Bid, Agreement, Plans, Specifications, Performance and Payment Bond, and other Contract Documents may be downloaded at the following link:

https://www.woburnma.gov/government/purchasing/bids

The selected contractor shall furnish a performance bond and a payment bond in amount at least equal to one hundred percent (100%) of the contract price as stipulated in Section 00700 - GENERAL CONDITIONS of these specifications.

Minority Business Enterprise (MBE) and Women's Business Enterprise (WBE) policies of the City of Woburn are applicable to this Contract. The bidder shall comply with all applicable laws and regulations pertaining to nondiscrimination, equal opportunity and affirmative action, including without limitation executive orders and rules and regulations of federal and state agencies of competent jurisdiction. The bidder shall achieve a goal of 10.4% combined MBE/WBE participation. The prime contractor and its subcontractors must utilize a mix of both

MBE and WBE firms whose participation, when added together, meets the overall combined goal set for the project. It is important that both MBE and WBE firms have an opportunity to work on public projects with a combined MBE/WBE goal. Therefore, individual projects with a combined goal must utilize reasonable representation of both MBE and WBE firms to meet the combined goal. Individual project MBE/WBE participation plans that include solely MBE or solely WBE participation or have only nominal participation by one or the other to meet the combined goal will not be considered responsive. Prime contractors that are themselves MBE or WBE certified will be required to bring some participation by a firm(s) that holds the certification which is not held by the prime contractor to the project. All MBEs and WBEs shall be certified by the Commonwealth of Massachusetts Supplier Diversity Office. The City of Woburn will not authorize waivers for the MBE and WBE requirements.

A Prebid Conference will be held on 04/05/2018 at 10:30 AM at the Site, George Clapp Elementary School. Bidders will have an opportunity to view the site of the work following the Prebid Conference.

All bids for this project are subject to applicable bidding laws of Massachusetts, including General Laws Chapter 149 as amended.

Minimum Wage Rates as determined by the Commissioner of the Division of Occupational Safety of the Executive Office of Labor and Workforce Development under the provisions of the Massachusetts General Laws Chapter 149, Section 26 to 27D, as amended, apply to this project. It is the responsibility of the Bidder, 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.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 working days, Saturdays, Sundays and legal holidays excluded after the opening of bids.

The Owner reserves the right to waive any informalities or to reject any or all bids.

CITY OF WOBURN, MASSACHUSETTS
BY ITS PURCHASING DEPARTMENT
10 Common Street
Woburn, Massachusetts 01801

END OF SECTION

SECTION 00200

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids
2. Location and Work to be Done
3. Deposit on Documents
4. Preparation of Bid
5. Modification of Bids
6. Obligation of Bidder
7. Information not Guaranteed
8. Bid Security
9. Time for Completion
10. Addenda and Interpretations
11. Bid Opening Procedure
12. Comparison of Bids
13. Statutes Regulating Competitive Bidding
14. Right to Reject Bid
15. Ability and Experience of Bidder
16. Conditions of Work
17. Security for Faithful Performance
18. Power of Attorney
19. Laws and Regulations
20. Liquidated Damages for Failure to Enter into Contract
21. Items and Indeterminate Items
22. CONTRACTOR Records
23. Bidder Certification – OSHA Training
24. Prevailing Wage Rates
25. Minority and Women Business Enterprise Requirements

1. Receipt and Opening of Bids

The City of Woburn herein called the OWNER, acting by and through its Purchasing Agent will receive sealed Bids for the George Clapp Elementary School Abatement and Demolition in Woburn, Massachusetts.

Such bids addressed to Office of the City of Woburn Purchasing Department, 10 Common Street, Woburn, Massachusetts 01801 and endorsed "George Clapp Elementary School Abatement and Demolition" will be received at the Office of Woburn Purchasing Department, 10 Common Street, Woburn, Massachusetts 01801 (Tel. (781)-932-4553) until 11:00 AM on April 5, 2018 at which time and place said bids will be publicly opened and read aloud.

If the building at which bids are to be received is closed for any reason on the date and time that bids are due, receipt of bids by the Owner will be postponed until the next business day by 11:00AM.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. The bidder agrees that this bid shall be good and may not be withdrawn for the number of days, after the opening of bids, as stipulated in the FORM OF GENERAL BID.

2. Location and Work to be Done

The location, general characteristics, and principal details of the Work are indicated on a set of 7 drawings numbered Cover, G-1, C-1, C-2, C-3, D-1 and D-2, inclusive.

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the ENGINEER and shall then become a part of the Contract Documents.

The CONTRACTOR shall furnish all superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

3. Deposit on Documents

A deposit, in the amount as specified in Section 00100 - ADVERTISEMENT FOR BIDS, in cash or check payable to the City of Woburn will be required on each set of Contract Documents taken. Such deposits will be refunded to all bidders and non-bidders upon the return of said documents in good condition within 30 days after the date of opening of general bids.

To ensure refund of the deposit, Contract Documents (except documents submitted by bidders) must be returned to the office of the Purchasing Agent and be accompanied by a letter of transmittal.

4. Preparation of Bid

Each bid must be submitted on the prescribed form in Section 00410 – FORM OF GENERAL BID. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

General Contractors shall file their bids with a copy of the certificate from Division of Capital Asset Management and Maintenance (DCAMM) showing that they are eligible to bid on projects of this category, of this estimated project dollar amount and up to an aggregate limit, and with an Update Statement, DCAM Form CQ3 and Certificate of Eligibility, DCAM Form CQ7.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, its address, and endorsed with the name of the project as specified in Receipt and Opening of Bids, above.

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

5. Modification of Bids

Any bidder may modify its bid by written communication at any time prior to the scheduled closing time for receipt of bids. Any telegraphic communication must be received by the OWNER prior to the closing time, and, provided further, for any telegraphic communication that modifies a bid the OWNER is satisfied that a written confirmation of the modification over the signature of the bidder was mailed prior to the closing time.

The modification communication shall not reveal the bid price but shall provide the addition or subtraction or other modification so that the final prices or terms will not be known by the OWNER until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the facsimile transmission.

6. Obligation of Bidder

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of its bid.

7. Information not Guaranteed

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the OWNER. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the OWNER does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents.

It is further agreed and understood that no bidder or CONTRACTOR shall use or be entitled to use any of the information made available to it or obtained in any examination made by it in any manner as a basis of or grounds for any claim or demand against the OWNER or the ENGINEER, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

8. Bid Security

Each bid must be accompanied by a certified check, a bid bond, cash, a treasurer's or cashier's check, payable to the OWNER, in the amount stated in Section 00100 – ADVERTISEMENT FOR BIDS. Such deposits will be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining deposits will be returned promptly after the OWNER and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to the selected contractor within 30 days, Saturdays, Sundays and holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

9. Time for Completion

The bidder must agree to commence work on or before a date to be specified in the written "Notice to Proceed" from the OWNER and to fully complete the project within the time limit stated in Section 00410 – FORM FOR GENERAL BID.

10. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally. All information given to bidders other than by means of the plans, specifications, or by addenda, as described below, is given informally and shall not be used as the basis of a claim against the OWNER or the ENGINEER.

Every request for such interpretation should be in writing (typed, not handwritten) addressed to: Weston & Sampson, 5 Centennial Drive, Peabody, MA 01960 Attention: Brian McCormack or sent via email to mccormab@wseinc.com and to be given consideration must be received at least ten working days prior to the date fixed for the opening of bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, will be emailed to all prospective bidders who have not already received them at the respective address furnished by them for such purposes. Bidders picking up sets of bid documents will be given all addenda issued to date and will be required to sign for all documents, acknowledging receipt. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the Contract Documents.

11. Bid Opening Procedure

The following list of requirements shall be met by each filed bid.

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids, above.

Properly executed bid security shall be placed in a sealed envelope and shall be attached to the outside of the envelope containing the bid.

The bid and all accompanying documents so required shall be signed by the Bidder or its authorized representative before submission.

All bidders shall include with their bids written acknowledgment of receipt of all addenda. Refer to acknowledgment form provided in Section 00410 - FORM FOR GENERAL BID.

The total dollar amount of each bid will be read, and the three apparent lowest bids will be selected for further consideration. These three apparent low bids will be read aloud for the benefit of the other bidders and the bid opening procedure will be closed. All those present at the bid opening may examine all bids after the bid opening and after the reading of the three apparent low bids except for the DCAMM Update Statements if contained therein, which are not public records.

12. Comparison of Bids

Bids will be compared on the basis of the quantities and unit and lump sum prices stated in the bid forms.

In the event that there is a discrepancy in Section 00410 - FORM FOR GENERAL BID between the lump sum or unit prices written in words and figures, the prices written in words will govern.

The OWNER agrees to examine and consider each FORM FOR GENERAL BID submitted in consideration of the bidder's agreements, as herein above set forth and as set forth in Section 00410 - FORM FOR GENERAL BID.

13. Statutes Regulating Competitive Bidding

Any bid, which does not comply with the provisions of Massachusetts General Laws Chapter 149, Sections 44A to 44J inclusive, as amended, need not be accepted and the OWNER may reject every such bid.

14. Right to Reject Bid

The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids, should the OWNER deem it to be in the public interest to do so.

The OWNER may also reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities, or the OWNER may waive such omissions, conditions or irregularities.

15. Ability and Experience of Bidder

All general contractors shall file with their bids a copy of a certificate of eligibility from Division of Capital Asset Management and Maintenance (DCAMM) showing that they are eligible to bid on projects of this category, value, and up to an aggregate limit and an update statement, DCAMM Form CQ3.

16. Conditions of Work

Each bidder must inform itself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of its obligation to furnish all material and labor necessary to carry out the provisions of its contract. Insofar as possible the CONTRACTOR, in carrying out its work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

17. Security for Faithful Performance

Simultaneously with its delivery of the executed Contract, the CONTRACTOR shall furnish a surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor and materials under this Contract as specified in Section 00700 - GENERAL CONDITIONS included herein. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the OWNER. The bonds shall remain in force for one year after final acceptance of the work by the OWNER, unless the OWNER, in writing, releases the CONTRACTOR from the obligation sooner.

18. Power of Attorney

Attorneys-in-fact who sign Contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

19. Laws and Regulations

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 requirement shall apply.

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

Attention is directed to Section 00830 and to other applicable sections of this specification.

20. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon its failure or refusal to execute and deliver the Contract, Bonds and Certificates of Insurance required within 5 days, Saturdays, Sundays and legal holidays excluded, after presentment of the contract by the OWNER, as liquidated damages for such failure or refusal, the security deposited with its bid, provided that the amount forfeited shall not exceed the difference between its bid price and the bid price of the next lowest responsible and eligible bidder. In case of death, disability, bonafide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, its bid deposit will be returned.

21. Items and Indeterminate Items

The work to be done under this Contract has been divided into parts or items to enable each bidder to bid on different portions of the work in accordance with its estimate of their cost and so that the actual quantity of work executed under each item may be paid for at the price bid for that particular item, even though each bidder may have judged that such quantity may be greater or less than the estimated quantity stated in Section 00410 – FORM OF GENERAL BID.

22. CONTRACTOR Records

The CONTRACTOR shall comply with the provisions of Massachusetts General Laws, Chapter 30, Section 39R, concerning CONTRACTOR records. This section has been reprinted in Section 00830 - STATE REGULATIONS.

23. Bidder Certification – OSHA Training

All employees who work on Massachusetts public works construction sites, on projects estimated to cost more than $10,000, must have no less than ten (10) hours of OSHA-approved safety and health training.

The Massachusetts Attorney General is authorized to restrain award of construction contracts to any contractor who is in violation of this requirement and to restrain the performance of these contracts by non-complying contractors.

Noncompliance with this law will disqualify contractors from bidding on public contracts.

24. Prevailing Wage Rates

Prevailing Wage Rates as determined by the Director of the Executive Office of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H, as amended, apply to this project. It is the responsibility of the bidder, before bid opening, to request if necessary, any additional information on Prevailing Wage Rates for those trades people who may be employed for the proposed work under this contract.

The Contractor is responsible for requesting up to date wage rates from the Owner prior to the one-year anniversary of the notice to proceed of this contract. The Owner shall obtain updated wage rates from the Commissioner and provide them to the Contractor upon said request.

25. Minority and Women Business Enterprise Requirements

MBE and WBE policies of the City of Woburn are applicable to this contract. The goals for this project and the forms required to be submitted with this bid are included in Section 00410 Attachment B of these contract documents.

END OF SECTION

SECTION 00410

FORM FOR GENERAL BID

To the Awarding Authority:

A. The Undersigned proposes to furnish all labor and materials required for **IFB 18-10 Clapp School Demolition** in Woburn, Massachusetts, in accordance with the accompanying plans and specifications prepared by Weston & Sampson Engineers, Inc. for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda numbered _____.

C. The proposed contract price is _____ dollars ($_____).

D. The subdivision of the proposed contract price is as follows:

Item 1 – Abatement, Demolition, and Miscellaneous Site Work: The work of the general contractor, being all work other than that covered by Item 2, including but not limited to permitting, temporary gates/fencing, temporary facilities, temporary utility connection and use, environmental protection controls, pest controls, air/dust monitoring, signage, clearing and grubbing, utility abandonment, abatement of hazardous materials including asbestos containing materials (ACM) and universal waste, and demolition of the building, complete, and associated site work, mobilization/demobilization, and other miscellaneous site work. The lump sum price for Item 1:

_____ dollars

($ _____)

Adjustment Class 1A – Removal And Disposal Of Buried Pipe Containing Asbestos: The work of the general contractor, being all work other than that covered by Item 2, including but not limited to removal and disposal of buried pipe containing asbestos, complete, as described in and required by the Contract Documents including, but not limited to; excavation, removal, demolition, disposal, and trench backfill. Any buried pipe containing asbestos shall be handled and disposed of in accordance with specification section 02051 – ASBESTOS ABATEMENT.

_____dollars per Linear Foot ($_____/LF)

The total price for _____LF of pipe removed and disposed:

($ _____)

Item 2 – Loam and Seed: The work of the general contractor, being all work other than that covered by Item 2, including but not limited to the loaming and seeding of the building footprint and other disturbed areas within the Limit of Work. The per Square Yard price for Item 2:

_____dollars per Square Yard ($_____/SY)

The total price for 2,000 SY of loam and seed:

($ _____)

The undersigned agrees that each of the above named sub-bidders will be used for the work indicated at the amount stated, unless a substitution is made. The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of all such premiums is included in the amount set forth in Item 1 of this bid.

The undersigned agrees that if it is selected as general contractor, it will promptly confer with the awarding authority on the question of sub-bidders; and that the awarding authority may substitute for any sub-bid listed above a sub-bid filed with the awarding authority by another sub-bidder for the sub-trade against whose standing and ability the undersigned makes no objection; and that the undersigned will use all such finally selected sub-bidders at the amounts named in their respective sub-bids and be in every way as responsible for them and their work as if they had been originally named in this general bid, the total contract price being adjusted to conform thereto.

The undersigned agrees that, if it is selected as general contractor, it will within five 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.

The undersigned hereby certifies that it 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 it will comply fully with all laws and regulations applicable to awards made subject to section 44A.

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 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.

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 provisions of Section Twenty-Nine F of Chapter Twenty-Nine, Section 25C (10) of Chapter 152 (workers' compensation) or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulations promulgated.

The Bidder hereby agrees that if selected as the Contractor it will commence work under this contract on or before a date to be fixed in the written "Notice to Proceed" given by the Owner to the Contractor and to fully complete the project within 100 consecutive days of the start date fixed in the "Notice to Proceed." The Bidder further agrees to pay as liquidated damages the sum of $ 1,000 for each consecutive calendar day thereafter during which the work has not been

fully completed, as provided in the "Liquidated Damages" provisions of Section 00800 SUPPLEMENTARY CONDITIONS.

The undersigned understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts, including General Laws Chapter 149, Sections 44A to 44J, as amended. Every bidder (including sub-bidders) must furnish the DCAM Update Statement with the bid.

The contract will be awarded to the lowest responsible and eligible bidder.

The undersigned understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The undersigned agrees that this bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids, where Federal approval is not required; and where Federal approval is required, the time for holding bids is 30 days, Saturdays, Sundays and legal holidays excluded, after Federal approval .

Bid security in the form of a bid bond, cash, certified check, treasurer's or cashier's check, payable to the Owner, in a dollar amount of 5 percent of the total bid, in accordance with the conditions in the INSTRUCTION TO BIDDERS, has been attached to this bid.

Pursuant to M.G.L. CH. 62C, Sec 49A, I certify under the penalties of perjury that I have complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Minority Business Enterprise (MBE) and Women's Business Enterprise (WBE) policies of the City of Woburn are applicable to this Contract. The bidder shall comply with all applicable laws and regulations pertaining to nondiscrimination, equally opportunity and affirmative action, including without limitation executive orders and rules and regulations of federal and state

agencies of competent jurisdiction. The bidder shall achieve a goal of 10.4% combined MBE/WBE participation. The prime contractor and its subcontractors must utilize a mix of both MBE and WBE firms whose participation, when added together, meets the overall combined goal set for the project. It is important that both MBE and WBE firms have an opportunity to work on public projects with a combined MBE/WBE goal. Therefore, individual projects with a combined goal must utilize reasonable representation of both MBE and WBE firms to meet the combined goal. Individual project MBE/WBE participation plans that include solely MBE or solely WBE participation or have only nominal participation by one or the other to meet the combined goal will not be considered responsive. Prime contractors that are themselves MBE or WBE certified will be required to bring some participation by a firm(s) that holds the certification which is not held by the prime contractor to the project. All MBEs and WBEs shall be certified by the Commonwealth of Massachusetts Supplier Diversity Office. The City of Woburn will not authorize waivers for the MBE and WBE requirements.

The undersigned Bidder hereby certifies it will comply with the specific affirmative action steps contained in the 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 its financial position or business organization other than those changes noted within the application since the applicant's most recent pre-qualification statement.

Respectfully submitted:

Date _____ By _____
(Signature)

_____
(Name - Typed or Printed)

_____
(Title)

(SEAL - if bid is by a corporation)

_____
(Business Name)

_____
(Federal ID Number)

_____
(Business Address)

_____
(City and State)

_____
(Telephone Number)

_____
(Fax Number)

00410 – ATTACHMENT A

DCAM PRIME-GENERAL CONTRACTOR UPDATE STATEMENT

SPECIAL NOTICE TO AWARDING AUTHORITY
BIDDERS' UPDATE STATEMENTS ARE NOT PUBLIC RECORDS AND ARE NOT OPEN TO PUBLIC INSPECTION (M.G.L. C.149, §44D)

EFFECTIVE MARCH 30, 2010

Commonwealth of Massachusetts
Division of Capital Asset Management
PRIME/GENERAL CONTRACTOR UPDATE STATEMENT

TO ALL BIDDERS AND AWARDING AUTHORITIES

A COMPLETED AND SIGNED PRIME/GENERAL CONTRACTOR UPDATE STATEMENT MUST BE SUBMITTED WITH EVERY PRIME/GENERAL BID FOR A CONTRACT PURSUANT TO M.G.L. c.149, §44A AND M.G.L. c. 149A. ANY PRIME/GENERAL BID SUBMITTED WITHOUT AN APPROPRIATE UPDATE STATEMENT IS INVALID AND MUST BE REJECTED.

Caution: This form is to be used for submitting Prime/General Contract bids. It is not to be used for submitting Filed Sub-Bids or Trade Sub-Bids.

AWARDING AUTHORITIES

If the Awarding Authority determines that the bidder does not demonstrably possess the skill, ability, and integrity necessary to perform the work on the project, it must reject the bid.

BIDDER'S AFFIDAVIT

I swear under the pains and penalties of perjury that I am duly authorized by the bidder named below to sign and submit this Prime/General Contractor Update Statement on behalf of the bidder named below, that I have read this Prime/General Contractor Update Statement, and that all of the information provided by the bidder in this Prime/General Contractor Update Statement is true, accurate, and complete as of the bid date.

_____ Bid Date

_____ Print Name of Prime/General Contractor

_____ Project Number (or name if no number)

_____ Business Address

_____ Awarding Authority

_____ Telephone Number

SIGNATURE⇨ _____
Bidder's Authorized Representative

INSTRUCTIONS

INSTRUCTIONS TO BIDDERS

- This form must be completed and submitted by all Prime/General contractors bidding on projects pursuant to M.G.L. c. 149, §44A and M.G.L. c. 149A.
- You must give complete and accurate answers to all questions and provide all of the information requested. MAKING A MATERIALLY FALSE STATEMENT IN THIS UPDATE STATEMENT IS GROUNDS FOR REJECTING YOUR BID AND FOR DEBARRING YOU FROM ALL PUBLIC CONTRACTING.
- **This Update Statement must include all requested information that was not previously reported on the Application used for your firm's most recently issued (not extended or amended) Prime/General Contractor Certificate of Eligibility. The Update Statement must cover the entire period since the date of your Application, NOT since the date of your Certification.**
- You must use this official form of Update Statement. Copies of this form may be obtained from the awarding authority and from the Asset Management Web Site: www.mass.gov/dcam .
- If additional space is needed, please copy the appropriate page of this Update Statement and attach it as an additional sheet.
- See the section entitled "Bidding Limits" in the *Instructions to Awarding Authorities* for important information concerning your bidding limits.

INSTRUCTIONS TO AWARDING AUTHORITIES

Determination of Bidder Qualifications

- It is the awarding authority's responsibility to determine who is the lowest eligible and responsible bidder. You must consider all of the information in the low bidder's Update Statement in making this determination. Remember: this information was not available to the Division of Capital Asset Management at the time of certification.
- The bidder's performance on the projects listed in Parts 1 and 2 must be part of your review. Contact the project references.
- AWARDING AUTHORITIES ARE STRONGLY ENCOURAGED TO REVIEW THE LOW BIDDER'S ENTIRE CERTIFICATION FILE AT THE DIVISION OF CAPITAL ASSET MANAGEMENT. Telephone (617) 727-9320 for an appointment.

Bidding Limits

Single Project Limit: The total amount of the bid, including all alternates, may not exceed the bidder's Single Project Limit.

Aggregate Work Limit: The annual value of the work to be performed on the contract for which the bid is submitted, when added to the annual cost to complete the bidder's other currently held contracts, may not exceed the bidder's Aggregate Work Limit. Use the following procedure to determine whether the low bidder is within its Aggregate Work Limit:

Step 1 Review Update Statement Question #2 to make sure that all requested information is provided and that the bidder has accurately calculated and totaled the annualized value of all incomplete work on its currently held contracts (column 9).

Step 2 Determine the annual dollar value of the work to be performed on your project. This is done as follows:

(i) If the project is to be completed in less than 12 months, the annual dollar value of the work is equal to the full amount of the bid.

(ii) If the project will take more than 12 months to complete, calculate the number of years given to complete the project by dividing the total number of months in the project schedule by 12 (calculate to 3 decimal places), then divide the amount of the bid by the calculated number of years to find the annual dollar value of the work.

Step 3 Add the annualized value of all of the bidder's incomplete contract work (the total of column 9 on page 5) to the annual dollar value of the work to be performed on your project. **The total may not exceed the bidder's Aggregate Work Limit**.

Correction of Errors and Omissions in Update Statements

Matters of Form: An awarding authority shall not reject a contractor's bid because there are mistakes or omissions of form in the Update Statement submitted with the bid, provided the contractor promptly corrects those mistakes or omissions upon request of the awarding authority. [810 CMR 8.05(1)].

Correction of Other Defects: An awarding authority may, in its discretion, give a contractor notice of defects, other than mistakes or omissions of form, in the contractor's Update Statement, and an opportunity to correct such defects, provided the correction of such defects is not prejudicial to fair competition. An awarding authority may reject a corrected Update Statement if it contains unfavorable information about the contractor that was omitted from the Update Statement filed with the contractor's bid. [810 CMR 8.05(2)].

PART 1 - COMPLETED PROJECTS

LIST ALL PUBLIC AND PRIVATE *BUILDING* PROJECTS YOUR FIRM HAS COMPLETED SINCE THE DATE OF APPLICATION FOR YOUR MOST RECENTLY ISSUED (NOT EXTENDED OR AMENDED) DCAM CERTIFICATE OF ELIGIBILITY. YOU MUST REPORT ALL REQUESTED INFORMATION NOT PREVIOUSLY REPORTED ON THAT DCAM APPLICATION*.

PROJECT TITLE & LOCATION	WORK CATEGORY	CONTRACT PRICE	START DATE	DATE COMPLETED

Attach additional sheets if necessary

* If your firm has been terminated from a project prior to completion of the work or has failed or refused to complete its work under any contract, full details and an explanation must be provided. See Part 3 of this Update Statement.

PROVIDE THE FOLLOWING REFERENCE INFORMATION FOR EACH COMPLETED PROJECT LISTED ON THE PREVIOUS PAGE.

PROJECT TITLE	COMPANY NAME	CONTACT PERSON	TELEPHONE
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone

Is your company or any individual who owns, manages or controls your company affiliated with any owner, designer or general contractor named above, either through a business or family relationship? ☐ YES ☐ NO

Are any of the contact persons named above affiliated with your company or any individual who owns, manages or control your company, either through a business or family relationship? ☐ YES ☐ NO

If you have answered YES to either question, explain. _____

PART 2 - CURRENTLY HELD CONTRACTS

LIST ALL PUBLIC AND PRIVATE BUILDING AND NON-BUILDING *CONSTRUCTION* PROJECTS YOUR FIRM HAS UNDER CONTRACT ON THIS DATE REGARDLESS OF WHEN OR WHETHER THE WORK COMMENCED.

1	2	3	4	5	6	7	8	9
PROJECT TITLE & LOCATION	WORK CATEGORY	START AND END DATES	ON SCHEDULE (yes / no)	CONTRACT PRICE	% NOT COMPLETE	$ VALUE OF WORK NOT COMPLETE (col. 5 X col. 6)	NO. OF YEARS REMAINING (see note below)	ANNUALIZED VALUE OF INCOMPLETE WORK (col. 7 ÷ col. 8) (divided by)

ANNUALIZED VALUE OF ALL INCOMPLETE CONTRACT WORK (Total of Column 9) $_____

Column 8
- If less than one year is left in the project schedule, write 1.
- If more than 12 months are left in the project schedule, divide the number of months left in the project schedule by 12 (calculate to three decimal places).

PROVIDE THE FOLLOWING REFERENCE INFORMATION FOR EACH INCOMPLETE PROJECT LISTED ON THE PREVIOUS PAGE.

PROJECT TITLE	COMPANY NAME	CONTACT PERSON	TELEPHONE
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone
	OWNER: Owner	Contact Person	Telephone
	DESIGNER: Designer	Contact Person	Telephone
	GC: GC	Contact Person	Telephone

Is your company or any individual who owns, manages or controls your company affiliated with any owner, designer or general contractor named above either through a business or family relationship? ☐ YES ☐ NO

Are any of the contact persons named above affiliated with your company or any individual who owns, manages or control your company, either through a business or family relationship? ☐ YES ☐ NO

If you have answered YES to either question, explain. _____

PART 3 - PROJECT PERFORMANCE

For Parts 3 and 4, if you answer YES to any question, please provide on a separate page a complete explanation. Information you provide herein must supplement the Application for your most recently issued (not extended or amended) DCAM Certificate of Eligibility. You must report all requested information not previously reported on that DCAM Application for Prime/General Certificate of Eligibility. Include all details [project name(s) and location(s), names of all parties involved, relevant dates, etc.].

	YES	NO
1. Has your firm been terminated on any contract prior to completing a project or has any officer, partner or principal of your firm been an officer, partner or principal of another firm that was terminated or failed to complete a project?	☐	☐
2. Has your firm failed or refused either to perform or complete any of its work under any contract prior to substantial completion?	☐	☐
3. Has your firm failed or refused to complete any punch list work under any contract?	☐	☐
4. Has your firm filed for bankruptcy, or has any officer, principal or individual with a financial interest in your current firm been an officer, principal or individual with a financial interest in another firm that filed for bankruptcy?	☐	☐
5. Has your surety taken over or been asked to complete any of your work under any contract?	☐	☐
6. Has a payment or performance bond been invoked against your current firm, or has any officer, principal or individual with a financial interest in your current firm been an officer, principal or individual with a financial interest in another firm that had a payment or performance bond invoked?	☐	☐
7. Has your surety made payment to a materials supplier or other party under your payment bond on any contract?	☐	☐
8. Has any subcontractor filed a demand for direct payment with an awarding authority for a public project on any of your contracts?	☐	☐
9. Have any of your subcontractors or suppliers filed litigation to enforce a mechanic's lien against property in connection with work performed or materials supplied under any of your contracts?	☐	☐
10. Have there been any deaths of an employee or others occurring in connection with any of your projects?	☐	☐
11. Has any employee or other person suffered an injury in connection with any of your projects resulting in their inability to return to work for a period in excess of one year?	☐	☐

PART 4 - Legal or Administrative Proceedings; Compliance with Laws

Please answer the following questions. Information must supplement all judicial and administrative proceedings involving bidder's firm, which were instituted or concluded (adversely or otherwise) since your firm's Application for your most recently issued (not extended or amended) Certificate of Eligibility. You must report all requested information not previously reported on that DCAM Application for Prime/General Certificate of Eligibility.

The term "administrative proceeding" as used in this Prime/General Contractor Update Statement includes (i) any action taken or proceeding brought by a governmental agency, department or officer to enforce any law, regulation, code, legal, or contractual requirement, except for those brought in state or federal courts, or (ii) any action taken by a governmental agency, department or officer imposing penalties, fines or other sanctions for failure to comply with any such legal or contractual requirement.

The term "anyone with a financial interest in your firm" as used in this Section "I", shall mean any person and/or entity with a 5% or greater ownership interest in the applicant's firm.

If you answer YES to any question, on a separate page provide a complete explanation of each proceeding or action and any judgment, decision, fine or other sanction or result. Include all details (name of court or administrative agency, title of case or proceeding, case number, date action was commenced, date judgment or decision was entered, fines or penalties imposed, etc.).

	YES	NO
1. Have any civil, judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to the procurement or performance of any construction contract, including but not limited to actions to obtain payment brought by subcontractors, suppliers or others?	☐	☐
2. Have any criminal proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to the procurement or performance of any construction contract including, but not limited to, any of the following offenses: fraud, graft, embezzlement, forgery, bribery, falsification or destruction of records, or receipt of stolen property?	☐	☐
3. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state's or federal procurement laws arising out of the submission of bids or proposals?	☐	☐
4. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of M.G.L. Chapter 268A, the State Ethics Law?	☐	☐

PART 4 - Legal or Administrative Proceedings; Compliance with Laws (continued)

	YES	NO
5. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state or federal law regulating hours of labor, unemployment compensation, minimum wages, prevailing wages, overtime pay, equal pay, child labor or worker's compensation?	☐	☐
6. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of any state or federal law prohibiting discrimination in employment?	☐	☐
7. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a claim of repeated or aggravated violation of any state or federal law regulating labor relations?	☐	☐
8. Have any proceedings by a municipal, state, or federal agency been brought, concluded, or settled relating to decertification, debarment, or suspension of your firm or any principal or officer or anyone with a financial interest in your firm from public contracting?	☐	☐
9. Have any judicial or administrative proceedings involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled relating to a violation of state or federal law regulating the environment?	☐	☐
10. Has your firm been fined by OSHA or any other state or federal agency for violations of any laws or regulations related to occupational health or safety? Note: this information may be obtained from OSHA's Web Site at www.osha.gov	☐	☐
11. Has your firm been sanctioned for failure to achieve DBE/MBE/WBE goals, workforce goals, or failure to file certified payrolls on any public projects?	☐	☐
12. Other than previously reported in the above paragraphs of this Section I, have any administrative proceedings or investigations involving your firm or a principal or officer or anyone with a financial interest in your firm been brought, concluded, or settled by any local, state or federal agency relating to the procurement or performance of any construction contract?	☐	☐
13. Are there any other issues that you are aware which may affect your firm's responsibility and integrity as a building contractor?	☐	☐

PART 5 - SUPERVISORY PERSONNEL

List all supervisory personnel, such as project managers and superintendents, who will be assigned to the project if your firm is awarded the contract. **Attach the resume of each person listed below**.

NAME	TITLE OR FUNCTION

PART 6 - CHANGES IN BUSINESS ORGANIZATION OR FINANCIAL CONDITION

Have there been any changes in your firm's business organization, financial condition or bonding capacity since the date your current Certificate of Eligibility was issued? ☐ Yes ☐ No
If YES, attach a separate page providing complete details.

PART 7 – LIST OF COMPLETED CONSTRUCTION PROJECTS SUBMITTED TO THE DIVISION OF CAPITAL ASSET MANAGEMENT.

Attach here a copy of the list of completed construction projects which was submitted with your firm's DCAM Application for your most recently issued (not extended or amended) DCAM Certificate of Eligibility. The Attachment must include a complete copy of the entire Section G – "Completed Projects" and the final page – "Certification" (Section J) containing the signature and date that the Completed Projects list (Section G) was submitted to the Division of Capital Asset Management.

00410 – ATTACHMENT B

MINORITY/WOMEN BUSINESS ENTERPRISE (MBE/WBE) REQUIREMENTS

MUNICIPAL CONTRACTS
STATE-ASSISTED BUILDING PROJECTS
MODEL BIDDING INSTRUCTIONS

APPENDIX TO BIDDING INSTRUCTIONS

GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES (MBE) AND WOMEN BUSINESS ENTERPRISES (WBE) (EXECUTIVE ORDER 390, M.G.L. c. 7, s. 4)

The applicable goals for minority business enterprise (MBE) and woman business enterprise (WBE) participation established for this Contract are as follows:
MBE/WBE Combined: 10.4% of the Contract Price.

A. MBE AND WBE PARTICIPATION

1. The apparent low Bidder's compliance with the requirements of this Section is a pre-requisite for receiving the Award of the Contract.

2. The MBE and WBE participation goals for this Contract are as set forth above. The Awarding Authority reserves the right to reduce or waive the MBE or WBE participation goals established for this Contract upon written request made by a general Bidder within the time frame set forth in paragraph 9 below. Such written request must demonstrate to the satisfaction of the Awarding Authority that it is not feasible for a non-MBE or non-WBE general Bidder to meet the goals established for this Contract based upon any or all of the following: (i) actual MBE/WBE availability, (ii) the geographic location of the project to the extent related to MBE/WBE availability, (iii) the scope of the work, (iv) the percentage of work available for subcontracting to MBE/WBEs and/or (v) other relevant factors, including a documented inability by the prospective Bidder to obtain commitments from MBE/WBE subcontractors sufficient to meet the MBE/WBE goals after having made a diligent, good faith effort to do so. All of the foregoing documentation shall accompany the Bidder's request for a reduction or waiver of the MBE/WBE participation goals. Such documentation shall include, at a minimum, the following:

3. A list of all items of work under the Contract that the Bidder made available for subcontracting to MBE/WBEs. The Bidder shall identify all items of work, other than work to be performed by filed sub- Bidders, that the Bidder did not make so available and shall state the reasons for not making such work available for subcontracting to MBE/WBEs. The Bidder shall also demonstrate that, where commercially reasonable, subcontracts were divided into scopes or tasks capable of being performed by MBE/WBEs.

4. Evidence that the Bidder sent written notices soliciting Bids or proposals to perform the items of work made available by the Bidder for subcontracting to all MBE/WBEs qualified to perform such work. The Bidder shall identify (i) each MBE/WBE solicited,

and (ii) each MBE/WBE listed in the SOMWBA directory under the applicable trade category that was not solicited and reasons therefore. The Bidder shall also state the date that notices were mailed and provide a copy of the written notice(s) sent.

5. Evidence that the Bidder made reasonable efforts to follow up the written notices sent to MBE/WBEs with telephone calls or personal visits in order to determine with certainty whether the MBE/WBEs were interested in performing the work. Phone logs or other documentation must be submitted.

6. A statement of the response received from each MBE/WBE solicited, including the reason for rejecting any MBE/WBE who submitted a bid or proposal.

7. Evidence of reasonable efforts made, if any, to assist MBE/WBEs that needed assistance in obtaining bonding or insurance, or lines of credit with suppliers if the inability of MBE/WBEs to obtain bonding, insurance, or lines of credit is the reason given for the Bidder's inability to meet the MBE/WBE goals.

8. The Bidder may also submit any other information supporting its request for a waiver or reduction in the MBE/WBE participation goals, including without limitation evidence that the Bidder placed advertisements in appropriate media and trade association publications announcing the Bidder's interest in obtaining bids or proposals from MBE/WBEs, and/or sent written notification to MBE/WBE economic development assistance agencies, trade groups and other organizations notifying them of the Contract and the work to be subcontracted by the Bidder to MBE/WBEs. The Bidder shall also submit any other information reasonably requested by the Awarding Authority to show that the Bidder has taken all actions that could reasonably be expected to achieve the MBE/WBE participation goals.

9. If filed Sub-Bids are solicited for this Contract, requests from prospective general Bidders to reduce or waive the MBE/WBE participation goals for this Contract must be received by the Awarding Authority no later than five (5) working days after the list of filed sub-Bidders is mailed by the Awarding Authority to persons who have taken out plans for the Contract. If there are no filed sub-Bids solicited for this Contract, requests to reduce or waive the MBE/WBE participation goals for this Contract must be received by the Awarding Authority no later than ten (10) calendar days before the date set for the receipt of general Bids. THE AWARDING AUTHORITY WILL NOT CONSIDER ANY REQUEST TO REDUCE OR WAIVE THE MBE/WBE PARTICIPATION GOALS FOR THIS CONTRACT THAT IS RECEIVED AFTER THESE DEADLINES. Any reduction or waiver of the MBE/WBE participation goals for this Contract will be made by written addendum mailed to all persons who have taken out plans for the project.

10. No later than five (5) working days after the opening of general Bids, the apparent low Bidder shall submit the following documents to the Awarding Authority's Affirmative Marketing Construction Officer (AMCO): (i) a completed Schedule for Participation by MBE/WBE ("Schedule for Participation") in the form provided by the Awarding Authority showing MBE/WBE participation in amounts equal to or exceeding the MBE/WBE participation goals for this Contract, (ii) a completed Letter of Intent in the

form provided by the Awarding Authority for each MBE/WBE listed in the Schedule for Participation, and (iii) a SOMWBA most recent certification letter for each MBE/WBE listed in the Schedule of MBE/WBE Participation showing that the MBE/WBE is certified in the area of work for which it is listed on the Letter of Intent.

11. Each Letter of Intent shall identify and describe the work to be performed by the named MBE/WBE (the "MBE/WBE Work") with enough specificity to permit the Awarding Authority to identify the particular items of contract work that the MBE/WBE will perform for MBE/WBE participation credit. The Awarding Authority reserves the right to reject any Letter of Intent if the price to be paid for the MBE/WBE Work does not bear a reasonable relationship to the value of such work under the Contract as determined by the Awarding Authority.

12. Within five (5) working days after receipt of the Schedule for MBE/WBE Participation, Letters of Intent, and SOMWBA most recent certification letter, the Awarding Authority shall review and either approve or disapprove the apparent low Bidder's submissions. If the apparent low Bidder has not submitted an appropriate Schedule for MBE/WBE Participation and appropriate Letters of Intent and SOMWBA most recent certification letter establishing that the MBE/WBE participation goal for the project will be met, the apparent low Bidder will be considered ineligible for Award of the Contract and the Awarding Authority will Award the Contract to the second lowest eligible and responsible Bidder, subject to said Bidder's compliance with these conditions. If funds are insufficient to award to the second lowest Bidder, the project may have to be re-bid.

13. The Bidder's attention is called to the General Conditions of the Contract which requires the Contractor to submit, within thirty (30) days of the Contract Date, signed subcontracts with all subcontractors or a purchase order or invoice from each material supplier and/or manufacturer listed on the Schedule for MBE/WBE Participation.

14. A filed sub-Bidder is not required to submit a Schedule of MBE/WBE Participation with its Bid. A filed sub-Bidder may, at its option, submit a Letter of Intent with its Bid if it is a SOMWBA certified MBE/WBE. If a filed sub-Bidder intends to sub-subcontract work to a SOMWBA certified MBE/WBE, and the awarding authority permits limited sub-sub contracting for purposes of MBE/WBE participation, and the filed sub-Bidder wishes that sub-subcontract to be credited toward the participation goals for this Contract, the filed sub-Bidder should submit a Letter of Intent from that MBE/WBE with its Bid.

APPENDIX to General Conditions of the Contract

GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES (MBE) AND WOMEN BUSINESS ENTERPRISES (WBE) (EXECUTIVE ORDER 390, M.G.L. c. 7, s. 4)

The applicable goals for minority business enterprise (MBE) and woman business enterprise (WBE) participation established for this Contract are as follows:

MBE/WBE Combined: 10.4% of the Contract Price

1. Goals

The goals for minority business enterprise (MBE) and woman business enterprise (WBE) participation established for this Contract are as set forth above and in the Owner - Contractor Agreement.

2. MBE/WBE Participation Credit

A. If the Contractor is itself an MBE or a WBE, MBE/WBE participation credit shall be given in an amount equal to the entire Contract Price. If the Contractor is not an MBE or WBE, then MBE/WBE participation credit will be given for the value of the Work that is actually performed by each MBE or WBE subcontractor or sub-subcontractor.

B. If the Contractor is a joint venture with one or more MBE/WBE joint ventures, MBE/WBE participation credit shall be given to the joint venture as follows:

(1) If the joint venture is certified by SOMBWA as an MBE or WBE, MBE/WBE Participation credit shall be given in an amount equal to the entire Contract Price.

(2) If the joint venture is not certified as an MBE or WBE by SOMWBA, MBE/WBE participation credit shall be given to the joint venture for the value of the Work that is performed by the MBE/WBE joint venture(s), and for the value of the Work that is actually performed by each MBE or WBE subcontractor or sub-subcontractor.

C. If an MBE/WBE supplies, but does not install equipment or materials, MBE/WBE participation credit shall be given only if the MBE/WBE supplier is regularly engaged in sales of equipment or supplies to the construction industry from an established place of business. MBE/WBE participation credit shall be given the full amount of the purchase order only if the MBE/WBE supplier manufactures the goods or substantially alters them before resale. Otherwise, a contractor may count toward its MBE/WBE goal 60 percent of the total bid price for its expenditures of its materials and supplies required under a contract and obtained from a MBE/WBE regular supplier.

D. MBE participation credit shall be given for the work performed by MBEs only, and WBE participation credit shall be given for the work performed by WBEs only. MBE participation may not be substituted for WBE participation, nor may WBE participation be substituted for MBE participation.

3. Establishing MBE/WBE Status.

A. A minority owned business shall be considered as an MBE only if it has been certified as a minority business enterprise by the State Office of Minority and Women Business Assistance ("SOMWBA").

B. A woman owned business shall be considered as a WBE only if it has been certified as a woman business enterprise by SOMWBA.

C. Certification as a disadvantaged business enterprise ("DBE"), certification as MBE/WBE by any agency other than SOMWBA, or submission of an application to SOMWBA for certification as an MBE/WBE shall not confer MBE/WBE status on a firm for the purposes of this Contract.

4. Subcontracts with MBE/WBEs

Within thirty (30) days after the award of this Contract, the Contractor shall (i) execute a subcontract with each MBE/WBE Subcontractor which has executed a Letter of Intent Approved by the Awarding Authority, (ii) cause its Subcontractors to execute a sub-subcontract with each MBE/WBE sub-subcontractor, and (iii) furnish the Awarding Authority with a signed copy of each such subcontract and sub-subcontract.

5. Performance of Contract Work by MBE/WBEs

A. The Contractor shall not perform with its own organization or subcontract or assign to any other firm work designated to be performed by any MBE/WBE in the Letters of Intent or Schedule of MBE/WBE Participation without the prior Approval of the Awarding Authority, nor shall any MBE/WBE assign or subcontract to any other firm, or permit any other firm to perform any of its MBE/WBE Work without the prior Approval of the Awarding Authority. Any such unapproved assignment, subcontracting, subsubcontracting, or performances of MBE/WBE Work by others shall be a change in the MBE/WBE Work for the purposes of this Contract. THE AWARDING AUTHORITY WILL NOT APPLY TO THE MBE/WBE PARTICIPATION GOAL(S) ANY SUMS ATTRIBUTABLE TO SUCH UNAPPROVED ASSIGNMENTS, SUB-CONTRACTS, SUB-SUBCONTRACTS, OR PERFORMANCE OF MBE/WBE WORK BY OTHERS.

B. The Contractor shall be responsible for monitoring the performance of MBE/WBE Work to ensure that each scheduled MBE/WBE performs its own MBE/WBE Work with its own workforce.

C. The Contractor and each MBE/WBE shall provide the Awarding Authority with all information and documentation that the Awarding Authority determines is necessary to ascertain whether or not an MBE/WBE has performed its own MBE/WBE Work. At the discretion of the Awarding Authority, failure to submit such documentation to the Awarding Authority shall establish conclusively for the purpose of giving MBE/WBE participation credit under this Contract that such MBE/WBE did not perform such work.

D. With each progress payment request submitted by the Contractor to the Awarding Authority, the Contractor must provide the Contractor Progress Payment Report indicating the value of payments for each MBE and WBE firms for that period.

6. Notification of Changes in MBE/WBE Work

A. If at any time during the performance of the Contract the Contractor determines or has reason to believe that a scheduled MBE/WBE is unable or unwilling to perform its MBE/WBE Work, or that there has been or will be a change in any MBE/WBE Work, or that the Contractor will be unable to meet the MBE/WBE participation goal(s) for this Contract for any reason, the Contractor shall immediately notify the Awarding Authority Contract Compliance Office in writing of such circumstances.

B. Any notice of a change in MBE/WBE Work pursuant to subparagraph "A" above shall include a revised Schedule of MBE/WBE Participation, and additional or amended Letters of Intent and subcontracts, as the case may be.

7. Actions required if there is a Reduction in MBE/WBE Participation

A. In the event there is a change or reduction in any MBE/WBE Work which will result in the Contractor failing to meet the MBE/WBE participation goal(s) for this Contract, other than a reduction in MBE/WBE Work resulting from a Change Order initiated by the Awarding Authority, then the Contractor shall immediately undertake a diligent, good faith effort to make up the shortfall in MBE/WBE participation as follows:

(1) The Contractor shall identify all items of the Work remaining to be performed under the Contract that may be made available for subcontracting to MBE/WBEs. The Contractor shall send a list of such items of work to the Awarding Authority, together with a list of the remaining items of the Work that was not made available to MBE/WBEs and the reason for not making such work available for subcontracting to MBE/WBEs.

(2) The Contractor shall send written notices soliciting proposals to perform the items of the Work that may be made available for subcontracting to MBE/WBEs to all MBE/WBEs qualified to perform such work. The Contractor shall advise the Awarding Authority of (i) each MBE/WBE solicited, and (ii) each MBE/WBE listed in the SOMWBA directory under the applicable trade category that was not solicited and the reasons therefore. The Contractor shall also advise the Awarding Authority of the dates notices were mailed and provide a copy of the written notice(s) sent.

(3) The Contractor shall make reasonable efforts to follow up the written notices sent to MBE/WBEs with telephone calls or personal visits in order to determine with certainty whether the MBE/WBEs were interested in performing the work. Phone logs or other documentation must be submitted to the Awarding Authority evidencing this effort.

(4) The Contractor shall make reasonable efforts to assist MBE/WBEs that need assistance in obtaining insurance, bonds, or lines of credit in order to perform work under the Contract, and shall provide the Awarding Authority with evidence that such efforts were made.

(5) The Contractor shall provide the Awarding Authority with a statement of the response received from each MBE/WBE solicited, including the reason for rejecting any MBE/WBE who submitted a proposal.

(6) The Contractor shall take any additional measures reasonably requested by the Awarding Authority to meet the MBE/WBE participation goal(s) established for this Contract, including, without limitation, placing advertisements in appropriate media and trade association publications announcing the Contractor's interest in obtaining proposals from MBE/WBEs, and/or sending written notification to MBE/WBE economic development assistance agencies, trade groups and other organizations notifying them of the project and of the work available to be subcontracted by the Contractor to MBE/WBEs.

B. If the Contractor is unable to meet the MBE/WBE participation goals for this Contract after complying fully with each of the requirements of paragraph "A" above, and the Contractor is otherwise in full compliance with the terms of this Article, the Awarding Authority may reduce the MBE/WBE participation goals for this Contract to the extent that such goals cannot be achieved.

8. Suspension of Payment and/or Performance for Noncompliance.

A. If at any time during the performance of this Contract, the Awarding Authority determines or has reason to believe that (1) there has been a change or reduction in any MBE/WBE Work which will result in the Contractor failing to meet the MBE/WBE participation goal(s) for this Contract, other than a reduction in MBE/WBE Work resulting from a change in the Contract work ordered by the Awarding Authority, and (2) the Contractor has failed to comply fully with all of the terms and conditions of paragraphs 1 through 7 above, the Awarding Authority may: (1) Suspend payment to the Contractor of an amount equal to the value of the work which was to have been performed by an MBE/WBE pursuant to the Contractor's Schedule of MBE/WBE Participation but which was not so performed, in order to ensure that sufficient Contract funds will be available if liquidated damages are assessed pursuant to paragraph 9, and/or (2) Suspend the Contractor's performance of this Contract in whole or in part.

B. The Awarding Authority shall give the Contractor prompt written notice of any action taken pursuant to paragraph A above and shall give the Contractor and any other interested party, including any MBE/WBEs, an opportunity to present evidence to the Awarding Authority that the Contractor is in compliance with the requirements of this Article, or that there is some justifiable reason for waiving the requirements of this Article in whole or in part. The Awarding Authority may invite SOMWBA to participate in any proceedings undertaken pursuant to this paragraph.

C. Upon a showing that the Contractor is in full compliance with the requirements of this Article, or that the Contractor has met or will meet the MBE/WBE participation goals for this Contract, the Awarding Authority shall release any funds withheld pursuant to clause A (1) above, and lift any suspension of the Contractor's performance under clause A (2) above.

9. Liquidated Damages; Termination

A. If payment by the Awarding Authority or performance by the Contractor is suspended by the Awarding Authority as provided in paragraph 8 above, the Awarding Authority shall have the following rights and remedies if the Contractor thereafter fails to take all action necessary to bring the Contractor into full compliance with the requirements of this Article, or if full compliance is no longer possible because the default of the Contractor is no longer susceptible to cure, if the Contractor fails to take such other action as may be required by the Awarding Authority to meet the MBE/WBE participation goals set forth in this Contract:

(1) The Awarding Authority may terminate this Contract, and/or

(2) The Awarding Authority may retain from final payment to the Contractor, as liquidated damages, an amount equal to the difference between:

(a) The total of the MBE/WBE participation goals set forth in this Contract, and;

(b) The amount of MBE/WBE participation credit earned by the Contractor for MBE/WBE Work performed under this Contract as determined by the Awarding Authority, the parties agreeing that the damages for failure to meet the MBE/WBE participation goals are difficult to determine and that the foregoing amount to be retained by the Awarding Authority represents the parties' best estimate of such damages. Any liquidated damages will be assessed separately for MBE and WBE participation.

B. Before exercising its rights and remedies hereunder, the Awarding Authority may give the Contractor and any other interested party another opportunity to present evidence to the Awarding Authority that the Contractor is in compliance with the requirements of this Article or that there is some justifiable reason for waiving the requirements of this Article in whole or in part. The Awarding Authority may invite SOMWBA to participate in any proceedings undertaken hereunder.

10. Reporting Requirements

The Contractor shall submit to the Awarding Authority all information or documentation that is necessary in the judgment of the Awarding Authority to ascertain whether or not the Contractor has complied with any of the provisions of this Article.

11. Awarding Authority's Right to Waive Provisions of this Article in Whole or In Part

The Awarding Authority reserves the right to waive any provision or requirement of this Article if the Awarding Authority determines that such waiver is justified and in the public interest. No such waiver shall be effective unless in writing and signed by a representative of the Awarding Authority's Affirmative Marketing Construction Officer (AMCO) or the office of its General Counsel. No other action or inaction by the Awarding Authority shall be construed as a waiver of any provision of this Article.

EXHIBIT A

SCHEDULE FOR PARTICIPATION
BY MINORITY/WOMEN BUSINESS ENTERPRISES

Project Number_____
Project Location_____
Project Name _____

A. Filed Sub-bidders utilizing MBE/WBE firms, and MBE/WBE Sub-bidders - attach to Filed Sub-bid.
B. General Contractor must submit to the Awarding Authority within five (5) working days of the opening of General Bids.

BIDDER CERTIFICATION:
The Bidder agrees that if awarded the contract it will expend at least the amount of the contract set forth below for MBE/WBE participation. For purposes of this commitment, the MBE and WBE designation means that a business has been certified by SOMWBA as either a MBE, WBE or MBE/WBE. The Bidder must indicate the MBE/WBE firms it intends to utilize on the project as follows (attach additional sheets if necessary):

Company Name & Address	MBE or WBE	Describe MBE/WBE Scopes of Work(clarify "Labor Only", "Material Only" or "Labor and Material")	If Supplier, Indicate Total Value of Supplies (60% of Total Counts Toward Participation)	Total Dollar Value of Participation

MBE Goal: $_____ **Total Dollar Value of MBE Commitment: $**_____
WBE Goal: $_____ **Total Dollar Value of WBE Commitment: $**_____
The undersigned hereby certifies that he/she has read the terms and conditions of the contract with regard to MBE/WBE participation and
is authorized to bind the Bidder to the commitment set forth above.
Name of Firm_____
Business Address_____
Print Name_____
Authorized Signature _____
Title_____
Telephone No._____ **Fax No.**_____
Date _____

EXHIBIT B
LETTER OF INTENT
MINORITY/WOMEN BUSINESS ENTERPRISES PARTICIPATION
(To be completed by MBE/WBE, and submitted by the General Bidder to the Municipal Affirmative Marketing Construction Officer (AMCO) within five (5) working days of the opening of General Bids or by Filed Sub-bidder with its bid.)
Project Number_____
Project Name _____
Project Location _____
To _____
Name of General Bidder/Sub-bidder
Indicate SOMWBA Certification:
_____ MBE
_____ WBE
_____ M/WBE
1. This firm intends to perform work in connection with the above project.
2. This firm is currently certified by SOMWBA to perform the work identified below, and has not changed its minority/women ownership, control, or management without notifying SOMWBA within thirty (30) days of such a change.
3. This firm understands that if the General Bidder/Sub-bidder referenced above is awarded the contract, the Bidder intends to enter into an agreement with this firm to perform the activity described below for the prices indicated. This firm also understands that the above referenced firm, as General Bidder/Sub-Bidder, will make substitutions only as allowed by the terms of the Contract.
4. This firm understands that under the terms of the contract, only work actually performed by an MBE/WBE will be credited toward MBE/WBE participation goals, and this firm cannot assign or subcontract out any of its work without prior written approval of the Awarding Authority, and that any such assignment or subcontracting will not be credited toward MBE/WBE participation goals.

MBE/WBE PARTICIPATION
Section/Item Number
(If Applicable)
Describe MBE/WBE Scopes of Work (Clarify "Labor Only", "Material Only" or "Labor and Material")
If Supplier, Indicate Total Value of Supplies (60% of Total Counts Toward Participation)
Dollar Value of Participation
Total Dollar Value: $_____
Name of MBE/WBE Firm_____
Business Address_____
Print Name_____
Authorized Signature _____
Title_____
Telephone No._____ Fax No._____
Date _____

EXHIBIT C
CONTRACTOR PROGRESS PAYMENT REPORT
MINORITY/WOMEN BUSINESS ENTERPRISES PARTICIPATION
Project Number: _____
Project Name: _____
Project Location: _____
Date: _____
Periodical Payment No.: _____
General Contractor: _____
MBE and/or WBE: _____
One copy of this report is to be submitted for each Minority Business Enterprise (MBE) and/or Women Business Enterprise (WBE) at the
time of submitting a request for payment. Copies of the report must be sent to the Minority Business Enterprise (MBE) and/or Women
Business Enterprise (WBE) named above and to the municipalities Affirmative Marketing Construction Officer (AMCO). The AMCO
will forward a copy of each Contractor Progress Payment Report to SOMWBA on a quarterly basis.
1. The total price to be paid to the above-named Minority Business Enterprise _____ and/or Women Business Enterprise _____:
$_____
2. The amount remitted to the Minority Business Enterprise and/or Women Business Enterprise as of the above date for work performed
under this project: $_____
3. Balance due the Minority Business Enterprise and/or Women Business Enterprise as of the above date for work performed under the
above-named project: $_____
4. Comments or explanation of amounts indicated under items 1 and 2 above: _____
_____
_____
_____
_____
5. We hereby certify that the information supplied herein (including pages attached) is correct and complete.
General Contractor: Minority and/or Women Business Enterprise
_____ _____
(Signed) (Signed)
_____ _____
(Title) (Title)
_____ _____
(Date) (Date)

00410 – ATTACHMENT C

CITY OF WOBURN CERTIFICATIONS

CITY OF WOBURN
OFFICE of the PURCHASING AGENT

CERTIFICATIONS

Statements below shall be submitted with each Bid or Proposal and shall be duly dated and signed with an **original signature** and all other information, or, the Bid or Proposal may be **rejected.**

In witness whereof, the undersigned certifies, under the pains and penalties of perjury that:

1.**STATE TAXES PAID**: Pursuant to M.G.L. Chapter 62C, s. 49A, the undersigned certifies that, to the best of my knowledge and belief, have complied with all the laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting of child support.
2.**CERTIFICATE OF NON-COLLUSION**: M.G.L. C. 30, s. 39M and/or C. 30B, s.10 : Any person submitting a bid or proposal for the procurement or disposal of supplies or services to any governmental body shall certify in writing, on the bid or proposal, as follows: The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity, or group of individuals.
3.**PUBLIC CONTRACTS - DEBARMENT**: M.G.L. C. 550, Acts of 1991: The undersigned certifies that the said "person" is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of C. 29, s. 29F, or any other applicable debarment provision of any other Chapter of the General Laws, or any Rule or Regulation promulgated thereunder. Additionally, the undersigned is not presently debarred by any Agency of the Federal Government.
4.HEALTH & SAFETY ON PUBLIC CONSTRUCTION PROJECTS OVER $ 10000: Chapter 306 of the Acts of 2004: The undersigned certifies that the firm 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 U.S. OSHA that is at least 10 hours in duration at the time that 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 U.S. OSHA that is at least 10 hours in duration.
5.COMPLIANCE : The undersigned is in compliance with all of the provisions, and shall remain in full compliance with the provisions for the life of any Contract resulting from this solicitation. That the bidder is qualified to perform any such Contract and possesses, or shall obtain, all requisite licenses and/or permits to complete performance; shall maintain all unemployment, workers' compensation, professional and personal liability insurance policies sufficient to cover its performance under any such Contract; and shall comply with relevant prevailing wage rates and employment laws. To the best of its knowledge and belief has paid all local taxes, tax titles, utilities, motor vehicle excise taxes, water and wastewater bills in MA as required by Law.

Print Company Name _____ Circle: Corporation Partnership Individual

Authorized Signature _____ Print Name _____

Title of Person Signing Bid or Proposal _____ Date _____

Company Federal ID # or Social Security # _____ State of Incorporation _____

Approval of a Contract, or other Agreement, will not be granted unless this form is signed and fully complete.

CERTIFICATE OF AUTHORITY

At a duly authorized meeting of the Board of Directors of _____
(Name of Corporation)

held on _____ it was VOTED that:
(Date)

_____ _____
(Name) (Officer)

of this corporation, be and he/she hereby is authorized to submit bids and proposals, execute contracts, deeds and bonds in the name and on behalf of said corporation, and affix its corporate seal hereto; and such execution of any contract, deed or obligation in this corporation's name on its behalf by such _____ under seal of the company, shall be valid
(Officer)
and binding upon this corporation.

A True Copy,

ATTEST: _____

TITLE: _____

PLACE OF BUSINESS: _____

_____

DATE OF THIS CERTIFICATE: _____

I hereby certify that I am the clerk of the _____
(Corporation)

that _____ is the duly elected _____ of
(Name) (Office)
said corporation, and that the above vote has not been amended or rescinded and remains in full force and effect as of the date of this contract.

_____
(Clerk)

CORPORATE SEAL:

CERTIFICATE OF GOOD STANDING

TO: Contractor

FROM: Purchasing Department

RE: CERTIFICATE OF GOOD STANDING

The Contractor must comply with our request for a CURRENT "Certificate of Good Standing".

If you require information on how to obtain the "Certificate of Good Standing" or Certificate of Registration (Foreign Corporations) from the Commonwealth of Massachusetts, please call the Secretary of State's Office at (617) 727-2850 (Press #1) located at One (1) Ashburton Place, 17th Floor, Boston, MA 02133 or you may access their web site at:

www.sec.state.ma.us/corp/certificates/certificate_request.asp

If your company is incorporated outside of Massachusetts and therefore is a "foreign corporation", but is registered to do business in Massachusetts, please comply with our request for the Certificate of Registration from the Commonwealth of Massachusetts. If your company is a foreign corporation, but is not registered to do business in Massachusetts, please provide the Certificate of Good Standing from your state of incorporation.

Please note that without the above certificate (s), the City of Woburn cannot execute your contract.

IMPORTANT NOTICE
Requests for Certificates of Good Standing by mail may take a substantial amount of time. A certificate may be obtained immediately in person at the Secretary's Office at the address above. Also, at this time, the Secretary of State's Office may not have your current annual report recorded. If this is the case, and you are therefore unable to obtain the Certificate of Good Standing, please forward a copy of your annual report filing fee check with your signed contracts. Please forward your original Certificate of Good Standing to the Purchasing Department upon receipt.

Thank You,

Purchasing Agent

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of individual submitting bid or proposal

Name of Business (please type or print)

CERTIFICATE OF TAX COMPLIANCE

Pursuant to Massachusetts General Law Chapter 62C, Section 49A, the undersigned acting on behalf of the Contractor*, certify under penalties of perjury that to the best knowledge and belief, the Contractor* is in compliance with all laws of the Commonwealth relating to taxes, reporting of employee and contractors, and withholding and remitting child support.

Individual

Signature Date

Name (please print or type) Social Security Number

Corporate

Corporate Name (please print or type)

Signature of Corporate Officer Date

Name of Corporate Officer (please print or type) Title

Taxpayer Identification Number

- As used in this certification, the word "Contractor" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Form:___ CITY OF WOBURN
Contract Number:_____

OSHA GENERAL CONTRACTOR CERTIFICATION FORM

Pursuant to Chapter 306 of the Acts of 2004
An Act Relative to the Health and Safety on Construction Projects

GENERAL CONTRACTOR'S CERTIFICATION – BID FORM

I, the undersigned, hereby certify under penalties of perjury that I, and all subcontractors who are not filed sub-bidders, shall:

(1) 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 a 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.

As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature: _____
(Individual Submitting Bid)
Duly Authorized

Name of Business or Entity:_____

Date: _____

RETURN THIS FORM WITH YOUR BID

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form is available from the Department of Labor Standards (DLS) at www.mass.gov/dols/pw and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

On a weekly basis, every contractor and subcontractor is required to submit a certified copy of their weekly payroll records to the awarding authority; this includes the payroll forms and the Statement of Compliance form. The certified payroll records must be submitted either by regular mail or by e-mail to the awarding authority. Once collected, the awarding authority is required to preserve those records for three years from the date of completion of the project.

Each such contractor and subcontractor shall furnish weekly **and** within 15 days after completion of its portion of the work, to the awarding authority directly by first-class mail or e-mail, a statement, executed by the contractor, subcontractor or by any authorized officer thereof who supervised the payment of wages, this form, accompanied by their payroll:

STATEMENT OF COMPLIANCE

_____, 20_____

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 _____

STATEMENT OF MANAGEMENT
For Contracts over $100,000

In accordance with M.G.L. Chapter 30, Section 39R, the undersigned successful bidder states that its system of internal accounting controls and that of its subsidiaries reasonably assure (1) that transactions are executed in accordance with management's general and specific authorization; (2) that transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles, and to maintain accountability for assets; (3) that access to assets is permitted only in accordance with management's general or specific authorization, and (4) that the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Executed this _____day of _____ , _____

On behalf of _____
(Name of Successful Bidder)

_____
(Address and telephone of Successful Bidder)

_____
(Name and title of person signing statement)

By:_____
(Signature)

CERTIFIED PUBLIC ACCOUNTANT STATEMENT

In accordance with M.G.L. 30, Section 39R I, _____ a certified public accountant, state that I have examined the above Statement of Management on internal accounting controls, and that in my opinion (1) the representations of management are consistent with the result of management's evaluation of the system of internal accounting controls; and (2) that 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 above referenced successful bidder's financial statements.

_____
(Signature)

_____

_____

_____
(Business name, address and telephone number)

Form **W-9**
(Rev. December 2011)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Print or type See Specific Instructions on page 2.

Name (as shown on your income tax return)

Business name/disregarded entity name, if different from above

Check appropriate box for federal tax classification:
☐ Individual/sole proprietor ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶

☐ Other (see instructions) ▶

☐ Exempt payee

Address (number, street, and apt. or suite no.)

Requester's name and address (optional)

City, state, and ZIP code

List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number
___ - ___ - ____

Employer identification number
__ - _____

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here Signature of U.S. person ▶ Date ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

SECTION 00520

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, _____, by and between the City of Woburn, hereinafter called "OWNER," acting herein through its _____, and doing business as (a corporation) (a limited liability company) (a partnership) (a joint venture) (an individual)* located in the (City) (Town)* of _____, County of _____, and State of _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows:

IFB 18-10 CLAPP SCHOOL DEMOLITION

hereinafter called the project, for the sum of _____ Dollars and _____ Cents ($_____) and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at its own proper cost and expense to furnish superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to complete the said project in accordance with the conditions and prices stated in Section 00410 - FORM OF GENERAL BID, Section 00700 - GENERAL CONDITIONS, Section 00800 - SUPPLEMENTARY CONDITIONS, Section 00815 – ADDITIONAL SUPPLEMENTARY GENERAL CONDITIONS, Section 00830 - STATE REGULATIONS, the plans, which include all maps, plates, drawings, blue prints, and the specifications and all other contract documents therefor as prepared by Weston & Sampson Engineers, Inc., including all bid documents.

The CONTRACTOR hereby agrees to commence work under this contract on or before a date to be fixed in the written Notice to Proceed given by the OWNER to the CONTRACTOR and to fully complete the project within 100 consecutive days of the start date fixed in the Notice to Proceed. The CONTRACTOR further agrees to pay as liquidated damages the sum of $1,000 for each consecutive calendar day thereafter during which the work has not been fully completed, as provided in the Liquidated Damages provisions of Section 00800 - SUPPLEMENTARY CONDITIONS.

The fair share goals for Minority Business Enterprise (MBE) and Women's Business Enterprise (WBE) participation for this contract are a minimum of **10.4 percent (%)** participation, applicable to the total dollar amount paid for the construction contract. The CONTRACTOR shall take all affirmative steps necessary to achieve this goal, and shall provide reports documenting the portion of contract and subcontract dollars paid to MBE/WBEs, and its efforts to achieve the goals, with

each invoice submitted or at such greater intervals as specified by the (municipality). The CONTRACTOR shall require similar reports from its subcontractors.

The CONTRACTOR shall not discriminate against or exclude any person from participation herein on grounds of race, color, religious creed, national origin, sex, sexual orientation, ancestry, or age; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, color, religious creed, national origin, sex, sexual orientation, ancestry, age, or handicapped status.

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 of 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

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

Subject to G.L. c.30, sec. 39K and/or sec. 39G and G.L. c.30, sec. 39F, as applicable, the OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Agreement, subject to additions and deductions, as provided in Section 00700 - GENERAL CONDITIONS, and to make payments on account thereof as provided in Section 00700 - GENERAL CONDITIONS and Section 00800 - SUPPLEMENTARY CONDITIONS

In accordance with the requirements of G.L. c.149, §27B, the Contractor shall submit, and shall require all of its subcontractors required to keep a record of hours and wages paid to laborers employed on the project to submit, to the awarding authority on a weekly basis, copies of such records. All such weekly submissions shall be accompanied by the following certification:

> The undersigned contractor hereby certifies, under the pains and penalties of perjury, that the foregoing payroll records are true and accurate records of the wages paid to laborers employed on the project for the period stated and said wages are in an amount no less than the prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned contractor agrees, in addition to any other remedies available to the awarding authority, to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work, arising out of or as a result of (1) the contractor's failure to pay laborers employed on the project the said applicable prevailing wage rates; (2) the failure of the foregoing payroll records to accurately state the said applicable prevailing wage rates; or (3) the failure of the foregoing payroll records to accurately represent the wages actually paid to laborers employed on the project.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

City of Woburn , Massachusetts
(Owner)

By _____

_____
(Name)

_____
(Title)

_____
(Contractor)

By _____

_____
(Name)

_____
(Title)

_____
(Address)

_____
(City and State)

Approved as to Form:

By_____
(Owner's Counsel)

_____
(Name)

In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this Contract is available therefor and that the _____ has been authorized to execute the Contract and approve all requisitions and change orders.

By_____
(Owner's Accountant)

_____
(Name)

CERTIFICATE OF VOTE
(to be filed if Contractor is a Corporation)

I, _____, hereby certify that I am the duly qualified and acting Secretary of
(Secretary of Corporation)
_____ and I further certify that a meeting of the Directors of said company,
(Name of Corporation)
duly called and held on _____, at which all members were present and voting, the
(Date of Meeting)
following vote was unanimously passed:

VOTED: To authorize and empower

_____

_____

_____

_____

_____

Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By:_____
(Secretary of Corporation)

A True Copy:

Attest: _____
(Notary Public)

My Commission Expires:_____
(Date)

Contractor's Certification

A Contractor will not be eligible for award of a contract unless such Contractor has submitted the following certification, which is deemed a part of the resulting contract:

CONTRACTOR'S CERTIFICATION

_____
Name of the General Contractor

certifies that it:

1. Will not discriminate in their employment practices;
2. Intends to use the following listed construction trades in the work under the contract:

   _____

   _____

   and
3. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and
4. Is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
5. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.
6. Agrees to comply with all provisions contained herein.

_____
Signature of authorized representative of Contractor Date

_____
Printed name of authorized representative of Contractor

Contractor's Certification (Continued)

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean natural person, business, partnership, corporation, committee, union, club or other organization, entity, or group of individuals.

Signature_____ Date_____

_____ _____
Print Name & Title Company Name

CERTIFICATE OF TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A (b), I

_____, authorized signatory for _____
Name of individual *Name of contractor*
do hereby certify under the pains and penalties of perjury that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

_____ _____
Signature Date

LABOR HARMONY AND OSHA TRAINING REQUIREMENTS

The undersigned certifies under penalties of perjury that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed at the work ***and*** that all employees to be employed at the worksite and in the work will have completed an OSHA-approved construction safety and health course lasting at least ten (10) hours.

Signature_____ Date_____

_____ _____
Print Name & Title Company Name

Subcontractor's Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the General Contractor the following certification, which will be deemed a part of the resulting subcontract:

SUBCONTRACTOR'S CERTIFICATION

_____
Name of the Subcontractor

certifies that it:

7. Will not discriminate in their employment practices;

8. Intends to use the following listed construction trades in the work under the contract:

   _____

   _____

   and

9. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and

10. Is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and

11. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.

12. Agrees to comply with all provisions contained herein.

_____
Signature of authorized representative of Subcontractor Date

_____
Printed name of authorized representative of Subcontractor

END OF SECTION

SECTION 00610

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)
a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture, LLC or Individual)
_____of _____, State of _____
(Surety) (City)
hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the City of Woburn, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars and _____Cents($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal has entered into a certain contract with the Owner (the "Contract"), dated the _____ day of _____, 20___, which Contract is by reference made a part hereof, for the construction described as follows:

IFB 18-10 CLAPP SCHOOL DEMOLITION

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of the Contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under the Contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise, this obligation shall remain in full force and effect.

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after (1) the Owner has declared the Principal in default of the Contract or any provision thereof, or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to execute the work consistent with, and in conformance to, the Contract (collectively referred to as a "Contractor Default"). The determination of a Contractor Default shall be made solely by the Owner. The Owner need not terminate the Contract to declare a Contractor Default or to invoke its rights under this Bond, and Contractor hereby agrees not to assert any claims against Surety under any indemnity or similar agreements on the grounds that Surety has interfered with the Contract by fulfilling its obligations hereunder in the absence of a termination of said Contract.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of following steps: (1) arrange for the Principal to perform and complete the work of the Contract; (2) arrange for a contractor other than the Principal to perform and complete the work of the Contract; (3) reimburse the Owner, in

a manner and at such time as the Owner shall reasonably decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

If the Surety does not proceed as provided in this Bond with due diligence and all deliberate speed, the Surety shall be deemed to be in default of this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Contract; (2) additional design, professional services, and legal costs, including attorney's fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligations of the Principal, if any, as provided in the Contract; and (5) liquidated damages as provided in the Contract, or if no such damages are specified, actual damages and consequential damages resulting from the Contractor Default or any default of the Surety under this Bond.

Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction in the Commonwealth of Massachusetts.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

The Surety providing the Bond shall have a rating of A or better within Best's Key Rating Guide.

IN WITNESS WHEREOF, this instrument is executed in _____ ( ) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20___.

ATTEST:

_____ Principal	_____ Witness as to Principal Signature
By_____ Signature	_____ Name and Title
_____ Name and Title	_____ Address
_____ Address	_____ City and State
_____ City and State	(SEAL)

ATTEST:

_____ Surety	_____ Witness as to Surety Signature
By_____ Attorney-in-Fact Signature	_____ Name and Title
_____ Name and Title	_____ Address
_____ Address	_____ City and State
_____ City and State	(SEAL)

END OF SECTION

SECTION 00615

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____ (Name of Contractor) a _____ (Corporation, Partnership, Joint Venture, Limited Liability Company, or Individual) hereinafter called "Principal" and _____ (Surety) of _____ (City), State of _____ (State) hereinafter called "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts are held and firmly bound to the City of Woburn, Massachusetts, hereinafter called "Owner," in the penal sum of _____ Dollars and _____ Cents ($_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal has entered into a certain contract with the Owner (the "Contract"), dated the _____ day of _____, 20____, which Contract is by reference made a part hereof, for the construction described as follows:

IFB 18-10 CLAPP SCHOOL DEMOLITION

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this Contract or to the work or to the specifications. The Surety Company providing the bond shall have a rating of A or better within the Best Key Rating Guide.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ ( ) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20___.

ATTEST:

_____ Principal	_____ Witness as to Principal Signature
By_____ Signature	_____ Name and Title
_____ Name and Title	_____ Address
_____ Address	_____ City and State
_____ City and State	(SEAL)

ATTEST:

_____ Surety	_____ Witness as to Surety Signature
By_____ Attorney-in-Fact Signature	_____ Name and Title
_____ Name and Title	_____ Address
_____ Address	_____ City and State
_____ City and State	(SEAL)

END OF SECTION

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 Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

_____

AMERICAN CONSULTING ENGINEERS COUNCIL

_____

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General Contractors of America

Construction Specifications Institute

These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2) (1996 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC User's Guide (No. 1910-50). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1996 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the 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. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

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*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) 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.A 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. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *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.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *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 in connection with the Work.

24. *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.

25. *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.

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

27. *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.

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *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.

** 30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

31. *Partial Utilization*--Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

32. *PCBs*--Polychlorinated biphenyls.

33. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

34. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.

35. *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.

36. *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.

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

38. *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.

39. *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.

40. *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.

* 41. *Specifications*--~~That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.~~

42. *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.

** 43. *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.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

45. *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 any Subcontractor.

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

47. *Unit Price Work*--Work to be paid for on the basis of unit prices.

48. *Work*--The entire completed 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.

49. *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.

50. *Written Amendment*--A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

1.02 Terminology

A. *Intent of Certain Terms or Adjectives*

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or 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 action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 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 9.10 or any other provision of the Contract Documents.

B. *Day*

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or 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).

D. *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.

E. Unless stated otherwise in the Contract Documents, words or phrases which 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

A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

2.02 Copies of Documents

A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed *

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

2.04 Starting the Work

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

2.05 Before Starting Construction

A. *CONTRACTOR's Review of Contract Documents:* 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 may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, 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 knew or reasonably should have known thereof.

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its 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 Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; 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.

* C. *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.~~

2.06 Preconstruction Conference

A. Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by 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.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules

A. Unless otherwise provided in the Contract Documents, at least ten 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.B. CONTRACTOR shall have an additional ten 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 any specified Milestones and 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 Shop Drawing and Sample 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 called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended 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, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees 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. 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 any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. 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; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known 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, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) 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: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

3.05 Reuse of Documents

A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER: (i) shall not 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 ENGINEER's Consultant, including electronic media editions; and (ii) shall not reuse any of 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 adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL 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, 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 of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general 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, ENGINEER, or any of ENGINEER's Consultants 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 at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so. **

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

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 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 in respect of 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 within the time and 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, OWNER, ENGINEER, and ENGINEER's Consultants 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.

4.04 Underground Facilities

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; 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:* Reference is made to the Supplementary Conditions for the identification of those* reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents. *

B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general 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, ENGINEER or any of ENGINEER's Consultants 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); 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.

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 to CONTRACTOR written notice: (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, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other 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.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other 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.F 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 are not intended to 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 CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, 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 current 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 must be accompanied by a certified copy of such agent's authority to act.

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 within 20 days thereafter substitute 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 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. ~~OWNER shall deliver to CONTRACTOR, with copies to each additional insured 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.~~

5.04 CONTRACTOR's Liability Insurance

* A. CONTRACTOR shall purchase and maintain such liability and other 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: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) 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 so required by this paragraph 5.04 to be purchased and maintained shall:

* 1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, 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, partners, employees, agents, and other 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 completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty 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);

6. 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

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and 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, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;~~

~~2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that~~

shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, 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, 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 additional insured to whom a certificate of insurance has been issued.

* B. OWNER shall purchase and maintain such boiler and machinery 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, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

* C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with 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 additional insured 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 paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. 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, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other 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 additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other 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, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other 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, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other 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 peril whether or not insured by OWNER; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other 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 insureds, 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 or Written Amendment.

* 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 2.05.C. 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, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

* B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work

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, and CONTRACTOR will not permit overtime work or the performance of Work on 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 General Requirements, 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 warranties and guarantees specifically called for 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. 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 (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

*

6.05 Substitutes and "Or-Equals"

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.

1. *"Or-Equal" Items:* If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, 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 that 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 procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first 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 shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not 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 work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also 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, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and 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 procedure for review by ENGINEER will be similar to that provided in subparagraph 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 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 either a Change Order for a substitute or 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 time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

F. *CONTRACTOR's Expense:* CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. 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 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 shall it 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 an additional insured 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, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 Patent Fees and Royalties

A. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees or agents, and other consultants 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. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 Laws and Regulations

A. CONTRACTOR shall give all notices and 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 primary 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 may be the subject of an

adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

** *6.10* Taxes

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

**6.11 Use of Site and Other Areas

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

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants 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 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, Written Amendments, 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. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. 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 ENGINEER's Consultant, 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). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

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

6.15 Hazard Communication Programs

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

6.16 Emergencies

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

6.17 Shop Drawings and Samples

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The 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.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, 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.

D. *Submittal Procedures*

1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

d. CONTRACTOR shall also have 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.

2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.

3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

E. *ENGINEER's Review*

* 1. ENGINEER will ~~timely~~ review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample 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 of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.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 approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. *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, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. 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.

B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;

2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;

4. use or occupancy of the Work or any part thereof by OWNER;

5. any acceptance by OWNER or any failure to do so;

6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;

7. any inspection, test, or approval by others; or

8. any correction of defective Work by OWNER.

6.20 Indemnification

* ~~A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, 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 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:~~

~~1. 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; and~~

~~2. is caused in whole or in part 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, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.~~

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees 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 Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them 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.~~

ARTICLE 7 - OTHER WORK

7.01 Related Work at Site

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let 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 and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, 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 their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

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

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 Promptly When Due

A. OWNER shall make payments to CONTRACTOR promptly 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 in respect of 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 in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

8.06 Insurance

* ~~A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.~~

8.07 Change Orders

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

8.08 Inspections, Tests, and Approvals

A. OWNER's responsibility in 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. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

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 and will not be changed without written consent of OWNER and ENGINEER.

*

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 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. 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 Clarifications and Interpretations

A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. 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, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefor as provided in paragraph 10.05.
**

9.05 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 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, as a result of a Field Order, a Claim may be made therefor as provided in paragraph 10.05.

9.06 Rejecting Defective Work

A. ENGINEER will have authority to disapprove or 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.

9.07 Shop Drawings, Change Orders and Payments

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 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.

9.09 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. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, 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. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 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 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

A. Without invalidating the Agreement 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 Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in paragraph 10.05.

10.02 Unauthorized Changes in the Work

A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

10.03 Execution of Change Orders

A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) 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 notice 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) is required by the provisions of any Bond to be given to a surety, 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 and Disputes

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter 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. Notice of the amount or extent

of the Claim, dispute, or other matter 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, dispute, or other matter). 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 Time 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).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; CASH 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 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 include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.~~

~~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 at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.~~

~~2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.~~

~~3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.~~

~~4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.~~

~~5. Supplemental costs including the following:~~

~~a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.~~

~~b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.~~

~~c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.~~

~~d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, 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, expressage, and similar petty cash items in connection with the Work.~~

~~i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.~~

~~j. When all the Work is performed on the basis of cost-plus, 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, 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.~~

~~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 and 11.01.B.~~

~~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 Cash 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 as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

1. the 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

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the 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.

B. 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. 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 9.08.

B. 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.

*

C. 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 any other item of Work; and

3. if 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 or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03); or

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

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee:* The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a 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 (or Milestones) may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) 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 (or Milestones) covered by a Change Order or of any Claim for* an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 Delays Beyond CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) 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.

12.04 Delays Within CONTRACTOR's Control

A. The Contract Times (or Milestones) will not be extended due to 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.

12.05 Delays Beyond OWNER's and CONTRACTOR's Control

A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 Delay Damages

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or

2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

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. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

A. OWNER, ENGINEER, ENGINEER's Consultants, 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, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site 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 said paragraph 13.04.B; 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, it must, if requested by ENGINEER, be uncovered for observation.

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such 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. If, however, such 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 Milestones), 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. 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).

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 Laws or Regulations or 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: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) 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. If CONTRACTOR does not promptly comply with the terms of such 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, and 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.~~

B. 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 or by Written Amendment.

C. 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.

D. 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 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 and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make

a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

A. *Applications for Payments*

1. At least 20 days before the date established 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 on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to 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: (i) 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 (ii) that 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 to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident

thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or 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 referred to 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 Written Amendment or Change Orders;

c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or

d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

C. *Payment Becomes Due*

*

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

**

D. *Reduction in Payment*

1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

c. there are other items entitling OWNER to a set-off against the amount recommended; or

d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must 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 corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined 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.

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. Promptly thereafter, 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. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and 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. 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.

B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.05 Partial Utilization

A. Use by OWNER at OWNER's option of 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, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. 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. 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.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

14.06 Final Inspection

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

14.07 Final Payment

A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) 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 or OWNER's property might in any way be responsible 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. *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 will become due and, when due, 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 and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are 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 allowed 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 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 the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equip-

ment, 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), 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 finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. 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.

C. 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.

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, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for 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. for 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. for 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. for 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, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after it is submitted, or 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. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after it is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

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 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 if 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, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations

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

17.05 Controlling Law

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

***** ******

SECTION 00800

SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS

AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 edition) and other provisions of the Contract Documents as

indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1. DEFINITIONS AND TERMINOLOGY

Add the following language at the beginning of definition 1.01 A.12 entitled "Contract Documents" in the General Conditions:

> "The Advertisement for Bids, Instructions to Bidders, State Regulations, ..."

Delete the words "The individual or entity named as such in the Agreement" in 1.01.A.19, “Engineer”, and insert the following in their place:

> "The individual or entity duly appointed by the Owner to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly appointed representatives."

Delete the words "and who is identified as such in the Supplementary Conditions" at the end of definition 1.01 A.20, entitled "ENGINEER'S Consultant."

Delete definition 1.01 A.41 entitled "Specifications" in the General Conditions in its entirety and insert the following in its place:

> "Sections included under Division 1 through Division 13 of the Contract Documents."

ARTICLE 2. PRELIMINARY MATTERS

SC-2.02

Delete paragraph 2.02A of the General Conditions in its entirety.

SC-2.03

Add paragraph 2.03B:

Notwithstanding the time limitations provided in paragraph 2.03A, the OWNER may desire to commence the Contract Times later than the sixtieth day after the bid opening. The OWNER and CONTRACTOR, upon mutual agreement, may extend the commencement of the Contract Times to any date that they elect. OWNER must obtain CONTRACTOR’s approval for extending the time beyond the dates/times stated in the Contract Documents.

SC-2.05

Delete paragraph 2.05C of the General Conditions in its entirety and insert the following in its place:

“C. Evidence of Insurance: CONTRACTOR shall deliver to OWNER, with a copy to the ENGINEER, Certificates of Insurance within 10 days after receipt of the notice of the acceptance of bid (and other evidence requested by OWNER) which CONTRACTOR is required to purchase and

maintain in accordance with the requirements of Article 5."

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01

Add the following sentence at the end of Paragraph 3.01A of the General Conditions:

> "...by all. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion."

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

SC-4.02

Delete the term "Supplementary Conditions" of paragraph 4.02 A of the General Conditions and replace it with "Contract Documents".

SC-4.04

Change "of" to "or" on line 6 of paragraph 4.04 B.2 of the General Conditions.

Delete the following words from lines 8 and 9 of paragraph 4.04 B.2 of the General Conditions:

> "...or not shown or indicated with reasonable accuracy..."

SC-4.05

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

"B. ENGINEER may check the lines, elevations and reference marks set by CONTRACTOR, and CONTRACTOR shall correct any errors disclosed by such check. Such a check shall

not be considered as approval of CONTRACTOR's work and shall not relieve CONTRACTOR of the responsibility for construction of the entire Work in accordance with the Contract Documents. CONTRACTOR shall furnish personnel to assist ENGINEER in checking lines and grades."

SC-4.06

Delete the term Supplementary Conditions in paragraph 4.06A of the General Conditions and replace it with "Contract Documents".

Add the following sentences at the end of paragraph 4.06A of the General Conditions:

> "...Contract Documents. Responsibilities of the CONTRACTOR with regard to removal and disposal of hazardous materials and substances on the project are described in detail in these Contract Documents. The CONTRACTOR, who may act as OWNER'S agent, and all SUBCONTRACTORS are responsible to transport all hazardous materials and to handle and dispose of all such material in accordance with local, state and federal regulations and will ensure proper material disposal at a facility licensed to receive such material."

ARTICLE 5. BONDS AND INSURANCE

NOTICE TO CONTRACTOR:

1. Proof of Insurance coverage shall be furnished to the OWNER in accordance with the schedule for submittal of Bonds and Agreements.

2. Additionally refer to Article 2. PRELIMINARY MATTERS, Paragraph SC-2.05.C

SC-5.01

Insert these sentences following SC-5.01.A: The Surety Company providing the bonds shall have a rating of A or better within the Best Key Rating Guide and be licensed by the **Massachusetts Division of Insurance.** The CONTRACTOR shall pay the premiums for such Bonds.

SC-5.03

Delete the second sentence in paragraph 5.03A of the General Conditions, which begins "OWNER shall deliver to...."

SC-5.04

The limits of liability for the insurance required by paragraph 5.04A of the General Conditions shall provide coverage for not less than the following amounts or greater where required by law:

5.04 A.1 and 5.04 A.2 Workers' Compensation.

(1)	Worker's Compensation per	Statutory Requirements
(2)	Coverage B - Employer's Liability	$100,000/$500,000/$100,000

5.04 A.3, 5.04 A.4 and 5.04 A.5 Commercial General Liability Limits shall include coverage for Independent Contractors (also known as Owners and Contractors Protective Liability), explosion, collapse and underground hazard coverage (XCU), broad form property damage, blanket contractual liability and products/completed operations. The general aggregate limits shall be endorsed so that they respond on a per project and per location basis.

Limits:

$1,000,000 each occurrence

$2,000,000 general aggregate

$2,000,000 products/completed operations aggregate

For this project, the Contractor shall be insured for claims arising from pollution conditions either as an endorsement to the commercial general liability insurance policy or by providing a separate Contractor's Pollution Liability insurance policy for limits of at least:

$2,000,000 each occurrence and $2,000,000 in the aggregate

5.04 A.6 Automobile Liability for owned, hired and non-owned vehicles:

(1)	Bodily injury:	$1,000,000	Combined single limit
(2)	Property damage	$1,000,000	Combined single limit

Revise the beginning of paragraph 5.04.B.1 to read as follows:

"with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.5 inclusive and paragraph 5.04.C, include as additional insureds…"

Delete paragraph 5.04.B.5 in its entirety and insert the following in its place:

"5. contains a provision that notice of cancellation of insurance be delivered in accordance with policy provisions. In addition, the CONTRACTOR and/or its insurance broker/agent shall immediately notify the OWNER and ENGINEER should any insurance coverage be cancelled. The CONTRACTOR shall immediately stop work on the Project and shall not resume work until the CONTRACTOR provides evidence, to the OWNER and ENGINEER, in the form of an acceptable insurance certificate, of new insurance coverage that replaces all cancelled coverage that is required for the Project."

Add two new paragraphs immediately after paragraph 5.04B of the General Conditions which are to read as follows:

"C. The CONTRACTOR shall also provide:

1. CONTRACTOR shall, as a minimum, purchase and maintain excess liability insurance in the umbrella form with a combined single limit of not less than $5,000,000 per occurrence and in the aggregate. Evidence of such excess liability shall be delivered to OWNER in accordance with paragraph 2.05C in the form of a

certificate indicating the policy numbers and limits of liability of all underlying insurance.

A. General Liability, Workers' Compensation, Automobile Liability and Umbrella Liability Policies will contain waivers of subrogation in favor of the Engineer and Owner.

2. If the aggregate limits of liability indicated in CONTRACTOR' insurance provided in accordance with paragraphs 5.03 and 5.04 are not sufficient to cover all claims for damages arising from his operations under this Contract and from any other work performed by him or if the commercial general liability insurance policy of insurance does not provide that the general aggregate limits apply on a per project and per location basis, CONTRACTOR shall have the policy amended so that the aggregate limits of liability required by this Contract will be available to cover all claims for damages due to operations under this Contract."

SC-5.05

Delete paragraph 5.05 of the General Conditions in its entirety.

SC-5.06

Delete Paragraph 5.06 A of the General Conditions in its entirety.

Delete paragraph 5.06B of the General Conditions in its entirety.

Delete Paragraph 5.06C of the General Conditions in its entirety.

Delete paragraph 5.06D of the General Conditions in its entirety.

Delete paragraph 5.06E of the General Conditions in its entirety.

SC-5.07

Amend the last sentence of paragraph 5.07A of the General Conditions by striking out the words "held by OWNER as trustee or." As so amended, paragraph 5.07A remains in effect.

SC-5.08

Delete paragraph 5.08A of the General Conditions in its entirety.

Delete paragraph 5.08B of the General Conditions in its entirety.

SC-5.09

Delete paragraph 5.09A of the General Conditions in its entirety and insert the following in its place:

"A. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with this Article 5 on the basis of its not complying with the Contract Documents, OWNER will notify CONTRACTOR in writing thereof within thirty days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.05C. CONTRACTOR will provide such additional information in respect of insurance provided by him as OWNER may reasonably request."

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

SC-6.01

Delete paragraph 6.01B of the General Conditions in its entirety and replace with the following:

"B. At the site of the Work the CONTRACTOR shall employ a full-time construction superintendent or foreman who shall have full authority to act for the CONTRACTOR. It is understood that such representative shall be acceptable to the ENGINEER and shall be one who will be continued in the capacity for the particular job involved unless the representative ceases to be on the CONTRACTOR's payroll. If at any time during the Work the representative is deemed by the ENGINEER to be no longer acceptable, the representative shall be promptly replaced by the CONTRACTOR. All communications to the superintendent or foreman shall be as binding as if given to the CONTRACTOR."

SC-6.04

Add the following paragraph after paragraph 6.04A.2 of the General Conditions:

"B. The CONTRACTOR's resident superintendent shall attend bi-weekly progress meetings at the site of the work with the ENGINEER and others as appropriate to review schedule status and such other pertinent subjects as may be listed on the agenda by the ENGINEER."

SC-6.05

Revise the second sentence of Paragraph A to read as follows:

"Unless the specification indicates that a proprietary item is called for, 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, and in accordance with MGL c.30, s.39M."

SC-6.17

In paragraph 6.17 E.1 of the General Conditions, delete the word "timely" from the first line.

SC-6.20

Delete paragraph 6.20A of the General Conditions in its entirety and replace with the following:

"A. To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold

harmless the OWNER, the ENGINEER, ENGINEER's consultants, and any of their officers, directors, employees, agents, affiliates, subsidiaries and partners from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting therefrom, but only to the extent caused in whole or in part by acts or omissions of the CONTRACTOR, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall apply to any such claims, damages, losses and expenses which arise and/or are incurred by any person or entity either during the performance of the Work and/or after completion of construction. Nothing in this paragraph shall be construed to negate, abridge, or reduce other rights or obligations of indemnity or contribution which would otherwise exist as to a party or person indemnified hereunder. CONTRACTOR hereby assumes the responsibility and liability for injury to or death of any and all persons, including the CONTRACTOR's employees, and for any and all damage to property caused by, resulting from, or arising out of any act, omission or neglect on the part of the CONTRACTOR, or of any Subcontractor or of anyone directly or indirectly employed by any of them or of anyone for whose acts, any of them may be liable. The Contractor hereby acknowledges its obligation under the foregoing paragraph to indemnify the Engineer and Owner against judgments suffered because of the contractor's work and to assume the cost of defending the Engineer and Owner against claims as described in the foregoing paragraph."

Delete paragraph 6.20C of the General Conditions in its entirety.

ARTICLE 8. OWNER'S RESPONSIBILITIES

SC-8.02

Delete the phrase "to whom the CONTRACTOR makes no reasonable objection."

SC-8.06

Delete paragraph 8.06A of the General Conditions in its entirety.

SC-8.09

Insert the following after the first sentence:

"However, the OWNER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

ARTICLE 9. ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.01

Add a new paragraph 9.01B after paragraph 9.01A of the General Conditions, which is to read as follows:

"B. Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the ENGINEER and CONTRACTOR, (2) between the OWNER and a Subcontractor or Subcontractors, or (3) between any person or entities other than the OWNER and CONTRACTOR. The ENGINEER shall, however, be entitled to performance and enforcement of obligations under the CONTRACT DOCUMENTS intended to facilitate performance of the ENGINEER'S duties."

SC-9.10

Insert the following after the first sentence on paragraph 9.10B:

"“However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”

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

Delete Article 11 of the General Conditions in its entirety and replace with the following:

"A. The unit price of an item of Unit Price work shall be subject to reevaluation and adjustment under the following conditions:

(1) If the total extended bid price [Estimated Quantity times the Bid Unit Price] of a particular item of Unit Price Work amounts to 5 percent or more of the Original Contract Price and the variation in the quantity of the particular item of Unit Price Work performed by CONTRACTOR differs by more than 15 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, 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. If OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price, OWNER shall be entitled to an adjustment in the unit price in an amount determined by the ENGINEER. ENGINEER shall not be liable in connection with any determination relating to adjustments which is rendered in good faith."

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

SC-12.01

Delete paragraph 12.01 in its entirety.

SC-12.06

Add the following new paragraphs after paragraph 12.06 of the General Conditions:

“12.07 Liquidated Damages:

A. If the CONTRACTOR shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the OWNER, then the CONTRACTOR does hereby agree, as a part consideration for the awarding of this Contract, to pay to the OWNER the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work. Such damages may be retained from time to time by the OWNER from progress payments or any amounts owing to the CONTRACTOR, or otherwise collected.

B. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain, and said amount is agreed to be the amount of damages which the OWNER would sustain and said amount shall be retained from time to time by the OWNER from current periodical estimates.

C. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided that the CONTRACTOR shall not be charged with liquidated damages of any excess cost when the OWNER determines that the CONTRACTOR is without fault and the CONTRACTOR's reasons for the time extension are acceptable to the OWNER; Provided, further, that the CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

1) to any preference, priority or allocation order duly issued by the Government;

2) to unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

3) to any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections C (1) and C (2) above;

D. Provided, further, that the CONTRACTOR shall, within thirty (30) days from the beginning of such delay, unless the OWNER shall grant a further period of time prior to the date of final settlement of the Contract, notify the OWNER, in writing, of the causes of the delay, who

shall ascertain the facts and extent of the delay and notify the CONTRACTOR within a reasonable time of its decision in the matter."

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

SC-13.07

Delete paragraph 13.07A of the General Conditions and insert the following in its place:

"A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or 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, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) correct such defective work, or, if it has been rejected by OWNER, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others therefrom. If CONTRACTOR does not begin the repairs within ten (10) days of receipt of written notification and promptly comply with the terms of OWNER's written instructions, or in an emergency where delay would cause serious risk, loss or damage, OWNER may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR."

SC-13.09

Revise paragraph 13.09A of the General Conditions

A. Delete the word "seven" and replace it with the word "ten" so that it reads "after ten days written notice to CONTRACTOR."

ARTICLE 14. PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02

Delete paragraph 14.02A.3 and insert the following in its place:

"3. Retainage with respect to progress payments will be five percent or, if stipulated, the maximum allowed by law."

Add Paragraph 4. to read as follows:

"4. The CONTRACTOR shall submit Weekly Payroll Records Report and Statement of Compliance verifying compliance with the Minimum Prevailing Wage Law, MGL ch. 149, Sections 26-27H. These Statements of Compliance shall be submitted as a condition of

payment for work performed during the period the reports apply."

SC-14.03

Delete paragraph 14.03A in its entirety and insert the following in its place:

"A. CONTRACTOR warrants and guarantees that title to all work, material and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than at the time of Application for Payment free and clear of all liens. CONTRACTOR shall provide written transfer of title and a certified paid invoice provided by the supplier."

ARTICLE 15. SUSPENSION OF WORK AND TERMINATION

SC-15.02

Add a new paragraph immediately after paragraph 15.02 A.4 of the General Conditions which is to read as follows:

"5. If the Work to be done under this Contract shall be abandoned, or if this Contract or any part thereof shall be sublet, without the previous written consent of OWNER, or if the contract or any claim thereunder shall be assigned by CONTRACTOR otherwise than as herein specified;"

ARTICLE 17. MISCELLANEOUS

SC-17.06, 17.07, 17.08, 17.09

Add the following new paragraphs after paragraph 17.05 of the General Conditions:

"17.06 Assignment:

A. The CONTRACTOR shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder until thirty (30) days prior notice in writing has been given to the OWNER of the intention to assign, which notice shall state the identity and address of the prospective assignee. No assignment shall be made without the OWNER's prior written consent. Such consent shall not be unreasonably withheld. In case the CONTRACTOR assigns all or any part of the moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the CONTRACTOR shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this Contract."

17.07 Liability

It is understood and agreed that members of the OWNER or the ENGINEER or any agent or employees of the OWNER signing this Agreement shall not be personally liable hereunder for any action incurred in connection with this Agreement.

17.08 State Statutes and Regulations

See Section 00830 for further modifications of the General Conditions due to state statutes and regulations.

17.09 Severability

If any provision of this Agreement shall be invalid or unenforceable to any extent or in any application, then the remainder of this Agreement and of such terms and conditions, except to such extent or in such application, shall not be affected thereby, and each and every term and condition of this Agreement shall be valid and enforced to the fullest extent and in the broadest application permitted by law."

17.10 Special Requirements for Hazardous Waste Contracts

This project is subject to all of the Safety and Health Regulations (CFR 29 Parts 1926, and all subsequent amendments as promulgated by the U.S. Department of Labor on June 24, 1974), and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulation for the Prevention of Accidents in Construction Operations Chapter 454 CMR 10.00 et. seq." Contractor shall be familiar with these requirements. This project is also subject to OSHA's regulations CFR 29 Part 1910.120 regarding Hazardous Waste Operations and Emergency Response.

1. The Contractor shall submit a complete Health and Safety Plan to the Engineer prior to initiating work at the site. The Health and Safety plan shall be prepared by a Certified Industrial Hygienist and shall contain at a minimum but not be limited to, a description of an on-site contamination reduction zone and decontamination procedures and a description of the on-site exclusion zone where the minimum level of personnel protection shall be level "C."

2. The Contractor shall provide verification to the Engineer that all its employees who participate in activities with the potential for exposure to hazardous substances have completed a training program which compiles with OSHA Regulations 29 CFR 1910.120.

3. Contractor's responsibility shall include the obligation to make certain that all vehicles, equipment, machinery, tools, appliances, protective clothing and devices leaving the site are free of Hazardous Materials and Substances. Transport vehicles carrying Hazardous Materials and Substances shall be exempt from this requirement only to the extent of the material-carrying portions of the vehicle.

4. The Contractor shall designate a representative who shall be competent to enforce environmental site safety requirements with respect to safety of persons and property, both on-site and off-site from pollution or contamination injuries or damages. This person shall have the right to limit access to the site to persons who acknowledge and agree to conform to the rules of the site concerning environmental safety and to carry out the instructions of the site safety supervisor as and when given.

5. The Contractor shall carry insurance to cover claims arising out of services related to

hazardous waste, with limits as specified under 5.04A, SECTION 00800, SUPPLEMENTARY CONDITIONS."

END OF SECTION

SECTION 00815

ADDITIONAL SUPPLEMENTARY GENERAL CONDITIONS
AMENDING THE STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT PREPARED BY ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE
(EJCDC NO. 1910-8, 1996 EDITION)

IFB 18-10 CLAPP SCHOOL DEMOLITION

(Sub) Paragraph No.	
2.05A	Delete the last clause following the word "thereby;" and substitute the following: The CONTRACTOR shall be liable to OWNER and/or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents if CONTRACTOR knew or reasonably should have known thereof.
3.02A.1	Delete the phrase starting "shall mean" through the end of this sentence and substitute the following: Shall mean the standard, specification, manual, code, or Laws or Regulations in effect and applicable at the time in question, except as may be otherwise specifically stated in the Contract Documents.
3.03A.1	Delete the last phrase starting with "provided," and substitute the following: CONTRACTOR shall be liable to OWNER and/or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy if CONTRACTOR knew or reasonably should have known thereof.
4.01A.	Delete the last sentence.
4.01B	Delete this subparagraph in its entirety.
4.03C.3	Delete this subparagraph in its entirety.

4.06C	Add the following to the first sentence: "unless CONTRACTOR caused or contributed to such Hazardous Environmental Condition."
4.06D	Delete the last sentence.
4.06E	Delete the last sentence.
4.06F	Delete the second sentence.
4.06G	Delete this subparagraph in its entirety.
4.06H	Delete the last sentence.
5.04B.7	Delete the phrase "and any insurance coverage written on a claims-made basis,".
5.04B.8	Insert the following subparagraph: 8. "all coverage shall be written on an occurrence basis.
5.07A	Delete all text after the first sentence.
5.07B	Delete this subparagraph in its entirety.
5.07C	Delete this subparagraph in its entirety.
5.10	Delete this paragraph in its entirety and substitute the following: OWNER may occupy or use a portion of the Work prior to Substantial Completion.
6.05A	Add the following to the second sentence ", and in accordance with G.L. c.30, §39M."
6.06F	Insert the following at the beginning of this subparagraph: "Except as required by and indicated in the specifications and contract documents pursuant to G.L. c.149, §44F,"
6.07	Delete the second sentence.
6.09C	Delete the last sentence.
6.13B	Delete the text in parentheses at the end of the third sentence.

7.01.A.2	Delete this subparagraph in its entirety.
7.01.B	Delete the last sentence.
7.02	Delete this paragraph in it entirety.
8.02	Delete the phrase “to whom CONTRACTOR makes no reasonable objection.”
8.07	Delete this paragraph in its entirety.
8.09	Insert the following after the first sentence: “However, the OWNER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”
9.02B	Insert the following at the end of this subparagraph: “However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”
9.03	Delete the last sentence.
9.04	Delete the last sentence.
9.05	Delete the last sentence.
9.08	Delete the final phrase “subject to the provisions of paragraph 10.05.”
9.09B	Delete the last sentence.
9.10B	Insert the following after the first sentence: “However, the ENGINEER shall have the right to direct the CONTRACTOR to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto.”
10.03A.3	Delete this subparagraph in its entirety.
10.05B.2	Delete the phrase “or within 60 days after Substantial Completion, whichever is later.”

12.06A.3	Add the following subparagraph: 3. Delays caused by or within the control of the OWNER. In such event, the CONTRACTOR’S sole remedy shall be an extension of the Contract Time.
12.06B	Delete this subparagraph in its entirety.
13.01	Delete the word “Prompt” at the beginning of the subparagraph.
13.03F	Delete the balance of this subparagraph after the words “CONTRACTOR’s expense.”
13.04B	Delete the last three sentences.
13.08	Delete the fourth sentence.
13.09C	Delete the second sentence.
14.02A.1	Delete the first phrase and substitute the following: “on a monthly basis and in accordance with G.L. c.30, §39G,”.
14.02C	Delete this subparagraph and substitute the following: Payment shall be made in accordance with G.L. c.30, §39G.
14.02D.2	Delete the word “immediate.”
14.02D.3	Delete this subparagraph in its entirety.
14.04	Delete the sixth sentence and substitute the following: “OWNER shall review the tentative certificate and make written objection to ENGINEER as to any provisions of the certificate or attached list.” Delete the phrase “within 14 days after submission of the tentative certificate to OWNER” in the seventh sentence. Delete the phrase “within said 14 days” in the eighth sentence. Delete the last sentence.
14.05	Delete the phrase “subject to the following conditions” at the end of the first sentence and delete subparagraphs 1 and 2 in their entirety.

14.07C Delete this subparagraph in its entirety and substitute the following:

Final payment shall be made in accordance with G.L. c.30, §39G.

14.09A.1 Delete this subparagraph in its entirety.

15.03A Delete the phrase "including fair and reasonable sums for overhead and profit on such Work;" in subparagraph 1 and the phrase "plus fair and reasonable sums for overhead and profit on such expenses" in subparagraph 2; and delete subparagraphs 3 and 4 in their entirety.

15.04 Delete the last sentence.

END OF SECTION

SECTION 00830

STATE STATUTES AND REGULATIONS
COMMONWEALTH OF MASSACHUSETTS

A. REVISIONS TO GENERAL CONDITIONS

1. Definitions
2. Subsurface Conditions Found Different
3. Subcontracting
4. Permits
5. Contractor Records
6. Massachusetts Sales and Use Tax
7. Clarifications and Interpretations
8. Change of Contract Price
9. Payments
10. Suspension of Work and Termination
11. Labor Classification and Minimum Wage Rates

B. OTHER REGULATORY REQUIREMENTS

1. Working Hours
2. DEP Community Sound Level Criteria
3. OSHA 10 Hour Certification Requirements

ATTACHMENT A - Wage Rates

ATTACHMENT B

Excerpts from Chapter 149, Chapter 30 and Chapter 82 of the Massachusetts General Law

ATTACHMENT C

Change Orders

A. REVISIONS TO GENERAL CONDITIONS:

1. Definitions

The term "AWARDING AUTHORITY," as used herein, shall be considered to be synonymous with the term "OWNER," described in definition 1.01 A.30.

Delete definition 1.01 A.43 entitled "Substantial Completion" in the General Conditions in its entirety and insert the following in its place:

"Substantial Completion shall be interpreted in accordance with Massachusetts General Law Chapter 30, Section 39G or 39K as appropriate."

2. Subsurface Conditions Found Different

Add the following sentence to the end of paragraph 4.03A of the General Conditions:

"...to do so. Adjustments resulting from subsurface or latent physical conditions will be in accordance with Massachusetts General Law Chapter 30, Section 39N."

3. Subcontracting

Add the following language at the end of paragraph 6.06F of the General Conditions:

"Except as required otherwise by Massachusetts General Law Chapter 149, Section 44F, for Work governed by Chapter 149, sections 44A through 44H.

4. Permits

Delete paragraph 6.08A of the General Conditions in its entirety and insert the following in its place:

"A. Unless otherwise provided for in Section 00890 PERMITS, the AWARDING AUTHORITY shall be responsible for identifying and obtaining all federal, state, and local permits required by the nature and location of construction, including but not limited to railroad permits, building construction permits, and permits for street and highway cuts and openings. CONTRACTOR shall be responsible for obtaining all permits required of its equipment, work force, or particular operations (such as blasting) in the performance of the Work and not otherwise specified to be obtained by the AWARDING AUTHORITY. These permit fees shall be paid by CONTRACTOR. 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."

5. Contractor Records

Add a new paragraph immediately after paragraph 6.09C of the General Conditions, which is to read as follows:
"D. The CONTRACTOR shall comply with all applicable provisions Chapter 30, Section 39R of the Massachusetts General Laws regarding, CONTRACTOR's records."

6. Massachusetts Sales and Use Tax

Add the following paragraph after paragraph 6.10A of the General Conditions:

"B. The materials and supplies to be used by the CONTRACTOR in the Work of this Contract are exempt from the Sales and Use Tax of the Commonwealth of Massachusetts. The AWARDING AUTHORITY tax exemption certificate number will be furnished to the CONTRACTOR."

7. Clarifications and Interpretations

Add the following language at the end of paragraph 9.04A of the General Conditions:

"The ENGINEER'S interpretation will be made in accordance with the requirements of Massachusetts General Law Chapter 30, Section 39P."

8. Change of Contract Price

Delete paragraphs 11.01, 11.02 and 12.01 of the General Conditions, having to do with Change of Contract Price. Changes in contract price will be governed by the section called "Change Orders," in Attachment D, Section 00830 and Article 11 in the Supplementary Conditions.

9. Payments

Delete paragraph 14.02B.1 of the General Conditions in its entirety and insert the following in its place:

“1. Progress Payments will be made in accordance with Massachusetts General Law Chapter 30, Section 39G, or 39K, as applicable.”

Add the following new paragraph following paragraph 14.02C.1 of the General Conditions:

“2. The CONTRACTOR shall make payments to Subcontractors in accordance with the requirements of Massachusetts General Law Chapter 30, Section 39F.”

Delete paragraph 14.07B of the General Conditions in its entirety and insert the following in its place:

"1. If, on the basis of the ENGINEER's observation of the Work during construction and final inspection and, upon the ENGINEER's review of the final Application for Payment and accompanying documentation, the ENGINEER is satisfied that the Work has been completed and that the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will indicate in writing its recommendation of payment and present the Application to the AWARDING AUTHORITY for payment. Thereupon the ENGINEER will give written notice to the AWARDING AUTHORITY and the CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, the ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment. In such case the CONTRACTOR shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, the AWARDING AUTHORITY shall in accordance with the applicable Massachusetts General Law, pay the CONTRACTOR the amount recommended by the ENGINEER."

10. Suspension of Work and Termination

Delete paragraph 15.01A of the General Conditions in its entirety and insert the following in its place:

"A. The AWARDING AUTHORITY may order, at any time and without cause, the CONTRACTOR to suspend or delay the Work in accordance with Massachusetts General Law Chapter 30, Section 39O."

11. Labor Classifications and Minimum Wage Rates

Add the following paragraphs under the heading "Wage Rates" after paragraph 17.09 of the Supplementary Conditions:

"17.11 Wage Rates

A. Minimum Wage Rates as determined by the Commissioner of the Division of Occupational Safety of the Executive Office of Labor and Workforce Development under the provisions of Massachusetts General Laws Chapter 149, Sections 26-27D apply to this project. A copy of the wage schedule is included in Attachment A of Section 00830. If, after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the Commissioner. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The CONTRACTOR shall notify the AWARDING AUTHORITY of its intention to employ persons in trades or occupations not classified in the wage determinations as soon as possible in order to allow sufficient time for the

AWARDING AUTHORITY to obtain approved rates for such trades or occupations.

B. The schedule of wages referred to above are minimum rates only, and the AWARDING AUTHORITY will not consider any claims for additional compensation made by CONTRACTOR because of payment by the CONTRACTOR of any wage rate in excess of the applicable rate contained in the Contract. All construction associated with this Contract will be governed by Heavy and Highway Rates.

C. The said schedule of wages shall continue to be the minimum rates to be paid during the life of this Agreement, except in the case of the duration of this Agreement exceeding one year, when the Contractor will be responsible for requesting and obtaining updated minimum wage rates from the Owner, and a legible copy of said schedule shall be kept posted in a conspicuous place at the site of the Work.

D. CONTRACTOR and subcontractors shall submit a copy of weekly payroll records to the AWARDING AUTHORITY and the AWARDING AUTHORITY shall retain the records for a minimum of three years."

B. OTHER REGULATORY REQUIREMENTS:

1. Working Hours

No laborer, workman, mechanic, foreman, or inspector, working within the Commonwealth, in the employ of the CONTRACTOR, subcontractor, or other person doing or contracting to do the whole or a part of the work contemplated by this 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.

2. DEP Community Sound Level Criteria

The Community Sound Level Criteria as established by the Commonwealth of Massachusetts' Department of Environmental Protection (DEP) must be conformed to prior to the AWARDING AUTHORITY's acceptance of the structure. The following sound level criteria must be met at the construction site:

A. The increase in the broadband noise level shall not be in excess of ten (10) dB(A) above ambient at the station boundary. The ambient level is defined as the A-weighted noise level that is exceeded ninety (90) percent of the time measured during the period in question.

B. The primary noise source(s) shall not produce a puretone condition. Puretone is any given octave band center frequency that exceeds the two adjacent center frequencies by three (3) or more decibels.

3. OSHA 10 Hour Certification Requirements

All employees of the Contractor who work at the jobsite must have received OSHA 10 Hour safety training, and have proof, at the jobsite, of being certified by OSHA as having received the training. The Contractor must provide written proof (copy of OSHA card each employee is required to carry is preferred) of this certification for every employee with submission of the first certified payroll report for each employee.

END OF SECTION

SECTION 00830

ATTACHMENT A

PREVAILING WAGE RATES

PREVAILING WAGE RATES

OF THE

STATE OF MASSACHUSETTS

CHARLES D. BAKER
Governor

KARYN E. POLITO
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

ROSALIN ACOSTA
Secretary

WILLIAM D. MCKINNEY
Director

Awarding Authority: City of Woburn

Contract Number: **City/Town:** WOBURN

Description of Work: Abatement and demolition of a 16600 square foot former Clapp Elementary School.

Job Location: 40 Hudson Street, Woburn Massachusetts

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- 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 from the Department of Labor Standards ("DLS") 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 any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person 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 DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
- 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. Awarding authorities are required to request these updates 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, 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. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F "rental of equipment" contracts.
- Every contractor or subcontractor which performs construction work on the project is required to 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. A sample of a payroll reporting form may be obtained at 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.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- 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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.25	$10.91	$10.89	$0.00	$55.05
(3 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.32	$10.91	$10.89	$0.00	$55.12
(4 & 5 AXLE) DRIVER - EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.44	$10.91	$10.89	$0.00	$55.24
ADS/SUBMERSIBLE PILOT *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$92.97	$9.90	$21.15	$0.00	$124.02
	08/01/2018	$97.80	$9.90	$21.15	$0.00	$128.85
	08/01/2019	$102.78	$9.90	$21.15	$0.00	$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR *LABORERS - ZONE 1*	12/01/2017	$38.25	$7.70	$14.75	$0.00	$60.70
	06/01/2018	$39.20	$7.70	$14.75	$0.00	$61.65
	12/01/2018	$40.15	$7.70	$14.75	$0.00	$62.60
	06/01/2019	$41.15	$7.70	$14.75	$0.00	$63.60
	12/01/2019	$42.15	$7.70	$14.75	$0.00	$64.60
	06/01/2020	$43.14	$7.70	$14.75	$0.00	$65.59
	12/01/2020	$44.12	$7.70	$14.75	$0.00	$66.57
	06/01/2021	$45.14	$7.70	$14.75	$0.00	$67.59
	12/01/2021	$46.15	$7.70	$14.75	$0.00	$68.60
For apprentice rates see "Apprentice- LABORER"						
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. *HEAT & FROST INSULATORS LOCAL 6 (BOSTON)*	12/01/2017	$35.90	$11.50	$7.10	$0.00	$54.50
	06/01/2018	$36.90	$11.50	$7.10	$0.00	$55.50
	12/01/2018	$37.90	$11.50	$7.10	$0.00	$56.50
	06/01/2019	$38.90	$11.50	$7.10	$0.00	$57.50
	12/01/2019	$39.90	$11.50	$7.10	$0.00	$58.50
	06/01/2020	$40.90	$11.50	$7.10	$0.00	$59.50
	12/01/2020	$41.90	$11.50	$7.10	$0.00	$60.50
ASPHALT RAKER *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BARCO-TYPE JUMPING TAMPER *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER *LABORERS - ZONE 1*	12/01/2017	$38.25	$7.70	$14.75	$0.00	$60.70
	06/01/2018	$39.20	$7.70	$14.75	$0.00	$61.65
	12/01/2018	$40.15	$7.70	$14.75	$0.00	$62.60
	06/01/2019	$41.15	$7.70	$14.75	$0.00	$63.60
	12/01/2019	$42.15	$7.70	$14.75	$0.00	$64.60
	06/01/2020	$43.14	$7.70	$14.75	$0.00	$65.59
	12/01/2020	$44.12	$7.70	$14.75	$0.00	$66.57
	06/01/2021	$45.14	$7.70	$14.75	$0.00	$67.59
	12/01/2021	$46.15	$7.70	$14.75	$0.00	$68.60
For apprentice rates see "Apprentice- LABORER"						
BOILER MAKER *BOILERMAKERS LOCAL 29*	01/01/2017	$42.92	$6.97	$16.21	$0.00	$66.10

Apprentice - *BOILERMAKER - Local 29*
Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	$27.90	$6.97	$10.54	$0.00	$45.41
2	65	$27.90	$6.97	$10.54	$0.00	$45.41
3	70	$30.04	$6.97	$11.35	$0.00	$48.36
4	75	$32.19	$6.97	$12.16	$0.00	$51.32
5	80	$34.34	$6.97	$12.97	$0.00	$54.28
6	85	$36.48	$6.97	$13.78	$0.00	$57.23
7	90	$38.63	$6.97	$14.59	$0.00	$60.19
8	95	$40.77	$6.97	$15.40	$0.00	$63.14

Notes:

Apprentice to Journeyworker Ratio:1:5

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) *BRICKLAYERS LOCAL 3 (WALTHAM)*	02/01/2018	$52.06	$10.75	$20.03	$0.00	$82.84
	08/01/2018	$53.41	$10.75	$20.16	$0.00	$84.32
	02/01/2019	$54.05	$10.75	$20.16	$0.00	$84.96
	08/01/2019	$55.40	$10.75	$20.30	$0.00	$86.45
	02/01/2020	$56.04	$10.75	$20.30	$0.00	$87.09
	08/01/2020	$57.39	$10.75	$20.45	$0.00	$88.59
	02/01/2021	$58.03	$10.75	$20.45	$0.00	$89.23
	08/01/2021	$59.43	$10.75	$20.61	$0.00	$90.79
	02/01/2022	$60.02	$10.75	$20.61	$0.00	$91.38

Apprentice - *BRICK/PLASTER/CEMENT MASON - Local 3 Waltham*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$26.03	$10.75	$20.03	$0.00	$56.81
2	60	$31.24	$10.75	$20.03	$0.00	$62.02
3	70	$36.44	$10.75	$20.03	$0.00	$67.22
4	80	$41.65	$10.75	$20.03	$0.00	$72.43
5	90	$46.85	$10.75	$20.03	$0.00	$77.63

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$26.71	$10.75	$20.16	$0.00	$57.62
2	60	$32.05	$10.75	$20.16	$0.00	$62.96
3	70	$37.39	$10.75	$20.16	$0.00	$68.30
4	80	$42.73	$10.75	$20.16	$0.00	$73.64
5	90	$48.07	$10.75	$20.16	$0.00	$78.98

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN *LABORERS - FOUNDATION AND MARINE*	12/01/2017	$38.60	$7.70	$14.95	$0.00	$61.25
	06/01/2018	$39.55	$7.70	$14.95	$0.00	$62.20
	12/01/2018	$40.50	$7.70	$14.95	$0.00	$63.15
	06/01/2019	$41.50	$7.70	$14.95	$0.00	$64.15
	12/01/2019	$42.50	$7.70	$14.95	$0.00	$65.15
	06/01/2020	$43.49	$7.70	$14.95	$0.00	$66.14
	12/01/2020	$44.47	$7.70	$14.95	$0.00	$67.12
	06/01/2021	$45.49	$7.70	$14.95	$0.00	$68.14
	12/01/2021	$46.50	$7.70	$14.95	$0.00	$69.15
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING LABORER *LABORERS - FOUNDATION AND MARINE*	12/01/2017	$37.45	$7.70	$14.95	$0.00	$60.10
	06/01/2018	$38.40	$7.70	$14.95	$0.00	$61.05
	12/01/2018	$39.35	$7.70	$14.95	$0.00	$62.00
	06/01/2019	$40.35	$7.70	$14.95	$0.00	$63.00
	12/01/2019	$41.35	$7.70	$14.95	$0.00	$64.00
	06/01/2020	$42.34	$7.70	$14.95	$0.00	$64.99
	12/01/2020	$43.32	$7.70	$14.95	$0.00	$65.97
	06/01/2021	$44.34	$7.70	$14.95	$0.00	$66.99
	12/01/2021	$45.35	$7.70	$14.95	$0.00	$68.00
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING TOP MAN *LABORERS - FOUNDATION AND MARINE*	12/01/2017	$37.45	$7.70	$14.95	$0.00	$60.10
	06/01/2018	$38.40	$7.70	$14.95	$0.00	$61.05
	12/01/2018	$39.35	$7.70	$14.95	$0.00	$62.00
	06/01/2019	$40.35	$7.70	$14.95	$0.00	$63.00
	12/01/2019	$41.35	$7.70	$14.95	$0.00	$64.00
	06/01/2020	$42.34	$7.70	$14.95	$0.00	$64.99
	12/01/2020	$43.32	$7.70	$14.95	$0.00	$65.97
	06/01/2021	$44.34	$7.70	$14.95	$0.00	$66.99
	12/01/2021	$45.35	$7.70	$14.95	$0.00	$68.00
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
CARPENTER *CARPENTERS -ZONE 2 (Eastern Massachusetts)*	03/01/2018	$40.28	$9.90	$17.50	$0.00	$67.68
	09/01/2018	$41.32	$9.90	$17.50	$0.00	$68.72
	03/01/2019	$42.35	$9.90	$17.50	$0.00	$69.75

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *CARPENTER - Zone 2 Eastern MA*

Effective Date - 03/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.14	$9.90	$1.73	$0.00	$31.77
2	60	$24.17	$9.90	$1.73	$0.00	$35.80
3	70	$28.20	$9.90	$12.31	$0.00	$50.41
4	75	$30.21	$9.90	$12.31	$0.00	$52.42
5	80	$32.22	$9.90	$14.04	$0.00	$56.16
6	80	$32.22	$9.90	$14.04	$0.00	$56.16
7	90	$36.25	$9.90	$15.77	$0.00	$61.92
8	90	$36.25	$9.90	$15.77	$0.00	$61.92

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.66	$9.90	$1.73	$0.00	$32.29
2	60	$24.79	$9.90	$1.73	$0.00	$36.42
3	70	$28.92	$9.90	$12.31	$0.00	$51.13
4	75	$30.99	$9.90	$12.31	$0.00	$53.20
5	80	$33.06	$9.90	$14.04	$0.00	$57.00
6	80	$33.06	$9.90	$14.04	$0.00	$57.00
7	90	$37.19	$9.90	$15.77	$0.00	$62.86
8	90	$37.19	$9.90	$15.77	$0.00	$62.86

Notes:
% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 $29.76/ 3&4 $35.45/ 5&6 $52.14/ 7&8 $57.89

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME *CARPENTERS -ZONE 2 (Wood Frame)*	10/01/2017	$26.25	$7.07	$7.86	$0.00	$41.18
	04/01/2018	$26.67	$7.07	$7.86	$0.00	$41.60
	10/01/2018	$27.09	$7.07	$7.86	$0.00	$42.02
	04/01/2019	$27.52	$7.07	$7.86	$0.00	$42.45
	10/01/2019	$27.95	$7.07	$7.86	$0.00	$42.88

As of 9/1/09 Carpentry work on wood-frame WEATHERIZATION projects shall be paid the WOOD FRAME CARPENTER rate.

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *CARPENTER (Wood Frame) - Zone 2*

Effective Date - 10/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$15.75	$7.07	$0.00	$0.00	$22.82
2	60	$15.75	$7.07	$0.00	$0.00	$22.82
3	65	$17.06	$7.07	$7.86	$0.00	$31.99
4	70	$18.38	$7.07	$7.86	$0.00	$33.31
5	75	$19.69	$7.07	$7.86	$0.00	$34.62
6	80	$21.00	$7.07	$7.86	$0.00	$35.93
7	85	$22.31	$7.07	$7.86	$0.00	$37.24
8	90	$23.63	$7.07	$7.86	$0.00	$38.56

Effective Date - 04/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$16.00	$7.07	$0.00	$0.00	$23.07
2	60	$16.00	$7.07	$0.00	$0.00	$23.07
3	65	$17.34	$7.07	$7.86	$0.00	$32.27
4	70	$18.67	$7.07	$7.86	$0.00	$33.60
5	75	$20.00	$7.07	$7.86	$0.00	$34.93
6	80	$21.34	$7.07	$7.86	$0.00	$36.27
7	85	$22.67	$7.07	$7.86	$0.00	$37.60
8	90	$24.00	$7.07	$7.86	$0.00	$38.93

Notes:
% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 $18.88/ 3&4 $26.26/ 5&6 $33.31/ 7&8 $35.93

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME (All Other Work) *CARPENTERS -ZONE 2 (Wood Frame)*	06/01/2016	$25.32	$9.80	$16.82	$0.00	$51.94
CEMENT MASONRY/PLASTERING *BRICKLAYERS LOCAL 3 (WALTHAM)*	01/01/2018	$46.02	$12.35	$22.41	$0.30	$81.08
	07/01/2018	$47.41	$12.35	$22.41	$0.30	$82.47
	01/01/2019	$48.15	$12.35	$22.41	$0.30	$83.21
	07/01/2019	$49.54	$12.35	$22.41	$0.30	$84.60
	01/01/2020	$50.29	$12.35	$22.41	$0.30	$85.35

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *CEMENT MASONRY/PLASTERING - Eastern Mass (Waltham)*

Effective Date - 01/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.01	$12.35	$15.41	$0.00	$50.77
2	60	$27.61	$12.35	$17.41	$0.30	$57.67
3	65	$29.91	$12.35	$18.41	$0.30	$60.97
4	70	$32.21	$12.35	$19.41	$0.30	$64.27
5	75	$34.52	$12.35	$20.41	$0.30	$67.58
6	80	$36.82	$12.35	$21.41	$0.30	$70.88
7	90	$41.42	$12.35	$22.41	$0.30	$76.48

Effective Date - 07/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.71	$12.35	$15.41	$0.00	$51.47
2	60	$28.45	$12.35	$17.41	$0.30	$58.51
3	65	$30.82	$12.35	$18.41	$0.30	$61.88
4	70	$33.19	$12.35	$19.41	$0.30	$65.25
5	75	$35.56	$12.35	$20.41	$0.30	$68.62
6	80	$37.93	$12.35	$21.41	$0.30	$71.99
7	90	$42.67	$12.35	$22.41	$0.30	$77.73

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 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$47.63	$10.50	$15.50	$0.00	$73.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$31.80	$10.50	$15.50	$0.00	$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2017	$51.41	$7.85	$16.10	$0.00	$75.36

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 - BRIDGES/TANKS*

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.71	$7.85	$0.00	$0.00	$33.56
2	55	$28.28	$7.85	$3.66	$0.00	$39.79
3	60	$30.85	$7.85	$3.99	$0.00	$42.69
4	65	$33.42	$7.85	$4.32	$0.00	$45.59
5	70	$35.99	$7.85	$14.11	$0.00	$57.95
6	75	$38.56	$7.85	$14.44	$0.00	$60.85
7	80	$41.13	$7.85	$14.77	$0.00	$63.75
8	90	$46.27	$7.85	$15.44	$0.00	$69.56

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN *LABORERS - ZONE 1*	12/01/2017	$37.65	$7.70	$14.75	$0.00	$60.10
	06/01/2018	$38.60	$7.70	$14.75	$0.00	$61.05
	12/01/2018	$39.55	$7.70	$14.75	$0.00	$62.00
	06/01/2019	$40.55	$7.70	$14.75	$0.00	$63.00
	12/01/2019	$41.55	$7.70	$14.75	$0.00	$64.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR *LABORERS - ZONE 1*	12/01/2017	$38.65	$7.70	$14.75	$0.00	$61.10
	06/01/2018	$39.60	$7.70	$14.75	$0.00	$62.05
	12/01/2018	$40.55	$7.70	$14.75	$0.00	$63.00
	06/01/2019	$41.55	$7.70	$14.75	$0.00	$64.00
	12/01/2019	$42.55	$7.70	$14.75	$0.00	$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS *LABORERS - ZONE 1*	12/01/2017	$38.40	$7.70	$14.75	$0.00	$60.85
	06/01/2018	$39.35	$7.70	$14.75	$0.00	$61.80
	12/01/2018	$40.30	$7.70	$14.75	$0.00	$62.75
	06/01/2019	$41.30	$7.70	$14.75	$0.00	$63.75
	12/01/2019	$42.30	$7.70	$14.75	$0.00	$64.75
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER *LABORERS - ZONE 1*	12/01/2017	$38.65	$7.70	$14.75	$0.00	$61.10
	06/01/2018	$39.60	$7.70	$14.75	$0.00	$62.05
	12/01/2018	$40.55	$7.70	$14.75	$0.00	$63.00
	06/01/2019	$41.55	$7.70	$14.75	$0.00	$64.00
	12/01/2019	$42.55	$7.70	$14.75	$0.00	$65.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR *LABORERS - ZONE 1*	12/01/2017	$38.40	$7.70	$14.75	$0.00	$60.85
	06/01/2018	$39.35	$7.70	$14.75	$0.00	$61.80
	12/01/2018	$40.30	$7.70	$14.75	$0.00	$62.75
	06/01/2019	$41.30	$7.70	$14.75	$0.00	$63.75
	12/01/2019	$42.30	$7.70	$14.75	$0.00	$64.75

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER *LABORERS - ZONE 1*	12/01/2017	$37.65	$7.70	$14.75	$0.00	$60.10
	06/01/2018	$38.60	$7.70	$14.75	$0.00	$61.05
	12/01/2018	$39.55	$7.70	$14.75	$0.00	$62.00
	06/01/2019	$40.55	$7.70	$14.75	$0.00	$63.00
	12/01/2019	$41.55	$7.70	$14.75	$0.00	$64.00
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$61.98	$9.90	$21.15	$0.00	$93.03
	08/01/2018	$65.20	$9.90	$21.15	$0.00	$96.25
	08/01/2019	$68.52	$9.90	$21.15	$0.00	$99.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$44.27	$9.90	$21.15	$0.00	$75.32
	08/01/2018	$46.57	$9.90	$21.15	$0.00	$77.62
	08/01/2019	$48.94	$9.90	$21.15	$0.00	$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$66.41	$9.90	$21.15	$0.00	$97.46
	08/01/2018	$69.86	$9.90	$21.15	$0.00	$100.91
	08/01/2019	$73.41	$9.90	$21.15	$0.00	$104.46
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$92.97	$9.90	$21.15	$0.00	$124.02
	08/01/2018	$97.80	$9.90	$21.15	$0.00	$128.85
	08/01/2019	$102.78	$9.90	$21.15	$0.00	$133.83
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) *ELECTRICIANS LOCAL 103*	03/01/2018	$50.15	$13.00	$17.85	$0.00	$81.00
	09/01/2018	$51.34	$13.00	$17.89	$0.00	$82.23
	03/01/2019	$52.53	$13.00	$17.93	$0.00	$83.46
For apprentice rates see "Apprentice- ELECTRICIAN"						
ELECTRICIAN *ELECTRICIANS LOCAL 103*	03/01/2018	$50.15	$13.00	$17.85	$0.00	$81.00
	09/01/2018	$51.34	$13.00	$17.89	$0.00	$82.23
	03/01/2019	$52.53	$13.00	$17.93	$0.00	$83.46

Classification **Effective Date** **Base Wage** **Health** **Pension** **Supplemental Unemployment** **Total Rate**

Apprentice - *ELECTRICIAN - Local 103*

Effective Date - 03/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$20.06	$13.00	$0.60	$0.00	$33.66
2	40	$20.06	$13.00	$0.60	$0.00	$33.66
3	45	$22.57	$13.00	$13.61	$0.00	$49.18
4	45	$22.57	$13.00	$13.61	$0.00	$49.18
5	50	$25.08	$13.00	$13.99	$0.00	$52.07
6	55	$27.58	$13.00	$14.38	$0.00	$54.96
7	60	$30.09	$13.00	$14.76	$0.00	$57.85
8	65	$32.60	$13.00	$15.15	$0.00	$60.75
9	70	$35.11	$13.00	$15.53	$0.00	$63.64
10	75	$37.61	$13.00	$15.93	$0.00	$66.54

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$20.54	$13.00	$0.62	$0.00	$34.16
2	40	$20.54	$13.00	$0.62	$0.00	$34.16
3	45	$23.10	$13.00	$13.62	$0.00	$49.72
4	45	$23.10	$13.00	$13.62	$0.00	$49.72
5	50	$25.67	$13.00	$14.01	$0.00	$52.68
6	55	$28.24	$13.00	$14.40	$0.00	$55.64
7	60	$30.80	$13.00	$14.78	$0.00	$58.58
8	65	$33.37	$13.00	$15.17	$0.00	$61.54
9	70	$35.94	$13.00	$15.56	$0.00	$64.50
10	75	$38.51	$13.00	$15.96	$0.00	$67.47

Notes: :
App Prior 1/1/03; 30/35/40/45/50/55/65/70/75/80

Apprentice to Journeyworker Ratio:2:3***

ELEVATOR CONSTRUCTOR *ELEVATOR CONSTRUCTORS LOCAL 4*	01/01/2017	$55.86	$15.28	$15.71	$0.00	$86.85

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - *ELEVATOR CONSTRUCTOR - Local 4*						
Effective Date - 01/01/2017						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 50	$27.93	$15.28	$0.00	$0.00	$43.21	
2 55	$30.72	$15.28	$15.71	$0.00	$61.71	
3 65	$36.31	$15.28	$15.71	$0.00	$67.30	
4 70	$39.10	$15.28	$15.71	$0.00	$70.09	
5 80	$44.69	$15.28	$15.71	$0.00	$75.68	
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 4*	01/01/2017	$39.10	$15.28	$15.71	$0.00	$70.09
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2017	$42.88	$10.00	$15.25	$0.00	$68.13
	05/01/2018	$43.59	$10.00	$15.25	$0.00	$68.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2017	$44.34	$10.00	$15.25	$0.00	$69.59
	05/01/2018	$45.06	$10.00	$15.25	$0.00	$70.31
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY *OPERATING ENGINEERS LOCAL 4*	11/01/2017	$22.83	$10.00	$15.25	$0.00	$48.08
	05/01/2018	$23.26	$10.00	$15.25	$0.00	$48.51
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER *ELECTRICIANS LOCAL 103*	03/01/2018	$50.15	$13.00	$17.85	$0.00	$81.00
	09/01/2018	$51.34	$13.00	$17.89	$0.00	$82.23
	03/01/2019	$52.53	$13.00	$17.93	$0.00	$83.46
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING *ELECTRICIANS LOCAL 103*	03/01/2018	$37.61	$13.00	$15.93	$0.00	$66.54
	09/01/2018	$38.51	$13.00	$15.96	$0.00	$67.47
	03/01/2019	$39.40	$13.00	$15.98	$0.00	$68.38
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN (ASST. ENGINEER) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$38.57	$10.50	$15.50	$0.00	$64.57
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FLAGGER & SIGNALER *LABORERS - ZONE 1*	12/01/2017	$21.50	$7.70	$14.75	$0.00	$43.95
	06/01/2018	$21.50	$7.70	$14.75	$0.00	$43.95
	12/01/2018	$22.50	$7.70	$14.75	$0.00	$44.95
	06/01/2019	$22.50	$7.70	$14.75	$0.00	$44.95
	12/01/2019	$23.50	$7.70	$14.75	$0.00	$45.95
	06/01/2020	$23.50	$7.70	$14.75	$0.00	$45.95
	12/01/2020	$24.50	$7.70	$14.75	$0.00	$46.95
	06/01/2021	$24.50	$7.70	$14.75	$0.00	$46.95
	12/01/2021	$24.50	$7.70	$14.75	$0.00	$46.95
For apprentice rates see "Apprentice- LABORER"						
FLOORCOVERER *FLOORCOVERERS LOCAL 2168 ZONE I*	03/01/2016	$42.13	$9.80	$17.62	$0.00	$69.55
Apprentice - *FLOORCOVERER - Local 2168 Zone I*						
Effective Date - 03/01/2016						
Step percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1 50	$21.07	$9.80	$1.79	$0.00	$32.66	
2 55	$23.17	$9.80	$1.79	$0.00	$34.76	
3 60	$25.28	$9.80	$12.25	$0.00	$47.33	
4 65	$27.38	$9.80	$12.25	$0.00	$49.43	
5 70	$29.49	$9.80	$14.04	$0.00	$53.33	
6 75	$31.60	$9.80	$14.04	$0.00	$55.44	
7 80	$33.70	$9.80	$15.83	$0.00	$59.33	
8 85	$35.81	$9.80	$15.83	$0.00	$61.44	
Notes: Steps are 750 hrs. % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps) Step 1&2 $30.55/ 3&4 $36.49/ 5&6 $53.33/ 7&8 $59.33						
Apprentice to Journeyworker Ratio:1:1						
FORK LIFT/CHERRY PICKER *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$31.80	$10.50	$15.50	$0.00	$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) *GLAZIERS LOCAL 35 (ZONE 2)*	01/01/2017	$40.91	$7.85	$16.10	$0.00	$64.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *GLAZIER - Local 35 Zone 2*

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.46	$7.85	$0.00	$0.00	$28.31
2	55	$22.50	$7.85	$3.66	$0.00	$34.01
3	60	$24.55	$7.85	$3.99	$0.00	$36.39
4	65	$26.59	$7.85	$4.32	$0.00	$38.76
5	70	$28.64	$7.85	$14.11	$0.00	$50.60
6	75	$30.68	$7.85	$14.44	$0.00	$52.97
7	80	$32.73	$7.85	$14.77	$0.00	$55.35
8	90	$36.82	$7.85	$15.44	$0.00	$60.11

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63

Apprentice - *OPERATING ENGINEERS - Local 4*

Effective Date - 12/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$25.65	$10.50	$0.00	$0.00	$36.15
2	60	$27.98	$10.50	$15.50	$0.00	$53.98
3	65	$30.31	$10.50	$15.50	$0.00	$56.31
4	70	$32.64	$10.50	$15.50	$0.00	$58.64
5	75	$34.97	$10.50	$15.50	$0.00	$60.97
6	80	$37.30	$10.50	$15.50	$0.00	$63.30
7	85	$39.64	$10.50	$15.50	$0.00	$65.64
8	90	$41.97	$10.50	$15.50	$0.00	$67.97

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK) *SHEETMETAL WORKERS LOCAL 17 - A*	02/01/2018	$44.11	$12.20	$24.12	$2.41	$82.84
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS) *ELECTRICIANS LOCAL 103*	03/01/2018	$50.15	$13.00	$17.85	$0.00	$81.00
	09/01/2018	$51.34	$13.00	$17.89	$0.00	$82.23
	03/01/2019	$52.53	$13.00	$17.93	$0.00	$83.46
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR) *SHEETMETAL WORKERS LOCAL 17 - A*	02/01/2018	$44.11	$12.20	$24.12	$2.41	$82.84
For apprentice rates see "Apprentice- SHEET METAL WORKER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) *PIPEFITTERS LOCAL 537*	03/01/2017	$51.19	$9.70	$18.14	$0.00	$79.03
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC *PIPEFITTERS LOCAL 537*	03/01/2017	$51.19	$9.70	$18.14	$0.00	$79.03
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS *LABORERS - ZONE 1*	12/01/2017	$38.25	$7.70	$14.75	$0.00	$60.70
	06/01/2018	$39.20	$7.70	$14.75	$0.00	$61.65
	12/01/2018	$40.15	$7.70	$14.75	$0.00	$62.60
	06/01/2019	$41.15	$7.70	$14.75	$0.00	$63.60
	12/01/2019	$42.15	$7.70	$14.75	$0.00	$64.60
	06/01/2020	$43.14	$7.70	$14.75	$0.00	$65.59
	12/01/2020	$44.12	$7.70	$14.75	$0.00	$66.57
	06/01/2021	$45.14	$7.70	$14.75	$0.00	$67.59
	12/01/2021	$46.15	$7.70	$14.75	$0.00	$68.60
For apprentice rates see "Apprentice- LABORER"						
INSULATOR (PIPES & TANKS) *HEAT & FROST INSULATORS LOCAL 6 (BOSTON)*	09/01/2017	$47.09	$11.75	$14.20	$0.00	$73.04
	09/01/2018	$49.34	$11.75	$14.20	$0.00	$75.29
	09/01/2019	$51.84	$11.75	$14.20	$0.00	$77.79

Apprentice - *ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Boston*

Effective Date - 09/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.55	$11.75	$10.45	$0.00	$45.75
2	60	$28.25	$11.75	$11.20	$0.00	$51.20
3	70	$32.96	$11.75	$11.95	$0.00	$56.66
4	80	$37.67	$11.75	$12.70	$0.00	$62.12

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$24.67	$11.75	$10.45	$0.00	$46.87
2	60	$29.60	$11.75	$11.20	$0.00	$52.55
3	70	$34.54	$11.75	$11.95	$0.00	$58.24
4	80	$39.47	$11.75	$12.70	$0.00	$63.92

Notes:
Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER *IRONWORKERS LOCAL 7 (BOSTON AREA)*	03/16/2017	$44.65	$7.80	$20.85	$0.00	$73.30

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *IRONWORKER - Local 7 Boston*

Effective Date - 03/16/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$26.79	$7.80	$20.85	$0.00	$55.44
2	70	$31.26	$7.80	$20.85	$0.00	$59.91
3	75	$33.49	$7.80	$20.85	$0.00	$62.14
4	80	$35.72	$7.80	$20.85	$0.00	$64.37
5	85	$37.95	$7.80	$20.85	$0.00	$66.60
6	90	$40.19	$7.80	$20.85	$0.00	$68.84

Notes:

** Structural 1:6; Ornamental 1:4

Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
LABORER *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *LABORER - Zone 1*

Effective Date - 12/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$22.50	$7.70	$14.75	$0.00	$44.95
2	70	$26.25	$7.70	$14.75	$0.00	$48.70
3	80	$30.00	$7.70	$14.75	$0.00	$52.45
4	90	$33.75	$7.70	$14.75	$0.00	$56.20

Effective Date - 06/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$23.07	$7.70	$14.75	$0.00	$45.52
2	70	$26.92	$7.70	$14.75	$0.00	$49.37
3	80	$30.76	$7.70	$14.75	$0.00	$53.21
4	90	$34.61	$7.70	$14.75	$0.00	$57.06

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER *LABORERS - ZONE 1*	12/01/2017	$37.65	$7.70	$14.75	$0.00	$60.10
	06/01/2018	$38.60	$7.70	$14.75	$0.00	$61.05
	12/01/2018	$39.55	$7.70	$14.75	$0.00	$62.00
	06/01/2019	$40.55	$7.70	$14.75	$0.00	$63.00
	12/01/2019	$41.55	$7.70	$14.75	$0.00	$64.00
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
LABORER: MULTI-TRADE TENDER *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85
This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE & TILE FINISHERS *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2018	$39.82	$10.75	$18.34	$0.00	$68.91
	08/01/2018	$40.90	$10.75	$18.47	$0.00	$70.12
	02/01/2019	$41.41	$10.75	$18.47	$0.00	$70.63
	08/01/2019	$42.49	$10.75	$18.61	$0.00	$71.85
	02/01/2020	$43.00	$10.75	$18.61	$0.00	$72.36
	08/01/2020	$44.08	$10.75	$18.76	$0.00	$73.59
	02/01/2021	$44.59	$10.75	$18.76	$0.00	$74.10
	08/01/2021	$45.71	$10.75	$18.92	$0.00	$75.38
	02/01/2022	$46.18	$10.75	$18.92	$0.00	$75.85

Apprentice - *MARBLE & TILE FINISHER - Local 3 Marble & Tile*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$19.91	$10.75	$18.34	$0.00	$49.00
2	60	$23.89	$10.75	$18.34	$0.00	$52.98
3	70	$27.87	$10.75	$18.34	$0.00	$56.96
4	80	$31.86	$10.75	$18.34	$0.00	$60.95
5	90	$35.84	$10.75	$18.34	$0.00	$64.93

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.45	$10.75	$18.47	$0.00	$49.67
2	60	$24.54	$10.75	$18.47	$0.00	$53.76
3	70	$28.63	$10.75	$18.47	$0.00	$57.85
4	80	$32.72	$10.75	$18.47	$0.00	$61.94
5	90	$36.81	$10.75	$18.47	$0.00	$66.03

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS,TILELAYERS & TERRAZZO MECH *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2018	$52.10	$10.75	$20.03	$0.00	$82.88
	08/01/2018	$53.45	$10.75	$20.16	$0.00	$84.36
	02/01/2019	$54.07	$10.75	$20.16	$0.00	$84.98
	08/01/2019	$55.42	$10.75	$20.30	$0.00	$86.47
	02/01/2020	$56.05	$10.75	$20.30	$0.00	$87.10
	08/01/2020	$57.40	$10.75	$20.45	$0.00	$88.60
	02/01/2021	$58.04	$10.75	$20.45	$0.00	$89.24
	08/01/2021	$59.44	$10.75	$20.61	$0.00	$90.80
	02/01/2022	$60.01	$10.75	$20.61	$0.00	$91.37

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *MARBLE-TILE-TERRAZZO MECHANIC - Local 3 Marble & Tile*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$26.05	$10.75	$20.03	$0.00	$56.83
2	60	$31.26	$10.75	$20.03	$0.00	$62.04
3	70	$36.47	$10.75	$20.03	$0.00	$67.25
4	80	$41.68	$10.75	$20.03	$0.00	$72.46
5	90	$46.89	$10.75	$20.03	$0.00	$77.67

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$26.73	$10.75	$20.16	$0.00	$57.64
2	60	$32.07	$10.75	$20.16	$0.00	$62.98
3	70	$37.42	$10.75	$20.16	$0.00	$68.33
4	80	$42.76	$10.75	$20.16	$0.00	$73.67
5	90	$48.11	$10.75	$20.16	$0.00	$79.02

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MECHANICS MAINTENANCE *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
MILLWRIGHT (Zone 1) *MILLWRIGHTS LOCAL 1121 - Zone 1*	10/01/2017	$39.52	$9.90	$18.50	$0.00	$67.92
	04/01/2018	$40.42	$9.90	$18.50	$0.00	$68.82
	10/01/2018	$41.32	$9.90	$18.50	$0.00	$69.72
	04/01/2019	$42.22	$9.90	$18.50	$0.00	$70.62

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *MILLWRIGHT - Local 1121 Zone 1*

Effective Date - 10/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$21.74	$9.90	$5.31	$0.00	$36.95
2	65	$25.69	$9.90	$15.13	$0.00	$50.72
3	75	$29.64	$9.90	$16.10	$0.00	$55.64
4	85	$33.59	$9.90	$17.06	$0.00	$60.55

Effective Date - 04/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	$22.23	$9.90	$5.31	$0.00	$37.44
2	65	$26.27	$9.90	$15.13	$0.00	$51.30
3	75	$30.32	$9.90	$16.10	$0.00	$56.32
4	85	$34.36	$9.90	$17.06	$0.00	$61.32

Notes:

Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:5

MORTAR MIXER *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$23.24	$10.50	$15.50	$0.00	$49.24
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$27.40	$10.50	$15.50	$0.00	$53.40
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2017	$51.41	$7.85	$16.10	$0.00	$75.36

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 - BRIDGES/TANKS*
Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.71	$7.85	$0.00	$0.00	$33.56
2	55	$28.28	$7.85	$3.66	$0.00	$39.79
3	60	$30.85	$7.85	$3.99	$0.00	$42.69
4	65	$33.42	$7.85	$4.32	$0.00	$45.59
5	70	$35.99	$7.85	$14.11	$0.00	$57.95
6	75	$38.56	$7.85	$14.44	$0.00	$60.85
7	80	$41.13	$7.85	$14.77	$0.00	$63.75
8	90	$46.27	$7.85	$15.44	$0.00	$69.56

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*	01/01/2017	$42.31	$7.85	$16.10	$0.00	$66.26

Apprentice - *PAINTER Local 35 Zone 2 - Spray/Sandblast - New*
Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$21.16	$7.85	$0.00	$0.00	$29.01
2	55	$23.27	$7.85	$3.66	$0.00	$34.78
3	60	$25.39	$7.85	$3.99	$0.00	$37.23
4	65	$27.50	$7.85	$4.32	$0.00	$39.67
5	70	$29.62	$7.85	$14.11	$0.00	$51.58
6	75	$31.73	$7.85	$14.44	$0.00	$54.02
7	80	$33.85	$7.85	$14.77	$0.00	$56.47
8	90	$38.08	$7.85	$15.44	$0.00	$61.37

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2017	$40.37	$7.85	$16.10	$0.00	$64.32

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint*
Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.19	$7.85	$0.00	$0.00	$28.04
2	55	$22.20	$7.85	$3.66	$0.00	$33.71
3	60	$24.22	$7.85	$3.99	$0.00	$36.06
4	65	$26.24	$7.85	$4.32	$0.00	$38.41
5	70	$28.26	$7.85	$14.11	$0.00	$50.22
6	75	$30.28	$7.85	$14.44	$0.00	$52.57
7	80	$32.30	$7.85	$14.77	$0.00	$54.92
8	90	$36.33	$7.85	$15.44	$0.00	$59.62

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (TRAFFIC MARKINGS) *LABORERS - ZONE 1*	12/01/2017	$37.50	$7.70	$14.75	$0.00	$59.95
	06/01/2018	$38.45	$7.70	$14.75	$0.00	$60.90
	12/01/2018	$39.40	$7.70	$14.75	$0.00	$61.85
	06/01/2019	$40.40	$7.70	$14.75	$0.00	$62.85
	12/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	06/01/2020	$42.39	$7.70	$14.75	$0.00	$64.84
	12/01/2020	$43.37	$7.70	$14.75	$0.00	$65.82
	06/01/2021	$44.39	$7.70	$14.75	$0.00	$66.84
	12/01/2021	$45.40	$7.70	$14.75	$0.00	$67.85
For Apprentice rates see "Apprentice- LABORER"						
PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. *PAINTERS LOCAL 35 - ZONE 2*	01/01/2017	$40.91	$7.85	$16.10	$0.00	$64.86

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PAINTER - Local 35 Zone 2 - BRUSH NEW*

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$20.46	$7.85	$0.00	$0.00	$28.31
2	55	$22.50	$7.85	$3.66	$0.00	$34.01
3	60	$24.55	$7.85	$3.99	$0.00	$36.39
4	65	$26.59	$7.85	$4.32	$0.00	$38.76
5	70	$28.64	$7.85	$14.11	$0.00	$50.60
6	75	$30.68	$7.85	$14.44	$0.00	$52.97
7	80	$32.73	$7.85	$14.77	$0.00	$55.35
8	90	$36.82	$7.85	$15.44	$0.00	$60.11

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT) *PAINTERS LOCAL 35 - ZONE 2*	01/01/2017	$38.97	$7.85	$16.10	$0.00	$62.92

Apprentice - *PAINTER Local 35 Zone 2 - BRUSH REPAINT*

Effective Date - 01/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$19.49	$7.85	$0.00	$0.00	$27.34
2	55	$21.43	$7.85	$3.66	$0.00	$32.94
3	60	$23.38	$7.85	$3.99	$0.00	$35.22
4	65	$25.33	$7.85	$4.32	$0.00	$37.50
5	70	$27.28	$7.85	$14.11	$0.00	$49.24
6	75	$29.23	$7.85	$14.44	$0.00	$51.52
7	80	$31.18	$7.85	$14.77	$0.00	$53.80
8	90	$35.07	$7.85	$15.44	$0.00	$58.36

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PANEL & PICKUP TRUCKS DRIVER *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.08	$10.91	$10.89	$0.00	$54.88
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$44.27	$9.90	$21.15	$0.00	$75.32
	08/01/2018	$46.57	$9.90	$21.15	$0.00	$77.62
	08/01/2019	$48.94	$9.90	$21.15	$0.00	$79.99
For apprentice rates see "Apprentice- PILE DRIVER"						
PILE DRIVER *PILE DRIVER LOCAL 56 (ZONE 1)*	08/01/2017	$44.27	$9.90	$21.15	$0.00	$75.32
	08/01/2018	$46.57	$9.90	$21.15	$0.00	$77.62
	08/01/2019	$48.94	$9.90	$21.15	$0.00	$79.99

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *PILE DRIVER - Local 56 Zone 1*

Effective Date - 08/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$22.14	$9.90	$21.15	$0.00	$53.19
2	60	$26.56	$9.90	$21.15	$0.00	$57.61
3	70	$30.99	$9.90	$21.15	$0.00	$62.04
4	75	$33.20	$9.90	$21.15	$0.00	$64.25
5	80	$35.42	$9.90	$21.15	$0.00	$66.47
6	80	$35.42	$9.90	$21.15	$0.00	$66.47
7	90	$39.84	$9.90	$21.15	$0.00	$70.89
8	90	$39.84	$9.90	$21.15	$0.00	$70.89

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$23.29	$9.90	$21.15	$0.00	$54.34
2	60	$27.94	$9.90	$21.15	$0.00	$58.99
3	70	$32.60	$9.90	$21.15	$0.00	$63.65
4	75	$34.93	$9.90	$21.15	$0.00	$65.98
5	80	$37.26	$9.90	$21.15	$0.00	$68.31
6	80	$37.26	$9.90	$21.15	$0.00	$68.31
7	90	$41.91	$9.90	$21.15	$0.00	$72.96
8	90	$41.91	$9.90	$21.15	$0.00	$72.96

Notes:

Apprentice to Journeyworker Ratio:1:5

PIPEFITTER & STEAMFITTER *PIPEFITTERS LOCAL 537*	03/01/2017	$51.19	$9.70	$18.14	$0.00	$79.03

Apprentice - *PIPEFITTER - Local 537*

Effective Date - 03/01/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$20.48	$9.70	$7.50	$0.00	$37.68
2	45	$23.04	$9.70	$18.14	$0.00	$50.88
3	60	$30.71	$9.70	$18.14	$0.00	$58.55
4	70	$35.83	$9.70	$18.14	$0.00	$63.67
5	80	$40.95	$9.70	$18.14	$0.00	$68.79

Notes:
** 1:3; 3:15; 1:10 thereafter / Steps are 1 yr.
Refrig/AC Mechanic **1:1;1:2;2:4;3:6;4:8;5:10;6:12;7:14;8:17;9:20;10:23(Max)

Apprentice to Journeyworker Ratio:**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
PLUMBERS & GASFITTERS *PLUMBERS & GASFITTERS LOCAL 12*	03/01/2018	$54.69	$11.57	$15.76	$0.00	$82.02
	09/01/2018	$56.19	$11.57	$15.76	$0.00	$83.52
	03/01/2019	$57.69	$11.57	$15.76	$0.00	$85.02
	09/01/2019	$59.19	$11.57	$15.76	$0.00	$86.52
	03/01/2020	$60.69	$11.57	$15.76	$0.00	$88.02
	09/01/2020	$62.19	$11.57	$15.76	$0.00	$89.52
	03/01/2021	$63.69	$11.57	$15.76	$0.00	$91.02

Apprentice - *PLUMBER/GASFITTER - Local 12*

Effective Date - 03/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$19.14	$11.57	$5.72	$0.00	$36.43
2	40	$21.88	$11.57	$6.49	$0.00	$39.94
3	55	$30.08	$11.57	$8.81	$0.00	$50.46
4	65	$35.55	$11.57	$10.36	$0.00	$57.48
5	75	$41.02	$11.57	$11.90	$0.00	$64.49

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$19.67	$11.57	$5.72	$0.00	$36.96
2	40	$22.48	$11.57	$6.49	$0.00	$40.54
3	55	$30.90	$11.57	$8.82	$0.00	$51.29
4	65	$36.52	$11.57	$10.36	$0.00	$58.45
5	75	$42.14	$11.57	$11.90	$0.00	$65.61

Notes:
** 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr
Step4 with lic$61.00, Step5 with lic$67.99

Apprentice to Journeyworker Ratio:**

PNEUMATIC CONTROLS (TEMP.) *PIPEFITTERS LOCAL 537*	03/01/2017	$51.19	$9.70	$18.14	$0.00	$79.03

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER *LABORERS - ZONE 1*	12/01/2017	$38.50	$7.70	$14.75	$0.00	$60.95
	06/01/2018	$39.45	$7.70	$14.75	$0.00	$61.90
	12/01/2018	$40.40	$7.70	$14.75	$0.00	$62.85
	06/01/2019	$41.40	$7.70	$14.75	$0.00	$63.85
	12/01/2019	$42.40	$7.70	$14.75	$0.00	$64.85
	06/01/2020	$43.39	$7.70	$14.75	$0.00	$65.84
	12/01/2020	$44.37	$7.70	$14.75	$0.00	$66.82
	06/01/2021	$45.39	$7.70	$14.75	$0.00	$67.84
	12/01/2021	$46.40	$7.70	$14.75	$0.00	$68.85
For apprentice rates see "Apprentice- LABORER"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$31.80	$10.50	$15.50	$0.00	$57.80
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY MIX CONCRETE DRIVERS after 4/30/10 (Drivers Hired After 4/30/2010)*TEAMSTERS LOCAL 25c*	07/01/2017	$28.18	$8.48	$9.72	$0.00	$46.38
READY-MIX CONCRETE DRIVER *TEAMSTERS LOCAL 25c*	07/01/2017	$29.48	$8.48	$9.72	$0.00	$47.68
RECLAIMERS *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg) *ROOFERS LOCAL 33*	02/01/2018	$42.36	$11.35	$14.80	$0.00	$68.51
	08/01/2018	$43.46	$11.35	$14.80	$0.00	$69.61
	02/01/2019	$44.61	$11.35	$14.80	$0.00	$70.76

Apprentice - *ROOFER - Local 33*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$21.18	$11.35	$3.44	$0.00	$35.97
2	60	$25.42	$11.35	$14.80	$0.00	$51.57
3	65	$27.53	$11.35	$14.80	$0.00	$53.68
4	75	$31.77	$11.35	$14.80	$0.00	$57.92
5	85	$36.01	$11.35	$14.80	$0.00	$62.16

Effective Date - 08/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$21.73	$11.35	$3.44	$0.00	$36.52
2	60	$26.08	$11.35	$14.80	$0.00	$52.23
3	65	$28.25	$11.35	$14.80	$0.00	$54.40
4	75	$32.60	$11.35	$14.80	$0.00	$58.75
5	85	$36.94	$11.35	$14.80	$0.00	$63.09

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*	02/01/2018	$42.61	$11.35	$14.80	$0.00	$68.76
	08/01/2018	$43.71	$11.35	$14.80	$0.00	$69.86
	02/01/2019	$44.86	$11.35	$14.80	$0.00	$71.01
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER *SHEETMETAL WORKERS LOCAL 17 - A*	02/01/2018	$44.11	$12.20	$24.12	$2.41	$82.84

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *SHEET METAL WORKER - Local 17-A*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$17.64	$12.20	$5.61	$0.00	$35.45
2	40	$17.64	$12.20	$5.61	$0.00	$35.45
3	45	$19.85	$12.20	$10.85	$1.29	$44.19
4	45	$19.85	$12.20	$10.85	$1.29	$44.19
5	50	$22.06	$12.20	$11.80	$1.38	$47.44
6	50	$22.06	$12.20	$12.05	$1.39	$47.70
7	60	$26.47	$12.20	$13.70	$1.57	$53.94
8	65	$28.67	$12.20	$14.65	$1.67	$57.19
9	75	$33.08	$12.20	$16.56	$1.86	$63.70
10	85	$37.49	$12.20	$17.96	$2.03	$69.68

Notes:
Steps are 6 mos.

Apprentice to Journeyworker Ratio:1:4

SIGN ERECTOR *PAINTERS LOCAL 35 - ZONE 2*	06/01/2013	$25.81	$7.07	$7.05	$0.00	$39.93

Apprentice - *SIGN ERECTOR - Local 35 Zone 2*

Effective Date - 06/01/2013

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$12.91	$7.07	$0.00	$0.00	$19.98
2	55	$14.20	$7.07	$2.45	$0.00	$23.72
3	60	$15.49	$7.07	$2.45	$0.00	$25.01
4	65	$16.78	$7.07	$2.45	$0.00	$26.30
5	70	$18.07	$7.07	$7.05	$0.00	$32.19
6	75	$19.36	$7.07	$7.05	$0.00	$33.48
7	80	$20.65	$7.07	$7.05	$0.00	$34.77
8	85	$21.94	$7.07	$7.05	$0.00	$36.06
9	90	$23.23	$7.07	$7.05	$0.00	$37.35

Notes:
Steps are 4 mos.

Apprentice to Journeyworker Ratio:1:1

SPECIALIZED EARTH MOVING EQUIP < 35 TONS *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.54	$10.91	$10.89	$0.00	$55.34
SPECIALIZED EARTH MOVING EQUIP > 35 TONS *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.83	$10.91	$10.89	$0.00	$55.63

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPRINKLER FITTER *SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1*	03/01/2018	$57.78	$9.12	$18.15	$0.00	$85.05
	10/01/2018	$59.28	$9.12	$18.15	$0.00	$86.55
	01/01/2019	$59.28	$9.47	$18.35	$0.00	$87.10
	03/01/2019	$60.78	$9.47	$18.35	$0.00	$88.60
	10/01/2019	$62.28	$9.47	$18.35	$0.00	$90.10
	03/01/2020	$63.78	$9.47	$18.35	$0.00	$91.60
	10/01/2020	$65.28	$9.47	$18.35	$0.00	$93.10
	03/01/2021	$66.78	$9.47	$18.35	$0.00	$94.60

Apprentice - *SPRINKLER FITTER - Local 550 (Section A) Zone 1*

Effective Date - 03/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$20.22	$9.12	$8.90	$0.00	$38.24
2	40	$23.11	$9.12	$8.90	$0.00	$41.13
3	45	$26.00	$9.12	$8.90	$0.00	$44.02
4	50	$28.89	$9.12	$8.90	$0.00	$46.91
5	55	$31.78	$9.12	$8.90	$0.00	$49.80
6	60	$34.67	$9.12	$10.40	$0.00	$54.19
7	65	$37.56	$9.12	$10.40	$0.00	$57.08
8	70	$40.45	$9.12	$10.40	$0.00	$59.97
9	75	$43.34	$9.12	$10.40	$0.00	$62.86
10	80	$46.22	$9.12	$10.40	$0.00	$65.74

Effective Date - 10/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	35	$20.75	$9.12	$8.90	$0.00	$38.77
2	40	$23.71	$9.12	$8.90	$0.00	$41.73
3	45	$26.68	$9.12	$8.90	$0.00	$44.70
4	50	$29.64	$9.12	$8.90	$0.00	$47.66
5	55	$32.60	$9.12	$8.90	$0.00	$50.62
6	60	$35.57	$9.12	$10.40	$0.00	$55.09
7	65	$38.53	$9.12	$10.40	$0.00	$58.05
8	70	$41.50	$9.12	$10.40	$0.00	$61.02
9	75	$44.46	$9.12	$10.40	$0.00	$63.98
10	80	$47.42	$9.12	$10.40	$0.00	$66.94

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

STEAM BOILER OPERATOR *OPERATING ENGINEERS LOCAL 4* For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN *OPERATING ENGINEERS LOCAL 4* For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TELECOMMUNICATION TECHNICIAN *ELECTRICIANS LOCAL 103*	03/01/2018	$37.61	$13.00	$15.93	$0.00	$66.54
	09/01/2018	$38.51	$13.00	$15.96	$0.00	$67.47
	03/01/2019	$39.40	$13.00	$15.98	$0.00	$68.38

Apprentice - *TELECOMMUNICATION TECHNICIAN - Local 103*

Effective Date - 03/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$15.04	$13.00	$0.45	$0.00	$28.49
2	40	$15.04	$13.00	$0.45	$0.00	$28.49
3	45	$16.92	$13.00	$12.74	$0.00	$42.66
4	45	$16.92	$13.00	$12.74	$0.00	$42.66
5	50	$18.81	$13.00	$13.03	$0.00	$44.84
6	55	$20.69	$13.00	$13.32	$0.00	$47.01
7	60	$22.57	$13.00	$13.61	$0.00	$49.18
8	65	$24.45	$13.00	$13.90	$0.00	$51.35
9	70	$26.33	$13.00	$14.19	$0.00	$53.52
10	75	$28.21	$13.00	$14.48	$0.00	$55.69

Effective Date - 09/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	$15.40	$13.00	$0.46	$0.00	$28.86
2	40	$15.40	$13.00	$0.46	$0.00	$28.86
3	45	$17.33	$13.00	$12.75	$0.00	$43.08
4	45	$17.33	$13.00	$12.75	$0.00	$43.08
5	50	$19.26	$13.00	$13.05	$0.00	$45.31
6	55	$21.18	$13.00	$13.34	$0.00	$47.52
7	60	$23.11	$13.00	$13.62	$0.00	$49.73
8	65	$25.03	$13.00	$13.92	$0.00	$51.95
9	70	$26.96	$13.00	$14.21	$0.00	$54.17
10	75	$28.88	$13.00	$14.50	$0.00	$56.38

Notes:

Apprentice to Journeyworker Ratio:1:1

TERRAZZO FINISHERS *BRICKLAYERS LOCAL 3 - MARBLE & TILE*	02/01/2018	$51.00	$10.75	$20.03	$0.00	$81.78
	08/01/2018	$52.35	$10.75	$20.16	$0.00	$83.26
	02/01/2019	$52.99	$10.75	$20.16	$0.00	$83.90
	08/01/2019	$54.34	$10.75	$20.30	$0.00	$85.39
	02/01/2020	$54.98	$10.75	$20.30	$0.00	$86.03
	08/01/2020	$56.33	$10.75	$20.45	$0.00	$87.53
	02/01/2021	$56.97	$10.75	$20.45	$0.00	$88.17
	08/01/2021	$58.37	$10.75	$20.61	$0.00	$89.73
	02/01/2022	$58.96	$10.75	$20.61	$0.00	$90.32

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *TERRAZZO FINISHER - Local 3 Marble & Tile*

Effective Date - 02/01/2018

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	$25.50	$10.75	$20.03	$0.00	$56.28
2	60	$30.60	$10.75	$20.03	$0.00	$61.38
3	70	$35.70	$10.75	$20.03	$0.00	$66.48
4	80	$40.80	$10.75	$20.03	$0.00	$71.58
5	90	$45.90	$10.75	$20.03	$0.00	$76.68

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*	12/01/2017	$38.85	$7.70	$14.95	$0.00	$61.50
	06/01/2018	$39.80	$7.70	$14.95	$0.00	$62.45
	12/01/2018	$40.75	$7.70	$14.95	$0.00	$63.40
	06/01/2019	$41.75	$7.70	$14.95	$0.00	$64.40
	12/01/2019	$42.75	$7.70	$14.95	$0.00	$65.40
	06/01/2020	$43.74	$7.70	$14.95	$0.00	$66.39
	12/01/2020	$44.72	$7.70	$14.95	$0.00	$67.37
	06/01/2021	$45.74	$7.70	$14.95	$0.00	$68.39
	12/01/2021	$46.75	$7.70	$14.95	$0.00	$69.40
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER *LABORERS - FOUNDATION AND MARINE*	12/01/2017	$37.57	$7.70	$14.95	$0.00	$60.22
	06/01/2018	$38.52	$7.70	$14.95	$0.00	$61.17
	12/01/2018	$39.47	$7.70	$14.95	$0.00	$62.12
	06/01/2019	$40.47	$7.70	$14.95	$0.00	$63.12
	12/01/2019	$41.47	$7.70	$14.95	$0.00	$64.12
	06/01/2020	$42.46	$7.70	$14.95	$0.00	$65.11
	12/01/2020	$43.44	$7.70	$14.95	$0.00	$66.09
	06/01/2021	$44.46	$7.70	$14.95	$0.00	$67.11
	12/01/2021	$45.47	$7.70	$14.95	$0.00	$68.12
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER *LABORERS - FOUNDATION AND MARINE*	12/01/2017	$37.45	$7.70	$14.95	$0.00	$60.10
	06/01/2018	$38.40	$7.70	$14.95	$0.00	$61.05
	12/01/2018	$39.35	$7.70	$14.95	$0.00	$62.00
	06/01/2019	$40.35	$7.70	$14.95	$0.00	$63.00
	12/01/2019	$41.35	$7.70	$14.95	$0.00	$64.00
	06/01/2020	$42.34	$7.70	$14.95	$0.00	$64.99
	12/01/2020	$43.32	$7.70	$14.95	$0.00	$65.97
	06/01/2021	$44.34	$7.70	$14.95	$0.00	$66.99
	12/01/2021	$45.35	$7.70	$14.95	$0.00	$68.00
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.17	$10.50	$15.50	$0.00	$72.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$34.12	$10.91	$10.89	$0.00	$55.92
TUNNEL WORK - COMPRESSED AIR *LABORERS (COMPRESSED AIR)*	12/01/2017	$49.73	$7.70	$15.35	$0.00	$72.78
	06/01/2018	$50.68	$7.70	$15.35	$0.00	$73.73
	12/01/2018	$51.63	$7.70	$15.35	$0.00	$74.68
	06/01/2019	$52.63	$7.70	$15.35	$0.00	$75.68
	12/01/2019	$53.63	$7.70	$15.35	$0.00	$76.68
	06/01/2020	$54.62	$7.70	$15.35	$0.00	$77.67
	12/01/2020	$55.60	$7.70	$15.35	$0.00	$78.65
	06/01/2021	$56.62	$7.70	$15.35	$0.00	$79.67
	12/01/2021	$57.63	$7.70	$15.35	$0.00	$80.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) *LABORERS (COMPRESSED AIR)*	12/01/2017	$51.73	$7.70	$15.35	$0.00	$74.78
	06/01/2018	$52.68	$7.70	$15.35	$0.00	$75.73
	12/01/2018	$53.63	$7.70	$15.35	$0.00	$76.68
	06/01/2019	$54.63	$7.70	$15.35	$0.00	$77.68
	12/01/2019	$55.63	$7.70	$15.35	$0.00	$78.68
	06/01/2020	$56.62	$7.70	$15.35	$0.00	$79.67
	12/01/2020	$57.60	$7.70	$15.35	$0.00	$80.65
	06/01/2021	$58.62	$7.70	$15.35	$0.00	$81.67
	12/01/2021	$59.63	$7.70	$15.35	$0.00	$82.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR *LABORERS (FREE AIR TUNNEL)*	12/01/2017	$41.80	$7.70	$15.35	$0.00	$64.85
	06/01/2018	$42.75	$7.70	$15.35	$0.00	$65.80
	12/01/2018	$43.70	$7.70	$15.35	$0.00	$66.75
	06/01/2019	$44.70	$7.70	$15.35	$0.00	$67.75
	12/01/2019	$45.70	$7.70	$15.35	$0.00	$68.75
	06/01/2020	$46.69	$7.70	$15.35	$0.00	$69.74
	12/01/2020	$47.67	$7.70	$15.35	$0.00	$70.72
	06/01/2021	$48.69	$7.70	$15.35	$0.00	$71.74
	12/01/2021	$49.70	$7.70	$15.35	$0.00	$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) *LABORERS (FREE AIR TUNNEL)*	12/01/2017	$43.80	$7.70	$15.35	$0.00	$66.85
	06/01/2018	$44.75	$7.70	$15.35	$0.00	$67.80
	12/01/2018	$45.70	$7.70	$15.35	$0.00	$68.75
	06/01/2019	$46.70	$7.70	$15.35	$0.00	$69.75
	12/01/2019	$47.70	$7.70	$15.35	$0.00	$70.75
	06/01/2020	$48.69	$7.70	$15.35	$0.00	$71.74
	12/01/2020	$49.67	$7.70	$15.35	$0.00	$72.72
	06/01/2021	$50.69	$7.70	$15.35	$0.00	$73.74
	12/01/2021	$51.70	$7.70	$15.35	$0.00	$74.75
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL *TEAMSTERS JOINT COUNCIL NO. 10 ZONE A*	12/01/2016	$33.54	$10.91	$10.89	$0.00	$55.34

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WAGON DRILL OPERATOR *LABORERS - ZONE 1*	12/01/2017	$37.75	$7.70	$14.75	$0.00	$60.20
	06/01/2018	$38.70	$7.70	$14.75	$0.00	$61.15
	12/01/2018	$39.65	$7.70	$14.75	$0.00	$62.10
	06/01/2019	$40.65	$7.70	$14.75	$0.00	$63.10
	12/01/2019	$41.65	$7.70	$14.75	$0.00	$64.10
	06/01/2020	$42.64	$7.70	$14.75	$0.00	$65.09
	12/01/2020	$43.62	$7.70	$14.75	$0.00	$66.07
	06/01/2021	$44.64	$7.70	$14.75	$0.00	$67.09
	12/01/2021	$45.65	$7.70	$14.75	$0.00	$68.10
For apprentice rates see "Apprentice- LABORER"						
WASTE WATER PUMP OPERATOR *OPERATING ENGINEERS LOCAL 4*	12/01/2017	$46.63	$10.50	$15.50	$0.00	$72.63
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER *PLUMBERS & GASFITTERS LOCAL 12*	03/01/2018	$54.69	$11.57	$15.76	$0.00	$82.02
	09/01/2018	$56.19	$11.57	$15.76	$0.00	$83.52
	03/01/2019	$57.69	$11.57	$15.76	$0.00	$85.02
	09/01/2019	$59.19	$11.57	$15.76	$0.00	$86.52
	03/01/2020	$60.69	$11.57	$15.76	$0.00	$88.02
	09/01/2020	$62.19	$11.57	$15.76	$0.00	$89.52
	03/01/2021	$63.69	$11.57	$15.76	$0.00	$91.02
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
Outside Electrical - East						
CABLE TECHNICIAN (Power Zone) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$27.14	$7.75	$1.81	$0.00	$36.70
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$38.45	$7.75	$9.53	$0.00	$55.73
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$31.66	$7.75	$9.44	$0.00	$48.85
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$24.88	$7.75	$1.75	$0.00	$34.38
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$38.45	$7.75	$13.61	$0.00	$59.81
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$33.92	$7.75	$10.21	$0.00	$51.88
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$24.88	$7.75	$1.75	$0.00	$34.38
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$20.35	$7.75	$1.61	$0.00	$29.71
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	09/03/2017	$45.23	$7.75	$16.61	$0.00	$69.59

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate

Apprentice - *LINEMAN (Outside Electrical) - East Local 104*

Effective Date - 09/03/2017

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	$27.14	$7.75	$3.31	$0.00	$38.20
2	65	$29.40	$7.75	$3.38	$0.00	$40.53
3	70	$31.66	$7.75	$3.45	$0.00	$42.86
4	75	$33.92	$7.75	$5.02	$0.00	$46.69
5	80	$36.18	$7.75	$5.09	$0.00	$49.02
6	85	$38.45	$7.75	$5.15	$0.00	$51.35
7	90	$40.71	$7.75	$7.22	$0.00	$55.68

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	01/01/2016	$28.98	$4.25	$3.12	$0.00	$36.35
TELEDATA LINEMAN/EQUIPMENT OPERATOR *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	01/01/2016	$27.31	$4.25	$3.07	$0.00	$34.63
TELEDATA WIREMAN/INSTALLER/TECHNICIAN *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	01/01/2016	$27.31	$4.25	$3.07	$0.00	$34.63
TREE TRIMMER *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	01/31/2016	$18.51	$3.55	$0.00	$0.00	$22.06
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is not on the ground. This classification does not apply to wholesale tree removal.						
TREE TRIMMER GROUNDMAN *OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104*	01/31/2016	$16.32	$3.55	$0.00	$0.00	$19.87
This classification applies only to tree work done: (a) for a utility company, R.E.A. cooperative, or railroad or coal mining company, and (b) for the purpose of operating, maintaining, or repairing the utility company's equipment, and (c) by a person who is using hand or mechanical cutting methods and is on the ground. This classification does not apply to wholesale tree removal.						

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.

SECTION 00830

ATTACHMENT B

EXCERPTS FROM CHAPTERS 30, 82 AND 149 OF THE MASSACHUSETTS GENERAL LAWS

ATTACHMENT B

Excerpts from Chapters 30, 82 and 149 of the Massachusetts General Laws

***NOTICE** - These are **NOT** the official versions of the Massachusetts General Laws (MGL). While reasonable efforts have been made to assure the accuracy of the excerpts provided, do not rely on this information without first checking an official edition of the MGL. If you are in need of legal advice or counsel, consult a lawyer. These excerpts include amendments to the General Laws passed through February 28, 2017. For laws enacted since that time, see the 2017 Session Laws.*

Certain excerpts from the Massachusetts General Laws are applicable to Construction contracts. Attention is directed to the following Sections of Chapter 149 as amended.

Section 25. Lodging, board and trade of public employees; statute part of employment contract.

"Every employee in public work shall lodge, board, and trade where and with whom he elects; and no person or his agents or employees under contract with the commonwealth, a county, city or town, or with a department, board, commission or officer acting therefor, for the doing of public work shall directly or indirectly require, as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person. This section shall be made a part of the contract for such employment."

Section 26. Public works; preference to veterans and citizens; wages.

"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..."

Section 34. Public contracts; stipulation as to hours and days of work; void contracts.

"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, subcontractor 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..."

Section 34A. Contracts for public works; workers' compensation insurance; breach of contract; enforcement and violation of statute.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall, before commencing performance of such contract, provide by insurance for the payment of compensation and the furnishing of other benefits under chapter one hundred and fifty-two to all persons to be employed under the contract, and that the contractor shall continue such insurance in full force and effect during the term of the contract. No officer or agent contracting in behalf of the commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforesaid stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the officer or agent who awarded the contract at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice. Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be a sufficient notice..."

Section 34B. Contracts for public works; wages for reserve police officer.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town."

Whenever general bids are invited for a contract subject to Section 44A, the following provision applies:

Section 44E. Filing of bids; forms; modular buildings. Second paragraph of subdivision (2), clause E.

"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 section 44A."

For projects estimated to cost more than $25,000, the following provision applies to sub-bidders:

Section 44F. Plans and specifications; sub-bids; form; contents. First paragraph of clause I of subdivision (2) of section 44F.

"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 of subcontracts subject to section 44F."

Section 44G. Allowances; alternates; weather protection devices.

"(A) "Allowance" as used herein means a sum of money covering one or more items of labor or labor and materials which is designated in bid documents and which general bidders are required to use in computing their bids. The use of such allowances shall be prohibited in the award of any contract subject to the provisions of section forty-four A. Whenever the designer is unable to supply specifications for any item prior to the solicitation of bids, such item shall not be included in any contract subject to the provisions of section forty-four A. The awarding authority shall solicit bids for every such item separately pursuant to the provisions of section forty-four A after specifications for that item are prepared.

(B) Every alternate contained in the form for general bids shall be listed in a numerical sequence in order of priority. When the awarding authority decides to consider alternates in determining the lowest eligible and responsible bidder, the awarding authority shall consider the alternates in descending numerical sequence, such that no single alternate shall be considered unless every alternate preceding it on the list has been added to or subtracted from the base bid price.

(C) The use of options other than alternates in bid documents or bid forms subject to section forty-four A shall be prohibited under all circumstances.

(D) Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner or his designee."

Section 44J. Invitations to bid; notice; contents; violations; penalty.

"(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 specification 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 section 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 ½ to 38O, 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."

Attention is directed to the following sections of Chapter 30 of the General Laws of Massachusetts as amended to date.

Section 38A. Price adjustment clause in contracts for road, bridge, water and sewer projects awarded under Sec. 39M

"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 39F. Construction contracts; assignment and subrogation; subcontractor defined; enforcement of claim for direct payment; deposit; reduction of disputed amounts.

"(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. Completion of public works; semi-final and final estimates; payments; extra work; disputed items.

"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 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 percent retainage, if held by the awarding authority, on that work, including the quantity, price and all but one percent 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 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."

Section 39I. Deviations from plans and specifications.

"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."

Section 39J. Public construction contracts; effect of decisions of contracting body or administrative board.

"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. Public building construction contracts; payments.

"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 percent 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 percent 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 then 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 terminations 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."

Section 39L. Public construction work by foreign corporations; restrictions and reports.

"The commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, request 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 such 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 such 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."

Section 39M. Contracts for construction and materials; manner of awarding.

"(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 named or described materials."

For projects estimated to cost more than $10,000, the following provision, section 39M subsection c, applies:

"(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."

Section 39N. Construction contracts; equitable adjustment in contract price for differing subsurface or latent physical conditions.

"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. Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim.

"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."

Section 39P. Contracts for construction and materials; awarding authority's decisions on interpretation of specifications, etc.; time limit; notice.

"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. Contracts for capital facility construction; contents; annual claims report.

"(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."

Section 39R. Keeping and maintaining of books, records and accounts; statement of management on internal accounting control; financial statements; enforcement.

“(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 A 1/2 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 A 1/2 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 A 1/2 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 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 for 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. Contracts for construction; requirements.

“(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.”

Section 40. Discharge or release of bonds.

"Bonds given to the commonwealth, any county, city, town or political subdivision to secure the performance of contracts for the construction or repair of public buildings or other public works may be discharged or released by the awarding authority, upon such terms as it deems expedient, after the expiration of one year from the time of completion, subject to section thirty-nine K, of the work contracted to be done; provided that no claim filed under said bond is pending, and provided further, that no such bonds shall be discharged or released prior to the expiration of all special guarantees provided for in the contract unless new bonds in substitution therefor specifically relating to the unexpired guarantees shall be taken."

Attention is directed to the following sections of Chapter 82 of the General Laws of Massachusetts as amended to date.

Section 40. Definitions.

"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 40A. Excavations; notice.

"No excavator installing a new facility or an addition to an existing facility or the relay or repair of an existing facility shall, except in an emergency, make an excavation, in any public or private way, any company right-of-way or easement or any public or privately owned land or way, unless at least 72 hours, exclusive of Saturdays, Sundays and legal holidays but not more than 30 days before the proposed excavation is to be made, such excavator has premarked not more than 500 feet of the proposed excavation and given an initial notice to the system. Such initial notice shall set forth a description of the excavation location in the manner as herein defined. In addition, such initial notice shall indicate whether any such excavation will involve blasting and, if so, the date and the location at which such blasting is to occur.

The notice requirements shall be waived in an emergency as defined herein; provided, however, that before such excavation begins or during a life-threatening emergency, notification shall be given to the system and the initial point of boring or excavation shall be premarked. The excavator shall ensure that the underground facilities of the utilities in the area of such excavation shall not be damaged or jeopardized.

In no event shall any excavation by blasting take place unless notice thereof, either in the initial notice or a subsequent notice accurately specifying the date and location of such blasting shall have been given and received at least 72 hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice shall be not less than four hours prior to such blasting. If any such notice cannot be given as aforesaid because of an emergency requiring blasting, it shall be given as soon as may be practicable but before any explosives are discharged."

Section 40B. Designation of location of underground facilities.

"Within 72 hours, exclusive of Saturdays, Sundays and legal holidays, from the time the initial notice is received by the system or at such time as the company and the excavator agree, such company shall respond to the initial notice or subsequent notice by designating the location of the underground facilities within 15 feet in any direction of the premarking so that the existing facilities are to be found within a safety zone. Such safety zone shall be so designated by the use of standard color-coded markings. The providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section; provided, however, that in the event that the excavator has given notice as aforesaid at a location at which because of the length of excavation the company cannot reasonably designate the entire location of its facilities within such 72 hour period, then such excavator shall identify for the company that portion of the excavation which is to be first made and the company shall designate the location of its facilities in such portion within 72 hours and shall designate the location of its facilities in the remaining portion of the location within a reasonable time thereafter. When an emergency notification has been given to the system, the company shall make every attempt to designate its facilities as promptly as possible."

Section 40C. Excavator's responsibility to maintain designation markings; damage caused by excavator.

"After a company has designated the location of its facilities at the location in accordance with

section 40B, the excavator shall be responsible for maintaining the designation markings at such locations, unless such excavator requests remarking at the location due to the obliteration, destruction or other removal of such markings. The company shall then remark such location within 24 hours following receipt of such request.

When excavating in close proximity to the underground facilities of any company when such facilities are to be exposed, non-mechanical means shall be employed, as necessary, to avoid damage in locating such facility and any further excavation shall be performed employing reasonable precautions to avoid damage to any underground facilities including, but not limited to, any substantial weakening of structural or lateral support of such facilities, penetration or destruction of any pipe, main, wire or conduit or the protective coating thereof, or damage to any pipe, main, wire or conduit.

If any damage to such pipe, main, wire or conduit or its protective coating occurs, the company shall be notified immediately by the excavator responsible for causing such damage.

The making of an excavation without providing the notice required by section 40A with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit, or its protective coating, shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person."

Section 40D. Local laws requiring excavation permits; public ways.

"Nothing in this section shall affect or impair local ordinances or by-laws requiring a permit to be obtained before excavation in a public way or on private property; but notwithstanding any general or special law, ordinance or by-law to the contrary, to the extent that any permit issued under the provisions of the state building code or state fire code requires excavation by an excavator on a public way or on private property, the permit shall not be valid unless the excavator notifies the system as required pursuant to sections 40 and 40A, before the commencement of the excavation, and has complied with the permitting requirements of chapter 82A."

Section 40E. Violations of Secs. 40A to 40E; punishment.

"Any person or company found by the department of telecommunications and energy, after a hearing, to have violated any provision of sections 40A to 40E, inclusive, shall be fined $1000 for the first offense and not less than $5,000 nor more than $10,000 for any subsequent offense within 12 consecutive months as set forth by the rules of said department; provided, however, that nothing herein shall be construed to require forfeiture of any penal sum by a state or local government body for violation of section 40A or 40C; and provided, further, that nothing herein shall be construed to require the forfeiture of any penal sum by a residential property owner for the failure to premark for an excavation on such person's residential property."

Attention is directed to the following sections of Chapter 30 of the Acts of 2009.

Section 33.

"(a) Notwithstanding any general or special law to the contrary, the following requirements shall apply to any public works project funded by the American Recovery and Reinvestment Act of 2009 where the amount of construction costs under any contract awarded is likely to exceed $1,000,000. For the purposes of this section, "public works" shall mean building or work the construction of which is carried on by authority of the commonwealth, or by a county, town, authority or district, or with funds of a federal agency or the commonwealth or a county, city, town, authority or district to serve the interest of the general public, regardless of whether title thereof is in the commonwealth or in a county, city, town, authority or district; provided, however, that for the purposes of this definition, "construction" shall have the meaning provided in section 27D of chapter 149 of the General Laws.

(b) For any public works project subject to subsection (a), the specifications set forth in any request for responses shall include a requirement that, on a per project basis, not less than 20 per cent of the total hours of employees receiving an hourly wage who are directly employed on the site of the project, employed by the contractor or a subcontractor and subject to the prevailing wage, shall be performed by apprentices in bona fide apprentice training programs as provided in sections 11H and 11I of chapter 23 of the General Laws which are approved by the division of apprentice training in the executive office of labor and workforce development.

(c) During the performance of a public works project subject to subsections (a) and (b), the contractor shall submit periodic reports to the awarding authority with records indicating the total hours worked by all journeymen and apprentices in positions subject to the apprentice requirement. In any instance in which the apprentice hours do not constitute 5 per cent of the total hours of employees subject to the apprentice requirement, the contractor shall submit a plan to the awarding authority describing how the contractor shall comply with the apprentice requirement.

(d) The attorney general shall have all the necessary powers to require compliance with the requirements of subsections (a), (b) and (c) therewith, including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts. Prior to award of the contract, an awarding authority may petition the attorney general for approval to adjust the requirements set forth in said subsections (a), (b) and (c). The attorney general may adjust these requirements only if he determines that compliance with these requirements is not feasible or if application of the requirements would be preempted by federal law.

(e) An awarding authority serving a low-income population may require additional specifications that address the needs of its clients including, but not limited to, preferential hiring for residents of public housing authorities for available apprenticeship positions.

(f) Subject to appropriation, the division of apprentice training shall enhance its outreach efforts to underserved populations in order to increase and diversify the number of apprentices in the commonwealth."

Section 39.

"Any entity located in the commonwealth that receives federal funds through the American

Recovery and Reinvestment Act of 2009 shall provide information as directed by the secretary of administration and finance regarding the use of the funds. The required information shall include, but not be limited to, the reporting information required by the federal government and any other information deemed necessary by the secretary to administer the American Recovery and Reinvestment Act of 2009 responsibly, efficiently and transparently. To the extent possible, the secretary shall work to streamline the reporting of this information, minimize duplication of data entry by recipients and ensure data consistency. The secretary may issue regulations to effectuate this reporting requirement."

Section 40.

"Employers and hiring agents on all projects funded in whole or in part by the American Recovery and Reinvestment Act of 2009 shall post notices of available employment opportunities to the commonwealth's job bank or the one-stop career centers closest to where the projects shall be located. The postings shall contain such information as directed by the secretary of labor and workforce development. The secretary may issue regulations to effectuate this job posting requirement."

END OF SECTION

SECTION 00830

ATTACHMENT C

CHANGE ORDERS

ATTACHMENT C

CHANGE ORDERS

Policy:

This section supplements Article 12, Change of Contract Price, in the General Conditions and Supplementary Conditions.

All executed change orders submitted to the Engineer for review and processing must be prepared in accordance with the attached change order format (Appendix A) with the appropriate number of copies, calculation sheet(s) (Appendix B) and all other supporting documentation necessary for evaluation. Failure to comply with these instructions will result in delays in processing the change order.

In order to avoid possible delays with approval of change orders, at the beginning of the project and as circumstances warrant, the Contractor shall submit a list of construction equipment, identifying major pieces of equipment to be utilized on the project. The list shall include the Contractor's designation, if any, the manufacturer, model, year of manufacture, serial number, size and horsepower of equipment. The Contractor shall also provide for approval a proposed bluebook equipment rental rate development that separately lists for each piece of equipment the monthly rental rate, area adjustment factor, depreciation factor, estimated operating cost per hour and total hourly rate. In the event the Contractor fails or is unable to provide appropriate rate information the Engineer may develop equipment rental rates for use on change orders.

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 as amended from time to time.

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 shall accept full and final payment at the contract unit price(s) for the acceptable quantities. Under certain circumstances, the unit prices may be subject to revaluation and adjustment. See Article 11 in the Supplementary

Conditions.

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 an 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 15% 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 5%, for the general contractor of the sum of the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credits for work deleted from the contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

C. Payment for work on a time and materials basis:

Unless an agreed lump sum and/or unit price is obtained as noted above and is so stated in the change price, the Contractor shall accept as full payment for which no agreement is contained in contract, an amount equal to:

1. The estimated cost of Labor, plus
2. The Direct Labor Costs, plus
3. Equipment Costs, plus
4. Material and Freight 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 the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credit for work deleted from the Contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

Explanation of items 1 through 7 as outlined in "B" and "C" above:

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 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. 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 Attachment A Massachusetts Wage Rates.

Liability insurance:	Bodily injury; excess umbrella; property damage; public liability
Blasters insurance:	If applied to any required direct labor costs
Builders risk insurance:	If applied to any required direct labor costs
Experience modification insurance:	If applied to any required direct labor costs
Surcharges:	If applied to any required direct labor costs

Following award and prior to execution of a construction contract, the Contractor and filed subbidders (where applicable) shall submit for review by the Owner, documentation to establish the markup percentage(s).

The documented direct labor markup for this contract may be adjusted on an annual basis as measured from the date the contract is executed. The contract agreement will provide for the establishment of the Direct Labor Cost percentage.

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 EquipmentWatch, division of

Intertec Publishing [Formerly 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 contract, stored and/or returned shall be credited to the cost of the change order, less documented costs.

   This change order will be prepared in such manner as to clearly separate Eligible and Ineligible Costs (as applicable to state-funded projects).

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.

APPENDIX A

CHANGE ORDER
(Enter Project Name)
(Enter Location)

Sheet __ of

Date_____

Project No. _____

Contract No. _____

Change Order No. _____

Owner's Name: _____

Owner's Address: _____

Contractor's Name: _____

Contractor's Address: _____

Item 1:

Description of Change:_____

Reason for Change:_____

Backup Information:_____

Cost: $_____

Item 2

Description of Change:_____

Reason for Change:_____

Backup Information:_____

Cost: $_____

Change Order (Continued)
(Enter Project Name)
(Enter Location)

Sheet __ of

Date_____

Project No. _____

Contract No. _____

Change Order No. _____

Contract Amount (As Bid) $_____

Amount of Previous Change Orders $_____

Net Change in Contract Price (this Change Order) $_____

Total Adjusted Contract Price (including this Change Order $_____

This Change Order extends the time to complete the work by ___ calendar days.

The extended completion date is _____
_____.

This Change Order checked by: _____
Resident Representative Date

This Change Order is requested by: _____

This Change Order is recommended by:

_____
Consultant Engineer P.E. # Date

The undersigned agree to the terms of the Change Order.

_____
Contractor Date

_____
Owner Date

Certification of Appropriation under M.G.L. c.44, s.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: this space reserved for STATE AGENCY APPROVAL

_____

Appendix B
Example Calculation Sheet

1. Labor

Foreman	10 hours @	$10.00/hour	$100.00
Engineer	10 hours @	8.80/hour	85.00
Operator	10 hours @	9.50/hour	95.00
Laborers	24 hours @	7.00/hour	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 @ $2.00/1.f.	$ 300.00
15 v.f. precast SMH	1,700.00
Freight (slip#___ enclosed)	25.00
	$2,025.00

4. Equipment

1 Backhoe	10 hours @	$ 80.00/hour	$ 800.00
1 Truck-crane	10 hours @	100.00/hour	1000.00
			$1800.00

TOTAL (items 1 through 4): $4,407.00

5. (15%) markup for Overhead, Profit

(15%) of $4,407 $ 661.00

EXAMPLE

6. (5%) markup on subcontractor's cost for general contractor (if subcontractor is involved)

(5%) of $4,407 $ 230.00

7. Credits (deductibles) -$323.00

TOTAL COST: $4,975.00

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence, calculation, photographs, reports**.**

END OF SECTION

SECTION 00890

PERMITS

PART 1 – GENERAL

1.01 DESCRIPTION:

A. This Section provides specific information and defines specific requirements of the Contractor regarding the preparation and acquisition of permits required to perform the work of this project. This Section also provides specific information and defines specific requirements of the Contractor regarding the termination of existing services. The permits and terminations required include, but are not limited to, those specifically described in this Section.

B. The following items are addressed in this Section.

1. Building Demolition Permits
2. Woburn Fire Department
3. Woburn Department of Public Works
4. National Grid Gas
5. Eversource Electric
6. Verizon
7. Lead, Asbestos, and Oil & Hazardous Materials Requirements
8. Department of Environmental Protection (DEP) and Environmental Protection Agency (EPA) Notification and Permits

1.02 RELATED WORK:

A. Section 01110 – CONTROL OF WORK AND MATERIALS

B. Section 01570 – ENVIRONMENTAL PROTECTION

C. Section 02051 – ASBESTOS ABATEMENT

D. Section 02075 – UNIVERSAL AND HAZARDOUS WASTE

E. Section 02220 – DEMOLITION

F. Section 02222 – UTILITY ABANDONMENT

G. Section 02300 – EARTHWORK

1.03 GENERAL PERMIT AND TERMINATION REQUIREMENTS:

A. The Contractor shall apply for, obtain, and pay for all permits and licenses required, including but not limited to the permits listed below. Contractor shall also be responsible for all fees and costs associated with decommissioning and termination of services.

B. The Contractor shall procure all other permits, licenses, and approvals from Federal, State, and local authorities and such other agencies as may be necessary in connection with the work of this Contract.

C. The Contractor shall perform the work in accordance with the Contract Documents, and any applicable Federal, State, and local requirements, permits, or order of conditions.

D. The Contractor shall provide all required certificates to show that the work has been completed in conformity with the permits and shall submit such Certificates of Approval to the Engineer before final acceptance of the work.

E. Terminate services in accordance with the requirements of the governing utility and as specified under Section 01110 – CONTROL OF WORK AND MATERIALS, Section 02220 –DEMOLITION, and Section 02222 – UTILITY ABANDONMENT.

F. Refer to the Contract Drawings showing the locations of water, gas, sewer, drain, and electric utilities at the site. The Contractor shall note that the utility information shown may not reflect actual field conditions.

1.04 BUILDING DEMOLITION PERMIT:

A. Demolition permitting is the responsibility of the Contractor. Demolition permitting for demolition of structures under this Contract will be obtained from the City of Woburn Inspectional Services Department.

B. For the Building Demolition Permit, contact Thomas C. Quinn, Jr: Telephone - 781-897-5840; Address - City of Woburn, Woburn Inspectional Services Department, 10 Common Street, Woburn, Massachusetts 01801.

C. When making application for a Building Demolition Permit, the Contactor shall submit a Massachusetts State Building Code (780 CMR) demolition permit application. See Attachment A for the procedure to acquire a demolition permit from the City of Woburn. The application shall be prepared in accordance with 780 CMR 112.0 – Demolition of Structures. Contractor shall complete the application and obtain all necessary signatures, including property owner, authorizing agent, and professional engineer as appropriate, prior to submitting application.

D. The Contractor shall be aware that in accordance with 780 CMR 112.1, a permit to demolish a building shall not be issued until a release is obtained from all utilities having service to the building stating that their respective service connections and appurtenance equipment have been removed or sealed/plugged.

1.05 WOBURN FIRE DEPARTMENT:

A. The Contractor shall coordinate with the Woburn Fire Department (WFD) on a number of fire department related issues.

B. Telephone - 781-932-4560; Address - Woburn Fire Department, Fire Prevention Office, 124 Main Street, Woburn, Massachusetts 01801.

1.06 WOBURN DEPARTMENT OF PUBLIC WORKS:

A. Sewer and water service shall be severed and capped as indicated on the Contract Drawings.

B. Contractor shall obtain permits for utility work in accordance with the requirements of the City of Woburn Municipal Code (available on line at www.woburnma.gov/government/city-clerk/ordinances/municipal-code). Permitting fees for utility work shall be waived.

C. For termination of water and sewer service connections, and for permitting, contact Jay Duran: 781-897-5980, Superintendent of Public Works, Woburn Department of Public Works, 50 North Warren Street, Woburn, Massachusetts 01801.

1.07 NATIONAL GRID GAS:

A. Gas services are terminated by National Grid Gas. The Contractor shall coordinate service termination with National Grid. Telephone (800) 732-3400; Address: National Grid Gas, 40 Sylvan Road, Waltham, MA 02451.
National Grid Gas requires a lead-time of approximately two weeks after the date of notification to perform the termination work.

1.08 EVERSOURCE ELECTRIC:

A. Electric services are terminated by Eversource Electric. The service termination, removal of existing electrical utilities, and provision of temporary electrical service must be coordinated with Tracy McDevitt, Telephone (339) 987-7132; Address: 247 Station Drive, Westwood, Massachusetts 02090. NSTAR requires a lead-time of approximately two weeks after the date of notification to perform the termination work.

1.09 VERIZON:

A. Telephone, Internet and cable services are terminated by Verizon. The disconnection of existing utilities shall be coordinated with Verizon.

1.10 LEAD, ASBESTOS, AND OIL & HAZARDOUS MATERIALS REQUIREMENTS:

A. For requirements associated with lead, asbestos, and oil and hazardous materials, see Section 02220 – BUILDING DEMOLITION, Section 02051 – ASEBESTOS ABATEMENT, Section 02075 – UNIVERSAL AND HAZARDOUS WASTE, and Section 13282 – LEAD BASED COATINGS REMOVAL.

1.11 NPDES STORMWATER DISCHARGE AND CONSTRUCTION SITE DEWATERING PERMITS:

A. Contractor shall obtain the NPDES Stormwater Discharge Permit, if required, and shall prepare a Stormwater Pollution Prevention Plan in accordance with the permit requirements.

B. The Contractor shall, if required, obtain a Construction Site Dewatering Permit (BRPWM 10) from the DEP and the EPA.

1.12 NOTIFICATIONS:

A. The Contractor shall make the appropriate notifications to the DEP and the EPA including, but not limited to, the DEP notification prior to asbestos abatement or demolition, BWP AQ 06, and EPA notification required under the Federal National Emission Standards for Hazardous Air Pollutants.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

ATTACHMENT A

City of Woburn Inspection Services
Procedures for Demolition Permit as per 780 CMR 8

CITY OF WOBURN INSPECTIONAL SERVICES
PROCEDURES FOR DEMOLITION PERMIT AS PER 780 CMR 8

1. A written statement from all pertinent utilities, electric, gas, water & sewer, phone company, cable, etc., affirming that all connections have been removed or sealed.
2. A copy of the written notification to all the abutters of the property that the demolition will be taking place.
3. The Fire Department must sign off on the permit application.
4. The Department of Public Works must sign off on the permit application.
5. The Board of Health must sign off on the permit application along with a receipt of extermination inspection is required. As asbestos acknowledgement letter is all required.
6. The Conservation Department must sign off on the permit application.
7. Construction trailers are not permitted to be parked on the site until a building permit has been issued and must meet setback requirements.
8. The Historical Commission must sign off on the permit application.
9. If the property is 75 years or older, the owner must apply for a demo delay permit with the Historical Commission.
10. On that permit:
    a. List all structures to be demolished.
    b. Provide detailed answers for all questions.
    c. Provide photographic documentation.
    d. Provide signature of the property owner.

SECTION 01014

SCOPE AND SEQUENCE OF WORK

PART 1 – GENERAL

1.01 WORK INCLUDED

A. The former Clapp School (Building) encompasses approximately 0.4 acres and is located on Hudson Street in Woburn, Massachusetts. The Building is bound to the north by Hudson Street, to the south and east by residential properties, and to the west by Arlington Road.

B. The Building shall be removed in its entirety, including subsurface structures (basements, crawl spaces, foundations, floor slabs, retaining walls, footings, and frost walls). The Contractor shall also demolish and remove all improvements and appurtenances associated with the structures (e.g., platforms, stairs, porches, build-outs, entrance ways, retaining walls, fencing, ancillary items, etc.) that may exist beyond the hatching shown, as indicated on the drawing. Demolition work shall be done in accordance with specification section 02220 – DEMOLITION..

C. The scope of work includes cutting, capping, and abandonment in place of existing building utilities. These utilities are as listed below:

- Drain line and associated catch basins in east side parking lot are to remain and be protected throughout the course of the project as indicated on Sheet C-2 of the Contract Documents.
- Water service lines connecting to the Building shall be cut, capped and filled with controlled density fill (CDF) as indicated on the Drawings.
- There are sewer service connections from the Building on the west side connected to a sewer manhole. These building sewer connections shall be capped at the manhole structure and the abandoned portion of the pipe filled with CDF as shown on the Drawings.
- Overhead telephone/cable service lines connecting to the Building shall be cut at the nearest utility pole and removed.
- Coordinate with Verizon for the disconnection of the buried telecommunication service line connecting to the Building. The line shall be cut at the limit of work and abandoned in place as indicated on the Drawings.
- Coordinate with Eversource Energy for the disconnection of electrical line as indicated on the Drawings.
- Coordinate with National Grid for the disconnection of the gas service line.
- The fire hydrant on the east side of the Building will be relocated to Hudson Street. The Contractor shall coordinate the new location with Woburn Public Works and the Owner.

The scope of work also includes environmental protection, protection and preservation of infrastructure to remain; traffic management; dust management; noise and rodent control; environmental and demolition permitting; and site restoration including backfilling, loaming and seeding.

D. The Contractor shall be permitted to store and/or stage materials, equipment, or other related items within construction fencing area as indicated on Sheet C-3 - Demolition Plan.

E. Contractor's operations at the site are restricted to the Contract Limit of Work shown on the Drawings and any additional constraints presented in these Specifications, except for work specified and indicated to occur beyond the Limit of Work (e.g. traffic control, access to the site, utility disconnection, etc.).

1.02 EXISTING CONDITIONS

A. By submitting a bid, the Contractor affirms having carefully examined the site and all conditions affecting the Work. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.

1.03 GENERAL REQUIREMENTS

A. The Contractor shall furnish all labor, materials, equipment, and incidentals, required to complete the work as shown in the Contract Drawings and specified herein. The work includes, but is not limited to the following:

1. Apply for, pay for and obtain all necessary permits required, including but not limited to those listed in Section 00890 - PERMITS, by local, State, and Federal agencies having jurisdiction over work for successful completion of this Contract.

2. Supply all submittals required by Section 01330 - SUBMITTALS and those required to proceed with the completion of this scope, including shop and working drawings, Health and Safety Plan, and copies of all accepted permits.

3. Install the temporary 8-foot high temporary chain link fence with mesh fabric/wind screen prior to the start of demolition activities as shown on the Contract Drawings and described in Section 02821 – TEMPORARY CHAIN LINK FENCE. The fence and mesh fabric/wind screen shall be maintained throughout the Project and remain in place after the completion of the Project.

4. Erosion and sediment control shall be installed as shown on the Contract Drawings and specified herein. This shall include straw wattles and sediment control fabric in catch basins as shown on the Contract Drawings and any additional measures that may be required or as determined by Engineer. Install anti-tracking pad at egress gate as shown on the Contract Drawings.

5. Provide all utilities and obtain applicable permits that are anticipated for use during the completion of the project, including electricity, and temporary water service, if required.

6. Except where specifically noted otherwise, the Contractor shall protect the existing stormwater collection system (catch basins, drain manholes, and piping), and hydrants as shown on the Contract Drawings.

7. The Contractor shall be responsible for employing proper protection techniques for excavation. Excavations shall be backfilled per Section 02300 – EARTHWORK.

8. Prior to commencement of demolition activities, Contractor shall verify removal and disposal of all asbestos-containing and hazardous materials from the Building has been completed.

9. Complete demolition and removal of site structures, including subsurface structures (basements, crawl spaces, foundations, floor slabs, footings, and frost walls), floor slabs, building contents and all appurtenant structures as designated on the Drawings and described in these Specifications.

10. Demolition of all ancillary structures and site features, unless otherwise indicated on the Contract Drawings.

11. Pick up for removal and disposal/recycling all debris resulting from demolition and other contract related activities.

12. Lawful disposal of, or recycling of, all demolition debris including, but not limited to: rubble, masonry, wood, plastic, concrete, electrical, metal, pavement, roofing materials, and other miscellaneous demolition debris from the Facility. Recycling and reuse of demolition debris material is strongly encouraged.

13. Backfill, compact, and grade demolished areas/voids. Backfill building footprint to within 4 inches of existing surrounding grades and place loam and seed in the top 4 inches. Fill shall be placed at a maximum 3:1 slope and match existing grades along the fill perimeter.

14. Cleanup of site, including removal of environmental protection, after the establishment of vegetation.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 GENERAL

A. The Contractor shall be responsible for scheduling its activities and the activities of any subcontractors involved, to meet the completion date, or milestones, established for the Contract. Scheduling of the work shall be coordinated with the Owner and Engineer.

B. Prior to performing any work at the Site, the Contractor shall submit a detailed scheduling plan to the Engineer for review per Section 01310 – CONSTRUCTION SCHEDULING. The plan shall describe the proposed sequence, methods, and timing of the work.

C. The schedule shall show the sequence of work described herein including permitting, submittal preparation, Site mobilization, building demolition, project closeout, demobilization, and chart contract completion.

3.02 CONSTRUCTION SEQUENCING REQUIREMENTS

A. Contractor shall ensure that pedestrian access to the playground located northeast of the Building is not impacted by the work of this Contract, and that adequate protection measures are implemented to ensure the health and safety of pedestrians. In this regard; the Contractor shall provide an eight (8) foot high chain link fence around the site, as indicated on Sheet C-3, along with appropriate warning signage, to restrict access to the demolition/abatement work area. A dust screen shall be amended to the fence to prevent dust migration from the site.

B. Contractor shall schedule work so that it will cause minimum inconvenience and nuisance to abutting building users, over the shortest possible time.

END OF SECTION

SECTION 01110

CONTROL OF WORK AND MATERIALS

1. Hauling, Handling and Storage of Materials
2. Open Excavations
3. Maintenance of Traffic
4. Care and Protection of Property
5. Protection and Relocation of Existing Structures and Utilities
6. Maintenance of Flow
7. Rejected Materials and Defective Work
8. Sanitary Regulations
9. Safety and Health Regulations
10. Site Investigation
11. Electric Service
12. Hazardous Waste
13. Clean-up and Disposal of Excess Material

1. HAULING, HANDLING AND STORAGE OF MATERIALS:

A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.

B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by him that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.

C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

2. OPEN EXCAVATIONS:

A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.

B. The length of open trench will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Engineer.

C. If the excavation becomes a hazard, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stocking excavated material in the street.

D. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

3. MAINTENANCE OF TRAFFIC:

A. All demolition debris, excavated materials and equipment shall be placed so that vehicular and pedestrian traffic may be maintained at all times.

B. For the entire duration of the Project, the Contractor shall maintain open and safe access to the Site as shown on the Contract Drawings.

C. The Contractor shall, at its own expense, provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals.

D. The Contractor shall furnish all construction signs that are deemed necessary by and in accordance with Part VI of the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation.

E. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

F. Conduct operations and removal of debris to ensure minimum interference with the operations of the Owner and the normal use of public ways and other adjacent facilities. Do not close or obstruct traffic ways, streets, walks or other facilities without the written permission of the Owner and authorities having jurisdiction.

G. The Contractor shall contact the Engineer before starting any work at the work site to review any traffic requirements.

H. Provision shall be made for safe passage at all times for emergency vehicles onto the work site.

4. CARE AND PROTECTION OF PROPERTY:

A. The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at its expense,

to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.

B. The Contractor shall protect the tree on the west side of the building that is not designated for removal, as shown on sheet C-3 – Demolition Plan. The Contractor shall protect the tree with orange construction fencing as shown on Detail Sheet D-1. Care shall be taken not to cut tree roots so as to harm the growth of the tree.

5. PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

A. The Contractor shall assume full responsibility for the protection of all structures and utilities that are not scheduled for demolition and/or removal. These structures and utilities include, but are not limited to, sidewalks, curbing and streets, hydrants, drain manholes, drains, culverts, and catch basins, whether or not they are shown on the Contract Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Should such property be damaged, it shall be restored by the Contractor, at no additional cost to the Owner.

B. The location of existing underground services and utilities shown on the Contract Drawings are based on available records. Although these documents may indicate the approximate location of existing utilities in the vicinity of the work, it is not warranted that all existing utilities and services are shown, or that indicated locations are correct. The Contractor shall coordinate all work involving utilities and shall verify the existing conditions of the areas in which the work is to be performed. In addition, the Contractor's attention is directed to the fact that there are existing aboveground utilities, at and in the immediate vicinity of the work. The Contractor shall identify all aboveground services prior to commencement of the work and exercise all necessary precautions to ensure worker and public safety, protection of the utilities not being demolished and compliance with the required utility standards and procedures.

C. The Contractor shall confirm the location of all underground utility services (including existing water services, drain lines, sewers, gas lines, electrical lines, and communications). The Contractor shall be responsible for having the utility companies locate their respective utilities at and in the vicinity of the site prior to excavating. To satisfy the requirements of Massachusetts law, Chapter 82, Section 40, the Contractor shall, at least 72 hours, exclusive of Saturdays Sundays and holidays, prior to excavation in the proximity of telephone, gas, cable television, and electric utilities, notify the utilities concerned by calling "DIG SAFE" at 811 or 1-888-DIG-SAFE.

D. The Contractor shall thoroughly inspect the building interior for incoming utilities to supplement identification of utility services for disconnection.

E. All existing site utilities, unless otherwise identified, shall be terminated as shown on the Contract Drawings, and as required and approved by the Engineer.

F. All property damaged by the Contractor's operations, outside the Limits of Work shall be restored to a condition at least equal to that in which it was found immediately

before work was begun. Suitable materials and methods shall be used for such restoration.

G. Restoration of existing property and structures, designated not to be demolished, shall be carried out as promptly as practicable and shall not be left until the end of the construction period.

H. On paved surfaces, the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with trades or wheels which are shaped so as to cut or otherwise damage such surfaces.

6. MAINTENANCE OF FLOW:

A. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. The Contractor shall surround catch basins that may receive runoff from the work area with straw wattles and use sediment control fabric as described in Section 01570 – ENVIRONMENTAL PROTECTION and shown on Sheet D-1 of the Contract Drawings, to protect drainage systems from sediment accumulation. If the Contractor damages or impairs any of the aforesaid drainage facilities, he shall repair the same within the same day.

B. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by its operations as described in Section 01740 – CLEANING UP.

7. REJECTED MATERIALS AND DEFECTIVE WORK:

A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor and shall not be made use of elsewhere in the work.

B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.

C. The Contractor shall reimburse Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or its employees, as determined by the Engineer, occurring previous to the final payment.

8. SANITARY REGULATIONS:

A. Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and

disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

B. Use heavy-duty refuse containers with tight-fitting domed lids, with a spring-loaded flap, for disposal of all garbage and trash associated with food. Maintain these containers so there are no openings that allow access by rodents. Refuse containers shall be emptied daily to maintain site sanitation.

C. Do not dispose of food, garbage, or trash associated with food in dumpsters or other containers being utilized for disposal of demolition debris.

D. Within five days after the date of the Notice to Proceed, remove all trash and debris from areas within the Limit of Work.

E. Maintain the site and its perimeter area free of trash, garbage, weeds, debris, and unnecessary or deteriorated hay bales. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.

F. Contractor shall designate a specific area at the site as a lunch and coffee break area to prevent random disposal of garbage and trash. Keep this area free of litter and garbage and provide refuse containers. Keep refuse containers upright with their lids shut tight.

9. SAFETY AND HEALTH REGULATIONS:

This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et. seq.)." Contractors shall be familiar with the requirements of these regulations.

10. SITE INVESTIGATION:

The Contractor acknowledges that he has satisfied himself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint himself with available information will not relieve him from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner.

11. ELECTRIC SERVICE:

A. The Contractor shall make all necessary applications and arrangements and pay for all fees and charges for electrical energy for power and light necessary for the proper completion of this contract during its entire progress. The Contractor shall provide and pay for all temporary wiring, switches, connections, and meters. The Contractor shall remove all temporary equipment after demolition work is completed. The Contractor may, at his own expense, utilize temporary generators to provide power for abatement and demolition related activities.

B. There shall be sufficient electric lighting provided by the Contractor so that all work may be done in a workmanlike manner where there is not sufficient daylight.

12. HAZARDOUS WASTE:

Should the Contractor, while performing work under this contract, uncover suspected hazardous materials, as defined in Massachusetts Hazardous Waste Regulations 310 CMR 30.00, **not** specified or shown on the Contract Documents, he shall immediately notify the Engineer.

END OF SECTION

SECTION 01140

SPECIAL PROVISIONS

1. Water for Demolition Purposes
2. Occupying Private Property
3. Existing Utility Locations
4. Coordination of Work
5. Time for Completion of Contract
6. Signs
7. Compliance with Permits
8. Contractor's Representative
9. Hours of Construction Activity
10. Other Contracts

1. WATER FOR DEMOLITION PURPOSES:

A. The Contractor shall provide water trucks or coordinate with the Woburn Water Department and Woburn Fire Department for use of a nearby fire hydrant, as temporary services for demolition activities, including dust control and asbestos abatement. Placement of water hoses across Hudson Street or Arlington Road will not be permitted. The Contractor shall install temporary metered water lines with backflow preventers to provide water for demolition activities and shall provide protection for the hydrants. Backflow preventers and meters are to be inspected and approved by the Woburn Department of Public Works prior to installation and use. The Contractor must pay applicable fees and use approved backflow preventers and meters per the Woburn Department of Public Works/Woburn Water Department. Beyond the applicable Woburn Department of Public Works/Woburn Water Department permit/set-up fees, there will be no charge for the water usage; however, waste of water by the Contractor shall be sufficient cause for withdrawing the privilege of unrestricted use.

B. If no water is available, the Contractor shall supply water at no additional cost to the Owner.

2. OCCUPYING PRIVATE PROPERTY:

A. The Contractor shall not enter upon nor occupy with workers, equipment or materials any property outside of the public highways or Owner's easements, except with the written consent of the property owner or property owner's agent.

3. EXISTING UTILITY LOCATIONS:

A. The location of existing underground services and utilities shown on the drawings is based on available records. It is not warranted that all existing utilities and services are shown,

or that shown locations are correct. The Contractor shall be responsible for having the utility companies locate their respective utilities on the ground prior to excavating.

B. To satisfy the requirements of **Massachusetts law, Chapter 82, Section 40**, the Contractor shall, at least 72 hours, exclusive of Saturdays, Sundays and holidays, prior to excavation in the proximity of telephone, gas, cable television and electric utilities, notify the utilities concerned by calling "DIG SAFE" at telephone number: 1-888-344-7233 or 811.

C. The Contractor shall coordinate all work involving utilities and shall satisfy itself as to the existing conditions of the areas in which it is to perform its work. It shall conduct and arrange its work so as not to impede or interfere with the work of other contractors working in the same or adjacent areas.

D. Test pits for the purpose of locating underground pipelines or structures in advance of demolition work shall be excavated and backfilled by the Contractor at the direction of the Engineer. Test pits shall be backfilled immediately after their purpose has been satisfied and the surface restored and maintained in a manner satisfactory to the Engineer. The Contractor shall test pit as part of this Project for the purpose of locating underground pipelines and structures at no additional cost to the Owner.

4. COORDINATION OF WORK:

The General Contractor shall be responsible for coordinating his own work as well as that of any subcontractors. It shall be responsible for notification of the Engineer when each phase of work is expected to begin and the approximate completion date.

5. TIME FOR COMPLETION OF CONTRACT:

The time for completion of this contract is stipulated in the FORM FOR GENERAL BID. The Bidder shall base his bid on completing the proposed work by the completion date stipulated in Section 00410 – FORM FOR GENERAL BID.

6. COMPLIANCE WITH PERMITS:

The Contractor shall perform all work in conformance with requirements of the Permits, which appear in Section 00890 – PERMITS.

7. CONTRACTOR'S REPRESENTATIVE:

The Contractor shall designate a representative who will be available to respond to emergency calls by the Owner at any time day and night and on weekends and holidays should such a situation arise.

8. HOURS OF CONSTRUCTION ACTIVITY:

The Contractor shall conduct all construction activity during daylight hours between 7:00 a.m. and 5:00 p.m., Monday through Friday. No construction work shall be allowed on Saturdays, Sundays or Holidays without written authorization from the Owner.

END OF SECTION

SECTION 01270

MEASUREMENT AND PAYMENT

1. GENERAL

A. The following sections describe the measurement and payment for the work to be done under the respective items listed in the FORM FOR GENERAL BID.

B. All work performed as described in these contract documents shall be paid for under one or more of the items listed in the FORM FOR GENERAL BID. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the FORM FOR GENERAL BID, but will be considered incidental to performance of the overall project.

C. Each lump or unit sum price stated in the FORM FOR GENERAL BID shall constitute full compensation as herein specified for each item of work completed in accordance with the Drawings and specifications.

D. The payment items listed herein and in the FORM FOR GENERAL BID are intended to provide full payment for the work shown on the drawings and specified herein. Any work called for or implied in the documents but not listed as a payment item shall be considered incidental to the overall project.

2. ITEM 1 – ABATEMENT AND DEMOLITION OF CLAPP SCHOOL BUILDING

A. The lump sum price for Item 1 shall constitute full compensation for furnishing all labor, material, tools, and equipment necessary for mobilization/demobilization and to complete Site preparation and miscellaneous Site work as described in and required by the Contract Documents including, but not limited to: all permits and approvals required to complete Work, all submittals/plans, temporary facilities, temporary utility connection and use, constructing and maintaining temporary fencing and gates as necessary, installing and maintaining environmental protection controls, clearing and grubbing within the Limits of Work as specified, signage/traffic control, erosion and dust/air monitoring and control, odor and noise control, catch basin inlet protection, rodent control, abatement of hazardous materials including ACM and universal waste, demolition and disposal of miscellaneous structures, features, and site improvements within the Limits of Work not included in other Bid Items, preparing and implementing a health and safety plan, preparing and submitting As-Built Documents, cleaning up, and all other work shown on the Drawings and called for in the specifications, except for the work included in Items 1A and 2.

B. The lump sum price for Item 1 shall constitute full compensation for furnishing all labor, materials, tools and equipment to complete the abatement and demolition of the Clapp School Building including building demolition, hazardous material abatement, utility abandonment, and all incidental work for demolishing, removing, and recycling/disposing the Building, complete, as shown on the Drawings and called for in the specifications.

C. The lump sum price for Item 1 shall also include demolition and removal of all adjacent site features and ancillary structures and their foundations, crushing clean concrete and brick, furnishing and placing Class B backfill, blending crushed concrete/brick and Class B Backfill per Specification 02220 – DEMOLITION, backfilling and grading the Building excavations/voids with crushed concrete/brick and Class B Backfill blend to a maximum slope of 3:1 and matching existing surrounding grades along the fill perimeter, and associated site work as shown on the Drawings and called for in the specifications.

3. ADJUSTMENT CLASS 1A – REMOVAL AND DISPOSAL OF BURIED PIPE CONTAINING ASBESTOS

A. In the event that buried pipe containing asbestos is discovered during demolition that is not part of the inventory presented in the Contract Documents, it shall become the Contractor's responsibility to stop that particular element of work and verify and obtain agreement with the Engineer that the work is in fact unidentified.

B. The quantity of buried pipe containing asbestos for removal and disposal to be pair for under this Adjustment Class shall be the number of linear feet of pipe removed and disposed.

C. This Adjustment Class constitutes full compensation to provide removal and disposal of buried pipe containing asbestos, complete, as described in and required by the Contract Documents including, but not limited to; excavation, removal, demolition, disposal, and trench backfill. Any buried pipe containing asbestos shall be handled and disposed of in accordance with specification section 02051 – ASBESTOS ABATEMENT.

4. ITEM 2 – LOAM AND SEED

A. The per square yard price for Item 2 shall constitute full compensation for furnishing all labor, materials, tools and equipment to complete the loaming and seeding of the top 4-inches of the building footprint and other disturbed areas within the Limit of Work.

END OF SECTION

SECTION 01310

CONSTRUCTION SCHEDULING

PART 1- GENERAL

1.01 DESCRIPTION

A. The Contractor shall be responsible for scheduling activities and the activities of any subcontractors involved, to meet the completion date, or milestones, established for the Contract. Scheduling of the work shall be coordinated with the Owner and Engineer.

B. A construction schedule shall be used to control the work of this Contract and to provide a definitive basis for determining job progress. The construction schedule and updates shall be prepared by the Contractor and coordinated with the Engineer and Owner. All work shall be done in accordance with the established schedule and the Contractor and his subcontractors shall be responsible for cooperating fully with the Engineer and Owner in effectively utilizing the schedule.

C. The Contractor shall submit a schedule for approval by the Engineer prior to initiation of work. The schedule shall consist of a Gantt Chart showing the sequence of work described in Section 01014 – SCOPE AND SEQUENCE OF WORK. The schedule shall include, but not limited to, the following: permitting, submittal preparation, site mobilization, site work for each area (see Section 01014 – SCOPE AND SEQUENCE OF WORK), project milestones, project closeout, and demobilization.

1.02 SUBMITTALS

A. Prior to performing any work at the Site, the Contractor shall submit a detailed schedule to the Engineer and Owner for review.

B. The schedule shall be updated by the Contractor on a biweekly basis and submitted to the Engineer and Owner for review.

1.03 RESPONSIBILITY FOR SCHEDULE COMPLIANCE

A. Whenever it becomes apparent from the current schedule that delays have resulted and the Contract milestones and/or completion date will not be met, or when so directed by the Engineer, the Contractor shall take some or all of the following actions at no additional cost to the Owner. He shall submit to the Engineer for approval, a written statement of the steps he intend to take to remove or arrest the delay to the critical path in the approved schedule.

1. Increase construction manpower in such quantities and crafts as will substantially eliminate the backlog of Work.

2. Increase the number of working hours per shift, shifts per day, working days per week, the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate the backlog of work.

3. Reschedule activities to achieve maximum practical concurrency of accomplishment of activities and comply with the revised schedule.

B. If when so requested by the Engineer, the Contractor should fail to submit a written statement of the steps he intends to take or should fail to take such steps as approved by the Engineer, the Engineer may direct the Contractor to increase the level of effort in man-power (trades), equipment and work schedule (overtime, weekend and holiday work, etc) to be employed by the Contractor in order to remove or arrest the delay to the critical path in the approved schedule and the Contractor shall promptly provide such level of effort at no additional cost to the Owner.

END OF SECTION

SECTION 01330

SUBMITTALS

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. The Contractor shall provide the Engineer with submittals as required by the contract documents.

1.02 RELATED WORK:

A. Divisions 1 – 13 of these specifications that require submittals.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 GENERAL:

A. As required by the General Conditions, Contractor shall submit a schedule of shop and working drawing submittals.

B. The Contractor shall submit the shop and working drawing submittals either electronically or hard copy.

3.02 ELECTRONIC SUBMITTALS:

A. In accordance with the accepted schedule, the Contractor shall submit promptly to the Engineer by email (davida@wseinc.com) or on Compact Disc (mail to Weston & Sampson Engineers, attention: CSD), one electronic copy in Portable Document Format (PDF) of shop or working drawings required as noted in the specifications, of equipment, structural details and materials fabricated especially for this Contract.

B. Each electronic copy of the shop or working drawing shall be accompanied by the Engineer's standard shop drawing transmittal form, included as Exhibit 1 of this section (use only for electronic submittals), on which is a list of the drawings, descriptions and numbers and the names of the Owner, Project, Contractor and building, equipment or structure.

C. The Contractor shall receive a shop drawing memorandum with the Engineer's approval or comments via email.

3.03 HARD COPY SUBMITTALS:

A. In accordance with the accepted schedule, the Contractor shall submit promptly to the Engineer, by mail (to Weston & Sampson Engineers Inc., attention: CSD), six (6) copies each of shop or working drawings required as noted in the specifications, of equipment, structural details and materials fabricated especially for this Contract.

B. Each shipment of drawings shall be accompanied by the Engineer's (if applicable) standard shop drawing transmittal form on which is a list of the drawings, descriptions and numbers and the names of the Owner, Project, Contractor and building, equipment or structure.

3.04 SHOP AND WORKING DRAWINGS:

A. Shop and working drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish of shop coat, grease fittings, etc., depending on the subject of the drawings. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for this Contract.

B. All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from his subcontractors and returning reviewed drawings to them. All shop and working drawings shall be prepared on standard size, 24-inch by 36-inch sheets, except those, which are made by changing existing standard shop or working drawings. All drawings shall be clearly marked with the names of the Owner, Project, Contractor and building, equipment or structure to which the drawing applies, and shall be suitably numbered. Each shipment of drawings shall be accompanied by the Engineer's (if applicable) standard shop drawing transmittal form on which is a list of the drawings, descriptions and numbers and the names mentioned above.

C. Only drawings that have been prepared, checked and corrected by the fabricator should be submitted to the Contractor by his subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Contract Documents in all respects. Shop drawings shall be reviewed and marked with the date, checker's name and indication of the Contractor's approval, and only then shall be submitted to the Engineer. Shop drawings unsatisfactory to the Contractor shall be returned directly to their source for correction, without submittal to the Engineer. Shop drawings submitted to the Engineer without the Contractor's approval stamp and signature will be rejected. Any deviation from the Contract Documents indicated on the shop drawings must be identified on the drawings and in a separate submittal to the Engineer, as required under subsection 6.17 Shop Drawings and Samples; D. Submittal Procedures, Paragraph 3 of the 1996 General Conditions.

D. The Contractor shall be responsible for the prompt submittal and resubmittal, as necessary, of all shop and working drawings so that there will be no delay in the work

due to the absence of such drawings.

E. The Engineer will review the shop and working drawings as to their general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections of comments made on the drawings during the review do not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner. The review of the shop drawings is general and shall not relieve the Contractor of the responsibility for details of design, dimensions, code compliance, etc., necessary for interfacing with other components, proper fitting and construction of the work required by the Contract and for achieving the specified performance. The Engineer will review submittals two times: once upon original submission and a second time if the Engineer requires a revision or corrections. The Contractor shall reimburse the Owner amounts charged to the Owner by the Engineer for performing any review of a submittal for the third time or greater.

F. With few exceptions, shop drawings will be reviewed and returned to the Contractor within 30 days of submittal.

G. No material or equipment shall be purchased or fabricated especially for this Contract nor shall the Contractor proceed with any portion of the work, the design and details of which are dependent upon the design and details of equipment or other features for which review is required, until the required shop and working drawings have been submitted and reviewed by the Engineer as to their general conformance and compliance with the project and its Contract Documents. All materials and work involved in the construction shall then be as represented by said drawings.

H. Two copies of the shop and working drawings and/or catalog cuts will be returned to the Contractor. The Contractor shall furnish additional copies of such drawings or catalog cuts when he needs more than two copies or when so requested.

3.05 SAMPLES:

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

B. The number of samples submitted shall be as specified. Submittal and processing of samples shall follow the procedures outlined for shop and working drawings unless the specifications call for a field submittal or mock-up.

C. Acceptance of samples will be acknowledged via a copy of the transmittal noting status. When samples are not acceptable, prompt resubmittal will be required.

END OF SECTION

EXHIBIT 1 TO SECTION 01330 SUBMITTALS

SHOP DRAWING TRANSMITTAL FORM

Shop Drawing Transmittal

Weston & Sampson℠

Instruction for Preparing Transmittal

No action will be taken on any item unless accompanied by this form.
TRANSMITTAL NOS. to be consecutive (1, 2, 3, etc.).
Each resubmittal of same item shall use same number with suffix letter (A, B, etc.).
SPEC. SECT. NO: Only one spec. section no. to each transmittal.
DESCRIPTION: Complete identification of document or group of documents.
SOURCE: Originator of document(s) being submitted.

DRAWING NO: Identification of document(s).
CONTRACT DRAWING REFERENCE: Contract drawing number(s) showing details of document(s).
SPECIAL INSTRUCTIONS: Special cases and emergencies, changes in distribution and special handling requests, etc. should be entered here.
SIGNATURE OF CONTRACTOR: Signature of individual who reviews and approves material prior to submittal to engineer.

THIS SECTION TO BE COMPLETED BY CONTRACTOR

TRANSM. NO.	SPEC. SECT. NO.	DATE	CONTRACTORS JOB NO.	W&S JOB NO.

PROJECT NAME & CONTRACT NO.	LOCATION

TO	Attention: CSD (Davida@wseinc.com) Weston & Sampson Engineers, Inc. 5 Centennial Drive Peabody, MA 01960-7985	FROM	

						By W&S	
ITEM NO.	DESCRIPTION	SOURCE	DRAWING NO. CATALOG NO. BROUCHURE, ETC	NO. OF COPIES	CONTRACT DRAWING REF.	ACTION CODE	REVIEWED BY
1							
2							
3							
4							

THIS CERTIFIES THAT ALL ITEMS SUBMITTED HEREWITH HAVE BEEN CHECKED BY THE CONTRACTOR, ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, EXCEPT AS NOTED, AND ARE APPROVED BY THE CONTRACTOR FOR THIS PROJECT.

SIGNATURE & TITLE

THIS SECTION TO BE COMPLETED BY WESTON & SAMPSON

ACTION CODE:
1. NO EXCEPTIONS TAKEN
2. MAKE CORRECTIONS NOTED
3. AMEND AND RESUBMIT
4. REJECTED- SEE REMARKS
5. ACKNOWLEDGEMENT
6. SUBMITTAL NOT REQUIRED, RETURNED WITHOUT REVIEW

a. INSTALLATION SHALL PROCEED ONLY WHEN ACTION CODE IS 1 OR 2
b. ACTION CODED 3 SHALL BE RESUBMITTED WITHIN TIME LIMIT SET IN CONTRACT
c. REVIEW DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY OF COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS

Weston & Sampson

SECTION 01380

HEALTH AND SAFETY PLAN

PART 1 – GENERAL

1.01 DESCRIPTION:

A. This Section provides specific information and defines specific requirements of the Contractor regarding the preparation of a site-specific Health and Safety Plan and related items. Prior to the start of work on the site the Contractor shall prepare and submit a site-specific health and safety plan, which includes consideration of all known and potential hazards at the site. Work may not proceed at the project site until the Contractor's health and safety plan has been received and reviewed by the Engineer.

B. In addition to addressing health and safety issues associated with asbestos abatement, miscellaneous oil & hazardous materials removal, and demolition of lead-containing items, the Health and Safety Plan and related items of this Section are also to address general demolition and construction activities required under this Contract. Refer to and coordinate with Section 02051 – ASBESTOS ABATEMENT, Section 02075 – UNIVERSAL AND HAZARDOUS WASTES, Section 02220 – DEMOLITION, and Section 13282 – LEAD BASED COATING REMOVAL, and the Contract Drawings for additional elements and requirements to be included in the Contractor's Health and Safety Plan.

C. The following items are addressed in this Section.

1. Preparation of a Site-Specific Health and Safety Plan

2. Personal Protective Equipment

3. Logs, Reports, and Recordkeeping

D. The Contractor is advised that asbestos containing material (ACM), Lead Based Coatings, and other hazardous materials (OHM) were detected in the building. Refer to Section 02051 – ASBESTOS ABATEMENT, Section 02075 – UNIVERSAL AND HAZARDOUS WASTES, and Section 13282 – LEAD BASED COATING REMOVAL for site investigation results.

1.02 PREPARATION OF A SITE-SPECIFIC HEALTH AND SAFETY PLAN:

A. Prior to the start of work on the site, Contractor shall prepare and submit an initial site-specific Health and Safety Plan, which includes consideration of all known and potential hazards at the site. Work may not proceed at the project site until the Contractor's Health and Safety Plan has been received by the Engineer. Site-specific health and safety procedures as specified herein are required due to potentially hazardous

conditions that may be encountered during handling, sampling, treatment, removal and disposal of contaminated and/or hazardous material. These procedures shall be described in the Health and Safety Plan prepared by the Contractor. The Contractor is responsible for its workers' and Subcontractors' health and safety and the monitoring and control of dust migration from the site. Therefore, the Engineer will only review the Contractor's Health and Safety Plan for relevant content. The Contractor shall implement, maintain, and enforce these procedures during all phases of the Work associated with the description of work described in this Section.

B. It is the responsibility of the Contractor to implement engineering controls, at no additional cost to Owner, to control and reduce fugitive air emissions, noise, and odors that exceed nuisance levels as specified in the Contract Documents.

C. This Section describes the minimum health and safety requirements during completion of the site work. The Contractor shall develop a detailed Health and Safety Plan based on all applicable regulations. The Health and Safety Plan must establish in detail the protocols necessary for protecting workers, on-Site personnel, visitors and potential off-site receptors from potential hazards that may be encountered during remediation activities.

D. The Contractor's Site Safety and Health Officer (SSHO) shall be present on-Site throughout the duration of the Contract, shall be fully qualified and experienced to conduct his/her duties, and shall maintain a continuous hazardous materials health and safety monitoring program throughout the project. It shall be the SSHO's responsibility to notify the Engineer of any deviations in the hazardous materials health and safety-monitoring program.

E. Contractor shall be cognizant of the minimum health and safety plan standards set forth in 29 CFR 1910.120 and 29 CFR 1926. The Health and Safety Plan shall include, but not be limited to, the following minimum requirements:

1. Identification of the Contractor's General Supervisor, Site Safety and Health Officer, and other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

2. Lines of authority, responsibility, and communication associated with personnel identified in paragraph 1.02 E.1.

3. Copies of 40-hour OSHA HAZWOPER training, Confined Space training, and 10-hour OSHA construction safety training certificates, including most current refresher session certificates if applicable, for all personnel that will be involved in the activities for which such training is required.

4. Comprehensive work plan that addresses the tasks and objectives of the project, including associated logistics and resources.

5. Identification and analysis of the hazards and risks associated with each task/operation of the project.

6. Contractor's standard operating procedures, including personnel training and field orientation information.

7. Procedures for determining appropriate levels of protection and equipment selection.

8. Identification of personal protective equipment (including respiratory protection equipment) to be used during each task/operation of the project (see Paragraph 1.03 for additional information).

9. Contractor's medical surveillance program.

10. Personal hygiene requirements and guidelines for project personnel.

11. Project Site zone delineation.

12. Site security and entry control procedures.

13. Frequency and types of air monitoring, personnel monitoring, and environmental sampling techniques to be used (including methods for maintenance and calibration of monitoring and sampling equipment).

14. Decontamination procedures (see Specification Section 01570 – ENVIRONMENTAL PROTECTION).

15. Contingency and emergency response plans and procedures.

16. List of emergency contacts (including names, addresses, and telephone numbers).

17. Confined Space Entry Procedures.

18. Procedures for minimizing electrical hazards and risks posed by overhead wires.

19. Methods and responsibility for updating the Health and Safety Plan, as necessary.

20. Spill Containment Program – Develop, submit for Engineers review, and implement an Oil and Hazardous Materials Management and Spill Control Program (OHM Program) to address inventory, storage, and on-site handling of oil and hazardous materials, risk mitigation measures, and spill control and reporting procedures that will be implemented by the Contractor during construction. The OHM Program shall include complete descriptions of all methods, procedures, and Best Management Practices (BMP) proposed to insure compliance with appropriate environmental requirements of Owner, the

Massachusetts Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency, and all others having jurisdiction.

21. Provisions for Pre-Entry Initial and Periodic Briefings.

C. Refer to and coordinate with Section 02051 – ASBESTOS ABATEMENT, Section 02075 – UNIVERSAL AND HAZARDOUS WASTES, Section 02220 – DEMOLITION, Section 02222 – UTILITY ABATEMENT, Section 02300 – EARTHWORK, and Section 13282 - LEAD BASED COATINGS REMOVAL, for additional elements and requirements to be included in the Contractor's Health and Safety Plan.

1.03 PERSONAL PROTECTIVE EQUIPMENT:

A. The personal protective equipment required to provide the appropriate level of dermal and respiratory protection shall be determined based on the results of continuous air monitoring performed by the Contractor and the standards set forth in the Contractor's Health and Safety Plan. The Engineer may conduct duplicate air monitoring for quality control purposes. Modified Level D protection shall be the minimum requirement for all on-site personnel, except during hazardous material abatement activities, when higher levels of protection will be required, as specified in Section 02051 – ASBESTOS ABATEMENT, Section 02075 – UNIVERSAL AND HAZARDOUS WASTES, and Section 13282 - LEAD BASED COATINGS REMOVAL.

END OF SECTION

SECTION 01550

SIGNAGE (TRAFFIC CONTROL)

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers furnishing and installing traffic control signs and other devices.

1.02 SYSTEM DESCRIPTION:

The Contractor shall furnish and install all construction signs deemed necessary by and in accordance with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the U.S. Department of Transportation.

1.03 TRAFFIC ROUTE:

A. Site access and egress shall be via the construction entrance on Hudson Street, which is a one-way street. Vehicles leaving the site shall turn left onto Hudson Street to access Arlington Road.

PART 2 - PRODUCTS

2.01 TRAFFIC WARNING AND REGULATING DEVICES:

B. Contractor shall provide warning signs, barricades and other devices in accordance with the specifications provided in the MUTCD. Size of signs, lettering, colors, method of support and other factors prescribed in the MUTCD shall be adhered to.

C. See Section 01110 – CONTROL OF WORK AND MATERIALS and Section 01140 – SPECIAL PROVISIONS for additional construction signage requirements. Locations, wording, and size of signs shall be coordinated with the Owner after the Contract is awarded.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Contractor shall erect traffic signs, and other traffic control devices as required by the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation, this Section, and the Contract Drawings, or as directed by the Engineer, to provide traffic safety and convenience, and to protect the work area from traffic, pedestrians, and animals.

B. Contractor shall relocate barricades, signs and other devices as necessary as the work progresses.

D. Unless extended protection is required for specific areas, when the work has been completed, all temporary warning and regulatory devices used by the Contractor shall be removed so that traffic can move unimpeded through the area.

E. Conduct operations and removal of debris to ensure minimum interference with the normal use of public ways and other adjacent facilities. Do not close or obstruct traffic ways, streets, walks or other facilities without the written permission of the Owner and authorities having jurisdiction.

F. Provision shall be made for safe passage at all times for emergency vehicles onto the work site.

END OF SECTION

SECTION 01562

DUST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION:

A. This Section specifies requirements for controlling dust generated during work of this Contract. Work activities requiring special attention to dust control include building demolition, asphalt/concrete demolition, stockpiling, loading and removal of material from the site, and earthwork. Dust generated during the course of the Work must be controlled and kept on-site.

B. The Contractor is responsible for control of dust at all times during work of this Contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

C. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. The Engineer may perform air/dust monitoring for confirmation purposes. If dust exceeds action levels described in this Section, or determined to be a nuisance by the Engineer, the Contractor shall be responsible for implementing additional engineering controls (e.g. additional dust suppression agents, wind screens), as directed by the Engineer, and described in this Section at no additional cost to the Owner.

D The Contractor shall conform to air monitoring action levels specified in Section 13282 – LEAD BASED COATINGS REMOVAL during the demolition of structures involving lead paint where lead exposure to workers may be in excess of the permissible exposure limit (PEL) as described in Section 13282 – LEAD BASED COATINGS REMOVAL.

E. The Contractor is responsible for daily clean-up of public roadways, adjacent driveways/parking lots, and walkways affected by work of this Contract. A wet spray power vacuum street sweeper shall be used on pavement, as required. Dry power sweeping is prohibited.

1.02 RELATED WORK:

A. Section 01140 – SPECIAL PROVISIONS
B. Section 01380 – HEALTH AND SAFETY PLAN
C. Section 01570 – ENVIRONMENTAL PROTECTION
D. Section 02051 – ASBESTOS ABATEMENT

E. Section 02075 – UNIVERSAL AND HAZARDOUS WASTES
F. Section 02220 – DEMOLITION
G. Section 02222 – UTILITY ABANDONMENT
H. Section 02300 – EARTHWORK
I Section 13282 – LEAD BASED COATINGS REMOVAL

1.03 REGULATORY REQUIREMENTS:

A. The Contractor shall perform all work specified under this Section in compliance with the Massachusetts Department of Environmental Protection, Code of Massachusetts Regulations (CMR) 310 CMR 7.00, "Air Pollution Control Regulations", specifically 310 CMR 7.09, "Dust, Odor, Construction and Demolition".

B. Work of this Contract shall be conducted in a manner that will not result in excessive particulate matter emissions, nuisance dust conditions, PM_{10} (particulate matter with an aerodynamic diameter less than or equal to 10 microns) emissions, or PM_{10} concentrations exceeding the Massachusetts and National Ambient Air Quality Standard of 150 $\mu g/m^3$ on 24-hour average basis.

1.04 SUBMITTALS:

A. Contractor shall submit a Dust Control Plan that outlines in detail the measures that he will implement to comply with this Section, including suppression, wind screens and barriers, prevention, cleanup, and other measures. Plan shall be submitted to the Engineer within fifteen calendar days following the date of the Notice to Proceed.

B. Contractor shall submit to the Engineer product literature and Material Safety Data Sheets for any dust suppression wetting agents and stabilizers that the Contractor proposes to use.

1.05 QUALITY CONTROL:

A. The Engineer may conduct air monitoring with a Mini RAM monitor, or equivalent, to ensure dust is being controlled at the site. During the course of the Work, the Contractor shall be responsible for implementing engineering controls (e.g., wetting, calcium chloride) to minimize or eliminate fugitive dust emissions. If dust exceeds action levels described below, or determined to be a nuisance by the Engineer, the Contractor shall be responsible for implementing additional engineering controls (e.g. additional dust suppression agents, wind screens), as required by the Engineer. If additional wet suppression (water) and/or wind screens, barriers, or covers are required per the Engineer based on air/dust monitoring results, they shall be at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 DUST SUPPRESSION AGENTS:

A. Dust suppression wetting agents shall be water soluble, non-toxic, non-reactive, non-volatile, and non-foaming.

B. Soil stabilizer shall be a sprayable organic or inorganic tackifier.

2.02 BARRIERS, SCREENS, AND COVERS:

A. Wind screens shall be a durable fabric mesh of 50 percent porosity, attached to demolition site fence.

B. Wind barriers shall be solid wood fences, solid durable fabric attached to temporary site fence, or other solid barriers intended to block the passage of wind.

C. Covers for stockpiles shall be plastic tarps. Contaminated soil covers shall be 20-mil polyethylene sheeting or 10-mil nylon reinforced polyethylene sheeting. The stockpile shall be placed on 40-mil polyethylene sheeting.

2.03 CALCIUM CHLORIDE:

A. Calcium chloride shall conform to the requirements of AASHTO-M 144, Type I or Type II and Specification for Calcium Chloride, ASTM D98. The calcium chloride shall be packaged in moisture proof bags or in airtight drums with the manufacturer, name of product, net weight, and percentage of calcium chloride guaranteed by the manufacturer legibly marked on each container.

B. Calcium chloride failing to meet the requirements of the aforementioned specifications or that which has become caked or sticky in shipment may be rejected by the Engineer.

2.04 WATER:

A. Water shall not be brackish and shall be free from oil, acid, and injurious alkali or vegetable matter.

PART 3 - EXECUTION

3.01 CONSTRUCTION SITE DUST CONTROL – GENERAL:

A. Wet suppression shall be used to provide temporary control of dust. Several applications per day may be necessary to control dust depending upon meteorological conditions and work activity. The Contractor shall apply wet suppression on a routine basis as necessary or required by the Engineer, to control dust. At a minimum, wet

suppression shall be applied to demolition debris, excavated material, aggregate piles, and exposed soils and dirt.

1. Wet suppression consists of the application of water or a wetting agent in solution with water. Ensure wetting agent is not used on plantable soils.

2. Wet suppression equipment shall consist of sprinkler pipelines, tanks, tank trucks, or other devices capable of providing regulated flow, uniform spray, and positive shut-off.

3. Water may be sprinkler applied with equipment including a tank with gauge-equipped pressure pump and a nozzle-equipped spray bar.

4. Water shall be dispersed through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.

5. The Contractor shall provide the necessary means to retain on-site all water runoff generated by dust control and dispose of such water in accordance with the requirements of the appropriate regulatory agencies. The Contractor shall be responsible for providing water, a means of disposal, necessary permits, and all appurtenances required to control dust. Coordinate with the requirements of Section 01570 – ENVIRONMENTAL PROTECTION.

B. Calcium chloride shall be used to control dust instead of wet suppression when freezing conditions exist. Calcium chloride shall be uniformly applied by a mechanical spreader at 1 ½ pounds per square yard, unless otherwise required by the Engineer. Ensure vegetation or soil to be used for vegetation is not treated.

C. The use of petroleum products for dust suppression is prohibited in this Contract.

D. Provide wind screens and wind barriers in locations where they would be effective in minimizing wind erosion and spread of dust. Locations shall be submitted as part of the Contractor's Dust Control Plan. The Contractor shall keep wind screens and barriers in good repair for the life of the Contract.

E. The Contractor is responsible for daily clean-up of paved areas affected by the work of this Contract. A wet spray power vacuum street sweeper shall be used on paved areas. Dry power sweeping is prohibited.

3.02 PUBLIC ROADWAY DUST CONTROL:

A. Vehicles leaving the demolition site shall have no mud and dirt on the vehicle body or wheels. Any foreign matter on the vehicle body or wheels shall be physically removed prior to vehicle's entering of a public roadway. Contractor shall not permit any truck to leave the site with exterior mud or dirt that has the potential to be deposited on public

roadways.

B. Haul truck cargo areas shall be securely and completely covered during material transport on public roadways.

C. Vehicle mud and dirt carryout, material spills, and soil wash-out onto public roadways and walkways and other paved areas shall be cleaned up immediately.

D. The Contractor is responsible for daily clean-up of public roadways and walkways affected by work of this Contract. A wet spray power vacuum street sweeper shall be used on paved roadway. Dry power sweeping is prohibited.

3.03 CONTROL OF EARTHWORK DUST:

A. During batch drop operations (i.e., earthwork with front-end loader, clamshell bucket, or backhoe) the free drop height of excavated or aggregate material shall be reduced as much as practical to minimize the generation of dust.

B. To prevent spills during transport, freeboard space shall be maintained between the material load and the top of the truck cargo bed rail.

3.04 CONTROL OF STOCKPILE DUST:

A. The Contractor shall use the following methods to control dust and wind erosion of active and inactive stockpiles:

1. Wet suppression without wetting agent during active stockpile load-in, load-out, and maintenance activities.

2. Soil stabilizers applied to the surface of inactive stockpiles.

3. Polyethylene tarps on stockpiles shall be placed both below and on top of stockpiles and secured with sandbags or an equivalent method to prevent the cover from being dislodged by the wind. The Contractor shall repair or replace covers whenever damaged or dislodged, at no additional cost to the Owner.

4. The tarps shall be bermed 12-inches high at all edges to prevent any infiltration of storm water or exfiltration of leachate.

B. The methods to be used shall be submitted to the Engineer as part of the Dust Control Plan.

3.05 DEMOLITION DUST CONTROL MEASURES:

A. The Contractor shall use water sprinkling, temporary enclosures, and other suitable

methods to limit dust and dirt rising and scattering in the air to the lowest practical level. Sufficient water shall be supplied for the building, demolition-related debris, and site compacting to meet Federal, State, and local air-quality regulations and to minimize dust during demolition and debris handling.

B. Closed chutes shall be used for the handling of debris. Dropping or throwing of debris is prohibited.

C. Debris may be stockpiled but must be done in accordance with Section 02220 - DEMOLITION.

D. During transport of debris, the truck cargo area shall be securely covered.

E. Removal of asbestos-containing material shall be in accordance with Section 02051 – ASBESTOS ABATEMENT.

END OF SECTION

SECTION 01570

ENVIRONMENTAL PROTECTION

PART 1 – GENERAL

1.01 DESCRIPTION:

A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.

B. Prior to commencement of work, the Contractor shall meet with representatives of the Engineer to develop mutual understandings relative to compliance of the environmental protection program.

1.02 RELATED WORK:

A. Section 00890 – PERMITS
B. Section 01330 – SUBMITTALS
C. Section 01562 – DUST CONTROL
D. Section 02230 – CLEARING AND GRUBBING
E. Section 02240 – DEWATERING
F. Section 02252 – SUPPORT OF EXCAVATION
G. Section 02300 – EARTHWORK

1.03 SUBMITTALS:

A. The Contractor shall submit for approval six sets of details and literature fully describing environmental protection methods to be employed in carrying out construction activities.

PART 2 - PRODUCTS

2.01 Straw Wattles:

A. The straw wattles shall be a minimum tube diameter of 12 inches. See Sheet D-1 of the Contract Drawings for additional details.

B. Straw wattles shall be AEC Premier Straw Wattles, as manufactured by American Excelsior Company, Arlington, TX (1-866-9FIBERS), or approved equal.

C. The wattles will be placed in a shallow trench (2-3 inches deep) and staked in the ground using wooden stakes. The wooden stakes will be placed at a minimum depth of 24-inches into the ground.

PART 3- EXECUTION

3.01 NOTIFICATION AND STOPPAGE OF WORK:

A. The Engineer will notify the Contractor in writing of any non-compliance with the foregoing provisions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work through the Engineer until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

3.02 AREA OF CONSTRUCTION ACTIVITY:

A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

3.03 PROTECTION OF WATER RESOURCES:

A. The Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or other harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers and streams.

B. Special measures should be taken to insure against spillage of any pollutants into public waters.

C. Catch basins shall be protected as specified in Section 01110 – CONTROL OF WORK AND MATERIALS and as shown on the Contract Documents with a nonwoven geotextile filter fabric trap, or straw wattles as described in this Section and shown on the Contract Drawings, and as approved by the Engineer.

D. The Contractor is responsible for maintaining flow into each catch basin shown to be protected on the Contract Documents to prevent ponding/flooding. The Contractor shall clean filter fabric by removing accumulated material, as needed. Removed material shall be disposed of per applicable local, State, and Federal requirements at no extra cost to the Owner.

E. The filter drainage fabric shall be composed of continuous-filament fibers bonded together to form a sheet. The fabric shall be an average of 20 mils thick and possess the characteristic of Mirafi 140 N.

3.04 PROTECTING AND MINIMIZING EXPOSED AREAS:

A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.

B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.

3.05 LOCATION OF STORAGE AREAS:

A. The location of the Contractor's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared as a part of this project and shall require written approval of the Engineer. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Engineer.

B. No excavated materials or materials used in backfill operations shall be deposited within a minimum distance of one hundred (100) feet of any watercourse or any drainage facility. Adequate measures for erosion and sediment control such as the placement of baled hay or straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.

C. There shall be no storage of equipment or materials in areas designated as wetlands.

D. The Engineer may designate a particular area or areas where the Contractor may store materials used in his operations.

E. Storage areas in cross-country locations shall be restored to pre-construction conditions with the planting of native species of trees and shrubs.

3.06 PROTECTION OF LANDSCAPE:

A. The Contractor shall not deface, injure, or destroy, remove or cut existing trees or shrubs not scheduled to be removed without written authority from the Owner. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized by the Engineer. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The Contractor shall, in any event, be responsible for any damage resulting from such use.

B. Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. When there is

unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.

C. Where, in the opinion of the Engineer, trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or other operations, the Engineer may require the Contractor to adequately protect such trees by placing boards, planks, poles or fencing around them. See sheet C-3 – Demolition Plan of the Contract Documents for additional information regarding protection of trees. Any trees or landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the Contractor. The Engineer will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of under the provisions of Section 02230 – CLEARING AND GRUBBING.

D. Cultivated hedges, shrubs, and plants, which could be injured by the Contractor's operations, shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

3.07 CLEARING AND GRUBBING:

A. The Contractor shall clear and grub areas to a minimum of 10 feet from the building and structures being demolished, unless otherwise noted on the Contract Drawings and as specified in Section 02230 – CLEARING AND GRUBBING.

3.08 DISCHARGE OF DEWATERING OPERATIONS:

A. Any water that is pumped and discharged from the trench and/or excavation as part of the Contractor's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system. Refer to Section 02240 – DEWATERNG for additional requirements.

B. Under no circumstances shall the Contractor discharge water to the areas designated as wetlands.

C. The pumped water shall be filtered through filter fabric and straw wattles, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. The vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second. Accumulated sediment shall be cleared from the channel periodically. Refer to Section 02240 – DEWATERING for additional requirements.

3.09 DUST CONTROL:

A. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. If the Engineer decides it is necessary to use calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed. Calcium chloride shall be as specified under Section 01562 – DUST CONTROL.

B. Calcium Chloride shall not be used for dust control within a drainage basin or in the vicinity of any source of potable water.

3.10 STRAW WATTLES:

A. To trap sediment and to prevent sediment from clogging drainage systems, straw wattles shall be used. Care shall be taken to keep the wattles from breaking apart. The wattles should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically.

3.11 CATCH BASIN PROTECTION:

A. Catch basin protection shall be used for every catch basin, shown on the drawings or as required by the Engineer, to trap sediment and prevent it from clogging drainage systems and entering wetlands. Sediment control fabric shall be securely installed under the catch basin grate, see Detail Sheet D-1 for additional details. Care shall be taken to keep the sediment control fabric from breaking apart or clogging. All deposited sediment shall be removed periodically and at times prior to predicted precipitation to allow free drainage flow. Prior to working in areas where catch basins are to be protected, each catch basin sump shall be cleaned of all debris and protected. The Contractor shall properly dispose of all debris at no additional cost to the Owner.

3.12 NOISE CONTROL:

A. The Contractor shall make special provisions to prevent excessive noise during demolition and construction. No heavy demolition and construction equipment or large engine vehicle shall be allowed to operate on the site between the hours of 7 PM and 7 AM, unless special permission is granted by the Owner. Temporary noise barriers shall be erected by the Contractor at the direction of the Owner if the noise level at the perimeter of the site is determined as excessive.

B. When available, make the maximum use of "low-noise-emission products" as certified by EPA. No blasting or use of explosives is permitted.

C. Protect employees against noise exposure in accordance with the requirements of the Occupational Safety and Health Act of 1972.

D. Compliance with the requirements of this Section will not offer any relief from

responsibility for compliance with local ordinances, regulations, and other Sections.

E. Compliance with the requirements of this Section will require the use of machines with effective mufflers or enclosures and selection of quieter alternative procedures.

F. Unless otherwise indicated, all noise level limits are measured 50 feet from the equipment producing said noise.

G. Noise Level Restrictions in All Areas: In no case expose the public to demolition and construction noise levels exceeding 85 dBA (slow) or to impulsive noise levels with a peak sound pressure level exceeding 125 dBA (fast). If work is specifically approved by Engineer during nighttime, restrict noise levels to not more than 50 dBA (slow).

Intermittent Noise: Prevent noises from non-stationary mobile equipment operated by a driver or from any source of nonscheduled intermittent, non-repetitive, short-term noises not lasting more than a few hours from exceeding 75 dBA during the daytime and 60 dBA during the nighttime.

END OF SECTION

SECTION 01577

PEST CONTROL (RODENT CONTROL)

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This section specifies requirements for pest control activities by the Contractor at all work and laydown (or staging) areas in connection with this Contract. The Contractor shall perform the work of this Section to ensure that rodents (rats and mice) and other pests do not infest or disperse from the site. The pest control work is to be performed prior to any demolition work and throughout the duration of the Contract.

B. The Contractor shall develop and implement an integrated pest management approach. As part of that approach, the Contractor shall maintain a cooperative dialogue with appropriate agencies and management representatives of neighboring properties.

C. The Contractor shall retain the services of a licensed pest exterminator to conduct an inspection of the work and laydown areas and report on the presence of rodents and other pests and take any necessary measures to eliminate existing pest populations prior to start of work. Upon completion of pest extermination work and prior to Woburn Board of Health sign-off on a demolition permit (Section 00890 – PERMITS), the Contractor shall submit to the Woburn Board of Health a work receipt from the licensed pest exterminator.

1.02 RELATED WORK:

A. Section 00890 – PERMITS

B. Section 01110 – CONTROL OF WORK AND MATERIALS

C. Section 02220 – BUILDING DEMOLITION

1.03 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Within ten days after Notice to Proceed, submit to the Engineer a written description of pest control measures to be used and the areas to be included in the program. Such description shall present results of the inspection and shall indicate materials, quantities, methods, and time schedule associated with the proposed pest control procedures; it shall also present a written description of the sanitation procedures to be used. Pest control procedures shall be linked to the inspection results and Contractor's schedule for performing work at the site. The Contractor's Pest Control Plan shall have both the Engineer's and the Owner's approvals prior to implementation.

B. Provide the name and background of the licensed pest exterminator retained to provide any necessary pest eradication measures prior to start of work. Before proceeding with the Work, the Contractor shall submit to the Engineer documentation of qualifications as described in Paragraph 1.04 below.

C. The Contractor shall submit to the Engineer a copy of the rodenticide manufacturer's EPA-approved pesticide label for all proposed rodenticides, including application directions.

D. The Contractor shall submit to the Engineer weekly data sheets with identification of locations treated, amounts and types of rodenticide used, survey and inspection results, sanitation conditions, complaint calls investigated, and any problems that occurred.

E. Submit copies of all permits and written correspondence related to permits and right-of-entry for pest control to the Engineer within 10 days of their issuance or receipt.

1.04 QUALIFICATIONS:

A. Pest control work shall be done by a company and employees with the following qualifications. If the Contractor does not have all of the following qualifications, he shall subcontract with a pest control company that possesses these necessary qualifications.

1. The company and key personnel shall have experience with commercial and residential accounts and construction and demolition projects; have experience and technical training in vertebrate pest management and integrated pest management; have experience with various rodent control techniques, equipment, and strategies; have training and experience with insect control; and have knowledge of and experience with techniques to reduce non-target hazards.

2. The supervisor shall be licensed and certified by the Massachusetts Pesticide Board in General Pest Control and Vertebrate Pest Control. The supervisor shall have specified training and experience in vertebrate pest management, commercial rodent control, general pest control, and integrated pest management.

3. Applicators shall be licensed by the Massachusetts Pesticide Board and certified in General Pest Control. Applicators shall have specific training and experience in commercial rodent control and integrated pest management.

4. The supervisor and applicators shall have up-to-date knowledge of pest control techniques as obtainable through national or regional pest control associations and attendance at training seminars.

5. The supervisor and applicators shall have experience and ability in record keeping and data management.

6. The supervisor and applicators shall have demonstrated communication skills (both oral and written) to ensure effective communication with residents and businesses.

1.05 COORDINATION AND PERMITS:

A. Initiate necessary applications for rodent control within 25 calendar days after the date of the Notice to Proceed. Provide a maintenance program until demolition is completed and all equipment and materials are removed.

B. Present proposed pest control activities to the Engineer. Provide updates and identification of any changes to pest control activities at weekly Project Progress Meetings throughout the duration of the Contract.

C. Obtain appropriate permit(s) from Federal, State, or municipal agencies for pest control activities associated with this work. Obtain any right of entry permits required for the performance of this work.

D. Perform all work in conformance with the requirements of these Specifications and the regulations of the U.S. Environmental Protection Agency and the Massachusetts Department of Food and Agriculture, including the regulations of the Massachusetts Pesticide Board (333 CMR 1.00 through 333 CMR 13.00).

1.06 LIABILITY:

A. Perform this work in such a manner that toxicants or other control tools do not pose a hazard to persons, domestic animals, or non-target wildlife. Maintain liability insurance for this work.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Furnish and use only rodenticide formulations registered with the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Food and Agriculture, where appropriate and according to label directions.

B. Furnish and use devices and supplies (e.g., traps and bait stations) to facilitate the management and effectiveness of the pest control program, where appropriate and according to label directions.

2.02 CONTAINERS:

Use metal or heavy-duty plastic refuse containers with tight-fitting lids for disposal of all garbage, or trash associated with food. These containers shall not have openings that allow access by rodents.

PART 3 - EXECUTION

3.01 INSPECTION:

A. Prior to baiting, inspect the demolition areas and accessible or observable bordering areas within 400 feet of the Limit of Work and record signs of rodent activity and sanitation deficiencies.

B. Inspect demolition areas, accessible or observable bordering areas, and other areas as designated by the Engineer for rodent activity and sanitation deficiencies weekly throughout the duration of this Contract. Notify the Engineer within 24 hours whenever rodents or signs of rodent activity (burrows or droppings) are observed at the site.

C. Plan and distribute baiting and control programs based on inspection data.

3.02 APPLICATION FOR RODENT CONTROL:

A. Apply rodenticides in strict accordance with EPA-approved label directions and the Rules and Regulations of the Massachusetts Department of Food and Agriculture.

B. Where appropriate, especially for surface placements of rodent baits, use properly secured and tamper-resistant bait stations consistent with EPA regulations. Individually number and properly identify all bait stations.

C. Building Demolition Application: Rid the buildings and their perimeters of rodents before commencing on any other demolition work. Distribute bait and traps as appropriate on all floors. Conduct outside surface and subsurface baiting as described in Paragraphs 3.02 D. and 3.02 E. below to ensure control in all work areas and bordering areas.

D. Surface Applications

1. For suspected rodent burrows, determine the presence of activity prior to application of bait or tracking powder. Plug all burrows immediately after bait application. Check baited burrows frequently to ensure that the bait has not been pushed out and to determine when rodent activity has ceased.

2. Initial Surface Baiting: Rid the work areas of rodents before demolition begins. Bait or use tracking powder at all observable rodent burrows. Install and secure bait stations at regular and appropriate intervals and locations. Document rodent activity (burrows, droppings, bait consumed, dead rodents) and replenish bait and shift bait placements as necessary to ensure complete control of rodent populations. Bait edge and bordering areas as necessary to ensure that rodents will not be dispersed by any work activities and that rodents will not infest work areas.

3. Maintenance Surface Baiting: Prior to commencing any demolition work, establish a maintenance baiting program in work areas and accessible bordering areas designated by the Engineer. Check bait placements weekly or more frequently if

necessary to maintain control. Respond to changes in rodent populations and infestations that occur. Shift and distribute bait and bait stations as appropriate to ensure continued control.

E. Cleanup

1. Remove rodent carcasses and dispose of them daily consistent with the rodenticide label directions and applicable codes, laws, and regulations.

2. Upon completion of operations at the site, remove remaining bait and dispose of it according to the rodenticide label and applicable codes, laws, and regulations. Also remove any bait stations or traps, and any wires used for subsurface baiting.

3.03 SANITATION:

A. Prior to commencing work at the site, and throughout the duration of this Contract, identify, and document potential harborage and food sources available to rodents on the work site and in the bordering areas within 400 feet of the Limit of Work. This includes any littering, improper or insufficient use of refuse containers, piles of debris, weed growth, and unnecessary or deteriorated hay/straw bales in construction areas. It also includes any bordering areas with sanitation conditions or structural deficiencies that violate State or municipal sanitary codes. Notify the Engineer of sanitation deficiencies when observed.

B. Refer to Specification Section 01110 - CONTROL OF WORK AND MATERIALS, for additional sanitation and site housekeeping requirements.

3.04 WORK AND LAYDOWN AREAS WITHIN THE CONTRACT AREA:

A. Before mobilization begins, obtain written verification from the pest exterminator that pest populations have been effectively controlled in areas to be occupied.

B. Following site clearing and before demolition, excavation, or construction, inspect work and laydown areas and remove all remaining trash and debris.

C. Maintain work and laydown areas free of trash, garbage, weeds, and debris. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.

D. Designate specific locations as lunch and coffee break areas to prevent random disposal of garbage and trash. Keep those areas free of litter and garbage and provide refuse containers as described in 2.02 of this section. Keep refuse containers upright with their lids shut tight.

F. Have all refuse containers emptied daily to maintain site sanitation.

G. Notify the Engineer within 24 hours whenever rodents (rats or mice) or signs of rodent activity (burrows or droppings) are observed in work or laydown areas. Take appropriate action to locate and control the rodents.

3.05 LAYDOWN AREAS OUTSIDE THE CONTRACT AREA:

A. Implement pest control at all laydown areas that are not areas of this Contract, but that are used by the Contractor in connection with this Contract. Undertake rodent control at least two weeks prior to use of the area and with time to ensure that the site is free of rodent populations (rats and mice) prior to site occupancy. Maintain the site free of rodents throughout the duration of its use.

B. Clear laydown areas of trash, debris, and weeds prior to occupancy. Initiate those actions only after rodent populations have been effectively controlled.

C. Maintain laydown areas free of trash, garbage, weeds, and debris. Provide and enforce proper use of refuse containers to ensure that rodents and other pests are not harbored or attracted.

3.06 COMPLAINT CALLS:

A. During all work under this Contract, respond to pest-related complaints from the adjacent neighborhoods within 24 hours when required by the Engineer. Inspect the particular premises and adjacent areas for sanitation and structural deficiencies and also signs of historic and recent pest activity. Provide sanitation and structural maintenance information to the property owner or manager. Place bait, traps, or other pesticides as necessary to resolve the complaint when there is a relationship between the pest infestation and demolition activities, or when required by the Engineer.

B. Maintain records of all complaints, including location, contact person, inspection results, and actions taken. Document the relatedness of the pest infestation to the demolition operations.

3.07 RECORD KEEPING:

A. Use standardized data sheets to maintain accurate records of date, time, placement, type, and amount of rodenticides or other control tools (e.g. traps) applied. This includes surveys, inspections, baiting, trapping, changes in pest activity, sanitation conditions, and complaint calls. Submit data in a format acceptable to the Engineer and as required under Paragraph 1.03 D.

END OF SECTION

SECTION 01740

CLEANING UP

PART 1 - GENERAL

1.01 DESCRIPTION:

The Contractor must employ at all times during the progress of its work adequate cleanup measures and safety precautions to prevent injuries to persons or damage to property. The Contractor shall immediately, upon request by the Engineer provide adequate material, equipment and labor to cleanup and make safe any and all areas deemed necessary by the Engineer.

1.02 RELATED WORK:

A. Section 00700 – GENERAL CONDITIONS
B. Section 01110 – CONTROL OF WORK AND MATERIALS
C. Section 01140 – SPECIAL PROVISIONS
D. Section 01570 – ENVIRONMENTAL PROTECTION

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

2.01 DAILY CLEANUP:

A. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.

B. Upon written notification by the Engineer, the Contractor shall within 24 hours clean up those areas, which in the Engineer's opinion are in violation of this section and the above referenced sections of the specifications.

C. If in the opinion of the Engineer, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

2.02 MATERIAL OR DEBRIS IN DRAINAGE FACILITIES:

A. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, gutters, drains, pipes, structures, such material or debris shall be

entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

2.03 REMOVAL OF TEMPORARY BUILDINGS, STRUCTURES AND EQUIPMENT:

A. On or before completion of the work, the Contractor shall, unless otherwise specifically required or permitted in writing, tear down and remove all temporary buildings and structures built by it; shall remove all temporary works, tools and machinery or other construction equipment furnished by it; shall remove all rubbish from any grounds, which it has occupied; shall remove silt fences and straw wattles used for trapping sediment; and shall leave the roads and all parts of the property and adjacent property affected by its operations in a neat and satisfactory condition. Temporary fencing shall remain.

2.04 RESTORATION OF DAMAGED PROPERTY:

A. The Contractor shall restore or replace, when and as required, any property damaged by its work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk and landscaping work. Materials, equipment, and methods for such restoration shall be as approved by the Engineer.

2.05 FINAL CLEANUP:

A. Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Engineer shall approve the condition of the site.

END OF SECTION

SECTION 01770

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This Section covers administrative and procedural requirements for closing out the project, including, but not limited to:

1. Project As-Built Documents with Global Positioning System (GPS) coordinates of all utility termination locations.
2. Checkout and Certification
3. Final Cleaning
4. Substantial Completion
5. Closeout Procedures
6. Final Completion

B. Closeout checklist to be completed by the Engineer.

C. The time for completion of this contract is stipulated in the FORM FOR GENERAL BID.

1.02 RELATED WORK:

A. General Requirements in their entirety.

B. Section 01740 - CLEANING UP

1.03 AS-BUILT DOCUMENTS:

A. The Contractor shall maintain on site, separate from the documents used for construction, one set of the documents listed below, and as construction progresses, shall legibly record on these documents all changes made during construction.

1. Contract Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other Modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.
6. Written interpretations and clarifications.
7. Field Orders.
8. Field test reports properly verified.

B. The completed set of As-Built Documents shall be submitted to the Engineer with the final Application for Payment. As-built documents shall include GPS coordinates, including

depths below grade, for all utility and steam tunnel/corridor cuts/caps/abandonment and demolition locations. Utility terminations to be shown with GPS coordinates on the As-Built Documents include, but not limited to, the locations of all: cut and capped water mains; closed/capped corporation stops/water services; sewer pipes cut/capped; and cut/capped roof drains. Refer to Section 02222 – UTILITY ABANDONMENT and the Contract Drawings.

1.04 CHECKOUT AND CERTIFICATIONS:

A. Prior to checkout and certifications, the following tasks shall be completed:

1. Construction shall be complete. For this purpose, completion of construction is defined as follows:

a. The Contractor has completed abatement and demolition activities in conformance with the Contract Drawings and Specifications.

2. All shop drawings shall have final approval.

3. All sampling test results, if required, submitted to the Engineer.

1.05 FINAL CLEANING:

A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

1. Clean the site, including landscape development areas of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to smooth, even textured surfaces.

2. Remove waste and surplus materials, rubbish, temporary utilities and construction facilities from the site, unless otherwise required by the Engineer.

3. Comply with requirements of Section 01740 - CLEANING UP.

1.06 SUBSTANTIAL COMPLETION:

A. Substantial Completion is officially defined in the General and Supplementary Conditions. The date of substantial completion will be certified by the Engineer for each Project Milestone. This date will not be certified until the following requirements have been satisfied by the Contractor:

1. All Contract requirements are complete. All individual units of equipment and treatment are fully operative and performing at specified efficiencies. Where efficiencies are not specified, performance shall meet acceptable standards for the particular unit.

2. All field tests and inspections have been satisfactorily completed and reports forwarded to the Engineer.

1.07 CLOSEOUT PROCEDURES:

A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and is complete in accordance with Contract Documents and ready for Engineer's and Owner's inspection for each Project Milestone.

B. Accompany Engineer and Owner on inspection to verify conformance with the Contract Documents. Prepare a punch list of work items that have been determined by inspection to not conform to Contract Documents. Punch list items shall include work items that are missing, incomplete, damaged, incorrect items, or improperly installed or constructed. The Contractor shall correct the punch list deficiencies by re-work, modifications, or replacement, as appropriate, until the items conform to the Contract Documents. The initial punch list shall be produced by the Contractor, with copies to the Engineer and the Owner's Project Manager. When the Contractor has reduced the number of deficient items to a reasonable level, the Engineer will develop a definitive punch list for the use of the Contractor.

C. Provide submittals to Engineer that are required by governing or other authorities.

D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment: Set of as-built documents, Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, warranties/guarantees, and all other data required by the Contract Documents.

1.08 CLOSEOUT SUBMITTALS

A. The closeout submittals for each Project Milestone include but are not necessarily limited to:

a. Evidence of payment and release of liens.
b. Waste shipment manifests, Bills of Lading (if required), weight slips, and shipping records.
c. Records of quantities/weights of materials shipped off-site, including all contaminated materials to disposal facilities, construction and demolition debris to recycling/disposal facilities, and all recycled/reused materials.

d. All other records or documents as necessary (i.e. personal air sampling records, injury reports, etc.)
e. Construction photographs
f. As-built drawings, including survey/GPS information on locations of utility terminations as described in Paragraph 1.03.B of this Section.

1.09 FINAL COMPLETION:

A. Prior to final completion, the following tasks shall be completed:

1. All items in the punch list shall be completed.

2. All Contract closeout documentation shall be submitted to and accepted by the Engineer.

1.10 COMPLETION CHECKLIST:

A. When the project has been fully completed, Final Payment can be approved.

PROJECT COMPLETION CHECKLIST

Project _____

Job No. _____

As part of the project closeout, all items listed below must be checked off as being complete or otherwise accounted for. The person verifying completion of the item shall list the completion date and his/her initials.

Project Closeout Checklist		
	Date Completion Verified	Verified by
AS-BUILT DOCUMENTS HANDED OVER		
1. Contract Drawings		
2. Specifications		
3. Addenda		
4. Change Orders/Contract Modifications		
5. Reviewed Shop Drawings, Product Data and Samples		
6. Written Interpretations/Clarifications		
7. Field Orders		
8. Field Test Reports		
EQUIPMENT CHECKOUT AND CERTIFICATIONS		
1. Work Complete per Drawings/Specifications		
2. Equipment Decommissioned and Removed		
3. All Shop Drawings have Final Approval		
4. All Shop Tests Complete and Results Submitted		

Project Closeout Checklist		
	Date Completion Verified	Verified By
FINAL CLEANING		
1. All Construction Facilities Removed		
2. All Construction Debris Removed		
3. All Areas Swept/Cleared		
SUBSTANTIAL COMPLETION		
1. All Items Complete		
CLOSEOUT PROCEDURES		
1. Written Certification Submitted that Work is Ready for Authority & Engineer Inspector		
2. Inspection by Authority, Engineer, Contractor completed		
3. Punch List of Nonconforming Items Prepared		
4. Documents Required by Governing or Other Authorities Submitted (List Them)		
5. Final Application for Payment Received		
6. Contact Completion and Acceptance Certificate Submittal		
7. Consent of Surety to Final Payment Submittal		
8. Release and Waiver of Liens and Claims Submitted		
9. Affidavit of Payment of Debts and Claims Submitted		
10. Warranties/Guarantees Submitted		
11. Other Required Releases and Waivers Submitted (List Them)		
12. Permits Submitted (List Them)		
13. Weekly Payrolls Submitted as Required by Law		
FINAL COMPLETION		
1. All Items in Punch List Completed		
2. All Other Required Documentation Submitted (List It)		

Project Closeout Checklist		
	Date Completion Verified	Verified By
CORRECTION/WARRANTY PERIOD		
1. Correction Period Start Date: _____ End Date: _____		
2. Specific Warranties Provided Item Warranty Duration		

Full name of persons signing their initials on this checklist:

_____

_____

_____

_____

_____

END OF SECTION

SECTION 02051

ASBESTOS ABATEMENT

PART 1 GENERAL

1.01 GENERAL PROVISIONS:

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all sections within DIVISION 1-GENERAL REQUIREMENTS, which are hereby made part of this Section of the Specifications.

B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of Article VI of the GENERAL CONDITIONS.

C. Examine all conditions as they exist at the Site related to the project before submitting a bid for the work of this Section.

D. All provisions of this Section relating to the health and safety of workers and the public, as well as protection of the environment are minimum standards. The Contractor is responsible for determining whether any additional and/or more stringent protective measures are required by any legal requirements or prudent conservative work practices and implementing such measures if deemed necessary. Nothing in this Section shall be deemed to relieve the Contractor from any liability with respect to any such legal requirements or requirement of prudent conservative practice.

E. Should demolition activities, as performed by the Contractor, uncover materials not readily identified as non-asbestos-containing, the material should be assumed to be asbestos-containing until classified otherwise. Removal should be performed in compliance with all requirements outlined in the Massachusetts Department of Labor Standards (DLS) 453 CMR 6.00; NESHAP 40 CFR 61; and OSHA 29 CFR 1926.1101, including all applicable local ordinances.

F. All work under this Section shall be performed by a contractor holding a current Massachusetts DLS asbestos abatement contractor's license. The Contractor shall furnish all labor, worker training, materials, equipment, and services for the complete and proper removal and disposal of asbestos-containing materials, as Specified in Section 1.02 of this Specification. The Contractor shall be responsible for the preparation and all costs and communications associated with any Massachusetts Department of Environmental Protection (DEP) Non-Traditional Asbestos Abatement Work Plan (NTAAWP) submitted for the project. Contractor shall be aware of the process and requirements for preparation, submittal and review/revision process of an NTAAWP, and shall incorporate into their project schedule. No delay claims will be accepted related to DEP review or edit requests.

G. Site surveys for asbestos-containing materials (ACM) were performed in support of up-coming complete demolition of the Site Building. Laboratory bulk sample results identified the following ACM within the Site building: floor tile and mastic, textured ceiling plaster, smooth plaster, parquet floor mastic, interior door caulk, stair grout, ceramic tile grout, chalkboard mastic, transite panels, electrical panel components, window mastic, window caulking/glazing, boiler components, vapor barrier, sink undercoat, tank insulation, incinerator components, breeching insulation, pipe/fitting insulation, duct insulation/lining, foundation damp-proofing, fabric flashing, skylight flashing.

H. For the purpose of this Section, the following definitions apply:

"Site" shall refer to the former Clapp School located at 40 Hudson Street in Woburn, Massachusetts.
"Contractor" shall refer to the asbestos abatement contractor.
"Engineer" shall refer to Weston and Sampson.
"Owner" shall refer to the City of Woburn.

1.02 DESCRIPTION OF WORK - GENERAL:

A. Provide labor, materials, and equipment to complete the work of this Section, including but not limited to:

1. Removal and disposal of all specified ACM and specified non-ACM materials, as indicated in Section 1.03, in accordance with the provisions set forth in this Section. This shall include the removal and disposal of asbestos-containing: floor tile and mastic, textured ceiling plaster, smooth plaster, parquet floor mastic, interior door caulk, stair grout, ceramic tile grout, chalkboard mastic, transite panels, electrical panel components, window mastic, window caulking/glazing, boiler components, vapor barrier, sink undercoat, tank insulation, incinerator components, breeching insulation, pipe/fitting insulation, duct insulation/lining, foundation damp-proofing, fabric flashing, skylight flashing, ACM debris, other specified ACMs and contaminated debris throughout the Site.

   All quantities of ACM will be verified by the Contractor, and agreed upon by Engineer and the Owner, before any work area preparations. As such, the Contractor shall visually inspect the site building prior to bid submission.

2. Work area preparations, including pre-cleaning, installation of critical barriers and polyethylene sheeting, construction of decontamination facilities, work area enclosures, sealing, isolation, and other activities.

3. Decontamination and clean up following removal activities in each designated work area as noted and as required.

4. Performance of any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job.

5. Compliance with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.

6. Demolition, abatement, and bulk loading (if any) activities at the Site must be conducted in accordance with applicable federal, state, and City of Woburn regulations and ordinances and any work plan to be prepared by the Contractor and approved by the Massachusetts DEP.

7. In areas where ACMs (in particular window caulk, pipe/fitting insulation, duct insulation, vapor barrier or transite paneling) exist above, below or behind any support structure, suspended or fixed ceilings or plaster or gypsum board walls, brick or any type of flooring, the contractor shall be responsible for removing the structure, ceiling, floor and/or wall systems in order to access ACM for removal.

8. The Engineer shall retain a third-party Massachusetts-licensed Asbestos Project Monitor to provide project monitoring services, abatement oversight and final air clearance sampling and analysis.

9. The Engineer, Owner and the City of Woburn reserve the right to perform job site inspections at any time during the project. The Engineer shall perform a final walkthrough of the site at the conclusion of abatement activities.

10. Contractor is responsible for clearing and grubbing of vegetative growth as described on the Contract Drawings to provide access to all sides.

11. Contractor shall be responsible for site security. If a containment or work area becomes vandalized and requires repair the Contractor shall reconstruct the containment or work area at no cost to the Owner.

1.03 DESCRIPTION OF WORK - DETAILED:

A. The following is the approximate location and quantities of ACMs identified at the Site.

Material	Location	Approximate Quantity
Floor Tile and Mastic (multiple types)	Throughout	20,000 SF
Textured Ceiling Plaster	Throughout	17,000 LF
Smooth Plaster	Throughout (classrooms, halls bathrooms, behind radiators in Cafetorium)	10,000 SF
Parquet Floor Mastic	Cafetorium	2,650 SF
Interior Door Caulk	Upper & Lower Hall	2,600 LF

Material	Location	Approximate Quantity
Grout in Stair seams	Main Entry Stair	240 LF
Ceramic Tile Grout	Main Entry Stair	1,700 SF
Ceramic Tile Grout	Bathrooms	2,000 SF
Chalkboard Mastic - Board to Frame	Classroom	475 SF 95 boards, 4 SF of mastic ea. (6 " x 8 ft)
Transite Panel above door	Upper Classrooms	110 SF 15 ea.
Electrical Panels - transite/wiring/paper	Basement	275 SF
Mastic at window sills and lintels	North section – west face, transition between panel and frame	400 LF
Window caulking/glazing – Interior and exterior	Throughout	150 windows Varying sizes
Boiler components – insulation, brick, roping, gasketing, etc.	Boiler Room	2 ea. ~5' x 6' x 7'
Vapor Barrier under slab	Throughout	17,000 SF
Sink Undercoat	Classrooms	10 ea.
Tank insulation	Boiler room	1 ea. ~4.5' D x 6.5' L
Incinerator components – insulation, brick, roping, gasketing, etc.	Boiler room	1 ea. ~4' x 3' x 4'
Boiler breeching insulation	Boiler room	250 SF
Pipe/fitting insulation	Throughout – exposed, in ceilings, wall, chases	1,800 LF
Foundation damp-proofing	South section	5,000 SF
Duct insulation/lining	Throughout –in ceilings, wall, chases	800 LF
Fabric flashing	North exterior wall – brick/concrete transition at foundation Common wall between original building and addition – brick/concrete transition at foundation	300 LF
Flashing at skylights	Roof – under metal trim	30 ea. ~3'x3'

B. Damp-proofing, vapor barrier and flashing materials (tars/felts) identified as ACM may be adhered to non-ACM substrate building material such as brick, glazed block, wood, plaster, concrete block, concrete, metal, masonry, structural components and window/door frames.

C. Fabric flashing at the brick/concrete foundation transition may be concealed within the common wall where the original section of the building meets the addition (see Sheet C-1). See historical drawing "A-3 Wall Sections" for additional details (included as an Attachment to the Contract Documents).

1.04 RELATED WORK:

A. Related work specified elsewhere: Examine all Drawings and all other Sections of the Specifications for requirements of related sections affecting the work of this Section, including, but not limited to:

1. Section 00890 – PERMITS
2. Section 01380 – HEALTH AND SAFETY PLAN
3. Section 02075 – UNIVERSAL AND HAZARDOUS WASTES
4. Section 02220 – DEMOLITION
5. Section 13282 – LEAD BASED COATINGS REMOVAL

B. The work of this Section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to Division 1 for additional procedures. The Contractor is responsible for the coordination of the work of this section with other related work.

1.05 SEQUENCE OF WORK:

A. The following is a typical sequence of work that the Contractor shall adhere to during the asbestos abatement project. Engineer may authorize deviations from this typical sequence based upon the specific conditions encountered during the project.

1. Post all required signage.
2. Isolate work area from unauthorized access.
3. Prepare the specified Work Area as described in Part 3 of this Section.
4. Construct decontamination unit, and any other construction needed to complete the work area, as described in this Section.
5. The Engineers' third-party Massachusetts-licensed Asbestos Project Monitor shall provide air monitoring at the perimeter of the work area and also shall collect and analyze air samples.
6. Request Engineer to inspect work area preparation and obtain Engineer approval before beginning removal work.
7. Remove and dispose all asbestos-containing materials as required by these Specifications.

8. Decontaminate the work area upon completion of removal.

9. Request Engineer to perform a final visual inspection to assure that no visible debris exists in the work area. Contractor shall re-clean the work areas as needed until they pass a visual inspection by the Engineers' third-party Massachusetts-licensed Asbestos Project Monitor.

10. Remove all work area barriers, equipment, polyethylene sheeting, etc. and clean any areas as described in this Section.

11. Submit all materials as required at the post abatement removal meeting not more than thirty days after completion of asbestos removal work.

1.06 ESTIMATES:

A. Section 1.03 represents a brief description of the location of asbestos-containing materials. This data is provided for informational purposes only and is based on the best information available at the time of specification preparation. Nothing in this section may be interpreted as limiting the scope of work otherwise required by this contract and related documents.

B. The quantities and location of ACM and the extent of work included in this section are only best estimates that are limited by the physical constraints imposed by safety of entering the buildings. Accordingly, minor variations of plus or minus 15% of the estimated quantities of ACM are considered as having no impact on the price of this contract.

1.07 COORDINATION AND PHASING OF WORK:

A. Contractor shall coordinate all work in this Section with all other work of this Project. Where additional regulatory requirements apply to the work in this Section, the Contractor shall ensure compliance with all requirements.

B. Contractors work schedule must be coordinated with, and acceptable to the Owner. Contractor shall work continuously and diligently in each work area on the days and during the hours indicated on their work schedule.

C. Contractor shall cooperate fully with other Contractors at the facility.

D. Contractor shall subdivide work areas and/or otherwise provide additional containments and mobilization where and when necessary to accomplish asbestos abatement in accordance with the project phasing, as determined and specified by the Owner.

E. Contractor shall provide the third-party Massachusetts-licensed Asbestos Project Monitor with at least 48-hours of advance notice to schedule any final air clearance sampling.

1.08 SUBMITTALS:

A. PRE-ABATEMENT MEETING:

The Contractor shall meet with the Owner and the Engineer for a Pre-Abatement meeting before commencing work on the project. At the meeting, the Contractor shall be represented by authorized representatives and the field supervisor who shall run the project on a daily basis, and who shall present evidence that all requirements for initiation of the work have been met. The minimum agenda for the meeting shall be:

1. Review of "Pre-Job Submittals".
2. Channels of communication.
3. Abatement schedule, including sequence of critical work.
4. Designation of responsible personnel.
5. Procedures for safety, security, quality controls, housekeeping, and related matters.
6. Use of premises, facilities, and utilities.

B. PRE-JOB SUBMITTALS:

The Contractor shall provide two copies of the following Pre-Job Submittals at the Pre-abatement Conference:

1. Copies of all notifications, permits, applications, personal licenses and like documents required by Federal, State, or local regulations obtained or submitted in proper fashion.

2. List of employees to be used on this project.

3. Copies of medical records as required by OSHA or a notarized statement by examining medical doctor that such examinations took place and when for each employee to be used on project.

4. Record of successful respiratory fit test performed by a competent person (as defined by OSHA) within the previous 12 months, as required elsewhere in the documents for each employee to be used on this project.

5. Certificate of Insurance. Owner and Engineer shall be listed as additional insured on the certificate.

6. Proposed respiratory program for employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used.

7. Written description of all procedures, methods, or equipment to be utilized by the Contractor that differ from the Contract Specifications, including manufacturers specifications on any equipment not specified for use by the Contract Specifications.

8. Proposed electrical safeguards to be implemented, including but not limited to location of transformers, GFCI outlets, lighting, etc., necessary to safely perform the job, including a description of an electrical hazards safety plan for common practices in the work area.

9. A list of all equipment to be used on site, by make and model, including negative pressure equipment, HEPA vacuums, Water Atomizing Devices, etc.

10. Chain of Command of responsibility at work site including supervisors, foreman, and competent person, their names, resumes and certificates of training.

11. Contractor's testing lab, AIHA PAT proficiency, and Certification in the State where work site is located.

12. Abatement schedule detailing phasing, including approximate days per phase, for asbestos abatement of all materials.

C. POST-CONSTRUCTION SUBMITTALS:

1. Submittals shall be prepared in accordance with Section 01330 - SUBMITTALS.

2. The Contractor shall submit the following to the Engineer within thirty (30) days after completion of the project:

a. Manifests and waste receipts acknowledging disposal of all waste material from the project showing delivery date, quantity, and appropriate signature of landfill's authorized representative.

b. A copy of the entry-exit logbook required elsewhere in these Specifications.

c. All personnel monitoring results as required by OSHA and elsewhere in these Specifications.

d. Copy of licenses, medical, and fit tests of all workers and supervisors who performed work on the project.

e. All notifications as required elsewhere in these Specifications.

f. Copies of all asbestos related air sampling data including required final air clearance sampling data.

1.09 REFERENCE STANDARDS, REGULATIONS AND CODES:

A. All work shall be performed strictly according to the Specifications contained herein, any DEP-approved Abatement Work Plan, and with the regulations cited in this Article. The Contractor and all sub-contractors undertaking asbestos abatement work and persons in their employ shall comply with and be bound to requirements of the following Federal, State, and Local standards, regulations and codes. These standards and codes shall be by reference made part of this Section and shall be complied with. Whenever regulations are conflicting, the more stringent regulation will prevail.

1. US Department of Labor; Occupational Safety and Health Act of 1970. (Particular attention is drawn to the Asbestos Regulations: CFR Title 29, Part 1910, Sec. 1910.1001 and Part 1926, Sec. 1926.1101, and the Respirator Regulations; CFR Title 29, Part 1910, Sec. 1910.134 and the Hazard Communication Program, CFR Title 29, Part 1910.1200).

2. US Environmental Protection Agency, CFR, Title 40, Part 61, Subparts A and M, National Emission Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule, Dated Tuesday, November 20, 1990.

3. US Environmental Protection Agency; TSCA Title II, Asbestos Hazard and Emergency Response Act (AHERA), 40 CFR Part 763 Subpart E - "Asbestos-Containing Materials in Schools" and also 40 CFR, Part 763, Subpart G - "Worker Protection Rule".

4. US Department of Transportation regulations, 49 CFR Parts 172 and 173.

5. All Commonwealth of Massachusetts laws, regulations and standards, including the regulations 453 CMR 6.00 "The Removal, Containment or Encapsulation of Asbestos" and 310 CMR 7.15 "Asbestos", 18.00 and 19.00 and MGL Chapter 21E.

6. Other Federal, State and local statutes, ordinances, regulations, or rules pertaining to this Section and the work described herein, including the storage, transportation and disposal of asbestos.

B. All regulations by these and other governing agencies in their most recent version are applicable. These specifications refer to many requirements found in these references, but in no way, intend to cite or reiterate all provisions therein or elsewhere. It is the contractor's responsibility to know, understand, and abide by all such regulations and common practices. Other provisions contained in these references may from time to time during the execution of this contract be enforced by the Owner at his own discretion.

1.10 REGULATORY SUBMITTALS:

A. The Contractor shall be responsible for securing all necessary permits for asbestos related work, including hauling, removal, and disposal, fire, and materials usage, or any other permits required to perform the specified work.

B. The Contractor shall notify the following agencies in appropriate manner and place of impending work, and shall provide evidence of notifications at the pre-construction conference:

1. U.S. Environmental Protection Agency,
   J. F. Kennedy Federal Building
   Boston, Massachusetts 02203
   (10 working days in advance)

2. Massachusetts Department of Environmental Protection
   Division of Air and Hazardous Materials
   (10 working days in advance)
   Send Notification to:

   Commonwealth of Massachusetts
   Asbestos Program
   205 Lowell Street
   Wilmington, Massachusetts 01887

3. Massachusetts Department of Labor Standards
   Asbestos Control Unit
   (10 working days in advance)

4. City of Woburn Fire Department, Building/Planning Department or Inspectional Services Department, Office of Health and Hospitals, Department of Public Works, Water Department, Police Department and any other state or city agencies as required by law or ordinance.

1.11 PROJECT CONDITIONS:

A. Working space and space available for storing materials is restricted within the confines of the project and as shown in the Drawings.

B. Provide access and personal protective equipment, to the Engineer and the Owner.

C. Schedule the use of existing utilities with the Owner. No utility service, fire protection system, or communication system may be interrupted without prior approval of the Owner and Engineer.

D. Water, electric power, lighting and other utilities, toilets, and other facilities shall be provided by the Contractor from existing sources where Contractor's use is not excessive and does not interfere with buildings normal use. Where existing utilities of the development are not adequate or cannot be used, the Contractor is responsible for providing alternative sources. The use of the building's utilities shall be coordinated through the Owner.

E. Post and affix caution signs and labels as required by OSHA regulation, 29.CFR.1926.1101 (k) (1). Post safety signs outside the work project as may be required by the Owner. Obtain two copies of 29.CFR.1910.1001, 29.CFR.1926.1101, 40.CFR.61, Subpart M, and Commonwealth of Massachusetts Regulations 453 CMR 6.00 and 310 CMR 7.00, and post one copy at the job site and retain one copy on file.

F. Post at the job site, or at the entrance to each independent Work Area, one copy of all Material Safety Data Sheets (MSDS's) of all chemicals and other substances to be used on this contract. These sheets shall be made available to the Engineer for review.

G. It will be the responsibility of the Contractor to maintain strict security of equipment, containments, work areas, buildings, trenches and excavations during the duration of their activities on the site.

1.12 GENERAL REQUIREMENTS:

A. All work-site preparations and practices will be conducted in accordance with all Federal, Massachusetts and appropriate City and other local regulations, standards and codes pertaining to worker health protection, protection of the public health and the environment, including current US Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), US Department of Transportation (DOT), Massachusetts Department of Labor Standards (DLS), Massachusetts Department of Environmental Protection (DEP), local and all other Federal, Commonwealth of Massachusetts and local regulations pertaining to asbestos removal, its transportation and disposal.

B. All operations involving exposure to airborne asbestos fiber shall be carried out according to the requirements of Part 3 of this Section.

C. Prior to use of any design, device, material, method of operation, or process covered by letters patent or copyright, the right for such use shall be secured by suitable legal agreement with the patentee or Owner of the letters patent or copyright. No arrangement involving letters patent or copyright is acceptable, if subsequent payment for permanent use following completion of the work is required or implied.

1.13 QUALITY CONTROL:

A. The Owner may retain the services of the Engineer to provide project administration, monitoring of Contractor work practices and performance, inspection of the work-sites, bulk fiber identification, and air sampling and analysis throughout the asbestos removal project.

B. AIR MONITORING:

1. Background (pre-testing) air and appropriate dust samples may be taken by the Engineers' third-party Massachusetts-licensed Asbestos Project Monitor to represent conditions before the Contractor starts masking and sealing operations.

2. During removal, area samples may be collected by the Owner or his agent in locations proximate to those areas where removal of asbestos-containing materials is ongoing. Contractor shall be responsible for all OSHA personal sampling. The Engineers' third-party Massachusetts-licensed Asbestos Project Monitor shall collect perimeter air samples during bulk loading, if necessary. Samples shall be collected from all four sides of the work area. A minimum of two samples per location per day shall be collected and analyzed onsite.

3. A Final Visual Inspection of the work area may be conducted by the Owner or his agent to ensure no visible asbestos debris exists in the work area, prior to demobilizing from the work area.

4. The air clearance acceptance criteria for this project is <0.010 fibers per cubic centimeter of air (f/cc) by Phase Contrast Microscopy (PCM) using the NIOSH 7400 Method. NOTE: Encapsulation on all surfaces (including floor) must be dry prior to final air sampling.

5. A sufficient number of samples to reliably characterize the work place air quality will be taken. Air will be agitated by means of a small leaf blower prior to the test and kept agitated by means of a small electric fan. The results of all samples must comply with the regulations set forth in this specification. Failure to meet the specified criteria will require the Contractor to re-clean the designated work site and then the Engineers' third-party Massachusetts-licensed Asbestos Project Monitor to repeat the final air clearance testing. All repeat air testing shall be the Contractor's financial responsibility. Cleaning and testing will be repeated until the specified criteria are met.

C. WORK REVIEW:

1. Outside the work area, airborne fiber concentrations must not exceed **0.010 fibers/cc**. If concentrations exceed this level, the work must be stopped, conditions reviewed as to the probable cause, and then corrected.

D. INSPECTIONS:

1. The Engineer will conduct a pre-abatement inspection. The Engineer will also conduct periodic inspections during abatement. The Engineers' third-party Massachusetts-licensed Asbestos Project Monitor will conduct a final visual inspection.

1.14 PERSONAL PROTECTION:

A. RESPIRATORS AND PROTECTIVE CLOTHING:

1. Personal protection, in the form of disposable Tyvek suits, and NIOSH approved respirators, are required for mechanics, contractor supervision, Engineer and

visitors at the work site during the set-up, removal, and cleaning operations. Contractor shall provide all this protective equipment for workers, Engineer and authorized personnel to access this work site.

2. Each worker shall be supplied with a minimum of two complete disposable uniforms every day. Removal workers shall not be limited to two uniforms. Supply additional uniforms as is necessary. Under no circumstances will anyone entering the work area be allowed to reuse a contaminated uniform.

3. Work clothes shall consist of disposable full body suits, head covers, gloves, footwear, and eye protection.

4. Supply workers and supervisory personnel with NIOSH approved protective respirators and HEPA/filters (P100 filters). Appropriate respirator selection shall be determined by the daily personnel samples being taken and strictly follow the guidelines set forth in the OSHA respiratory program 29 CFR 1910.134 and the Massachusetts DLS Regulations 453 CMR 6.00. The respirators shall be sanitized and maintained according to the manufacturer's specifications. Appropriate respirators shall be selected using the information provided in OSHA Title 29 CFR Part 1910.1926 Final Rules. Disposable respirators shall not be considered acceptable in any circumstance. The Contractor will maintain on site a sufficient supply of disposable HEPA/filters to allow workers and supervisory personnel to change contaminated filters at least three (3) times daily. The Contractor is solely responsible for means and methods used and for compliance with applicable regulations.

5. Respirators shall be individually assigned to removal workers for their exclusive use. All respiratory protection shall be provided to workers in accordance with the written submitted respiratory protection program, which includes all items in OSHA 29 CFR 1910.134 (b) (1-11). A copy of this program shall be kept at the worksite and shall be posted in the Clean Room of the Decontamination Unit.

6. Workers must perform negative and positive pressure fit tests each time a respirator is put on, whenever the respirator design so permits.

7. Workers shall be given a qualitative fit test in accordance with procedures detailed in the OSHA 29 CFR 1910.134, Qualitative Fit Test Protocols for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

8. Upon leaving the active work area, pre-filters shall be discarded, cartridges removed, and respirators cleaned in disinfectant solution and clean water rinse. Clean respirators shall be stored in plastic bags when not in use. The contractor shall inspect respirators daily for broken, missing, or damaged parts.

9. Provide daily personal sampling to check personal exposure levels for the purpose of establishing respiratory protection needs. Samples shall be taken for the duration

of the work shift or for eight hours, whichever is less. Personal samples need not be taken every day after the first day if working conditions remain invariant but must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be to determine eight-hour Time-Weighted-Averages (TWA). The contractor is responsible for personal sampling as outlined in OSHA Standard 1926.1001.

10. Sampling personnel shall be proficient in the taking of air samples under NIOSH 7400, and must be supervised by an individual who has completed the training course NIOSH 572 or equivalent.

11. Air sampling results shall be available at the job site in written form no more than twenty-four (24) hours after the completion of a sampling cycle. The document shall list each sample's result, sampling time and date, person monitored, flow rate, sample duration, microscope field area, number of fibers per fields counted, cassette size and analysts name and company. Air sample analysis results will be reported in fibers per cubic centimeter.

B. WORK PROCEDURES:

In order to avoid possible exposure to dangerous levels of asbestos, and to prevent possible contamination of areas outside the demarcated work zone, work shall follow the guidelines listed below.

1. Before leaving the work area, the worker shall remove all gross contamination and debris from the coveralls. In practice, this is carried out by one worker assisting another.

2. All equipment used by the workers inside the demarcated work zone shall be either left in the Dirty Room of the Decontamination Unit or thoroughly decontaminated before being removed from the area. Extra work clothing (that in addition to the disposable garment) shall be left in the Dirty Room of the Decontamination Unit until the completion of work in that area.

3. As stated in Section 3.01(D) (Decontamination Unit and Procedures), all persons leaving the removal area must decontaminate before leaving the demarcated work area.

4. Under no circumstance shall workers or supervisory personnel be allowed to eat, drink, smoke, chew gum, or chew tobacco in the work area. Only in the case of life threatening emergency shall workers or supervisory personnel be allowed to remove their protective respirators while in the work area. In this situation, respirators are to be removed for as short a duration as possible.

1.15 SPECIAL CONSIDERATIONS:

A. Storage - Limited storage space may be provided by the Owner on the property for this project. Contractor will supply any additional temporary storage as needed. All materials and equipment are to be kept in orderly fashion in designated areas, free and clear of high traffic areas and doorways, and in conformance with all regulations, codes, and in consideration of building usage. Contractor will be allowed to store waste in a waste dumpster on-site, to be coordinated with the Owner.

B. Working Hours - Working hours are specified in Division 1 - GENERAL REQUIREMENTS.

C. Security - The Owner will provide specific access as required during the project to the Contractor and personnel assigned to the project. The Contractor will be responsible for the security of the section of the building involved in the abatement project. It will also be the Contractor's responsibility to allow only authorized personnel into the work area, and to secure all assigned entrances and exits at the end of the workday. Any person entering or leaving the contained areas must sign the Contractor's bound logbook and enter the date and time. The logbook must be located immediately outside the entrance to the Decontamination Unit at all times and be open for inspection by the Owner.

PART 2 PRODUCTS

2.01 MATERIALS:

A. Wetting Agents: The wetting agent shall be approved by the Engineer.

B. Sealants: Sealing material shall be both penetrating and bridging and may be applied by a one or two coat system and shall meet the following criteria:

1. ASTM Standard E-84.
2. Underwriter's Laboratory approval for Class 1A
3. Fire Rating: Class A

a. Flame Spread: 0-25
b. Fuel contribution: 10
c. Smoke Density: 5

C. Containment Bags: Upon approval of the Engineer, containment bags may be utilized for the removal of pipe insulation. Removal shall be as manufacturer’s instructions and as described in these specifications.

D. Framing Materials and Doors: As required to construct temporary decontamination facilities and critical barriers.

E. Fire Retardant Clear Polyethylene Sheeting, minimum thickness 8-mil.

F. Fire Retardant Black Plastic Sheeting, minimum thickness 6-mil.

G. Drums: Asbestos transporting drums, sealable and clearly marked with warning labels as required by OSHA and EPA.

H. Plastic Bags: Sealable, asbestos disposal bags, mm 6-mil thick and labeled

I. Signs: Asbestos warning signs for posting at perimeter of work area, as specified in 29 CFR 1926.1101(k)(1)(CIIi).

J. Tape: Tape shall be high quality polyethylene film as approved by the Engineer.

K. Contamination Control Flooring: As approved.

L. Spray Adhesive: As approved.

M. Respirators: NIOSH approved with HEPA cartridges.

N. Disposable Coveralls: As approved.

2.02 TOOLS AND EQUIPMENT:

A. Air Filtration Device (AFD): Air Filtration Devices shall be equipped with High Efficiency Particulate Absolute (HEPA) filtration systems.

B. Scaffolding: Scaffolding, as required to accomplish the specified work, shall meet all applicable safety regulations.

C. Transportation Equipment: Transportation Equipment, as required, shall be suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Waste material shall be stored in 30 cubic yard dosed dumpsters.

D. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems. Vacuum equipment shall be as manufactured by Nilfisk of America of Malvern, Pennsylvania, Norclean Vacuum Systems distributed by Power Products and Services Co., Inc., Forest, Virginia or approved equal.

E. Vacuum attachments: Soft brush attachment, Asbestos Scraper Tool, Drill Dust Control Kit.

F. Electric Sprayer: An electric airless sprayer suitable for application of encapsulating material.

G. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for amended water application.

H. Portable Shower: For personnel decontamination.

I. Water Atomizer: Powered air misting device equipped to operate continuously.

J. Other Tools and Equipment: Provide other suitable tools for the stripping, removal, encapsulation, and disposal activities including but not limited to hand-held scrapers, wire brushes, sponge, rounded-edge shovels, brooms, and carts.

PART 3 EXECUTION

3.01 GENERAL CONSIDERATIONS:

A. APPROVALS AND INSPECTION:

All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet these contract specifications along with EPA, OSHA, NIOSH, regulations and recommendations as well as any other federal, state, and local regulations. Where there exists overlap of these regulations, the most stringent one applies.

Modifications to this isolation and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated. Written modifications to these specifications must be made to the Engineer for review before they can be used for work on this project.

B. DAMAGE AND REPAIRS TO THE WORK SITE:

Asbestos removal and disposal shall be performed without damage to the adjacent roadways, trees and buildings outside the limit of work. Contractor shall provide protection of these items and materials as part of the work area preparation. Where asbestos abatement activity causes damage, the Contractor shall patch, repair, replace or otherwise restore the area to its original condition at no additional cost to the Owner.

C. BARRIERS AND ISOLATION AREAS:

Construct and maintain suitable critical barriers within the buildings to separate work areas from spaces occupied by the adjacent building. Critical barriers shall be of sufficient size and strength to prevent staff, the public and others from entering the work areas.

Warning signs shall be posted on all critical barriers at the commencement of the work area preparation, as required in 1926.1101 of the Occupational Safety and Health Standards Federal Register, Volume 51, Number 119, June 20, 1986. The signs shall display the proper legend in the lower panel, with letter sizes and styles of a visibility at least equal to that specified in OSHA Standard 1926.1101.(k)(1)(ii). The signs will read as follows:

Danger
Asbestos
May Cause Cancer
Causes Damage to Lungs
Authorized Personnel Only

The signs shall be posted at the perimeters of asbestos removal, demolition or construction areas where the asbestos-containing material to be removed exists.

The Contractor shall maintain all temporary and critical barriers, facilities and controls as long as needed for the safe and proper completion of the work. Work will not be allowed to commence until all control systems are in place and operable.

No barriers shall be removed until the work areas are thoroughly cleaned, and all debris has been properly bagged and removed from work areas, and the area has passed final visual inspection, in accordance with provisions detailed herein.

Additionally, the Contractor shall erect a conspicuous 'No Trespassing' sign approximately 4'x4' at gated entries to the work site. Adjacent to the 'No Trespassing' sign, a sign or notification that unauthorized vehicles will be towed at the owners' expense shall also be erected.

D. DECONTAMINATION UNIT AND PROCEDURES:

A remote two-stage decontamination unit shall be constructed in conformance with requirements set forth in OSHA 29 CFR 1926.1101, and may be used at the approval of the Engineer for the removal of asbestos-containing window materials to be removed in accordance with all applicable Sections of this specification. A "two stage" unit resembles the "three-stage" unit in construction detail, but it is built without a shower section.

E. HEPA FILTRATION

Adequate negative pressure shall be provided within the enclosure as specified below.

1. After asbestos work area is totally isolated, and prior to commencement of work, the Engineer will perform, at their discretion, a visual inspection of the work area. This will consist of checking the integrity of barriers including smoke testing the containment if deemed necessary by the Engineer. This does not in any way relieve the Contractor's responsibilities to ensure the isolation of the work area. The volume of air within the contained work area shall be changed a minimum of four (4) times per hour. A pressure differential reading of -0.02 inches of water shall be maintained in the negative pressure work area relative to adjacent areas. A manometer with a strip chart recorder shall be used to show that the proper pressure differential is being maintained.

2. Equipment used for producing a negative pressure work area shall have a filtering device that is at least 99.97% efficient at a 0.3-micron pore size. Filters meeting these standards are referred to as High Efficiency Particulate Absolute (HEPA) filters. The HEPA filtration units shall be equipped with the following:

   a. Magnehelic gauge to monitor the unit's air pressure difference across the filters and be able to interpret magnehelic readings to cubic feet per minute (CPM).

   b. An affixed label, clearly marked and conspicuous, showing the most recent installation date and hour reading of the primary internal HEPA filter.

   c. A clock to record the unit's operation time.

   d. Automatic shut off for filter failure or absence.

   e. Audible alarm for unit shutdown.

   f. Amber flashing warning light for filter loading.

   g. The unit must be equipped with a safety system that prevents it from being operated with the HEPA filter in an improper orientation.

   h. All flexible ducting, vent tubing, adapter plates and other equipment used for the passage of filtered air shall be undamaged, uncontaminated, and free of air leaks at all points.

3. Pre-filters shall be changed frequently during the abatement.

4. All HEPA units shall exhaust to the outside of the building. All HEPA units shall be DOP tested on-site by the Contractor.

5. Air movement shall flow uninterrupted from outside the work area through the Decontamination Unit into the work area. There shall be no other openings for air to enter the containment unless approved by the Engineer in writing.

6. HEPA filtration units shall be placed as far as possible from the air intake to the containment to prevent short cycling of fresh air.

7. This containment, along with the decontamination chamber, shall constitute the critical containment of the work area from the surrounding areas. All openings to this critical containment are to be sealed except where air must enter the work site due to the use of exhaust equipment.

8. Unless approved by the Engineer, air shall enter the critical containment only through the Decontamination Unit. A pressure differential meter will be installed and maintained. If pressure differential drops below -0.02 inches of water, stop work until proper negative pressure is restored.

9. Written modifications to these isolations and sealing methods, procedures, and design may be considered if all elements of proper and safe procedures to prevent contamination and exposure can be demonstrated.

10. Written modifications to these specifications must be made to the Engineer for review before they can be used for work on this project.

3.02 DISPOSAL OF ASBESTOS WASTE:

A. Waste removal procedure shall be done in accordance with all regulations as set forth by the agencies having authority to regulate.

B. Provide proof that disposal sites for the waste materials have current and valid permits to dump asbestos waste at the time of the pre-construction meeting.

C. Obtain receipts from the dumping site(s) and submit to the Engineer upon request for final payment.

D. Warning labels having permanent, waterproof print and adhesive shall be affixed to all bags, trucks, drums (lids and sides), and other containers used to store and/or transport asbestos-containing material. Labels must be conspicuous and legible and contain the following warning:

Danger
Contains Asbestos Fibers
May Cause Cancer
Causes Damage to Lungs
Do Not Breathe Dust
Avoid Creating Dust

E. Be responsible for all necessary precautions to prevent pollution by spilling during the performance of services and shall assume full responsibility for all Contractor caused spills, which shall be cleaned up at the Contractor's expense.

3.03 HOUSEKEEPING:

A. Throughout the work period, maintain the work areas in a standard of cleanliness as specified throughout these specifications.

1. Contaminated disposable clothing, respirator filters, and other debris shall be bagged and sealed at the end of each workday.

2. All asbestos generated by either removal or repair shall be bagged immediately and not allowed to be left exposed at the end of each workday.

3. Respirators shall be thoroughly cleaned at the end of each workday and stored for the next day's use.

4. Retain all stored items in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection materials.

5. Do not allow the accumulation of scrap, debris, waste material, and other items not required for completion of the work.

6. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the ecology.

7. Daily and more often if necessary, inspect the work areas and adjoining spaces, and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.

8. Maintain the site in a neat and orderly condition at all times.

3.04 TEMPORARY UTILITIES:

Provide temporary connections to electrical and water utilities as they exist at the property or at the street and provide temporary facilities as required and necessary to carry out the work.

A. WATER SERVICE:

1. The Contractor shall provide temporary connections to any roadside fire hydrant and provide all lines necessary for distribution of water. The Contractor is responsible for obtaining permits for connection to City of Woburn water lines. The Contractor is also responsible for payment of all permit and water usage fees, as applicable. All fire hydrant use locations shall be determined and approved by the City of Woburn Water Department prior to use.

B. ELECTRICAL SERVICE:

1. General: Comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electrical service. All power connections and panel work are to be performed by a licensed electrician.

2. Temporary Power: Provide power sources as required. Sub-panel and disconnect shall be sized and equipped to accommodate all electrical equipment required for completion.

3. Voltage Differences: Provide I.D. warning signs at power outlets which are other than 110-120-volt power. Provide polarized outlets for plug-in type outlets, to prevent insertion of 110-120 volt plugs into higher voltage outlets.

4. Ground Fault Protection: Provide all receptacle outlets equipped with ground fault circuit interrupters (GFCI) and reset button for plug-in connection of equipment.

5. Electrical Power Cords: Use only graded extension cords.

C. LIGHTING:

1. The Contractor must supply temporary lighting for all lighting requirements within work areas as required.

END OF SECTION

SECTION 02058

CONTROLLED DENSITY FILL (CDF)

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Controlled Density Fill is to be used where indicated on the contract drawings or as described in any Massachusetts Department of Transportation road opening permits included in the project.

1.02 RELATED WORK:

A. Section 01110 - CONTROL OF WORK AND MATERIALS

B. Section 01330 - SUBMITTALS

C. Section 02300 - EARTHWORK

D. Section 02252 - SUPPORT OF EXCAVATION

1.03 REFERENCES:

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges - Subsection M4.08.0, CONTROLLED DENSITY FILL.

1.04 SUBMITTALS:

Proposed Mix Designs for the type(s) of Controlled Density Fill shall be submitted for review and approval from the Contractor's Ready Mix provider in accordance with specification Section 01330 - SUBMITTALS.

PART 2 - PRODUCTS

2.01 MATERIALS:

Materials employed in the Controlled Density Fill shall meet the requirements as described in MassDOT Standard Specifications Subsection M4.08.0.

2.02 TYPE OF CONTROLLED DENSITY FILL:

Controlled Density Fill for this project shall be (Type 1 - Very Flowable (Non-excavatable), Type 1E - Very Flowable (Excavatable), Type 2 - Flowable (Non-

excavatable) or Type 2E - Flowable (Excavatable), as described in MassDOT Subsection M4.08.0.

PART 3 - EXECUTION

3.01 GENERAL:

A. Controlled Density Fill shall be batched at a ready mix plant and is to be used at a high or very high slump of approximately 10- to 12-inches. It shall be flowable, require no vibration and after it has been placed for Type 1E and 2E, be excavatable by hand tools and/or small machines.

B. Controlled Density Fill shall be placed so as to not disturb adjacent structures, utilities or the sidewalls of trenches.

C. Controlled Density Fill shall be installed within abandoned water, sewer, and drain pipes as shown on the Drawings.

END OF SECTION

SECTION 02075

UNIVERSAL AND HAZARDOUS WASTES

PART 1 GENERAL

1.01 GENERAL PROVISIONS:

A. Attention is directed to Section 00700 – STANDARD GENERAL CONDITIONS and all sections within DIVISION 1 - STANDARD GENERAL REQUIREMENTS, which are hereby made part of this Section of the Specifications.

B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of Article VI of the GENERAL CONDITIONS.

C. Examine all conditions as they exist at the project before submitting a bid for the work of this Section.

C. All provisions of this Section relating to the health and safety of workers and the general public, as well as protection of the environment are minimum standards. The General Contractor is responsible for determining whether any legal requirements or prudent conservative work practices require any additional and/or more stringent protective measures and implementing such measures if deemed necessary. Nothing in this Section shall be deemed to relieve the General Contractor from any liability with respect to any such legal requirements or requirement of prudent conservative practice.

D. All work-site preparations and practices will be conducted in accordance with all Federal, Massachusetts and appropriate City and other local regulations, standards and codes pertaining to worker health protection, protection of the public health and the environment, including current US Environmental Protection Agency (EPA), Department of Labor Occupational Safety and Health Administration (OSHA), US Department of Transportation (DOT), Massachusetts Department of Labor Standards (MA DLS), Massachusetts Department of Environmental Protection (MA DEP), local and all other Federal, Commonwealth of Massachusetts and local regulations pertaining to removal, transportation and disposal.

1.02 SCOPE OF WORK - GENERAL

A. PCB- and/or di (2-ethylhexyl) phthalate (DEHP)-Containing Light Ballasts

1. Remove, package, transport and dispose/recycle all PCB- and DEHP-containing light ballasts as hazardous waste.

2. Provide and secure all notifications and permits necessary for the transport and disposal of PCB- and DEHP-containing light ballasts as hazardous material.

Ballast shall be separated from PCB- and DEHP-contaminated materials and each shall be properly labeled and containerized.

3. Furnish all labor, materials, equipment, and services required for all work included in this Section.

4. Compliance with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.

5. Decontamination and clean up following removal activities in each designated work area.

6. Perform any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Engineer.

B. Fluorescent Light/High Intensity Discharge Lamp Bulbs

1. Remove, package, transport and dispose of all mercury/lead-containing fluorescent and high-intensity discharge (HID) lamp bulbs as hazardous waste. Contractor shall assure that bulbs are handled carefully and not broken or damaged.

2. Provide and secure all notifications and permits necessary for the transport and disposal of mercury/lead-containing bulbs as hazardous material.

3. Furnish all labor, materials, equipment, and services required for all work included in this Section.

4. Comply with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.

5. Decontamination and clean up following removal activities in each designated work area.

6. Perform any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Engineer.

C. PCB-Containing Equipment – Transformers, Switches, Switching Gear, etc.

1. Remove, package, transport and dispose/recycle all PCB-containing equipment as hazardous waste.

2. Provide and secure all notifications and permits necessary for the transport and disposal of PCB-containing equipment as hazardous material. Equipment shall be

separated from PCB-contaminated materials and each shall be properly labeled and containerized.

3. Furnish all labor, materials, equipment, and services required for all work included in this Section.

4. Compliance with all applicable federal, state, and local regulations, as well as all requirements set forth in these Specifications and facility requirements.

5. Decontamination and clean up following removal activities in each designated work area.

6. Perform any other work or activities required by this Specification, applicable regulations, or as necessary to perform a complete job to the satisfaction of the Owner and Engineer.

1.03 SCOPE OF WORK - DETAILED

The following is the approximate location of universal waste, chemical waste, and other hazardous materials that must be removed, in accordance with this Section:

Material	Quantity
Compressor – standalone and in unit ventilators	5
Door closers	35
A/C, refrigerator, fountain	8
Industrial size rooftop HVAC unit	1
Fluorescent light bulbs (4',8'& round)	800
Fluorescent light ballasts	450
Paint cans	10
Household cleaners	10
Fire exit lights	20
Television, monitor	3
Fire extinguishers	5
Oil tank	1 ~275 gallon
Dry type transformer	5

A. PCB- and DEHP-Containing Light Ballasts Removal and Disposal: Suspect PCB- and DEHP-containing light ballasts are present throughout the facility based upon dismantling of representative fixtures to observe ballasts. The following work shall be included as the scope of work for removal, transport and disposal of PCB- and DEHP-containing light ballasts:

1. All hazardous material abatement work areas shall remain isolated from all other trades and remain inaccessible to the public. Contractor shall monitor access to these areas.

2. Contractor shall remove and dispose of all PCB- and DEHP-containing light ballasts in the facility as PCB- and DEHP-containing waste in accordance with all applicable state and federal regulation. Removal and disposal of all light ballasts shall include proper packaging, transportation and disposal of waste. Contractor is required to provide and secure all notifications and permits necessary for the transportation and disposal of PCB- and DEHP-containing light ballasts as hazardous material. The disposal options may include disposal at a chemical or hazardous waste landfill, or incineration at an EPA-approved high temperature incinerator. Under no circumstances shall the Contractor be allowed to dispose of light ballasts (i.e. intact ballasts) at a municipal solid waste landfill. Contractor is advised that all leaking PCB-or DEHP-containing ballasts must be incinerated at an EPA-approved high temperature incinerator at its costs.

3. Contractor shall provide hazardous waste manifests documenting the proper disposal of all PCB- and DEHP-containing light ballasts in accordance with all applicable state and federal regulations.

4. Contractor shall specify the method of disposal to the Owner and Engineer. The Contractor shall provide any information and/or documentation requested by the aforementioned parties to prove that all PCB-containing light ballasts have been properly packaged, labeled, transported and disposed.

B. Fluorescent Light/High Intensity Discharge (HID) Bulbs Removal and Disposal: The following work shall be included as the scope of work for removal of fluorescent light and/or HID lamp bulbs:

1. All hazardous materials abatement work areas shall remain isolated from all other trades and remain inaccessible to the public. Contractor shall monitor access to these areas.

2. Contractor shall remove all fluorescent light bulbs and/or HID lamps, intact, prior to demolition activities, and to dispose of all light bulbs as mercury or lead waste in accordance with all applicable state and federal regulations. Removal and disposal of all light bulbs shall include proper packaging, transportation and disposal of waste. Contractor is required to provide and secure all notifications and permits necessary for the transportation and disposal of fluorescent light bulbs and HID lamp bulbs in accordance with all applicable state and federal regulations. The disposal options may include recycling or land disposal in accordance with all applicable state and federal regulations.

3. Contractor shall provide manifests documenting the proper disposal of all bulbs in accordance with all applicable state and federal regulations.

4. Contractor will be required to specify the method of disposal to the Engineer and provide any information and/or documentation requested by the aforementioned parties to prove that all light bulbs have been properly packaged, labeled, transported and disposed.

1.04 RELATED WORK SPECIFIED ELSEWHERE

A. Related work specified elsewhere: Examine all Drawings and all other Sections of the Specifications for requirements of related sections affecting the work of this Section, including but not limited to:

1. Section 00890 – PERMITS
2. Section 01380 – HEALTH AND SAFETY PLAN
3. Section 02051 – ASBESTOS ABATEMENT
4. Section 02220 – DEMOLITION
5. Section 13282 - LEAD BASED COATINGS REMOVAL

B. The work of this Section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to other Divisions for additional procedures. The Contractor is responsible for the coordination of the work of this Section with other related work.

C. Portions of the work herein require direct coordination with the work of the above noted Related Sections. The Contractor shall coordinate this with the work of other trades on the site.

PART 2 - PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION

SECTION 02220

DEMOLITION

PART 1 – GENERAL

1.1 SUMMARY:

A. Section Includes

1. Complete demolition of the building, above grade structures, and miscellaneous site features within the Limit of Work, as shown on the Contract Drawings.
2. Complete demolition of all sub-grade structures, including floors, slabs, foundations, footings/frost walls, and retaining walls within the Limits of Work as shown on the Contract Drawings, unless otherwise specified.
3. Complete demolition of all interior and exterior building elements and contents of building designated for demolition, including walls, ceilings, and roof structures.
4. Complete demolition of ancillary structures and their foundations, site features and items, including but not limited to concrete, ramps, stairs, concrete pads, existing fencing not being used to secure the site, curbing, miscellaneous improvements, and debris within the Limits of Work, even if the site features are not specifically shown on the Drawings.
5. Protection of stormwater utilities/structures not designated for demolition.
6. Removal and lawful disposal of miscellaneous debris and solid waste located within the Limits of Work indicated on the Drawings.

B. Asbestos and hazardous materials abatement at the building to be demolished shall be completed as described in Section 02051 – ASBESTOS ABATEMENT and Section 02075 – UNIVERSAL AND HAZARDOUS WASTES prior to the work described under this Section.

C. Related Sections

1. Section 00890 – PERMITS
2. Section 01014 – SCOPE AND SEQUENCE OF WORK
3. Section 01110 – CONTROL OF WORK AND MATERIALS
4. Section 01140 – SPECIAL PROVISIONS
5. Section 01330 – SUBMITTALS
6. Section 01380 – HEALTH AND SAFETY PLAN
7. Section 01562 – DUST CONTROL
8. Section 01570 – ENVIRONMENTAL PROTECTION
9. Section 01577 – PEST CONTROL
10. Section 01740 – CLEANING UP
11. Section 02051 – ASBESTOS ABATEMENT
12. Section 02075 – UNIVERSAL AND HAZARDOUS WASTES

13. Section 02222 – UTILITY ABANDONMENT
14. Section 02230 – CLEARING AND GRUBBING
15. Section 02282 – EARTHWORK
16. Section 13282 – LEAD BASED COATINGS REMOVAL

1.2 DEFINITIONS:

A. Demolish – To tear down, segregate waste streams and lawfully recycle or dispose of all debris generated in the process including structure contents.

1.3 SUBMITTALS:

A. Demolition and Waste Management Plan: Prior to the start of demolition work, and no later than 30 calendar days after the date of the Notice to Proceed, submit a comprehensive Demolition and Waste Management Plan for the Engineer's review and approval prior to demolition work. The Demolition and Waste Management Plan shall be coordinated with, and as appropriate include reference to, the various plans and submittals required by these Specifications. At a minimum the Contractor's Demolition and Waste Management Plan shall specifically include and address the following.

1. A schedule that details the overall sequence for the building being demolished under this Contract.
2. Methods, equipment and operations. Include information such as demolition method and approach, equipment types and placement, name and address of all demolition debris transporters, and protection controls, including protection to traffic, and passersby.
3. Indicate the types of wastes to be generated and the proposed disposal or recycling locations. Include back-up disposal and recycling facilities per Paragraph 1.3.B below. In accordance with the EPA's Principles for Greener Cleanups, the Contractor is encouraged to clean and salvage/reuse/recycle demolition debris and building contents as much as possible.
4. Copies of any authorizations and permits required to perform the work, including disposal/recycling facility permits.
5. Identify stockpile and staging areas within the Limit of Work for approval by the Engineer and Owner.
6. Do not proceed with the demolition until the Engineer has given written acceptance of the demolition plan.

B. The Demolition and Waste Management Plan shall, at a minimum, contain the following:

- Disposal/Recycling facility name(s).
- Disposal/Recycling facility address(es).
- Name and title of contact person for each disposal/recycling facility to be used.

- Telephone number of contact person for each disposal/recycling facility to be used.
- For each disposal/recycling facility to be used, copies of licenses or permits to operate and confirmation that they are permitted to accept demolition materials to be taken to that facility.
- Lists matching each facility with the materials it will accept for this project, and specifying whether the facility is a treatment, storage, recycling or disposal facility.
- Confirmation from the facility(ies) that they will accept the type and quantities demolition materials.
- Description of Contractor's procedures to manage and track materials and example of Contractor's material tracking log.

C. Contract Closeout Submittals - (throughout project and prior to authorization of final payment):

1. Records of the amounts of waste generated, by waste type. Shall be submitted and up to date with each request for payment. Requests for payment will be returned, in the event that this requirement is not met.
2. Evidence of lawful disposal or recycling of all wastes generated, including waste shipment manifests, shipping records, and weight slips shall be submitted and up to date with each request for payment. Requests for payment will be returned, in the event that this requirement is not met.
3. Documentation of underground structures and utilities as identified in Part 3 of this Section.

1.4 REGULATORY REQUIREMENTS:

A. Contractor is solely responsible for obtaining permits or approvals which may be required to perform the work of this Section, including all costs, fees and taxes required or levied. All legally imposed charges made by local authorities for the work of this Section involving the connection, inspection and approval services of all bureaus administering all applicable codes and regulations shall be provided hereunder at no additional expense to Owner.

B. Notify and obtain such permits or approvals from all agencies having jurisdiction over demolition prior to starting work including, but not limited to Health, Building, and Fire Departments of the municipality and local, State and Federal agencies. The Contractor shall give the proper authorities all required notices or information relating to work in his charge, pay all fees necessary to obtain all official licenses, permits and certificates, and comply with the rules of the Massachusetts Department of Public Safety.

C. Comply with all applicable Federal, State, and local environmental, safety and health requirements and regulations regarding the demolition of structures and other site features and recycling or disposal of demolition debris, as applicable.

D. Conform to applicable codes and requirements for demolition of structures, safety of adjacent structures, dust control, service utilities, and discovered hazards.

E. Contractor shall be aware that the existing equipment/structures may be coated with lead paint. Hence, demolition of the structures shall comply with all applicable lead paint regulations. Contractor performing this work shall be thoroughly knowledgeable of all federal, state and local laws, rules, and regulations regarding hazardous waste containing lead. By bidding this contract, the Contractor is stating his expertise in this work and the Owner shall not be responsible for any additional costs incurred by the Contractor as a result of any misunderstanding or disagreement with the applicable federal, state, and local laws, rules and codes.

F. Collection treatment, and disposal of all lead-containing wastes shall be in strict accordance with current applicable federal, state, and local laws, rules, and codes, including, but not limited to, Resource Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TSCA), Occupational Safety Health Act (OSHA), and USEPA.

1.5 PROJECT CONDITIONS:

A. Occupancy: The former Clapp school building is vacant.

B. Condition of Structures: Owner assumes no responsibility nor makes any claim as to the actual condition, or the structural adequacy of any existing construction to be demolished. The Contractor shall investigate and assure itself of the condition of the work to be demolished and shall take all precautions to ensure safety of persons and property. Refer to Section 01014 – SCOPE AND SEQUENCE OF WORK for information regarding the existing conditions of the building. Site tours will be conducted after the Pre-Bid Conferences as specified in the Advertisement For Bids.

C. Asbestos containing materials found in the building are summarized in Section 02051 – ASBESTOS ABATEMENT and other hazardous materials and white goods are summarized in Section 02075 – UNIVERSAL AND HAZARDOUS WASTES. See Section 13282 – LEAD BASED COATINGS REMOVAL for lead-based coatings removal requirements.

D. Items of value that are not indicated to be returned to Owner shall become the property of the Contractor. Storage or sale of items on the project site is prohibited.

E. Explosives: Not permitted.

G. Protection: Ensure the safe passage of persons around the building during demolition. Prevent injury to persons and damage to property. Provide adequate shoring and bracing to prevent collapse. Immediately repair damaged property to the condition before being damaged.

1.6 EXISTING CONDITIONS:

A. By submitting a bid, the Contractor affirms having carefully examined the site and all conditions affecting the Work. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.

B. Work Area:

The work area includes one (1) building and approximately 20,000 SF of paved parking area.

The Clapp School is a former elementary school building with a footprint of approximately 16,700 square feet (SF). The building is two stories and constructed of mostly steel and concrete with exterior walls constructed of brick. A portion of the lower floor is below grade.

See the Contract Drawings and "As-Built Drawings" for additional details and other site features within the Work Area.

PART 2 - PRODUCTS

NOT USED

PART 3 – EXECUTION

3.1 PROJECT MANAGEMENT:

A. Engineer and/or Owner shall have authority over all work at the site.

B. Contractor shall provide a Project Superintendent who shall serve as a direct communication between Contractor and Owner.

3.2 GENERAL REQUIREMENTS:

A. Verify site conditions before proceeding with demolition work. Field check the accuracy of the Drawings and inspect structures and utilities prior to start of work and notify the Engineer in writing, of any hazardous conditions and/or discrepancies. Primary structures and other site features are shown on the Drawings, other building elements and superstructures may not be shown on the Drawings but may exist within the Limits of Work and shall be demolished as part of the work of this Section, including, but not limited to, foundations, slabs, footings/frost walls, retaining walls and associated foundations, fences, structures, doorways, hand rails, mechanical equipment, furniture, and HVAC equipment.

1. Unknown Site Conditions - The information provided on the Drawings and in the Specifications is believed accurate, but Contractor should field verify all

information. Contractor shall bear full responsibility for obtaining all locations of underground structures, utilities and their connections.

2. Interior Elements - Interior features including but not necessarily limited to structural elements, walls, partitions, furniture, desks, lockers, office equipment, mechanical equipment, piping or other building facilities are not shown on the Drawings and must be visually inspected prior to submittal of bid, and again prior to initiation of on-site work. Contractor shall be responsible for performing its own inspection and appraisal of all features and facilities to be demolished or removed for salvage. Site tours will be conducted after the Pre-Bid Conferences as scheduled in the ADVERTISEMENT FOR BIDS. Contractor shall also investigate to assure itself of the condition of the work to be demolished and shall take all precautions necessary to ensure safety of people and property.

3. Sub-Grade Elements – all subgrade elements shall be demolished and disposed of, including floors, basements, foundations, slabs, footings/frost walls, retaining walls and associated foundations within the Limits of Work as shown on the Drawings, unless otherwise specified.

B. The demolition of the building, utilities and related appurtenances shall be accomplished by methods that will not cause damage to surrounding structures, underground and overhead utilities, or other existing items and structures that are to remain in place.

C. All debris shall be promptly and properly managed as the demolition progresses. Construct and/or prepare material Staging/Stockpile areas as required at locations approved by Engineer.

D. Loaded demolition vehicles shall use Hudson Street to enter and exit the Site.

3.3 SITE PREPARATION:

A. All overhead hazards, which are imminent dangers, shall be removed and/or stabilized prior to work commencing near the building. Where hazards are not readily accessible, Contractor shall mark and control areas below hazards to prohibit access below the hazards. This shall be performed with caution tape, saw horses, safety fence or other types of barricades as determined by applicable safety codes.

B. Prior to demolition, remove asbestos containing materials and other hazardous materials prior to structure demolition, in accordance with pertinent Sections of this Contract.

C. Install erosion control and protect all catch basins that may be impacted by demolition or utility activities.

D. Terminate and discontinue utilities serving the building prior to demolition activities.

E. Plug and abandon all sewer lines and as indicated on the Drawings before any plumbing fixtures or traps are removed from the building. The Contractor shall plug and remove drains from the building (roof drains, floor drains, etc.) per applicable regulations and, at

a minimum, 10-feet from the building footprint per Section 02222 – UTILITY ABANDONMENT.

3.4 HAZARDOUS MATERIALS:

A. Lead Paint

1. A number of State, Federal and local agencies regulate work which involves lead paint. The Contractor is hereby notified that there are paint coatings on the structures to be demolished that contain lead. This lead could present a hazard to workers and requires regulatory compliance with 29 CFR 1926.62 "Lead in Construction."

2. Of specific concern is the cutting of steel components using torch methods. If the Contractor intends to torch cut painted steel, lead paint must be removed from the area to be cut with a chemical stripper or other means prior to cutting. Sufficient paint must be removed from the area to prevent volatilization of lead during the heating of the steel. Other means of controlling worker exposure to lead will be acceptable provided that they are addressed in the Lead Exposure Control Plan (Section 13282 – LEAD BASED COATINGS REMOVAL) and that they meet the requirements of 29 CFR 1926.62.

3. Where activities may generate leaded dust or impact a leaded surface, regulate work area so that dust migration is contained properly within the regulated area. Once the work is complete, properly clean up and dispose of leaded dust and materials per Section 13282 – LEAD BASED COATINGS REMOVAL.

B. Oil and Hazardous Material Contamination

1. There are known asbestos containing materials (ACM) and other hazardous materials in the building. See Section 02051 – ASBESTOS ABATEMENT and Section 02075 – UNIVERSAL AND HAZARDOUS WASTES for additional information.

2. PCBs were not detected in building materials (e.g., caulking, paint, and glazing) greater than 50 parts per million (ppm). Based on the results of the building hazardous materials assessment, the materials will not be required to be disposed of at a TSCA permitted facility as PCB impacted waste materials. However, materials containing PCB's at a concentration greater than 2 ppm may not be disposed at solid waste landfills in Massachusetts. These materials must be disposed at a facility permitted to accept them (e.g., out-of state lined landfills). See the PCB Sampling Summary Table included as an attachment to this section.

3.5 DEMOLITION:

A. Conduct demolition in accordance with approved plans and in compliance with all relevant specifications, details and plans, so as to minimize interference with adjacent properties.

B. Conduct operations with minimum interference to public or private properties and access routes. Gain access to the premises at designated locations only.

C. Building

1. Disconnect, cap, identify and remove designated utilities. Coordinate with all Utility representatives and pay all fees associated with all work. See Drawings and Section 02222 – UTILITY ABANDONMENT for additional requirements.

2. Demolish the building, complete. Walls, partitions, furniture, desks, office equipment, mechanical and HVAC equipment, piping or other interior building facilities are not shown on the Drawings but shall be demolished.

3. Segregate various building materials to facilitate recycling of salvageable materials.

4. Barricade work area as necessary to protect workers and general public from falling debris.

5. Do not leave unstable structures unattended. Plan the workday so that all structures are stable at the end of each work day.

6. Unless specifically authorized otherwise, all demolished materials shall be removed from the premises and disposed of, or recycled, in a lawful manner. Provide evidence of satisfactory disposal or recycling

D. Foundations and Substructures

1. Remove all concrete slabs, foundations, basements, retaining walls and associated foundations, footings/frost walls, and related substructures to full depth as noted on the Contract Documents.

2. Based on previous test pitting investigations at the former Clapp Elementary School, there is asbestos-containing mastic damp-proofing/waterproofing present on the subgrade structures, including frost walls and basement along the southern portion of the building. The Contractor should anticipate approximately half of the subgrade foundations have mastic damp-proofing/waterproofing, unless otherwise noted.

F. Miscellaneous Site Structures and Features

1. Concrete Slabs – Demolish all concrete slabs that are outside the building footprints (aprons, ramps, steps, platforms, pads etc.) and associated foundation walls within the Limits of Work as shown on the Drawings, whether or not they are specifically shown on the Drawings.

2. Other Items Within Limit of Work – Demolish all improvements and miscellaneous items, unless designated to remain (stormwater piping, stormwater structures, sewer force main, etc.), such as curbing, ramps, railings, stairs, retaining walls, sidewalks, wood poles, light poles, utility poles not designated to remain, fences, street/parking lot poles, and trash/debris within the Limits of Work, whether or not they are specifically shown on the Drawings.

3. Bituminous Concrete Pavement – With the exception of the paved parking areas, completely remove/demolish all bituminous pavement driveways/walkways and asphalt areas within the Limits of Work shown on the Drawings. Trucks and trailers shall remain on paved services as much as possible; the removal/demolition of parking areas shall be after the demolition/removal of the building.

3.6 ON-SITE REUSE:

A. Uncoated brick and concrete may be crushed on-site to 3-inch minus and reused as backfill per ABC Regulations (310 CMR 16.00) and Section 02300 – EARTHWORK. Crushed uncoated brick may be used as backfill if blended with crushed uncoated concrete and soil (Class B Backfill) at a 1:1:1 ratio and as approved by the Engineer and Owner. When only crushed uncoated concrete and soil is used for backfill, it shall be blended at a 1:1 ratio, unless otherwise approved by the Engineer and Owner. The intent of the on-site reuse of uncoated brick and concrete is to backfill excavations and voids so surplus uncoated brick and concrete is not generated. Any surplus uncoated brick and concrete shall be stockpiled on-site at an approved location for future use by the Owner. The import of crushed concrete and/or brick will not be allowed. The mining of on-site soils to blend with crushed concrete and brick will not be allowed.

B. Asphalt cannot be used as backfill in excavation areas/voids but may be reclaimed/pulverized in place to 3-inch minus per ABC Regulations, rolled/compacted, and left in its current configuration. If asphalt is not reclaimed/pulverized in place, the Contractor shall recycle off-site at no additional cost to the Owner.

C. Painted/coated concrete/brick shall be recycled/disposed of off-site. The Contractor may remove waterproofing/coatings from concrete per applicable regulations and reuse on-site, as specified above, at no additional cost to the Owner.

3.7 DISPOSAL AND RECYCLING:

A. The Contractor shall be responsible for sampling and characterizing all material designated for disposal and/or recycling for the purpose of fulfilling any disposal/recycling testing requirements, and obtaining approvals, from the disposal/recycling facility(ies). All disposal/recycling characterization sampling and analysis performed by the Contractor shall be at no additional cost to Owner.

The Contractor shall provide the Engineer with a minimum of 2-days notice prior to sampling and shall not sample unless Engineer's approval is received, and the Engineer is present to witness the collection of the samples

The Contractor shall submit a copy of all sampling analyses and a tabulated summary of the data in Microsoft Excel format to the Engineer within two (2) days of receipt of the laboratory report.

B. Legally dispose of or recycle all materials from demolition as well as equipment and other materials that are within the building. The disposal and/or recycling facility(ies) shall be permitted to accept the waste stream by the applicable State Agency. The loading of demolition materials shall be performed in a manner that prevents materials and activities from generating excessive dust and ensure minimum interference with roads, sidewalks and streets both on-site and off-site.

C. Provide evidence that the demolition materials have been received at a legal disposal, recycle, reuse or salvage location. The means for such proof may be truck weight slips from an approved disposal/recycling facility or documentation of transfer of title. Transport of all materials off site shall be in accordance with applicable Department of Transportation Regulations. All materials leaving the site shall become the property of Contractor.

3.8 SITE RESTORATION:

A. The Contractor shall backfill demolished/excavated areas/voids to a maximum slope of 3:1 and to within 4 inches of the surrounding grades along the fill perimeter and provide positive runoff from backfilled areas, unless otherwise required by the Owner and Engineer. Class B Backfill shall be imported and placed per Specification Section 02300 – EARTHWORK, as required and approved by the Engineer and Owner. Loam and seed shall be placed in the top 4 inches in accordance with specification section 02920 – LOAMING AND SEEDING.

END OF SECTION

SECTION 02222

UTILITY ABANDONMENT

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This Section covers the abandonment, demolition/removal, cutting/capping/plugging, filling of existing pipes with controlled density fill, termination and discontinuance of existing utilities within the Limits of Work as designated on the Contract Drawings and described herein, including: sewer, water, gas, telephone, telecom, and electrical utilities. The Contractor shall protect the existing stormwater collection system, as shown on the Contract Drawings. See the Contract Drawings for additional information.

B. The locations of existing underground services and utilities shown on the Contract Drawings are based on available records. It is not warranted that all existing utilities and services are shown, or that shown locations are correct. The Contractor shall be responsible for determining the location of existing utilities and having the utility companies locate their respective utilities on the ground prior to excavating. The Contractor shall coordinate utility termination work with the applicable utility companies to ensure services have been shutoff.

C. The Contractor shall furnish all materials, tools, labor, and equipment to abandon, cut/cap/plug, terminate, and discontinue existing utilities as specified herein.

D. Except where specifically noted otherwise, the Contractor shall protect the existing stormwater collection system (catch basins, drain manholes and piping), active water mains, active sewer utilities, and remaining utilities not designated for removal.

E. The relocated fire hydrant on Hudson Street shall at all times be left clear of obstructions and readily accessible to fire apparatus, and no material or other obstructions shall be placed within ten (10) feet of a fire hydrant.

1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. The Contractor shall submit a Utility Abandonment Plan to the Engineer within 14 days of the Notice to Proceed. The Utility Abandonment Plan shall include, but not limited to the following: material specifications and shop drawings for all materials and equipment for abandoning existing utilities under this Section and the Contract Drawings; details/plan for protecting utilities to be left in place and details/plan for cutting, capping, abandoning, demolishing, and removing utilities.

B. Submit to the Engineer an As-Built Documents showing locations of all utility cuts/caps/abandonment/demolition locations with Global Positioning System (GPS) coordinates. The Contractor shall also indicate vertical location based on depth from existing grade. The As-Built Documents will serve as Owner's record of utility termination locations. Utility terminations to be shown with GPS coordinates on the as-built documents include all cut and capped utility services.

PART 2 - PRODUCTS

2.01 CAPPING MATERIALS:

A. Cast Iron/Ductile Iron Piping - Caps shall be ductile iron, mechanical joint caps of the same diameter as the pipe. Gaskets shall be plain tipped rubber, suitable for exposure to the liquid within the pipe. Restraining glands shall have individually actuated wedges and shall be "Megalug" as manufactured by EBAA Iron Sales, Inc., Eastland, TX; StarGrip by Star Pipe Products, Houston, TX; RomaGrip by Romac Industries, Inc., Sultan, WA; Sigma One-Lok by Sigma Corporation, Cream Ridge, NJ; or approved equal. All bolts and nuts shall be high strength alloy. Contractor shall provide concrete thrust blocks behind all caps.

B. Asbestos-Concrete (AC) Piping – Capping shall be done by installing a transition coupling, a ductile iron nipple and a mechanical joint cap with retainer gland. Provide concrete thrust blocks. AC piping requiring removal shall be removed and disposed of per all applicable regulations at no additional cost to the Owner.

C. Sanitary Sewer – Concrete or masonry plugs shall be used.

D. Copper, Iron Piping - Caps or plugs shall be permanent screwed or silver soldered cap fittings. Termination materials shall be of the same materials as the pipe.

2.02 CONCRETE AND MASONRY PLUGS:

A. Plugs installed at the open ends of the pipe to be abandoned shall be 12-inch thick 3,000-psi cement concrete, or 8-inch thick brick masonry as required. The pipes to be abandoned as specified herein and as shown on the Contract Drawings.

B. Precast cement concrete plugs that are used shall meet the requirements for 3,000 psi concrete and shall be free of cracks and spalls. Brick masonry plugs shall be made of brick meeting the requirements of ASTM C32, for grade SS, hard brick.

C. Mortar shall be composed of Portland cement, hydrated lime, and sand and the volume of sand shall not exceed three times the sum of the volumes of cement and lime. The proportions of cement and lime shall be as required and may vary from 1:1/4 for dense hard-burned brick to 1:3/4 for softer brick. In general, mortar for grade SS brick shall be mixed in the volume proportions of 1:1/2:4-1/2; Portland cement to hydrated lime to sand. The cement concrete plug shall be covered with non-shrink grout to prevent leakage at the plug.

2.03 PIPE FILLING:

A. All sewer, water and drain pipes indicated to be abandoned in place shall be filled with flowable fill in accordance with specification section 02058 – CONTROLLED DENSITY FILL.

PART 3 - EXECUTION

3.01 GENERAL:

A. The Contractor shall determine the location of existing utilities to be abandoned from the Contract Drawings, field investigations, electronic utility detectors, coordination with applicable utility companies, and test pits.

B. The Contractor shall at least 72 hours, exclusive of Saturdays, Sundays, and holidays, prior to excavation contact DIGSAFE before working below ground and shall maintain the DIGSAFE numbers throughout the course of the project.

C. The Contractor may not begin excavations until approval of the Utility Abandonment Plan. Before backfilling any underground utility termination, the Contractor shall notify the Engineer, so the Engineer can inspect and photograph the termination. If the area is covered prior to inspection/approval the work shall be uncovered for inspection at the Contractor's expense. Any and all costs associated with uncovering the work and damages resulting from such uncovering are the sole responsibility of the Contractor. Immediately following the Engineer's inspection/approval, excavations for utility cutting/capping/ abandonment shall be backfilled and the surface restored and maintained in a manner satisfactory to the Engineer.

D. The Contractor shall abandon, demolish/remove, cut/cap/plug, terminate, and discontinue individual building utility services as designated on the Contract Drawings and described in these Specifications. Except where specifically noted otherwise, the Contractor shall protect the existing stormwater collection system (catch basins, drain manholes, piping, and culverts), monitoring wells and hydrants as designated on the Contract Drawings and described in these Specifications.

E. All utility shut offs shall be coordinated with Owner and applicable utility company. The Contractor shall be responsible for any fees associated with the shut off of utilities. The Contractor shall obtain written authorization from the utility companies before shutting off or terminating any utility service, including terminating water and sewer service.

F. The Contractor shall cut, cap, and abandon in place all utilities from the building scheduled for demolition to the property line, unless otherwise specified or noted on the Drawings.

G. The Contractor shall provide detectable tracer tape and an oak marker stake above the plugged end of each utility pipe/conduit to be cut and capped.

3.02 UTILITY ABANDONMENT:

A. Sanitary Sewer and Drainage System:

1. Existing sewers or drains shall be plugged with 3,000 psi concrete or with brick masonry, as required by the Engineer, at the sewer and drain manholes shown on the Contract Drawings. The remaining existing pipes shall be filled with controlled density fill from the building to the plug. The method of filling the abandoned pipeline shall fill a minimum of 95 percent of the total annular volume of the pipe.

2. For non-circular pipes, the largest interior cross-sectional dimension shall govern in determining size of abandonment.

3. The Contractor shall patch any pavement damaged or removed during demolition/capping operations.

4. Plugs shall be of adequate strength to withstand the full soil and groundwater pressure but not less than 5 psi. Plugs and caps shall be watertight.

5. Open ends of sewer and drain services less than 12-inches in diameter shall be plugged with the appropriate concrete plugs as required by the Engineer. Such plug shall be made watertight with an application around the plug of an approved watertight compound.

6. Masonry plugs shall be at least 8-inches thick and concrete plugs shall be at least 12-inches thick. Pipes entering a manhole or catch basin that are to be abandoned shall have a plug installed that is flush with the interior wall of the structure.

7. The Contractor shall protect active sewer and drain lines. The Contractor shall coordinate with the Owner and the City of Woburn to verify active lines.

B. Water Services:

1. All water mains to be abandoned shall be cut at both ends at the property line and the remaining abandoned pipes shall be filled with controlled density fill from the building to the plug. The method of filling the abandoned pipeline shall fill a minimum of 95 percent of the total annular volume of the pipe.

2. Any water main to be abandoned shall be cut at its connection to a live main and physically disconnected. If a gate valve or corporation stop exists at the connection, it shall be closed.

3. Valve box tops and covers shall be removed from all valves and curb stops, which are on the abandoned main. These areas shall then be backfilled and paved.

4. Prior to abandoning the water service piping, the Contractor shall relocate the fire hydrant as indicated on the Drawings and provide necessary fittings to connect the hydrant to the service pipe that will be reinstated.

5. Asbestos cement piping requiring removal during utility abandonment shall be removed and disposed of per all applicable regulations at no additional cost to the Owner.

C. Electrical Service:

1. The disconnection of electrical utilities to be done by others. Scheduling of disconnection will require coordination between Contractor, Electric Company and Owner.

2. The Contractor will arrange to have the electrical services terminated at main utility poles. The Contractor shall remove and dispose of all wire, electrical appurtenances and poles that are abandoned. The Contractor shall not remove any transformers or any active utility poles. The Contractor shall coordinate with Owner and Electric Company before handling any utility poles, electrical wiring, and appurtenances.

D. Telephone:

1. The Contractor shall arrange with the telephone provider to have telephone services to the building disconnected at the pole. The Contractor shall remove and dispose of all abandoned wiring and appurtenances. The Contractor shall coordinate with Owner before arranging to have telephone service disconnected. Telephone services and associated utility poles that are designated to remain active shall be protected.

E. Telecom:

1. The Contractor shall arrange with the telecom provider to have cable services to the building disconnected at the pole. The Contractor shall remove and dispose of all abandoned wiring and appurtenances. The Contractor shall coordinate with Owner before arranging to have telecom services disconnected. Telecom services and associated utility poles that are designated to remain active shall be protected.

F. Buried telecommunication conduit:

1. The Contractor shall arrange with the utility provider to have telecom services to the building disconnected at the pole. The Contractor shall cut/cap conduit at the limit of work and abandon in place as shown on Sheet C-2 – Utility Disconnection Plan.

G. Gas:

1. The Contractor shall call National Grid at 800-732-3400 to coordinate the termination and disconnection of gas service to the building.

3.03 CONCRETE PLACING DURING COLD WEATHER:

A. Concrete shall not be placed on frozen ground, and no frozen material or material containing ice shall be used. Materials for concrete shall be heated when temperature is below 40°F, or is expected to fall to below 40°F, within 72 hours, and the concrete after placing shall be protected by covering, heat, or both.

B. All details of Contractor's handling and protecting of concrete during freezing weather shall be subject to the approval of the Engineer. All procedures shall be in accordance with provisions of ACI 306.

3.04 CONCRETE PLACING DURING HOT WEATHER:

A. Concrete just placed shall be protected from the direct rays of the sun and the forms and reinforcement just prior to placing, shall be sprinkled with cold water. The Contractor shall make every effort to minimize delays, which will result in excessive mixing of the concrete after arrival on the job.

B. During periods of excessively hot weather (90°F or above), ingredients in the concrete shall be cooled insofar as possible and cold mixing water shall be used to maintain the temperature of the concrete at permissible levels all in accordance with the provisions of ACI 305. Any concrete with a temperature above 90°F, when ready for placement, will not be acceptable, and will be rejected.

END OF SECTION

SECTION 02230

CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. The Contractor shall clear and grub the area within 10-feet (minimum), or as required for demolition, of the building within the Limits of Work. The Contractor shall also clear and grub around structures designated to be demolished. The Contractor shall limit the amount of clearing of significant trees (>12"), while grubbing bushes, shrubs, between the trees down to grade. Any trees damaged by the Contractor during demolition activities shall be removed and disposed of (including stumps) at the sole cost of the Contractor with no additional compensation under the Contract.

B. Unless otherwise noted on the Drawings, all areas to be cleared shall also be grubbed.

C. The Contractor shall not clear and grub outside of the area required for construction operations. The Contractor shall not disturb areas outside of the Limit of Work as shown on the Contract Drawings. The Contractor shall use extra care to protect tree on the southwest side of the building. See Sheet C-3 of the Contract Documents for additional information.

1.02 RELATED WORK:

Any trees and shrubs specifically designated by the Owner not to be cut, removed, destroyed, or trimmed shall be saved from harm and injury in accordance with Section 01570 – ENVIRONMENTAL PROTECTION.

PART 2 - PRODUCTS: NOT APPLICABLE

PART 3 - EXECUTION

3.01 RIGHT TO WOOD AND LOGS:

The Owner shall have the right to cut and remove logs and other wood of value in advance of the Contractor's operations. All remaining logs and other wood to be removed in the course of clearing shall become the property of the Contractor.

3.02 CLEARING:

A. Unless otherwise indicated, the Contractor shall cut or otherwise remove all trees, saplings, brush and vines, windfalls, logs and trees lying on the ground, dead trees and stubs more than 1-foot high above the ground surface (but not their stumps), trees which have been partially uprooted by natural or other causes (including their stumps), and other vegetable

matter such as shags, sawdust, bark, refuse, and similar materials.

C. Except where clearing is done by uprooting with machinery or where stumps are left longer to facilitate subsequent grubbing operations, trees, stumps, and stubs to be cleared shall be cut as close to the ground as practicable but not more than 6-inches above the ground surface in the case of small trees, and 12-inches in the case of large trees. Saplings, brush and vines shall be cut close to the ground.

3.03 GRUBBING:

A. Unless otherwise indicated on the Drawings, the Contractor shall completely remove all stumps and roots to a depth of 18-inches, or if the Contractor elects to grind the stumps, they shall be ground to a minimum depth of 6-inches.

B. Any depression remaining from the removal of a stump and not filled in by backfilling shall be filled with gravel borrow and/or loam, whichever is appropriate to the proposed ground surface.

3.04 DISPOSAL:

All material collected in the course of the clearing and grubbing, which is not to remain, shall be disposed of in a satisfactory manner away from the site or as otherwise approved. Such disposal shall be carried on as promptly as possible and shall not be left until the final clean-up period.

END OF SECTION

SECTION 02240

DEWATERING

PART 1 - GENERAL

1.01 WORK INCLUDED:

This section specifies designing, furnishing, installing, maintaining, operating and removing temporary dewatering systems as required to lower and control water levels and hydrostatic pressures during construction; disposing of pumped water; constructing, maintaining, observing and, except where indicated or required to remain in place, removing of equipment and instrumentation for control of the system.

1.02 RELATED WORK:

A. Section 00890 – PERMITS
B. Section 01570 – ENVIRONMENTAL PROTECTION
C. Section 02252 – SUPPORT OF EXCAVATION
D. Section 02300 – EARTHWORK

1.03 SYSTEM DESCRIPTION:

A. Dewatering includes lowering the water table and intercepting seepage, which would otherwise emerge from the slopes or bottom of the excavation; increasing the stability of excavated slopes; preventing loss of material from beneath the slopes or bottom of the excavation; reducing lateral loads on sheeting and bracing; improving the excavation and hauling characteristics of sandy soil; preventing rupture or heaving of the bottom of any excavation; and disposing of pumped water.

1.04 QUALITY ASSURANCE:

A. The Contractor is responsible for the adequacy of the dewatering systems.

B. The dewatering systems shall be capable of effectively reducing the hydrostatic pressure and lowering the groundwater levels to a minimum of 2 feet below excavation bottom, unless otherwise required by the Engineer, so that all excavation bottoms are firm and dry.

C. The dewatering system shall be capable of maintaining a dry and stable subgrade until the structures, pipes and appurtenances to be built therein have been completed to the extent that they will not be floated or otherwise damaged.

D. The dewatering system and excavation support (see Section 02252 – SUPPORT OF EXCAVATION) shall be designed so that lowering of the groundwater level outside the excavation does not adversely affect adjacent structures, utilities or wells.

1.05 SUBMITTALS

A. Contractor shall submit six copies of a plan indicating how they intend to control the discharge from any dewatering operations on the project, whether it is discharge of groundwater from excavations or stormwater runoff during the life of the project.

PART 2 - PRODUCTS: NOT APPLICABLE

PART 3 - EXECUTION

3.01 DEWATERING OPERATIONS:

A. All water pumped or drained from the work shall be disposed of in a manner that will not result in undue interference with other work or damage to adjacent properties, pavements and other surfaces, buildings, structures and utilities. Suitable temporary pipes, flumes or channels shall be provided for water that may flow along or across the site of the work. All disposal of pumped water shall conform to the provisions of Section 01570 – ENVIRONMENTAL PROTECTION and Section 00890 - PERMITS.

B. Dewatering facilities shall be located where they will not interfere with utilities and construction work to be done by others.

C. Dewatering procedures to be used shall be as described below:

1. Crushed stone shall encapsulate the suction end of the pump to aid in minimizing the amount of silt discharged.

2. For dewatering operations with relatively minor flows, pump discharges shall be directed into hay bale sedimentation traps lined with filter fabric. Water is to be filtered through the hay bales and filter fabric prior to being allowed to seep out into its natural watercourse.

3. For dewatering operations with larger flows, pump discharges shall be into a steel dewatering basin. Steel baffle plates shall be used to slow water velocities to increase the contact time and allow adequate settlement of sediment prior to discharge into waterways.

4. Where indicated on the contract drawings or in conditions of excess silt suspended in the discharge water, silt control bags shall be utilized in catch basins.

D. The Contractor shall be responsible for repair of any damage caused by his dewatering operations, at no cost to the Owner.

END OF SECTION

SECTION 02252

SUPPORT OF EXCAVATION

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. This section of the specification covers support of excavation methods, including, but not limited to: excavation sidewall stepping/sloping, wood and steel sheeting and bracing for support of excavations. The requirements of this section shall also apply, as appropriate, to other methods of excavation support and underpinning which the Contractor elects to use to complete the work.

B. The Contractor shall furnish, and place excavation supports or step sidewalls of excavation to safely excavate the area, indicated on the Contract Drawings or requested by the Engineer.

1.02 RELATED WORK:

A. Section 02220 – DEMOLITION
B. Section 02222 – UTILITY ABANDONMENT
C. Section 02240 – DEWATERING
D. Section 02300 – EARTHWORK

1.03 QUALITY ASSURANCE:

A. This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Safety and Department of Labor, Division of Occupational Safety "Excavation & Trench Safety Regulation (520 CMR 14.00)" and "Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et seq.)." Contractors shall be familiar with the requirements of these regulations.

B. The excavation support system shall be of sufficient strength and be provided with adequate bracing to support all loads to which it will be subjected. The excavation support system shall be designed to prevent any movement of earth that would diminish the width of the excavation or damage or endanger adjacent structures.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Timber sheeting shall be sound spruce, pine, or hemlock, planed on one side and either tongue and grooved or splined. Timber sheeting shall not be less than nominal 2 inches thick.

B. Where steel sheet piling is used by the Contractor, the material shall be of such size and strength as required by the excavation support design prepared by the Contractor. Steel sheet piling may be new or used material but shall not contain splices, cutouts, patches, or other alterations which would impair its integrity or strength. Steel sheeting shall be an approved standard section, weighing not less than 22 pounds per square foot of wall and conforming to ASTM A6 and A328.

C. Timber and steel used for bracing shall be of such size and strength as required in the excavation support design. Timber or steel used for bracing shall be new or undamaged used material which does not contain splices, cutouts, patches, or other alterations which would impair its integrity or strength.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. Work shall not be started until all materials and equipment necessary for their construction are either on the site of the work or satisfactorily available for immediate use as required.

B. The sheeting shall be securely and satisfactorily braced to withstand all pressures to which it may be subjected and be sufficiently tight to minimize lowering of the groundwater level outside the excavation, as required in Section 02240 - DEWATERING.

C. The sheeting shall be driven by approved means to the design elevation. No sheeting may be left so as to create a possible hazard to safety of the public or a hindrance to traffic of any kind.

D. If boulders or very dense soils are encountered, making it impractical to drive a section to the desired depth, the section shall, as required, be cut off.

E. The sheeting, if used, may be left in place or salvaged at the option of the Contractor. Steel or wood sheeting permanently left in place shall be cut off at a depth of not less than two feet below finish grade unless otherwise required.

F. All cut-off will become the property of the Contractor and shall be removed by it from the site.

G. Responsibility for the satisfactory construction and maintenance of the excavation support system, complete in place, shall rest with the Contractor. Any work done, including incidental construction, which is not acceptable for the intended purpose shall be either repaired or removed and reconstructed by the Contractor at its expense.

H. The Contractor shall be solely responsible for repairing all damage associated with installation, performance, and removal of the excavation support system.

END OF SECTION

SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall make excavations of normal depth in earth for trenches and structures, shall backfill and compact such excavations to the extent necessary, shall furnish all labor, materials, equipment and incidentals necessary to perform all excavation, stockpiling, backfill, compaction, and grading required to complete the work specified herein. The work shall include, but not limited to, excavation where necessary for terminating/abandoning utilities, test pit excavation necessary for investigating subsurface conditions, excavations to remove subgrade structures, any other miscellaneous excavation required for accomplishing the work, and backfilling, compacting, and miscellaneous grading utilizing approved methods and equipment satisfactory to Engineer. In general, the excavated material shall be reused on-site in the area the material was excavated. The Contractor may use crushed concrete and brick per Specification Section 02220 – DEMOLITION, for backfilling.

The Contractor shall backfill demolished/excavated areas/voids with excavated materials and Class B backfill as needed to within 4-inches of existing grade. The Contractor shall backfill the remaining 4-inches with loam and seed to match the surrounding grades and provide positive runoff from backfilled areas, unless otherwise required by the Owner and Engineer. The Contractor may crush and reuse clean concrete/brick as backfill per Specification Section 02220 – DEMOLITION. Class B Backfill as specified herein shall be imported and placed as necessary and as required and approved by the Engineer and Owner.

1.02 RELATED WORK:

A. Section 00890 – PERMITS
B. Section 01110 – CONTROL OF WORK AND MATERIALS
C. Section 01570 – ENVIRONMENTAL PROTECTION
D. Section 02220 – DEMOLITION
E. Section 02222 – UTILITY ABANDONMENT
F. Section 02240 – DEWATERING
G. Section 02252 – SUPPORT OF EXCAVATION

1.03 REFERENCES:

American Society for Testing and Materials (ASTM)

ASTM	C131	Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
ASTM	C136	Method for Sieve Analysis of Fine and Coarse Aggregates.
ASTM	C330	Specification for Lightweight Aggregate for Structural Concrete.
ASTM	D1556	Test Method for Density of Soil in Place by the Sand Cone Method.
ASTM	D1557	Test Methods for Moisture-density Relations of Soils and Soil Aggregate Mixtures Using Ten-pound (10 Lb.) Hammer and Eighteen-inch (18") Drop.
ASTM	D2922	Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges.

Code of Massachusetts Regulations (CMR) 520 CMR 14.00 Excavation & Trench Safety Regulation

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Samples of all materials proposed for the project shall be submitted to the Engineer for review. Size of the samples shall be as approved by the Engineer.

B. Names and qualifications of third-party testing company and certified laboratory performing compaction testing prior to the start of demolition activities.

1.05 PROTECTION OF EXISTING PROPERTY:

A. The work shall be executed in such manner as to prevent any damage to facilities at the site and adjacent property and existing improvements, such as but not limited to streets, curbs, paving, play structures, service utility lines, structures, monuments, bench marks, observation wells, and other public or private property. Protect existing improvements from damage caused by settlement, lateral movements, undermining, washout and other hazards created by earthwork operations.

B. In case of any damage or injury caused in the performance of the work, the Contractor shall, at its own expense, make good such damage or injury to the satisfaction of, and without cost to the Owner. Existing roads, sidewalks, and curbs damaged during the project work shall be repaired or replaced to at least the condition that existed at the start of operations.

The Contractor shall replace, at his own cost, existing benchmarks, observation wells, monuments, and other reference points, which are disturbed or destroyed.

C. Buried drainage structures and pipes, observation wells and piezometers, including those which project less than eighteen inches (18") above grade, which are subject to damage from construction equipment shall be clearly marked to indicate the hazard. Markers shall indicate limits of danger areas, by means which will be clearly visible to operators of trucks and other construction equipment and shall be maintained at all times until completion of project.

1.06 DRAINAGE:

A. The Contractor shall provide, at its own expense, adequate drainage facilities to complete all work items in an acceptable manner. Drainage shall be done in a manner so that runoff will not adversely affect construction procedures or cause excessive disturbance of underlying natural ground or abutting properties.

1.07 FROST PROTECTION AND SNOW REMOVAL:

A. The Contractor shall, at its own expense, keep earthwork operations clear and free of accumulations of snow as required to carry out the work.

B. The Contractor shall protect the subgrade beneath new structures and pipes from frost penetration when freezing temperatures are expected.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Excavated material shall be placed back into the excavation and compacted as specified herein. In general, the excavated material shall be reused on-site in the area the material was excavated.

B. GRAVEL BORROW:

Gravel Borrow shall satisfy the requirements listed in MassDOT Specification Section M1.03.0, Type b.

C. CRUSHED STONE:

Crushed stone shall satisfy the requirements listed in MassDOT Specification Section M2.01.

D. SAND BORROW:

Sand Borrow shall satisfy the requirements listed in MassDOT Specification Section M1.04.0.

E. PEASTONE:

Peastone shall be smooth, hard, naturally occurring, rounded stone meeting the following gradation requirements:

Passing 5/8-inch square sieve opening - 100%
Passing No. 8 sieve opening - 0%

F. BACKFILL MATERIALS:

1. Class B Backfill: The Class B backfill shall be granular, well graded friable soil; free of rubbish, ice, snow, tree stumps, roots, clay and organic matter; with 30 percent or less passing the No. 200 sieve; no stone greater than two-third (2/3) loose lift thickness, or six inches, whichever is smaller.

2. Crushed Concrete/Brick: The Contractor may use crushed concrete and brick (3-inch minus) as backfill per ABC Recycling Regulations (310 CMR 16.00) and Section 02220 – DEMOLITION.

PART 3 - EXECUTION

3.01 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION:

A. Contractor shall take the necessary steps to avoid disturbance of subgrade during excavation and filling operations, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials, dewatering and other acceptable control measures.

3.02 EXCAVATION:

A. GENERAL:

1. The Contractor shall follow a construction procedure, which permits visual identification of stable natural ground. Where groundwater is encountered, the size of the open excavation shall be limited to that which can be handled by the Contractor's chosen method of dewatering and which will allow visual observation of the bottom and backfill in the dry.

2. Contractor shall take great care to do no damage to existing structures or utilities scheduled to remain. All damage caused by Contractor's operations shall be repaired to the satisfaction of Owner at no additional cost to the Owner. The Contractor shall

appropriately excavate (e.g. hand excavation, vacuum extraction) to expose steam piping corridors/tunnels to avoid damage to the steam pipe insulation.

3. All excavated material not to be used on site shall become the property of the Contractor and shall be disposed of off-site in a legal manner. The Contractor shall pay all off-site disposal costs.

4. The Contractor shall segregate materials excavated during the course of the Work that are suspected to be contaminated based on visual and olfactory appearance or other physical indications of contamination as required by the Engineer.

B. EXCAVATION NEAR EXISTING STRUCTURES:

1. Attention is directed to the fact that there are pipes, manholes, drains, and other utilities in certain locations. An attempt has been made to locate all utilities on the Drawings, but the completeness or accuracy of the given information is not guaranteed.

2. As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and excavation shall be done by means of hand tools, as required. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.

3. Where determination of the exact location of a pipe or other underground structure is necessary for properly performing the work, the Contractor shall excavate test pits to determine the locations.

3.03 BACKFILL PLACEMENT AND COMPACTION:

A. GENERAL:

1. Prior to backfilling, the Contractor shall compact the exposed natural subgrade to the densities as specified herein.

2. After approval of subgrade by the Engineer, the Contractor shall backfill areas to required contours and elevations with specified materials, or as required by the Engineer or Owner.

3. Uncoated brick may be crushed to 3-inch minus and reused as backfill per ABC Regulations and if blended with crushed uncoated concrete and soil (Class B Backfill) at a 1:1 ratio and as approved by the Engineer and Owner. When only crushed uncoated concrete and soil is used for backfill, it shall be blended at a 1:1 ratio, unless otherwise approved by the Engineer and Owner. Any surplus uncoated crushed brick and concrete shall be stockpiled at a designated area within the site as required by the Engineer or Owner at no additional cost to the Owner.

4. Backfill shall be placed back into the excavation and compacted to the specified density and compacted over the full width unless otherwise directed in writing by Engineer. The Contractor shall use a vibratory roller of sufficient size to achieve 90% compaction or more. Compaction testing is not required by the Contractor but may be performed by the Owner if compaction methods are questionable. See Specification Section 02220 – DEMOLITION for uncoated brick and concrete reuse requirements, if used for backfill.

5. Backfill shall be placed in suitable horizontal layers to obtain the specified density. Where the horizontal layer meets a natural rising slope, the layer shall be keyed into the slope by cutting a bench. Maximum lift thickness shall be 12 inches. Failures, ruptures and settlements resulting from poor compaction and soil placement techniques shall be the full responsibility of Contractor. Any corrective work shall be performed at no additional cost to the Owner.

6. All backfilled materials shall be field tested for conformance to this Section. The Engineer reserves the right to test backfill for conformance to the specifications and Contractor shall assist as required to obtain the information. If test results indicate work does not conform to specification requirements, the Contractor shall remove or correct the defective Work by recompacting where appropriate or replacing as necessary and approved by the Engineer, to bring the work into compliance, at no additional cost to the Owner.

7. Where horizontal layers meet a rising slope, the Contractor shall key each layer by benching into the slope.

8. If the material removed from the excavation is suitable for backfill with the exception that it contains stones larger than permitted, the Contractor has the option to remove the oversized stones and use the material for backfill or to provide replacement backfill at no additional cost to the Owner.

B. UTILITY ABANDONMENT TRENCHES:

1. The Contractor shall backfill around utility cut/caps as required by Woburn Department of Public Works. The Contractor shall coordinate with the Woburn Department of Public Works prior to any utility abandonment.

2. In shoulders of streets and road, the top 12-inch layer of trench backfill shall consist of processed gravel for sub-base, satisfying the requirements listed in MassDOT standard specification M1.03.1.

C. BACKFILLING ADJACENT TO STRUCTURES:

1. The Contractor shall not place backfill against or on structures until they have attained sufficient strength to support the loads to which they will be subjected. Excavated material approved by the Engineer may be used in backfilling around structures. Backfill material shall be thoroughly compacted to meet the requirements of this specification.

2. Contractor shall use extra care when compacting adjacent to pipes and drainage structures. Backfill and compaction shall proceed along sides of drainage structures so that the difference in top of fill level on any side of the structure shall not exceed two feet (2') at any stage of construction.

3. Where backfill is to be placed on only one side of a structural wall, only hand-operated roller or plate compactors shall be used within a lateral distance of five feet (5') of the wall for walls less than fifteen feet (15') high and within ten feet (10') of the wall for walls more than fifteen feet (15') high.

3.04 DISPOSAL OF SURPLUS MATERIALS:

A. Surplus excavated materials, which are acceptable to the Engineer, shall be used to backfill normal excavations in rock or to replace other materials unacceptable for use as backfill. Upon written approval of the Engineer, surplus excavated materials shall be neatly deposited and graded so as to make or widen fills, flatten side slopes, or fill depressions; or shall be neatly deposited for other purposes as indicated by Owner, within its jurisdictional limits; all at no additional cost to the Owner.

B. Any suspect contaminated soils, if encountered, will be sampled by the Engineer for disposal characterization.

C. Disposal of all rubble shall be in accordance with all applicable local, State and Federal regulations.

3.05 CLEAN-UP OF DEBRIS:

A. All surface debris shall be cleaned within the Limits of Work as described in Section 01740 – CLEANING UP. Cleanup shall be to the level of no visible debris and shall at a minimum include the area within the Limits of Work shown on the Contract Drawings.

END OF SECTION

SECTION 02821

TEMPORARY CHAIN LINK FENCE

PART 1 - GENERAL

1.01 WORK INCLUDED:

A. The Contractor shall provide all labor, materials and appurtenances necessary for the installation, maintenance and dismantling of 8-foot high temporary fencing/gates as shown on the Drawings and as specified herein.

B. The Contractor shall be responsible for securing the site and protecting their equipment and work areas. Temporary fencing and gates beyond existing fencing/gates and temporary fencing/gates shown on the Drawings shall be at the discretion of the Contractor. If containment is damaged during abatement activities, the Contractor shall be responsible for immediate repair/replacement of the containment at no additional cost to the Owner.

1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Six sets of manufacturers literature of the materials specified herein shall be submitted to the Engineer for review.

B. Six sets of shop drawings of the temporary chain link fence and gates shall be submitted to the Engineers for review.

1. Shop drawings shall indicate layout of temporary fencing/gates and other site-specific conditions. Prepare drawing after site observation and verification of existing conditions.

2. Shop drawings shall include information for the mesh fabric/wind screens specified herein.

PART 2 - PRODUCTS-GALVANIZED

2.01 TEMPORARY CHAIN LINK FENCING:

A. Unless otherwise indicated, type of temporary chain link fencing shall be Contractor's option. Following types are acceptable:

1. New materials or previously used salvaged chain link fencing in good condition.

2. Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for driving into ground.

3. Fabric: Woven galvanized steel wire mesh. Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.

4. Height: 8-foot high temporary fencing with mesh fabric where shown on the Contract Drawings.

5. Mesh Fabric/Wind Screens (if required): mesh fabric, such as a wind screen/privacy screen, for dust control and to shield demolition activities from the adjacent properties. The mesh fabric shall be a durable fabric mesh of 50 percent porosity and shall be weather resistant. The mesh fabric shall fasten securely to the 8-foot temporary fence and gates and completely cover the fence and gates. The mesh fabric shall be dark green in color or otherwise approved by the Owner.

B. Gates: Provide gates as required to secure the Site or required for functional access to Site:

1. Fabricate of same material as used for fencing.

2. Vehicle gates:

a. Minimum width: 20 feet to allow access for emergency vehicles.
b. Capable of manual operation by one person.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. The fence and gates shall be erected by skilled mechanics in accordance with the recommendations of the manufacturer and these specifications. These specifications shall take precedence over the recommendations of the manufacturer if any discrepancy exists between them.

B. Posts

1. Maximum post spacing shall be 10-feet. Post spacing shall be uniform and posts shall be plumb.

2. Drive posts, set in holes and backfill, as shown on the Detail Sheets of the Contract Drawings. Posts shall be securely installed to support fence and mesh fabric/windscreens.

3. For soft and unstable ground conditions, cast concrete plug around post.

4. Temporary terminal posts shall be securely installed to prevent Site access/trespassing.

C. Securely attach wire fabric to posts. Maximum area of unbraced fence fabric shall not exceed 1,500 square feet.

D. Install with required hardware.

E. Fabric shall be stretched taut, with the bottom edge following the existing grade, and shall be a continuous mesh between terminal posts. Each span of fabric shall be attached independently at terminal posts. Where terminal posts do not have provisions for weaving fabric to posts, stretcher bars shall be placed through the end weave of the fabric and secured to the post with bar bands spaced not more than 15-inches apart on the post.

F. Fabric shall be attached with ties to line posts at intervals of not more than 14-inches (and to the top railing and braces at intervals not exceeding 24-inches).

G. The bottom tension wire shall be interlaced in the weave of the fabric, pulled taut and fastened to terminal posts.

H. Install mesh fabric/wind screen, if required, to the chain link fence and gates per manufacturer's recommendations.

I. The Contractor may use portions of the existing fencing for site security. Segments of the existing fence that are not 8 feet in height shall have an additional section of fencing placed on top to achieve desired 8-foot height. The Contractor shall install mesh fabric/wind screen to segments of existing fence used for site security as shown on Sheet C-3 – Demolition Plan.

3.02 MAINTENANCE:

A. Maintain fencing in good condition. If damaged, immediately repair.

END OF SECTION

SECTION 02920

LOAMING AND SEEDING

PART 1 - GENERAL

1.01 WORK INCLUDED:

This section covers all labor, materials, and equipment necessary to do all loaming, seeding and related work as indicated on the Drawings and as herein specified. All lawns disturbed by the Contractor's operations shall be repaired as herein specified.

1.02 RELATED WORK:

A. Section 02300 - EARTHWORK

1.03 QUALITY ASSURANCE:

A. For a particular source of loam, the Engineer may require the Contractor to send approximately 10 pounds of loam to an approved testing laboratory and have the following tests conducted:

1. Organic concentration
2. pH
3. Nitrogen concentration
4. Phosphorous concentration
5. Potash concentration

B. These tests shall be at the Contractor's expense. Test results, with soil conditioning and fertilizing recommendations, shall be forwarded to the Engineer.

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

A. Six sets of information detailing the seed mixes, fertilizers, mulch material, slope protection material (if required) and origin of loam shall be submitted to the Engineer for review.

B. Three sets of test results shall be submitted to the Engineer for review.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. LOAM:

1. Loam shall be a natural, fertile, friable soil, typical of productive soils in the vicinity, obtained from naturally well-drained areas, neither excessively acid nor alkaline, and containing no substances harmful to grass growth. Loam shall not be delivered to the site in frozen or muddy condition and shall be reasonably free of stumps, roots, heavy or stiff clay, stones larger than 1-inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter.

2. The loam shall contain not less than 4 percent nor more than 20 percent organic matter as determined by the loss of weight by ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 degrees F.

B. LIME:

Lime shall be standard commercial ground limestone containing at least 50 percent total oxides (calcium oxide and magnesium oxide), and 50 percent of the material must pass through a No. 100 mesh sieve with 98 percent passing a No. 2 mesh sieve.

C. FERTILIZER:

Fertilizer shall be commercial fertilizer, 10-10-10 fertilizer mixture containing at least 40 percent of organic nitrogen. It shall be delivered to the site in the original sealed containers, each showing the manufacturer's guaranteed analysis. Fertilizer shall be stored so that when used it will be dry and free flowing. No fertilizer shall be used which has not been marketed in accordance with State and Federal Laws, relating to fertilizers.

D. MULCH:

1. Materials to be used in mulching shall conform to the following requirements:

2. Straw Mulch - Straw Mulch shall consist of stalks or stems of grain after threshing.

3. Wood Fibre Mulch - Wood Fibre Mulch shall consist of wood fibre produced from clean, whole uncooked wood, formed into resilient bundles having a high degree of internal friction and shall be dry when delivered to the project.

E. SEED:

1. Seed shall be of an approved mixture, the previous year's crop, clean, high in germinating value, a perennial variety, and low in weed seed. Seed shall be obtained from a reliable seed company and shall be accompanied by certificates relative to mixture purity and germinating value.

2. Grass seed for lawn areas shall conform to the following requirements:

	Proportion by Weight	Germination Purity	Purity Minimum
Chewing's Fescue	30%	70%	97%
Kentucky 31 Fescue	30%	90%	98%
Kentucky Blue Grass	20%	80%	85%
Domestic Rye Grass	20%	90%	98%

Grass seed for cross-country areas, slopes and other areas not normally mowed shall conform to the following requirements:

	Proportion by Weight	Germination Minimum	Purity Minimum
Creeping Red Fescue	50%	85%	95%
Kentucky 31	30%	85%	95%
Domestic Rye	10%	90%	98%
Red Top	5%	85%	92%
Ladino Clover	5%	85%	96%

F. TEMPORARY COVER CROP:

1. Temporary cover crop shall conform to the following requirements:

	% Weight	Germination Minimum
Winter Rye	80 min.	85%
Red Fescue (creeping)	4 min.	80%
Perennial Rye Grass	3 min.	90%
Red Clover	3 min.	90%
Other Crop Grass	0.5 max.	
Noxious Weed Seed	0.5 max.	
Inert Matter	1.0 max.	

G. SLOPE EROSION PROTECTION:

1. Erosion control blanket shall be 100% degradable plastic mesh with 100% degradable straw or straw/coconut fill. Fill shall be held together by degradable fastening. Weight shall be 0.50 lb/sq. yd. Erosion control blankets shall be applied parallel to direction of water flow. The erosion control blankets shall be by North American Green, Evansville, IN or approved equal. For slopes 2:1 or greater, Model SC150 shall be used. For slopes less than 2:1, Model S150 shall be used.

2. Six-inch wire staples shall be placed according to manufacturer's recommendations to anchor the mesh material. Staples shall be designed to decompose.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION:

A. After approval of rough grading, loam shall be placed on areas affected by the Contractor's operations. Loam shall be at least 6-inches compacted thickness.

B. Lime shall be applied to bring the pH to 6.5 or, without a soil test, at the rate of 2-3 tons of lime per acre.

C. Fertilizer shall be applied according to the soil test, or without a soil test, at the rate of 1000 pounds per acre.

D. Loam shall be worked a minimum of 4-inches deep, thoroughly incorporating the lime and fertilizer into the soil. The loam shall then be raked until the surface is finely pulverized and smooth and compacted with rollers, weighing not over 100 pounds per linear foot of tread, to an even surface conforming to the prescribed lines and grades. Minimum depth shall be 6-inches after completion.

3.02 SEEDING:

A. Seeding shall be done when weather conditions are approved as suitable, in the periods between April l and May 30 or August l5 to October l, unless otherwise approved.

B. If there is a delay in seeding, during which weeds grow or soil is washed out, the Contractor shall remove the weeds or replace the soil before sowing the seed, without additional compensation. Immediately before seeding is begun, the soil shall be lightly raked.

C. Seed shall be sown at the approved rate, on a calm day by machine.

D. One half the seed shall be sown in one direction and the other half at right angles. Seed shall be raked lightly into the soil to a depth of l/4-inch and rolled with a roller weighing not more than l00 pounds per linear foot of tread.

E. The surface shall be kept moist by a fine spray until the grass shows uniform germination over the entire area. Wherever poor germination occurs in areas larger than 3 sq. ft., the Contractor shall reseed, roll, and water as necessary to obtain proper germination.

F. The Contractor shall water, weed, cut and otherwise maintain and protect seeded areas as necessary to produce a dense, healthy growth of perennial lawn grass.

G. If there is insufficient time in the planting season to complete the fertilizing and seeding, permanent seeding may be left until the following planting season, at the option of the Contractor or as required by the Engineer. In that event, a temporary cover crop shall be sown. This cover crop shall be cut and watered as necessary until the beginning of the following planting season, at which time it shall be plowed or harrowed into the soil, the area shall be fertilized and the permanent seed crop shall be sown as specified.

3.03 PLACING MULCH:

A. Straw Mulch shall be loosely spread to a uniform depth over all areas designated on the plans, at the rate of 4-1/2 tons per acre, or as otherwise required.

B. Straw Mulch may be applied by mechanical apparatus, if in the judgment of the Engineer the apparatus spreads the mulch uniformly and forms a suitable mat to control slope erosion. The apparatus shall be capable of spreading at least 80 percent of the hay or straw in lengths of 6-inches or more, otherwise it shall be spread by hand without additional compensation.

C. Wood Fibre Mulch shall be uniformly spread over certain selected seeded areas at the minimum rate of 1,400 pounds per acre unless otherwise required. It shall be placed by spraying from an approved spraying machine having pressure sufficient to cover the entire area in one operation.

3.04 SEEDING AND MULCHING BY SPRAY MACHINE:

A. The application of lime, fertilizer, grass seed and mulch may be accomplished in one operation by the use of an approved spraying machine. The materials shall be mixed with water in the machine and kept in an agitated state in order that the materials may be uniformly suspended in the water. The spraying equipment shall be so designed that when the solution is sprayed over an area, the resulting deposits of lime, fertilizer, grass seed and mulch shall be equal to the specified quantities.

B. A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of limestone, fertilizer, grass seed and mulch per 100 gallons of water.

B. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above. If the results of the spray operation are unsatisfactory, the Contractor will be required to abandon this method and to apply the lime, fertilizer, grass seed and mulch by other methods.

3.05 INSPECTION AND ACCEPTANCE:

At the beginning of the planting season following that in which the permanent grass crop is sown, the seeded areas will be inspected. Any section not showing dense, vigorous growth at that time shall be promptly reseeded by the Contractor at his own expense. The seeded areas shall be watered, weeded, cut and otherwise maintained by the Contractor until the end of that planting season, when they will be accepted if the sections show dense, vigorous growth.

END OF SECTION

SECTION 13282

LEAD BASED COATINGS REMOVAL

PART 1 - GENERAL:

1.01 DESCRIPTION:

A. This Section specifies demolition of structures involving lead paint and lead-containing dust/debris at the former Clapp School.

B. Documents affecting work of this Section include, but are necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Divisions One through Thirteen of these Specifications.

C. Examine all Drawings and all other Sections of the Specifications for requirements of related sections affecting the work of this Section. A lead determination of the Site buildings indicates that various painted components are considered to be lead-containing.

D. The work of this Section shall be performed as stated herein. In performing the work of this Section, the Contractor shall refer to other Sections for additional procedures. The Contractor is responsible for the coordination of the work of this Section with related work. No delays in completion of the work may be claimed for lack of coordination.

E. Contractor shall comply with all applicable local, state, and federal guidelines and regulations regarding all work involving the presence of lead-containing paint.

F. The work of this Section references work of the Contractor performing the demolition. Additionally, requirements of the Contractor regarding coordination and related work are identified in this Section and shall be considered the responsibility of the Contractor.

1.02 DESCRIPTION OF WORK:

A. The work of this Section includes full building demolition. The procedures described herein apply to all demolition work where a worker may be occupationally exposed to lead as well as to the disposal of the demolition debris. The Contractor shall assume that any painted surface not tested under this specification shall be assumed to contain lead paint and it shall be the Contractor's responsibility to protect workers performing under this Contract. This may require additional testing by the Contractor to verify lead content.

B. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State and local regulations pertaining to work practices, hauling and disposal of hazardous waste, protection of workers and visitors to the site, and persons occupying areas adjacent to the site. The Contractor shall hold the Engineer and Owner

harmless for failure to comply with any applicable work, hauling, disposal, safety, health or regulation on the part of himself, his workers or his subcontractors.

C. The Contractor is required to ensure the protection of workers performing any related demolition work that will affect surfaces coated with lead containing paint, lead-containing dust, as well as, protecting the public and the environment from exposure to lead dust.

D. CODES AND STANDARDS:

1. All work shall conform to the standards set by applicable Federal, State and local laws, regulations, ordinances, and guidelines in such form in which they exist at the time of the work on the contract and as may be required by subsequent regulations.

2. In addition to any detailed requirements of the Specification, the Contractor shall at his own cost and expense comply with all laws, ordinances, rules and regulations of Federal, State, Regional and Local Authorities regarding handling and storing of lead waste material.

3. The following references are cited as applicable standard and regulations as amended:

a. Code of Federal Regulations (CFR) Publications:

29 CFR 1910	General Industry
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
29 CFR 1926.62	Lead in Construction
29 CFR 1926.200	Signs, Signals and Barricades
29 CFR 1926.354	Welding, Cutting and Heating in Way of Preservative Coatings
29 CFR Subpart T	Demolition
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards for Lead
40 CFR 61 Subpart A	General Provisions
40 CFR 61.152	Standard for Waste Manufacturing, Demolition, Renovation, Spraying, and Fabricating Operations.

40 CFR 241	Guidelines for the Land Disposal of Solid Wastes
40 CFR 257	Criteria for Classification of Solid Waste
40 CFR 261 and 262	Waste Disposal Facilities and Practices

b. Massachusetts Regulations:

454 CMR 23.00	Occupational Lead Exposure

c. American National Standards Institute (ANSI) Publications:

29.2-79	Fundamentals Governing the Design and Operation of Local Exhaust Systems
288.2-80	Practices for Respiratory Protection

d. National Institute of Occupational Safety and Health (NIOSH) Publications:

Manual of Analytical Methods, 4th Ed.

e. Underwriters Laboratories, Inc. (UL) Fire Resistance Directory Publications:

586-77 (R 1982)	Test Performance of High Efficiency Particulate, Air Filter Units

E. All regulations by the above and other governing agencies in their most current version are applicable throughout this project. Where there is a conflict between this Specification and the cited State, Federal, or local regulations, the more restrictive or stringent requirements shall prevail.

THIS SECTION REFERS TO MANY REQUIREMENTS FOUND IN THESE REFERENCES, BUT IN NO WAY, IS IT INTENDED TO CITE OR REITERATE ALL PROVISIONS THEREIN OR ELSEWHERE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KNOW, UNDERSTAND, AND ABIDE BY ALL SUCH REGULATIONS AND COMMON PRACTICES.

1.03 DEFINITIONS:

A. The following definitions apply to the performance of the work of this project.

1. Action Level: An airborne concentration of lead above 30 micrograms per cubic meter ($\mu g/m^3$) as a time weighted average (TWA) for more than 30 days per year.

2. Area Monitoring: Sampling of lead concentrations within the work area and outside the work area which is representative of the airborne concentrations of lead.

3. Clean Room: An uncontaminated change room directly adjacent to the work area having facilities for storage of employees' personal clothing and uncontaminated work clothes, materials and equipment provided when the airborne exposure to lead is above the PEL.

4. Contractor: The Contractor who is performing work involving lead containing paint under this Section.

5. Decontamination Area: A contained area adjacent to or connected to the abatement work area and consisting of an equipment room, shower area, and clean room which is used for decontamination of workers, materials and equipment.

6. HEPA Filter Equipment: High efficiency particulate air (HEPA) filtered vacuuming or exhaust ventilation equipment with a UL 586 filter system. Filters shall be of 99.97 percent efficiency for retaining 0.3 micrometer diameter particles.

7. Lead-Containing Paint: Paint, varnish, or stain, which contains lead in excess of 0.0% lead by weight.

8. Lead Permissible Exposure Limit (PEL): 50 $\mu g/m^3$ of air, based upon an 8-hour time weighted average.

9. Sample Location: Area or place where an air or wipe sample is collected.

10. Time Weighted Average (TWA): The TWA is an 8-hour time weighted average for the test of the concentration of lead for worker exposure.

11. Wet Cleaning: The process of removing lead contamination from building surfaces, equipment and other objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as lead contaminated wastes.

12. Work Area: A controlled-access work area, which has no plastic sheeting or other containment barriers, erected to separate the trades.

1.04 SUBMITTALS:

A. NOTIFICATIONS:

1. Provide in proper and timely fashion, all necessary notifications to relevant federal, state, and local authorities and obtain and comply with provisions of all permits or applications required by the work specified, as well as make all required submittals required under those auspices. Contractor shall indemnify the Owner and Engineer from and pay for all claims resulting from failure to adhere to these provisions. Costs for all permits, applications, and the like are to be assumed by Contractor. Required notifications include but are not limited to the following:

a. Massachusetts Department of Environmental Protection, Form AQ06 - Construction/Demolition Notification.

B. Provide four (4) copies of the following Submittals at least 4 weeks prior to commencement of the work of the contract:

1. Copies of all notifications, permits, applications, licenses and like documents required by Federal, State, or local regulations and this specification obtained or submitted in proper fashion,

2. Copies of written medical opinions for each employee who may be occupationally exposed to lead as required by 29 CFR 1926.62 (j)(3)(v),

3. Copies of supervisors' and workers' training certificates,

4. Record of successful respirator fit testing performed by a qualified individual within the previous 6 months for each employee to be used on this project with the employee's name and social security number with each record,

5. Employer's Lead Compliance Program as required by 29 CFR 1926.62, including proposed respiratory protection program and medical monitoring for all employees throughout all phases of the job, including make, model and NIOSH approval numbers of respirators to be used; worker orientation plan; written description of all proposed procedures, methods, or equipment to be utilized, including those that may differ from the Contract Specifications. In all instances, Contractor must comply with all applicable federal, state and local regulations.

6. Proposed number and type (i.e., hazardous waste or non-hazardous waste, open top, front loading, etc.) of dumpsters for waste, proposed location(s),

7. A list of all equipment to be used on site, by make and model,

8. Chain of Command of responsibility at work site including supervisors and competent person, their names, resumes and certificates of training and phone numbers,

9. List of total number of supervisors and workers intended to be assigned to the project, including name and lead awareness qualifications,

10. Material Safety Data Sheets on potentially hazardous materials to be used on the project,

11. Waste Disposal Plan which describes the waste stream and the disposal means (i.e. landfill, recycle, etc.) and includes the name, address, and ID number of the proposed hazardous waste hauler, waste transfer route, and proposed disposal reclamation or treatment facility,

12. Name and address of the proposed construction debris site,

13. Construction schedule including sequence of critical work.

No work on the project will be allowed to begin until the Pre-Construction Submittals as listed herein are accepted by the Engineer. Any delay caused by the Contractor's refusal to submit this documentation in a timely fashion does not constitute a claim for extra compensation or a time extension.

C. Submit the following to the Engineer as a Post-Construction submittal package:

1. Copies of waste manifests and receipts acknowledging disposal of all lead waste material from the project, showing delivery date, quantity, and appropriate signature of landfill's authorized representative,

2. DEP approval for all waste reduction techniques, if utilized,

3. A notarized copy of the daily list of workers and site entry-exit logbook,

4. All personnel monitoring results,

5. All TCLP testing results.

1.05 GENERAL WORK PROCEDURES:

A. Work shall be carried out in sequential phases. Inspection and approval of each phase by the Engineer shall be sought and gained before proceeding to the next phase and in accordance with the schedule approved. This shall include demolition requirements for work area clearance and work area release before other work. As a Contract requirement, any reasonable delay caused by this requirement will not constitute a basis for claim against the Owner or Engineer. Contractor must coordinate the work of this section with the work of all other trades.

B. At no time will the Owner permit storage of lead waste materials generated from demolition activities inside the Site building, and any storage of materials will be subject to the Owner's approval. Assure security of lead waste materials at all times.

1.06 SPECIAL CONSIDERATIONS:

A. TESTING REFERENCES:

1. Testing for lead paint has been performed on a representative number of painted components at the former Clapp School Building located at 40 Hudson Street in Woburn, Massachusetts using Atomic Absorption Spectrophotometry (AAS) analysis.

B. The Contractors shall follow the requirements of this Section regarding component removal, demolition, worker exposure and protection, work area cleaning, and waste disposal.

C. Work Affected – In general, the following activities are minimum requirements of this Section and affect the demolition performed on the painted components:

1. No torch cutting, mechanical sanding, stripping, or abrasive methods of paint removal shall occur.

2. No demolition activities may occur which increase the workers' exposure above the Action Level of 30 $\mu g/m^3$. Contractor shall fully complete with the OSHA lead standard at 29 CFR 1926.62.

3. Workers shall be informed of the components to be renovated or demolished that have been identified as containing lead.

4. Worker protection, at a minimum, shall comply with the OSHA Lead Standard 29 CFR 1926.62. Worker Right to Know and Health and Safety Standards of 1926.62 shall also apply to the work of this Section.

5. Separation of Trades: Unprotected, untrained workers or trades shall not perform any related work within the same vicinity as demolition-involving components identified with lead.

6. Clean-up Activities: The Contractor shall maintain work zones free of accumulated debris, lead dust, and paint chips.

C. Lead Contaminated Materials Clean-Up

1. Due to the presence of lead on representative painted surfaces, all loose and flaking paint at the Site buildings shall be removed from the substrate to which it is applied.

2. All debris with visible paint chips within the building, including, but not limited to piles of plastic, debris, plywood, blue tarps, etc. shall be considered lead contaminated.

3. The Contractor shall perform TCLP testing of the stored materials and properly package and dispose of these stored materials.

4. At the completion of TCLP testing, and in conjunction with asbestos abatement activities under negative pressure containment as specified in Section 02051 - Asbestos Abatement of these specifications, the Contractor shall perform a wash-down of lead-contaminated dust and/or paint chips on the interior of the buildings. At the completion of the wash-down, no visible dust and debris shall remain within the building.

1.08 FEES, PERMITS & LICENSES:

A. The Contractor shall pay all licensing fees, royalties, and other costs necessary for the use of any copyrighted or patented product, design, invention, or process in the performance of the work specified in this Section. The Contractor shall be solely responsible for costs, damages, or losses resulting from any infringement of these patent rights or copyrights. The Contractor shall hold the Owner and Engineer harmless from any costs, damages, and losses resulting from any infringement of these patent rights or copyrights. If the Contract Specification requests the use of any product, design, invention, or process that requires a licensing, patent or royalty fee for use in the performance of the job, the Contractor shall be responsible for the fee or royalty fee and shall disclose the existence of such rights.

B. Contractor shall be responsible for costs for all licensing requirements, where applicable and notification requirements and all other fees related to the Contractor's ability to perform the work in this Section.

C. Secure all necessary permits for work under this Section, including hauling, removal, and disposal, fire, and materials usage, or any other permits required to perform the specified work.

1.09 CLEAN-UP:

A. Maintain the work site in a neat and orderly manner at all times, so as not to interrupt or infringe upon the work of other trades.

B. Comply with all requirements for release of work areas as described in the project specification.

C. It is the prerogative of the Engineer to inspect whenever deemed necessary, the Contractor is responsible for meeting, and correcting any deficiencies discovered which do not meet the current applicable regulations and requirements of these specifications.

1.10 COORDINATION:

A. At no time shall Contractor cause or allow to be caused conditions which may cause risk or hazard to the general public or conditions that might impair safe use of the facility. The use of the facility's electricity, water or like utilities by the Contractor shall be as specified in Division 1.

B. Coordinate the work of this Section with that of all other trades. Phasing and scheduling of this project will be subject to the approval of the Engineer. The work of this Section shall be scheduled and performed so as not to impede the progress of the project as a whole. Work shall not proceed in any area without the express consent of the Engineer. The Contractor shall be available within 24 hours notice for additional work if after

acceptance of the work it is found that complete demolition was not achieved from the initial work effort as determined by the Engineer.

C. The proposed schedule for the work in this Section shall show the time involved from start to finish of demolition operations, including preparation, removal, clean-up, Engineer's inspections and de-mobilization portions of the job.

D. A final schedule shall then be prepared and coordinated with the Owner and Engineer. The final scheduling shall be submitted in writing before the commencement of work.

E. Complete activities in the phases of the agreed upon final schedule. The work must be completed in a continuous, uninterrupted operation.

F. Unless specifically authorized by the Engineer, the work of this project shall be conducted according to the hours established in Division 1.

G. Inspections: The Engineer may perform visual inspections during the work of this section, as described below. Contractor shall not proceed with work until Contractor has received Engineer's approval at the stages identified below:

1. During: Before the commencement of a proposed alternative method other than specified.

2. Post Inspection: At the completion of work and final clean-up, before clearance or removal of any critical barriers and decontamination unit from the work area.

3. Waste Removal Inspection: Notify Engineer removal of hazardous waste from the site.

1.11 AUTHORITY TO STOP WORK:

A. The Engineer has the authority to stop the lead-based coatings removal and lead dust cleanup work at any time the Engineer determines that conditions are not within the Specifications and applicable regulations. The stoppage of work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the Engineer. Standby time required to resolve violations shall be at the Contractor's expense and shall not be cause for extending the completion date.

1.12 EMERGENCY PRECAUTIONS:

A. The Contractor shall establish emergency and fire exits from the work area.

B. When an injury occurs, the Contractor shall stop work until the injured person has been removed from the work area.

1.13 DISPOSAL OF WASTE MATERIAL:

A. GENERAL:

1. Contractor and transporting Contractor will be required to comply with the Resource Conservation and Recovery Act (RCRA) and with all applicable federal, state, and local regulations.

2. Contractor shall be responsible for disposing of all waste determined by Toxicity Characteristic Leaching Procedure (TCLP) to be hazardous. If TCLP testing has not been performed, the Contractor shall be responsible for testing the waste.

3. Contractor and all sub-contractors shall comply with all EPA regulations.

PART 2 – PRODUCTS

2.01 GENERAL REQUIREMENTS:

A. The Contractor shall deliver all materials and equipment to the site in the original containers bearing the name of the manufacturer, and details for proper storage and use.

B. All materials or equipment delivered to the site shall be unloaded, temporarily stored, and transferred to the work area in a manner that shall not interfere with other trades working in the area.

C. Unloading and temporary storage sites, and transfer routes, must be approved in advance by the Owner and Engineer.

D. Damaged or deteriorated materials may not be used and must be promptly removed from the premises. Material that becomes contaminated shall be packaged and legally disposed in an approved, secure landfill.

2.02 MATERIALS:

A. All materials and equipment proposed to be used on this project shall be subject to the acceptance of the Engineer. The list of required materials shall include, but not necessarily limited to the following:

1. Fire retardant polyethylene sheeting, minimum thickness of six (6)-mil.

2. Plastic bags, minimum thickness of six (6)-mil.

3. Duct Tape, up to 3-inch width

4. Lead Warning Signs, as required by the DOS Regulations and OSHA Hazard Communication requirements.

5. Flexible duct for ventilation units (if required)

6. Spray adhesive, fire retardant

7. Personal Protective Equipment, NIOSH approved respirators

8. Ventilation units with HEPA filtration and exhaust fans.

9. HEPA vacuums

10. Trisodium-Phosphate (TSP) and product data

11. Cloth tarpaulin

2.03 TOOLS AND EQUIPMENT:

A. Transportation Equipment: Transportation equipment, as required, shall be suitable for loading, temporary storage, transporting, an unloading waste without exposure to persons or property. All over-the-road transportation equipment must carry the appropriate hazardous waste transport licenses and insurance.

B. Vacuum Equipment: All vacuum equipment utilized in the work area shall utilize HEPA filtration systems.

C. Water Sprayer: The water sprayer shall be an airless or other low-pressure sprayer for water application.

D. Other Tools and Equipment: The Contractor shall provide other suitable tools including but not limited to: rounded edge shovels, rakes, brooms, and carts.

E. The Contractor shall provide ground fault circuit interrupters (GFCI) to protect all electrical cord and connections.

F. Approved lighting equipment for use in the work area.

G. Scaffolding: Scaffolding, as required to accomplish specified work, shall meet all applicable Federal, State and local safety regulations and used in accordance with manufacturer's specifications.

PART 3 – EXECUTION

3.01 SCHEDULING:

A. The Contractor shall coordinate all scheduling with the Engineer. A schedule of work shall be submitted to the Engineer before contract performance.

3.02 UTILITIES:

A. Provide all necessary connections for temporary utilities in the workplace during work. Shut down and disconnect all electrical power to the work area so that there is no possibility of reactivation and electrical shock during the work. The temporary electrical power shall be in accordance with all OSHA requirements.

3.03 IDENTIFICATION OF HAZARDS:

A. Prior to any work involving lead-containing items, the contractor shall identify all work activities in which a worker may be occupationally exposed to lead.

B. The Contractor shall initially determine if any worker may be exposed to lead above the action level.

3.04 BARRIERS AND ISOLATION AREAS:

A. All lead in demolition work areas shall remain isolated from all other trades on the project and remain inaccessible to the public. Contractor shall monitor the access to the demolition work areas. The below listed items are required to control the generation of lead-containing dust during demolition activities. The Contractor is ultimately responsible for cleaning all generated dust and paint debris from demolition operations and must maintain work areas free from lead dust generated from demolition activities.

1. Signs shall be posted at all approaches to the work area warning that work-involving lead is being conducted in the vicinity. Signs shall be in bold lettering not smaller than two inches tall.

2. Barriers shall not be removed until the work areas are thoroughly cleaned and approved by the Engineer.

3.05 APPROVALS AND INSPECTIONS:

A. All temporary facilities, work procedures, equipment, materials, services, and agreements must strictly adhere to and meet this Section along with EPA, OSHA, regulations and recommendations as well as federal, state, and local regulations. Where there exists overlap of these regulations, the most stringent one applies. All work performed by the Contractor is further subject to approval of the Engineer.

3.06 PERSONAL SAMPLING – CONTRACTOR:

A. Perform personal air sampling during all demolition work to determine worker exposure limits. The results of such sampling shall be posted, provided to individual workers, and submitted to Engineer as described herein.

B. Provide sampling to check personal exposure levels. Representative sampling shall be taken for the duration of the work shift or for eight hours, whichever is less. Personal

samples need not be taken for repeated working conditions if working conditions remain unchanged, but must be taken every time there is a change in the removal operation, either in terms of the location or the type of work. Sampling will be used to determine eight-hour Time-Weighted-Averages (TWA). Personal sampling shall be as outlined in OSHA Standard 29 CFR 1926.62.

C. Air sampling results shall be transmitted to the Engineer and individual workers available at the job site in written form no more than forty-eight (48) hours after the completion of a sampling cycle. The reporting document shall list each sample's result, sampling time and date, personnel monitored and their social security numbers, flow rate, sample duration, sample yield, cassette size, and analyst's name and company, and shall include an interpretation of the results. Air sample analysis results will be reported in micrograms/cubic meter ($\mu g/m^3$).

D. The Contractor's testing lab shall be AIHA accredited for analysis of metals. Contractor shall submit for Engineer's review and acceptance the name and address of the laboratory, certification(s) of AIHA accreditation for metal analysis, listing of relevant experience in air lead analysis, and presentation of a documented Quality Assurance and Quality Control program.

E. Air monitoring frequency will be established in accordance with the requirements set forth in 29 CFR 1926.62.

3.07 WORK PROCEDURES:

A. The contractor shall initiate, and continue, sufficient engineering and work practice controls, as described in the Contractor's Lead Compliance Program, to reduce and maintain worker exposures to lead at or below the Action Level.

B. The following work practices are specifically required by these specifications:

1. All persons except those directly involved in the work shall be excluded from the work area. Physical barriers shall be used, where necessary, to limit access to the work area for the duration of the demolition operations. Warning signs may be posted in accordance with applicable regulations.

2. Provide hand-washing facilities and assure that all workers thoroughly wash their hands and face upon exiting the work area. Workers shall pay careful attention to cleanse the hands and face when decontaminating. Provide hygiene facilities, including shower, as required based on initial assessment and continued monitoring.

3. Thoroughly wet the building materials or areas to be demolished and mist the air to reduce the potential for creating airborne lead and dust.

4. All equipment used by the workers inside the work area shall be either left in the work area or thoroughly decontaminated before being removed from the area. Extra work clothing (in addition to the disposable suits supplied by the Contractor)

shall be left in the clean area until the completion of work in that area. The clean area shall be cleaned of all visible debris and disposable materials daily.

5. Under no circumstances shall workers or supervisory personnel eat, drink, smoke, chew gum, or chew tobacco in the work area; to do so shall be grounds for the Engineer to stop all demolition operations. Only in the case of life threatening emergency shall workers or supervisory personnel be allowed to remove their protective respirators while in the work area. In this situation, respirators are to be removed for as short a duration as possible.

6. Feasible engineering controls shall be implemented by the Contractor as described in the Lead Compliance Program to minimize the possibility of contamination of areas adjacent to the work area. The following activities are the minimum requirements of this section and affect the demolition performed on the painted components:

    1. No torch cutting, mechanical sanding, stripping, or abrasive methods of paint removal shall occur.

    2. No demolition activities may occur which increase the worker's exposure above the Action Level of 30 $\mu g/m^3$. Contractor shall fully comply with the OSHA lead standard 29 CFR 1926.62.

7. Workers shall be informed of the components to be renovated that are identified as containing lead.

8. Separation of Trades: Unprotected, untrained workers or trades shall not perform any related work within the same areas as demolition involving components identified as containing lead. Other trades may not enter these areas until clean-up procedures are completed.

3.08 STORAGE OF WASTE:

A. Use of waste containers on site shall be controlled under the following requirements:

1. Location of waste containers on site shall be subject to Owner's approval.

2. The waste containers lined shall be lined with two layers of six-mil polyethylene sheeting, be solid, enclosed containers, locked and sealed at all times. This requirement applies to waste classified as hazardous based on TCLP testing.

3. Contractor shall comply with all federal, state, and local regulations and ordinances regarding lead waste storage.

END OF SECTION