

# TOWN OF NATICK MASSACHUSETTS

**TO:** Natick Select Board  
James Errickson, Town Administrator  
Jon Marshall, Deputy Town Administrator – Operations  
William Spratt, Interim Director, Natick Public Works  
Anthony Comeau, Supervisor, Water and Sewer Division, Natick Public Works  
Gregory Eldridge, P.E., Vice President, Haley Ward, Inc.

**FROM:** Bryan R. Le Blanc, Director of Procurement

**DATE:** May 9, 2023

**SUBJECT: CONTRACT AWARD**  
**W165 – Chemical Feed Upgrades/Springvale**

On April 27, 2023, sealed general bids were received, pursuant to M.G.L. c. 149, secs. 44A *et seq.*, for Chemical Feed Upgrades/Springvale. General bids were received from one (1) bidder. (See attached.) DCAMM and filed sub-bid requirements applied, as this project was estimated to cost greater than \$150,000.00.<sup>1</sup>

Dankris Builders Corp. (“Dankris”) is the lowest responsible and eligible bidder. We recommend that the Natick Select Board award the contract to Dankris for the complete main bid work, as provided for in the Town’s Invitation for Bids. The amount of the award will be for \$317,900.00, as provided for in Dankris’ bid. We have reviewed the bids received and have checked the references and qualifications of Dankris. Mr. Gregory Eldridge, Vice President of Haley Ward Inc., the Town’s on-call Water and Sewer project consulting engineering firm, has also done the same and has recommended award accordingly. See attached. Dankris’ bid is in accordance with our estimate; it has pledged to stand by its number.

Please advise if you have any questions or require additional information.

|  |          |
|--|----------|
| Bids Received:   | 04/27/23 |
| Newspaper Advertisement ( <u>Metrowest Daily News</u> ): | 03/22/23 |
| Town Hall Posting:                                       | 03/13/23 |
| Website Posting:   | 03/13/23 |
| Central Register:  | 03/22/23 |
| COMMBUYS Posting:  | 03/13/23 |

---

<sup>1</sup> Filed sub-bids were received for the electrical sub-trade on April 13, 2023. Filed-sub bidding is required to be conducted if the estimated cost within a sub-trade for public building construction is estimated to cost more than \$25,000. In this case, the Town received four (4) filed sub-bids for the electrical sub-trade. A copy of the sub-bid tab is attached hereto. Note that the contract will run from the general contractor to an electrical sub-contractor. The Town will not award an electrical sub-contract directly.

Funding: FY2020 Capital Acct#655902-580920 and  
.  
FY2021 Capital Acct#656003-580930.

Bids Received: See attached.



April 28, 2023

**Via Email**

Mr. Anthony Comeau, Water and Sewer Supervisor  
Natick Department of Public Works  
75 West Street  
Natick, MA, 01760

**Re: Bid Results, Chemical Feed Upgrades, Contract No. W-165**

Dear Mr. Comeau,

On April 27, 2023, one (1) bid was received for Contract W-165 entitled "Chemical Feed Upgrades". We are attaching a Canvass of Bids and have summarized the bid amount below:

|                     | <b><u>Total Bid</u></b> |
|---------------------|-------------------------|
| 1. Dankris Builders | \$ 317,900.00           |

The project work consists of chemical feed upgrades at the Springvale and Elm Bank water treatment plant sites including, but not limited to, day tanks, day tank scales, transfer pumps, electrical and instrumentation work. The bid exceeded the project estimate, which can be attributed to the price escalation in materials, labor and equipment over the last 3 years, since the project estimate and funding were set. We feel the low bid represents the cost of the work today.

Dankris Builders has worked on a large number of projects in Natick and recently completed the H&T GAC PFAS removal water treatment plant and working on the Tonka GAC PFAS removal temporary water treatment plant. Additionally, we have worked with Dankris on many projects in Natick and other municipalities and are familiar with their work. Our experience with Dankris Builders indicates that they have the equipment, resources, and experience to perform the work in accordance with the contract documents and within the specified time frame. The bid submitted by them appears to be in order.



Should you choose to award to Dankris Builders, will have attached a Notice of Award form for signature.

If you have any question on the bids and/or this letter, please feel free to contact our office.

Sincerely,  
Haley Ward, Inc.

Gregory J. Eldridge, P.E.  
Vice President – Senior Project Manager

Cc: Bryan LeBlanc via email

Enclosures: Canvass of Bids

P:\MA\Jobs\3010133 Natick\493 Chemical feed Upgrades\Letters\493-004 Award Letter Town.docx

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

**CANVASS OF GENERAL BIDS RECEIVED – THURSDAY, APRIL 27, 2023**

Dankris Builders  
6 High Street  
Plainville, MA 02762

| <u>DESCRIPTION</u>                 | <u>1<sup>ST</sup> LOW BIDDER</u> | <u>2<sup>ND</sup> LOW BIDDER</u> | <u>3<sup>RD</sup> LOW BIDDER</u> |
|------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Total Bid Amount                   |                                  |                                  |                                  |
| General Contract                   | <u>\$317,900.00</u>              | <u>\$</u>                        | <u>\$</u>                        |
| <u>Item 1.</u> Base Work           | <u>\$234,900.00</u>              | <u>\$</u>                        | <u>\$</u>                        |
| <u>Item 2.</u> Filed Sub Contracts | <u>\$ 83,000.00</u>              | <u>\$</u>                        | <u>\$</u>                        |
| Division 16 - Electrical           |                                  |                                  |                                  |
| Jasco Electric, Inc.               |                                  |                                  |                                  |
| 456 Rear West Central St.          |                                  |                                  |                                  |
| Franklin, MA 02038                 |                                  |                                  |                                  |

A true summary of bids received

HALEY WARD, INC.



Gregory J. Eldridge, P.E.  
Vice President, Senior Project Manager

# Town of Natick

## IFB Opening Form

General Bids - Chemical Feed Upgrades/Springvale

Date & Time: April 27, 2023, 9:00 A.M. EDST

|                                       | Envelope Sealed<br>& Marked | Bid Security - 5%<br>& DCAMM<br>(Electrical) | Certificate of<br>Non-Collusion | Tax Compliance<br>Certification | Cert. of Corporate<br>Bidder | Conflict of<br>Interest<br>Certificate | Signature of<br>Bidder &<br>Addenda 1-3 |  |  | Certificate of<br>Non-Debarment | Price  |
|---------------------------------------|-----------------------------|--|---------------------------------|---------------------------------|------------------------------|--|---|--|--|---------------------------------|--|
| Company Name                          |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
| Dankis Builders Corp., Plainville, MA | x                           | x  | x                               | x                               | x                            | x                                      | x                                       |  |  | x                               | \$317,900 (\$234,900 + \$83,000<br>Electrical Sub-Bid (Jasco)) |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |
|                                       |                             |  |                                 |                                 |                              |  |   |  |  |                                 |  |

CPO Signature:

Witness Signature:

*Second thing 27th day of April 2023*  
*[Signature]*  
*4/27/23*  
*Melissa Hankes*

# Town of Natick

## IFB Opening Form

Sub-Bids - Chemical Feed Upgrades (Electrical)

Date & Time: April 13, 2023, 9:00 A.M. EDST

|                                       | Envelope Sealed<br>& Marked | Bid Security - 5%<br>& DCAMM<br>(Electrical),<br>Update | Certificate of<br>Non-Collusion | Tax Compliance<br>Certification | Cert. of Corporate<br>Bidder | Conflict of<br>Interest<br>Certificate | Signature of<br>Bidder &<br>Addenda 1 |  | Compliance with<br>MGL 151B |  | Price                                   |
|---------------------------------------|-----------------------------|---|---------------------------------|---------------------------------|------------------------------|--|---------------------------------------|--|-----------------------------|--|---|
| Company Name                          |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
| Jasco Electric, Franklin, MA          | x                           | x   | x                               | x                               | x                            | x                                      | x                                     |  | x                           |  | \$83,000.00 (Unrestricted).             |
| Richard T. Losordo, Brockton, MA      | x                           | x   | x                               | x                               | x                            | x                                      | x                                     |  | x                           |  | \$142,000.00 (Unrestricted).            |
| Fall River Electric, Fall River, MA   | x                           | x   | x                               | x                               | x                            | x                                      | x                                     |  | x                           |  | \$176.925.00 (Any except<br>Waterline). |
| Dagle Electrical Cons., Wilmington, M | x                           | x   | x                               | x                               | x                            | x                                      | x                                     |  | x                           |  | \$194,490.00 (Unrestricted).            |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |
|                                       |                             |   |                                 |                                 |                              |  |                                       |  |                             |  |   |

Signed this 13<sup>th</sup> day of April 2023 under my hand and seal.

CPO Signature:

*[Signature]* 4/13/23

Witness Signature:

*[Signature]* 4/13/2023

## AGREEMENT

THIS AGREEMENT made this thirty-first day of May in the  
year 2023, by and between the Town of Natick, Massachusetts having an address of Natick Town Hall, 13  
East Central Street, Natick, MA 01760, (hereinafter called OWNER), by its Select Board, and

Dankris Builders Corp.

having an address of

Six High Street, Unit 1, Plainville, MA 02762

Six High Street, Unit 1, Plainville, MA 02762 doing business as a (Corporation, Partnership or Individual) hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, OWNER and CONTRACTOR hereby agree as follows:

## ARTICLE 1. WORK

1.1 CONTRACTOR will commence the Work as specified or indicated in the Contract Documents as defined in Article 8 herein.

1.2 The work consists of chemical feed upgrades at the Springvale and Elm Bank water treatment plants, which includes new day tanks, day tank scales, electrical work and instrumentation work.

1.3 CONTRACTOR shall furnish all materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the Project described herein.

## ARTICLE 2. ENGINEER

2.1 The Project has been designed by Haley Ward, Inc., who is hereinafter called ENGINEER and who shall act as OWNER'S representative, who shall assume all duties and responsibilities, and shall have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### ARTICLE 3. CONTRACT TIME

3.1 CONTRACTOR shall commence the work required by the Contract Documents in accordance with the provisions of the Notice to Proceed and Contract Documents. The work will be substantially complete within two hundred twenty (220) consecutive calendar days after the date when the Contract Time commences to run in accordance with the Notice to Proceed and will be completed and ready for final payment within two hundred forty (240) consecutive calendar days after the date when the Contract Time commences to run in accordance with the Notice to Proceed.

3.2 The work at both plants will be done during the low water demand season beginning in October. Both plants cannot be offline at the same time, Contractor to schedule work accordingly.



3.3. Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER **Four Hundred** dollars (\$400.00) for each day that expires after the time in paragraph 3.1 of this section for Substantial Completion until the Work is substantially complete. After Substantial Completion if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work, within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **Eight Hundred** dollars (\$800.00) for each day that expires after the time specified in paragraph 3.1 of this section for completion and readiness for final payment.

#### ARTICLE 4. CONTRACT PRICE

4.1. In consideration for performance of the work as required by the Contract Documents, OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds as follows:

TOTAL CONTRACT PRICE (\$ 317,900.00)  
Three Hundred Seventeen Thousand Nine Hundred Dollars and Zero Cents

---

Contractor's General Bid is attached to this Agreement as an exhibit.

#### ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions, as modified, if applicable, by the Supplementary Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1. Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER and as provided in Article 14 of the General Conditions, as modified, if applicable, by the Supplementary Conditions.

5.2. Final Payment. Upon final completion and acceptance of the Work in accordance with the General Conditions, as modified, if applicable, by the Supplementary Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER .

#### ARTICLE 6. TERMS

6.1. Terms used in this Agreement, which are defined in Article 1 of the General Conditions, as modified, if applicable, by the Supplementary Conditions, will have the meanings indicated in the General Conditions, as modified, if applicable, by the Supplementary Conditions

## ARTICLE 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

7.1. CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

7.2. CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.2 of the General Conditions, and accepts the determination set forth in paragraph SC-4.2 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.

7.3. CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in paragraph 7.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions, as modified, if applicable, by the Supplementary Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

7.4. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions, as modified, if applicable, by the Supplementary Conditions.

7.5. CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

7.6. CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

## ARTICLE 8. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1 Invitation for Bids
- 8.2 Instructions to Bidders
- 8.3 Contractor's Bid
- 8.4 This Agreement ("Agreement") (pages 1 to 10, inclusive).
- 8.5 Exhibits to this Agreement
- 8.6 General Conditions
- 8.7 Supplementary Conditions
- 8.8 CONTRACTOR'S Performance and Payment Bonds, and insurance certificates.
- 8.9 Notice of Award.
- 8.10 Notice to Proceed.
- 8.11 Specifications as listed in table of contents.
- 8.12 Drawings, consisting of a cover sheet and sheets numbered: I1, E1-E3, M1-M4  
with each sheet bearing the following general title:  
  
Town of Natick, Massachusetts  
Select Board  
  
Chemical Feed Upgrades  
Contract No. W-165
- 8.13 Addenda numbers 1 to 3, inclusive.
- 8.14 Change Order (s)

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.4 and 3.5 of the General Conditions.

## ARTICLE 9. INDEMNIFICATION

CONTRACTOR shall compensate the Town for all damage to Town of Natick property of any nature arising out of CONTRACTOR's work. CONTRACTOR shall indemnify, defend, and hold harmless the Town of Natick and all of its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by CONTRACTOR or its subcontractor(s) of their obligations under this Contract, or the act or omission of CONTRACTOR, its subcontractor(s), or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by CONTRACTOR under the Contract, or which arise out of the violation of any Federal, Massachusetts or Town of Natick statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by CONTRACTOR or any of its officers or employees regarding the subject matter of the Contract.

## ARTICLE 10: INSURANCE

10.1 CONTRACTOR shall provide insurance that satisfies the categories and amounts specified in Article 5 of the General Conditions, as modified by Article 5 of the Supplementary Conditions.

10.2. Each certificate and policy of insurance required by this Agreement shall contain a cancellation provision as indicated below with no variations.

“Should any of the above described policies be canceled or materially amended before the expiration date thereof, the issuing insurer will mail within thirty (30) calendar days’ written notice to the certificate holder named to the left”.

10.3 The Town of Natick and ENGINEER shall be named as an additional insured on each policy of insurance required by this agreement other than worker's compensation.

## ARTICLE 11: MISCELLANEOUS PROVISIONS

11.1. No assignment by CONTRACTOR of any rights under or interests in the Contract Documents will be binding on OWNER without the written consent of OWNER; and specifically, but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent, and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge CONTRACTOR from any duty or responsibility under the Contract Documents.

11.2. This Agreement shall be binding upon OWNER and CONTRACTOR, their respective heirs, executors, administrators, successors, or assigns and legal representative to the other party hereto, its partners, heirs, executors, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

11.3. If any provision of this Agreement shall be determined to be invalid or unenforceable by final judgment of a court of competent jurisdiction, the remaining provisions shall continue in effect to the extent permitted by law.

11.4 This Agreement may be amended only by a written instrument signed by the parties.

11.5 This Agreement shall be governed by and construed in accordance with the Massachusetts law.

11.6 CONTRACTOR shall provide, to the satisfaction of OWNER, adequate supervision of all work performed under this Agreement.

11.7 This Agreement shall be guided by the Commonwealth of Massachusetts Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program. The goal for Affirmative Action is five percent (5%) minority workforce. CONTRACTOR shall take all affirmative steps necessary to achieve these goals, and shall provide required reports.

11.8 CONTRACTOR shall comply with all provisions of law applicable to his work including without limitation statutes, by-laws rules, regulations, orders and directives. This Contract shall be considered to include in their entirety all terms respecting workers' compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, and any other laws, as though such terms were set forth in their entirety herein. CONTRACTOR shall comply with all applicable provisions of law and regulation as specified by the Williams-Steiger Occupational Safety and Health Act of 1970, as amended.

11.9 CONTRACTOR has made this Contract in reliance on his own examinations and estimates as to the amount and character of his work, and conditions which may be encountered in the performance thereof, and shall assume all risks and bear all losses pertaining thereto.

11.10 CONTRACTOR shall compensate the Town of Natick for all damages to the Town property of any nature arising out of CONTRACTOR'S work.

11.11 The Town of Natick may defer payment to CONTRACTOR of such sums otherwise due him under this Contract for such period of time as the Director of Public Works may deem required by law or expedient for protection of the Town or others against his noncompliance with the provisions thereof; and the Town may reimburse itself, by deduction from the money so retained, for all expense and loss resulting to it from his noncompliance.

11.12 No payment by the Town of Natick to CONTRACTOR shall be deemed to be a waiver of any right of the Town of Natick under this Contract or ratification by the Town of Natick of any breach hereof by CONTRACTOR.

11.13 CONTRACTOR shall provide services under this Agreement as an independent CONTRACTOR with the Town of Natick and CONTRACTOR and its employees shall not be entitled to receive any benefits of employment with the Town of Natick, including without limitation salary, overtime, vacation pay, holiday pay, health insurance, life insurance, pension or deferred compensation.

11.14 If any assignment shall be made by CONTRACTOR or by any guarantor of CONTRACTOR for the benefit of creditors, or if a petition is filed by CONTRACTOR or by any guarantor of CONTRACTOR for adjudication as a bankrupt, or for reorganization or an arrangement under any provision of the Bankruptcy Act as then in force and effect, or if an involuntary petition under any of the provisions of the Bankruptcy Act is filed against CONTRACTOR and such involuntary petition is not discharged within ninety (90) calendar days thereafter, in any event the Town may terminate this Contract upon written notice to CONTRACTOR.

11.15. The award of this Contract and the continued operation of this Contract are subject to appropriation by Natick Town Meeting of sufficient money to fund the Contract.

11.16 OWNER may terminate this Contract upon written notice to CONTRACTOR if a source of money to fund the Contract is lost during any year of the Contract term. In the alternative, the parties may agree in writing to amend the Contract to provide for a Contract price which represents the reduced appropriation for a contract year.

11.17 In the event of termination, CONTRACTOR shall be entitled to be paid for services rendered in accordance with this Contract prior to termination.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have executed or caused to be executed by their duly authorized officials this Agreement in five (5) copies, each of which shall be deemed as an original on the date first above written. One Counterpart each has been delivered to OWNER, CONTRACTOR, ENGINEER, Town Counsel and Town Accountant.

OWNER:

Town of Natick, Massachusetts

CONTRACTOR:

Dankris Builders Corp.

\_\_\_\_\_  
Printed Name of CONTRACTOR

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

The Natick Select Board

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

\_\_\_\_\_  
Bruce T. Evans, Chair

\_\_\_\_\_  
Kathryn M. Coughlin, Vice-Chair

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Richard Sidney, Clerk

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Paul R. Joseph

\_\_\_\_\_  
Kristen L. Pope

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

\_\_\_\_\_  
[ CORPORATE SEAL ]

\_\_\_\_\_  
Attest

Address for giving notices:

Select Board

Natick Town Hall

13 East Central Street

Natick, MA 01760

Contractor Address for giving notices:

President , Dankris Builders Corp.

---

Six High Street, Unit 1

---

Plainville, MA 02762

---



## CERTIFICATE OF APPROPRIATION

In accordance with the requirements of M.G.L. Chapter 44, Section 31C, this is to certify that an appropriation in the amount of this CONTRACT is available therefor, and that the Natick Select Board is authorized to execute this CONTRACT and to approve all requisitions and execute change orders.

---

Michelle L. Laramée  
Comptroller

---

Date

APPROVED AS TO FORM ONLY (AND NOT AS TO SUBSTANCE):

---

Karis L. North, Esq.  
Office of the Town Counsel

---

Date

CERTIFICATE OF VOTE

I, \_\_\_\_\_, hereby certify  
(Clerk/Secretary)

that I am the duly qualified and acting \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Corporation Name)

and I further certify that at a meeting of the Directors of said Corporation duly called and held on  
\_\_\_\_\_ 20 \_\_\_\_, at which meeting all Directors were present and voting, the following vote was  
unanimously passed:

VOTED: To authorize and empower either \_\_\_\_\_,  
\_\_\_\_\_  
(Name) (Title);  
\_\_\_\_\_, \_\_\_\_\_; or  
(Name) (Title)  
\_\_\_\_\_, \_\_\_\_\_  
(Name) (Title),

any one acting singly, to execute all contracts and bonds on behalf of the Corporation.

I, further certify that the above vote is still in effect on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and has  
not been changed or modified in any respect.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

The certification contained hereabove shall be executed by CONTRACTOR or copy of current  
"certification of authority to sign for the Corporation" shall be attached.)

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

BID FORM FOR GENERAL BID

To the Awarding Authority: Town of Natick, Massachusetts

Select Board  
Natick Town Hall  
13 East Central Street  
Natick, MA 01760

- A. The undersigned Bidder proposes to furnish all labor and materials required for the Chemical Feed Upgrades in Natick, Massachusetts, in accordance with the accompanying plans and specifications prepared by Haley Ward, 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 #1, dated March 31, 23' / #2 dated 4/21/23  
#3 dated 4/24/23
- C. The Proposed Contract Price is: Three hundred seventeen thousand nine hundred dollars  
(use words)

(\$ 317,900 )  
(price in figures)

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

Item 1 The Base Work of the general contractor, being all work other than work of sub-contractor under Item 2.

Total Proposed Base Contract Price for General Bid (\$ 234,900 )  
(price in figures)

Two hundred thirty four thousand nine hundred dollars  
(use words)

Item 2 The total price of the work of the Filed Sub-Contract is (\$ 83,000 )  
(price in figures)

Eighty Three Thousand dollars  
(use words)

The individual Sub-Bids for Item 2 in the above paragraph are as follows:

| <u>Filed</u><br><u>Sub-Contract</u> | <u>Name of</u><br><u>Filed Sub-Bidder</u> | <u>Amount of</u><br><u>Sub-Bid</u> | <u>Bonds Required</u><br><u>(Indicated by</u><br><u>"Yes" or "No")</u> |
|-------------------------------------|---|------------------------------------|--|
| a. Division 16<br>Electrical        | <u>JASCO ELECTRIC INC</u>                 | <u>\$ 83,000</u>                   | <u>NO</u>  |

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 he is selected as general contractor, he 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.

E. The undersigned agrees that, if he is selected as general contractor, he will within five (5) 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 one (1) surety company, the surety companies shall be jointly and severally liable.

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 ten (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.

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

The Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that it has reviewed the insurance requirements contained in the Contract Documents and certifies that it can meet them. The Bidder also certifies its completion of the attached Contractor Certification forms.

The following documents are attached to and made a condition of this Bid:

- (a) Required Bid Security in the amount of five (5%) percent of PROPOSED CONTRACT PRICE appearing in Paragraph 4 above, and in a form as described in the Instructions to Bidders.
- (b) A copy of a "Certificate of Eligibility" issued by the Deputy Commissioner of the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) showing that the Bidder has the classification and capacity rating to perform the work required.
- (c) An update statement in such form as the Deputy Commissioner of DCAMM shall prescribe.

The undersigned bidder hereby certifies he/she will comply with the minority workforce percentage ratio and specific affirmative action steps contained in the applicable EEO/AA provisions of this Contract. The Bidder receiving the award of the Contract shall be required to obtain from each of its subcontractors a copy of the certification by said subcontractor, regardless of tier, that it will comply with the minority workforce ratio and specific affirmative action steps contained in these EEO/AA Contract provisions and submit it to the contracting agency prior to the award of such subcontract.

The undersigned certifies under penalties of perjury that there have been no substantial changes in his financial position or business organization other than those changes noted within the application since the applicant's most recent pre-qualification statement and that the bid is in all respects *bona fide*, fair and made without collusion or fraud with any other person. "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. M.G.L. c. 149 §44D (1)(b).

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provision of Section 29F of Chapter 29, or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulation promulgated thereunder.

THIS BID SUBMITTED ON April 27 2023

Name of General Bidder (Bidder): Dankris Builders Corp.

By [Signature]  
Signature

Luke Baril  
Printed Name

President  
Printed Title

(Corporate Seal)

Attest [Signature]  
(Secretary)

Business Address: 6 High Street Unit 1  
Plainville MA 02762

Phone Number: (508) 695-4066

E-mail Address: LBaril@dankris.com

Fax: 508-695-5866

### 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

Dankris Builders Corp

Name of the General Contractor

Certifies that:

1. It intends to use the following listed construction trades in the work under Contract:

Laborers, Carpenters

2. It shall comply with the minority workforce ratio and specific affirmative action steps contained herein: and
3. It shall obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this Contract, the subcontractor's certification required by this bid conditions.

Dankris Builders Corp.

Name of Contractor

6 High Street Unit 1

Plainville MA 02762

Address of Contractor

By:

[Signature]  
Signature

Luke Bari  
Printed Name

President  
Printed Title

4/27/23  
Date

CERTIFICATE OF NON-COLLUSION

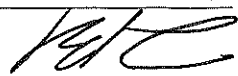
The undersigned as Bidder certifies under penalties of perjury that this Bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, business, joint ventures, partnership, corporation or other organization, entity or group of individuals.

Name of Bidder

Dank's Builders Corp.  
6 High Street  
Plainville MA

Address of Bidder

By:



Signature

Luke Bail

Printed Name

President

Printed Title

4/27/23

Date



# CERTIFICATE OF NON-DEBARMENT

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine or any other applicable debarment provisions of any other chapter of the General Law or any rule or regulation promulgated thereunder.

Name of Bidder

Dankris Builders Corp

6 High Street Plainville MA

Address of Bidder

By:

[Signature]  
Signature

Luke Baril  
Printed Name

President  
Printed Title

4/27/23  
Date

### TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. Chapter 62C, Section 49A, the undersigned hereby certifies under penalty of perjury that Dankris Builders Corp has complied with all laws of the Commonwealth of Massachusetts relating to taxes, to the reporting of employees and contractors, and to the withholding and remitting of child support.

Dankris Builders Corp  
Name of Bidder

6 High Street

Plainville MA  
Address of Bidder

By: [Signature]  
Signature

Mike Baril  
Printed Name

President  
Printed Title

4/27/23  
Date

## CONFLICT OF INTEREST CERTIFICATION

The Bidder named below hereby certifies that:

1. The Bidder has not given, offered, or agreed to give any gift, contribution, or, offer of employment as an inducement for, or in connection with, the award of a contract for these services.
2. No consultant to, or, subcontractor for the Bidder has given, offered, or agreed to give any gift, contribution, or, offer of employment to the Bidder, or, to any other person, corporation, or entity as an inducement for, or, in connection with, the award to the consultant or subcontractor of a contract by the Bidder.
3. No person, corporation, or, other entity, other than a bona fide full time employee of the Bidder has been retained or hired to solicit for or in any way assist the Bidder in obtaining the contract for services upon an agreement or understanding that such person, corporation, or entity be paid a fee or other compensation contingent upon the award of the contract to the Bidder.
4. The Bidder named below understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Bidder with respect to the services outlined in the Project Manual.
5. The Bidder understands that the Bidder, its officers, employees, agents, subcontractors and affiliated agencies, shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

Name of Bidder

Dankris Builders Corp

6 High Street Plainville MA

Address of Bidder

By:

[Signature]  
Signature

Luke Baril  
Printed Name

President  
Printed Title

4/27/23  
Date

CERTIFICATE AS TO CORPORATE BIDDER

I, JoAnn Baril certify that I am the Secretary of the corporation named as Bidder in the Bid included herein; that Luke Baril, who signed said Bid on behalf of the Bidder was then President of said corporation; that I know his signature; that his signature thereon is genuine and that said Bid was duly signed, sealed and executed for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

JoAnn Baril  
Secretary-Clerk

Dated: 4/27/23

Name of Bidder

Dankris Builders Corp.

6 High Street Plainville MA  
Address of Bidder

By:

[Signature]  
Signature

Luke Baril  
Printed Name

President  
Printed Title

4/27/23  
Date

## CERTIFICATE OF FOREIGN CORPORATION

If the Bidder is a foreign corporation, by affixing his/her signature, the Bidder certifies that the corporation is qualified under the provisions of M.G.L. Chapter 181, Section 4 to do business in the Commonwealth of Massachusetts.

Name of Bidder

NA

\_\_\_\_\_  
Address of Bidder

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

Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature/Title)

If awarded the Contract, the Contractor shall provide with his agreement package, a certificate from the Secretary of the Commonwealth of Massachusetts that the corporation is qualified under provisions of M.G.L. Chapter 181, Section 4, to do business in the Commonwealth.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
CERTIFICATION

The undersigned agrees that if he is selected as the contractor, he shall comply with the provisions of M.G.L. Chapter 30, Section 39S.

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 in 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 ten (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 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 ten (10) hours in duration.

Name of Bidder

Dankris Builders Corp  
6 High Street Plainville MA  
Address of Bidder

By:

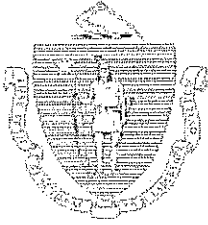
[Signature]  
Signature

Luke Baril  
Printed Name

President  
Printed Title

4/27/23  
Date

END OF BID FORM FOR GENERAL BID



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE FOR ADMINISTRATION & FINANCE  
DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE  
One Ashburton Place  
Boston, MA 02108  
(617) 727-4050

MAURA T. HEALEY  
GOVERNOR

MATTHEW J. GORZKOWICZ  
SECRETARY

KIMBERLEY DRISCOLL  
LIEUTENANT GOVERNOR

CAROL W. GLADSTONE  
COMMISSIONER

Prime  
Certificate of Contractor Eligibility  
CONTRACTOR IDENTIFICATION NUMBER: 0392

This Certificate Shall be Used for Submitting Prime Bids Only

1. **CERTIFICATION PERIOD:** This Certificate is valid from March 27, 2023 to March 26, 2024\*
2. **CONTRACTOR'S NAME:** Dankris Builders Corp
3. **CONTRACTOR'S ADDRESS:** 6 High Street, Unit 1  
Plainville, MA 02762-1126
4. **WORK CATEGORIES:** This Contractor is certified to file bids under Massachusetts General Laws Chapter 149, Chapter 149A and Chapter 25A in the following Categories of Work:

General Building Construction, Mechanical Systems, Pumping Stations, Sewage and Water Treatment Plants

5. **EVALUATIONS:**
- |                                    |    |
|------------------------------------|----|
| Number of Projects Evaluated:      | 18 |
| Average Project Evaluation Rating: | 94 |
| Number of Projects Below Passing:  | 0  |
6. **PROJECT LIMITS:**
- |                                      |             |
|--------------------------------------|-------------|
| Single Project Limit (SPL):          | \$2,236,000 |
| Aggregate Work Limit (AWL):          | \$6,000,000 |
| General Building Construction Limit: | #2,236.000  |

7. **SUPPLIER DIVERSITY OFFICE CERTIFICATION:** N/A

Carol W. Gladstone, Commissioner

2/9/2023

Approval Date

**\* NOTICE TO CONTRACTORS:** *If this contractor becomes uncertified for any reason this Certificate will immediately become void. Complete Applications for Renewal of Contractor Eligibility are due no later than three months PRIOR to the Expiration Date of the Certification Period shown above.*

Reviewer's Initials: MR

**GREAT MIDWEST INSURANCE COMPANY**

800 Gessner, Ste. 600  
Houston, TX 77024  
(713) 935-4800

**BID BOND**

Approved by The American Institute of Architects,  
A.I.A. Document No. A 310 February 1970 Edition

KNOWN ALL MEN BY THESE PRESENTS, that we **Dankris Builders Corp. of**

**6 High Street – Unit #1, Plainville, MA 02762** as Principal, hereinafter called the Principal, and the **Great Midwest Insurance Company** duly organized under the laws of the State of Texas with Administrative Offices at 800 Gessner, Houston, TX 77024, as Surety, hereinafter called the Surety, are held firmly bound unto **Town of Natick, 75 West Street, Natick, MA 01700** hereinafter called the Oblige, in the sum of **Five Percent (5%) of the Total Amount Bid Dollars (\$--5%--)**, for the payment of which sum well and truly to be made, and the said Principal and the Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Chemical Feed Upgrades.**

NOW, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter into a Contract with the Oblige in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 27th day of April, 2023

In the presence of:  
(Seal)

By: 

**Dankris Builders Corp.**

By: 

**Luke Baril, President**

(Principal)

(Title)

Witness:

By: 

**GREAT MIDWEST INSURANCE COMPANY (Seal)**

(Surety)

By: 

**Michael T. Dacey, Attorney-In-Fact**



POWER OF ATTORNEY

Great Midwest Insurance Company

KNOW ALL MEN BY THESE PRESENTS, that GREAT MIDWEST INSURANCE COMPANY, a Texas Corporation, with its principal office in Houston, TX, does hereby constitute and appoint: MICHAEL T. DACEY, MARCIA S. DACEY, DINA HOPKINS

its true and lawful Attorney(s)-In-Fact to make, execute, seal and deliver for, and on its behalf as surety, any and all bonds, undertakings or other writings obligatory in nature of a bond.

This authority is made under and by the authority of a resolution which was passed by the Board of Directors of GREAT MIDWEST INSURANCE COMPANY, on the 1<sup>st</sup> day of October, 2018 as follows:

Resolved, that the President, or any officer, be and hereby is, authorized to appoint and empower any representative of the Company or other person or persons as Attorney-In-Fact to execute on behalf of the Company any bonds, undertakings, policies, contracts of indemnity or other writings obligatory in nature of a bond not to exceed Ten Million dollars (\$10,000,000.00), which the Company might execute through its duly elected officers, and affix the seal of the Company thereto. Any said execution of such documents by an Attorney-In-Fact shall be as binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company. Any Attorney-In-Fact, so appointed, may be removed in the Company's sole discretion and the authority so granted may be revoked as specified in the Power of Attorney.

Resolved, that the signature of the President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary, and the seal of the Company may be affixed by facsimile to any certificate of any such power and any such power or certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certificate so executed and sealed shall, with respect to any bond of undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS THEREOF, GREAT MIDWEST INSURANCE COMPANY, has caused this instrument to be signed by its President, and its Corporate Seal to be affixed this 30th day of November, 2020.



GREAT MIDWEST INSURANCE COMPANY

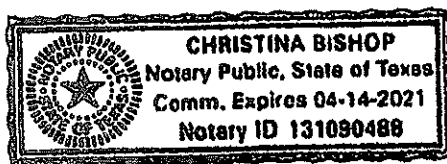
BY

*Mark W. Haushill*

Mark W. Haushill  
President

ACKNOWLEDGEMENT

On this 30th day of November, 2020, before me, personally came Mark W. Haushill to me known, who being duly sworn, did depose and say that he is the President of GREAT MIDWEST INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he executed said instrument on behalf of the corporation by authority of his office under the By-laws of said corporation.



BY

*Christina Bishop*

Christina Bishop  
Notary Public

CERTIFICATE

I, the undersigned, Secretary of GREAT MIDWEST INSURANCE COMPANY, A Texas Insurance Company, DO HEREBY CERTIFY that the original Power of Attorney of which the foregoing is a true and correct copy, is in full force and effect and has not been revoked and the resolutions as set forth are now in force.

Signed and Sealed at Houston, TX this 27th Day of April 20 23



BY

*Leslie K. Shaunty*

Leslie K. Shaunty  
Secretary

WARNING: Any person who knowingly and with intent to defraud any insurance company or other person, files and application for insurance of claim containing any materially false information, or conceals for the purpose of misleading, information concerning any fact material thereto, commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties.

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

BID FORM FOR FILED SUB-BIDS

TO ALL GENERAL BIDDER EXCEPT THOSE EXCLUDED:

- A. The undersigned proposes to furnish all labor and materials required for completing the Chemical Feed Upgrades, in accordance with the Contract Documents, all the work specified in Division 16 Electrical of the specifications and in any plans specified in such section; prepared by Haley Ward, Inc., Engineers for Chemical Feed Upgrades in Natick, Massachusetts, for the contract sum of:

LUMP SUM SUBCONTRACT PRICE DIVISION 16 (\$ 83,000)  
(figures)

Eighty Three Thousand  
(price in words)

- B. These Sub-Bids include Addenda Numbered 7.

- C. These Sub-Bids

☐ may be used by any General Bidder except:

\_\_\_\_\_

☐ may only be used by the following General Bidders:

\_\_\_\_\_

(Instructions: To exclude General Bidders, insert "X" in one box only and fill in the names of the excluded General Bidders in the blank space following that box. Do not answer this Section C if no General Bidders are excluded.)

D. The Undersigned agrees that, if he is selected as a Sub-Bidder, he will, within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation of a Subcontract by the General Bidder selected as the General Contractor, execute with such General Bidder a Subcontract in accordance with the terms of this Sub-Bid, and contingent upon the execution of the General Contract, and, if requested so to do in the General Bid by such General Bidder, who shall pay the premiums therefor, or if prequalification is required pursuant to section 44D3/4, furnish a Performance and Payment Bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority, in the full sum of the Subcontract price.

E. The names of all persons, firms and corporations furnishing to the Undersigned labor or labor and materials for the class or classes or part thereof of work for which the provisions of the section of the specifications for this sub-trade require a listing in this paragraph, (including the Undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the specifications), the name of each such class of Work or part thereto and the Bid Price for each such class of Work or part thereof are:

| Name | Class of Work | Bid Price |
|------|---------------|-----------|
|      |               |           |
|      |               |           |
|      |               |           |
|      |               |           |

(Do not give Bid Price for any class or part thereof furnished by Undersigned)

F. The Undersigned agrees that the above list of Bids to the Undersigned represents bona fide bids based on the hereinbefore described plans, specifications and addenda and that, if the Undersigned is awarded the Contract, they will be used for the Work indicated at the amounts stated, if satisfactory to the Awarding Authority.

G. The Undersigned further agrees to be bound to the General Contractor by the terms of hereinbefore described plans, specifications (including all general conditions stated therein) and addenda, and to assume toward him all the obligations and responsibilities that he, by those documents, assumes toward the OWNER.

H. The Undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications:

1. Have been in business under present business name

Twenty three (23) years.  
(No. of years)

2. Ever failed to complete any work awarded? N/D  
(yes or no)

3. List one (1) or more recent buildings with names of the General Contractor and Engineer/Architect on which you served as a Subcontractor for work of similar character as required for the above-named building.

| Building  | Engineer/<br>Architect | General<br>Contractor | Amount of<br>Contract |
|---|------------------------|-----------------------|-----------------------|
| City of Gloucester,<br>(a) Babson Water Treatment Station<br>Plant Raw Water Sys. | State                  | Waterline             | \$290,291             |
| Town of West Newbury<br>(b) Chemical Injection Bldg. Tota & Howard                | Dankris Bldrs.         |                       | \$157,930             |
| City of Gloucester<br>(c) Water Pollution Control Environmental<br>Partners       | D+C Construction       |                       | \$200,221             |

4. Bank reference Santander Bank, Foxboro, MA

I. 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.

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

Date April 13, 2023

JASCO ELECTRIC, INC

(Name of Sub-bidder)

By Jeffrey A Schnurr  
JEFFREY A SCHNURR, PRESIDENT

(Title and Name of Person Signing Bid)

456 Rear West Central St., Franklin, MA 02038  
(Business Address)

FRANKLIN, MA 02038  
(City and State)

THIS SUB-BID SUBMITTED ON APR 13 2023

By

Signature

JEFFREY A SCHNURR

Printed Name

PRESIDENT

Printed Title

By JASCO ELECTRIC, INC

(Corporation Name)

MASSACHUSETTS

(State of Incorporation)

(Corporate Seal)

Attest

(Secretary)

Mary C. Schnurr

Business Address: 456 REAR WEST CENTRAL ST

FRANKLIN, MA 02038

Phone Number: (508) 520-2055

E-mail Address: JEFF@JASCOELECTRIC<sup>INC</sup>.COM

Fax: 508 520-2077

Subcontractor's Certification

Name of Project CHEMICAL FEED UPGRADES  
CONT. # W-165

Prior to the award of any subcontract, regardless of tier, the prospective Subcontractor must execute and submit to the Contractor the following certification, which is deemed a part of the resulting contract:

SUBCONTRACTOR'S CERTIFICATION

JASCO ELECTRIC, INC certifies that

1. it intends to use the following listed construction trades in the work under the subcontract  
\_\_\_\_\_; and
2. will comply with the minority manpower ratio and specific affirmative action steps contained herein; and
3. will obtain from each of its Subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the Subcontractor certification required by these bid conditions.

  
(Signature of authorized representative of Subcontractor)

JEFFREY A SCHNURR

Printed Name

PRESIDENT

Printed Title

In order to ensure that the said Subcontractor's certification becomes a part of all subcontracts under the contract, no subcontract shall be executed until an authorized representative of the Town agency (or agencies) administering this project has determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

## CERTIFICATE OF NON-COLLUSION

The undersigned as Sub-Bidder certifies under penalties of perjury that this Bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, business, joint ventures, partnership, corporation or other organization, entity or group of individuals.

Name of Sub-Bidder

JASCO ELECTRIC, INC.  
456 REAR WEST CENTRAL ST.  
FRANKLIN MA 02038  
Address of Sub-Bidder

By:

  
Signature

JEFFREY A SCHURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date

## CERTIFICATE OF NON-DEBARMENT

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine or any other applicable debarment provisions of any other chapter of the General Law or any rule or regulation promulgated thereunder.

Name of Sub-Bidder

JASCO ELECTRIC, INC.  
456 REAR WEST CENTRAL ST  
FRANKLIN, MA 02038  
Address of Sub-Bidder

By: 

Signature

JEFFREY A. SCHNURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date



## TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. Chapter 62C, Section 49A, the undersigned hereby certifies under penalty of perjury that JASCO ELECTRIC, INC has complied with all laws of the Commonwealth of Massachusetts relating to taxes, to the reporting of employees and contractors, and to the withholding and remitting of child support.

JASCO ELECTRIC, INC  
Name of Sub-Bidder

456 REAR WEST CENTRAL ST

FRANKLIN, MA 02038  
Address of Sub-Bidder

By: 

Signature

JEFFREY ASCHNURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date

## CONFLICT OF INTEREST CERTIFICATION

The Sub-Bidder named below hereby certifies that:

1. The Sub-Bidder has not given, offered, or agreed to give any gift, contribution, or, offer of employment as an inducement for, or in connection with, the award of a contract for these services.
2. No consultant to, or, subcontractor for the Sub-Bidder has given, offered, or agreed to give any gift, contribution, or, offer of employment to the Sub-Bidder, or, to any other person, corporation, or entity as an inducement for, or, in connection with, the award to the consultant or subcontractor of a contract by the Sub-Bidder.
3. No person, corporation, or, other entity, other than a bona fide full time employee of the Sub-Bidder has been retained or hired to solicit for or in any way assist the Sub-Bidder in obtaining the contract for services upon an agreement or understanding that such person, corporation, or entity be paid a fee or other compensation contingent upon the award of the contract to the Sub-Bidder.
4. The Sub-Bidder named below understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Sub-Bidder with respect to the services outlined in the Project Manual.
5. The Sub-Bidder understands that the Sub-Bidder, its officers, employees, agents, subcontractors and affiliated agencies, shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

Name of Sub-Bidder

JASCO ELECTRICAL, INC  
456 REAR WEST CENTRAL ST.  
FRANKLIN, MA 02038  
Address of Sub-Bidder

By: 

Signature

JEFFREYA SCHNURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date

CERTIFICATE AS TO CORPORATE SUB-BIDDER

I, MARY C. SCHNURR certify that I am the SECRETARY of the corporation named as Sub-Bidder in the Sub-Bid included herein; that JEFFREY A. SCHNURR, who signed said Sub-Bid on behalf of the Sub-Bidder was then PRESIDENT of said corporation; that I know his signature; that his signature thereon is genuine and that said Sub-Bid was duly signed, sealed and executed for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

Mary C. Schnurr  
Secretary/Clerk

Dated: APRIL 13, 2023

Name of Sub-Bidder

JASCO ELECTRIC, INC.  
456 REAR WEST CENTRAL ST.  
FRANKLIN, MA 02038  
Address of Sub-Bidder

By:

[Signature]  
Signature

JEFFREY A. SCHNURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
CERTIFICATION

The undersigned agrees that if he is selected as the Sub-contractor, he shall comply with the provisions of M.G.L. Chapter 30, Section 39S.

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 in 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 all employees to be employed in the work subject to this Sub-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.

Name of Sub-Bidder

JASCO ELECTRIC, INC.  
456 REAR WEST CENTRAL ST.  
FRANKLIN, MA 02038  
Address of Sub-Bidder

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

Signature

JEFFREY A. SCHNURR  
Printed Name

PRESIDENT  
Printed Title

APRIL 13, 2023  
Date

END OF BID FORM FOR FILED SUB-BIDS



Liberty Mutual Surety  
Attention: LMS Claims  
P.O. Box 34526  
Seattle, WA 98124  
Phone: 206-473-6210  
Fax: 866-548-6837  
Email: HOSCL@libertymutual.com  
www.LibertyMutualSuretyClaims.com

## The Ohio Casualty Insurance Company BID OR PROPOSAL BOND

KNOW ALL MEN BY THESE PRESENTS, That we, Jasco Electric, Inc.

of 456 Rear West Central Street, Franklin, MA 02038

(hereinafter called the Principal) as Principal, and The Ohio Casualty Insurance Company, with its principal office in the City of Boston, Massachusetts (hereinafter called the Surety), as Surety, are held and firmly bound unto Town of Natick

of 13 E Central St, Town Hall, Natick, MA 01760

(hereinafter called the Obligor) in the penal sum of Five Percent of Bid Amount

Dollars 5% of Bid Amount 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, successors and assigns.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the Principal has submitted the accompanying bid dated April 13, 2023 for Electrical Work for Chemical Feed Upgrades

NOW, THEREFORE, if the Obligor shall make any award according to the terms of said bid and the Principal shall enter into a contract with said Obligor in accordance with the terms of said bid and provide a bond for the faithful performance thereof within the time specified; or if no time is specified within thirty days after the date of said award; or if the Principal shall, in the case of failure so to do, indemnify the Obligor against any loss the Obligor may suffer directly arising by reason of such failure, not exceeding the penalty of this bond, then this obligation shall be null and void; otherwise to remain in full force and virtue.

Signed, sealed and dated: April 13, 2023

Jasco Electric, Inc.

Principal

By: 

The Ohio Casualty Insurance Company

By: 

Marcia W. Thompson

(Attorney-in-fact)



BID-0018206

LMS-20885e 11/17



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

The Ohio Casualty Insurance Company  
**POWER OF ATTORNEY**

Principal: Jasco Electric, Inc.

Agency Name: CHARLES RIVER INS BROKERAGE INC

Bond Number: BID-0018206

Obligee: Town of Natick

Bid Bond Amount: ( 5% of Bid Amount ) Five Percent of Bid Amount

KNOW ALL PERSONS BY THESE PRESENTS: that The Ohio Casualty Insurance Company, a corporation duly organized under the laws of the State of New Hampshire (herein collectively called the "Company"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint Marcia W. Thompson in the city and state of FRAMINGHAM, MA, each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Company in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of the Company has been affixed thereto this 26th day of September, 2016.



The Ohio Casualty Insurance Company

By:

David M. Carey  
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss  
COUNTY OF MONTGOMERY

On this 26th day of September, 2016, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of The Ohio Casualty Insurance Company and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



Commonwealth of Pennsylvania - Notary Seal  
Teresa Pastella, Notary Public  
Montgomery County  
My commission expires March 28, 2025  
Commission number 1126044  
Member, Pennsylvania Association of Notaries

By:

Teresa Pastella  
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-law and Authorizations of The Ohio Casualty Insurance Company, which is now in full force and effect reading as follows:

**ARTICLE IV - OFFICERS: Section 12. Power of Attorney.**

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**Certificate of Designation** - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature or electronic signatures of any assistant secretary of the Company or facsimile or mechanically reproduced or electronic seal of the Company, wherever appearing upon a certified copy of any power of attorney or bond issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of The Ohio Casualty Insurance Company do hereby certify that this power of attorney executed by said Company is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Company this 13th day of April, 2023.



By:

Renee C. Llewellyn  
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.



*The Commonwealth of Massachusetts*  
*Executive Office for Administration and Finance*  
*Division of Capital Asset Management and Maintenance*  
*One Ashburton Place*  
*Boston, Massachusetts 02108*

*Tel: (857) 204-1305*

*Fax: (617) 727-8284*

CHARLES D BAKER

GOVERNOR

KARYNE E. POLITO

LIEUTENANT GOVERNOR

*Email: Certification.DC.AMM@mass.gov*

MICHAEL J. HEFFERNAN

SECRETARY

ADMINISTRATION & FINANCE

CAROL W. GLADSTONE

COMMISSIONER

**Filed Sub-Bid**  
**Certificate of Contractor Eligibility**  
**CONTRACTOR IDENTIFICATION NUMBER: 1521**

**This Certificate Shall be Used for Filed Sub-Bids Only.**

- 1. CERTIFICATION PERIOD:** This Certificate is valid from September 27, 2022 to September 26, 2023\*
- 2. CONTRACTOR'S NAME:** Jasco Electric, Inc.
- 3. CONTRACTOR'S ADDRESS:** 456 Rear West Central Street  
Franklin, MA 02038
- 4. WORK CATEGORIES:** This Contractor is certified to file bids under Massachusetts General Laws Chapter 149, Chapter 149A and Chapter 25A in the following Categories of Work:

Electrical

- |                        |                                    |    |
|------------------------|------------------------------------|----|
| <b>5. EVALUATIONS:</b> | Number of Projects Evaluated:      | 4  |
|                        | Average Project Evaluation Rating: | 98 |
|                        | Number of Projects Below Passing:  | 0  |

- 6. SUPPLIER DIVERSITY OFFICE CERTIFICATION: N/A**

Carol W. Gladstone, Commissioner

9/19/2022

Approval Date

**\* NOTICE TO CONTRACTORS:** *If this contractor becomes uncertified for any reason this Certificate will immediately become void. Complete Applications for Renewal of Contractor Eligibility are due no later than three months PRIOR to the Expiration Date of the Certification Period shown above.*

**Reviewer's Initials: KT**

ADDENDUM NO. 3

DATED

APRIL 24, 2023

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

TO ALL BIDDERS OF RECORD:

This Addendum shall be part of the Contract Documents as provided in the Instructions to Bidders of Contract No. W-165. Acknowledgment of receipt of the Addendum shall be made by inserting its number on Page 00300-1 of the General Bid Form and page 00350-1 of the Filed Sub-bids. Failure to do so may subject the bidder to disqualification.

The following changes are to be made to the contract documents to eliminate the application of a secondary containment coating system at the Springvale site.

**Specification Section 09900**

Paragraph 1.4 A. 2. **Delete the words** "Springvale and"

**Delete Paragraph** 1.6 Coating Schedule-Springvale Containment Area in its entirety.

**Renumber** paragraph 1.7 Touch Up **to** 1.6 Touch Up

END OF ADDENDUM



ADDENDUM NO. 2

DATED

APRIL 21, 2023

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

TO ALL BIDDERS OF RECORD:

This Addendum shall be part of the Contract Documents as provided in the Instructions to Bidders of Contract No. W-165. Acknowledgment of receipt of the Addendum shall be made by inserting its number on Page 00300-1 of the General Bid Form and page 00350-1 of the Filed Sub-bids. Failure to do so may subject the bidder to disqualification.

**April 13, 2023 Sub-Bid Opening was held, below is a summary of the Bids Received.**

**DIVISION 16 – ELECTRICAL**

| <u>BIDDER</u>  | <u>BID AMOUNT</u>    |
|--|----------------------|
| 1. <u>Jasco Electric, Inc.</u>   | <u>\$ 83,000.00</u>  |
| 2. <u>Richard T. Losordo</u>   | <u>\$ 142,000.00</u> |
| 3. <u>Fall River Electrical Associates</u><br>May be used by any General Bidder except<br>Waterline Industries | <u>\$ 176,925.00</u> |
| 4. <u>Dagle Electrical Co.</u>   | <u>\$ 194,490.00</u> |

A pre-bid was held on April 6, 2023 with the following questions that required a response through addendum.

Question from the pre-bid meeting.

Q1. Does pvc pipe have to be CPVC, was it specified?

A. Yes specification section 15064 requires PVC pipe to be chlorinated polyvinyl chloride. All drawing references to PVC shall mean CPVC and shall be as specified as schedule 80.

The following changes are to be made to the contract documents.

### **Specification Section 15094**

Insert the attached specifications section 15094 into the Contract Documents.

Insert "15094 Pipe Hangers and Supports 15094-1 thru 15094-3" into Division 15 Index page.

Insert "15094 Pipe Hangers and Supports" into the Table of Contents for Division 15.

### **Specification Section 15100**

Paragraph 2.1 B: Insert the following after 2.1 B.3.

4. PVC ball valves shall be true union ball valves model 161 546 354 Type 546 1" DN25 by Georg Fischer.

### **Drawing M2**

See attached revised drawing M2, change includes the reconnection of the existing H&T chlorine transfer pump not shown on drawings. Contractor to install new PVC tee to connect the existing pump and piping. Existing chlorine transfer pump transfer chlorine to the H&T GAC building.

### **Drawing M3**

See attached revised drawing M3, change includes leaving both tanks inside the containment area, provided they can be located to allow half of the floor area to be coated, then relocate tanks to the other side of area to allow the remaining half to be coated.

**Drawing M4:** Same text change as Drawing M3.

### **Schedule Clarification**

The work shall be scheduled so that WTP downtime is limited as much as possible to allow Natick to meet system water demand. Tonka, H&T & Elm Bank are the major water sources for Natick. The following minimum procedures should be adopted.

1. Installing day tanks and piping from day tanks before taking the H&T & Tonka existing chlorine piping and pumps out of service.
2. Removing existing feed pump control panels after the day tanks and majority of the piping has been completed.
3. Installing the transfer pump control panels and feed pump controls panels when the H&T & Tonka piping is being replaced.
4. Elm Bank and Tonka/H&T offline at the same time.

**END OF ADDENDUM #2**

## SECTION 15094

### PIPE HANGERS AND SUPPORTS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide pipe supports, including in general, all metallic hanging and supporting devices for supporting piping, unless noted on the Drawings or specified herein otherwise.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 15064 Plastic Pipe and Fittings

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Hangers and supports shall be of an approved standard design capable of supporting the load under all operating conditions.
- C. All pipe and appurtenances connected to equipment shall be supported in such a manner as to prevent any strain being imposed on the equipment. When manufacturers have indicated requirements that piping loads shall not be transmitted to their equipment, submit certification stating that such requirements have been complied with.
- D. Codes and regulations:
  - 1. In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies having jurisdiction.
  - 2. In the event of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements;

3. Shop drawings and other data as required to indicate method of installing and attaching equipment, except where such details are fully shown on the Drawings.

#### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

### PART 2 - PRODUCTS

- 2.1 Unless otherwise specified here, pipe hangers and supports shall be manufactured by Grinnell Co., Inc., Carpenter and Patterson, Inc., or equal. Any references to a specific figure number of a specific manufacturer is for the purpose of establishing a type and quality of product and shall not be considered as proprietary. Any item comparable in type, style, quality, design and performance will be considered for approval.

#### 2.2 HANGERS AND SUPPORTS SCHEDULE: Catalog numbers refer to Grinnell.

- A. CPVC pipe attached to FRP rail or other non anchored plates.
  1. Stand off two hole pipe strap equal to Grinnell 1-SOSR
  2. Zinc elector-Galvanized finish.
- B. CPVC pipe attached to wall.
  1. Split ring Hanger two screw equal to Grinnell 1-FIG 38C
  2. Threaded rod to be stainless steel
  3. Hanger to be Copper Powder epoxy coated.
- C. Adjustable Pipe Support
  1. Adjustable pipe supports shall be equal to Grinnell Fig. No. 264.
  2. Supporting pipe shall be schedule forty (40) galv. steel pipe with a flange base.

#### 2.3 FASTENERS AND INSERTS

- A. Fasteners shall be equal to Hilti Drop-In Anchors, Star, Drop-Grip Anchors or equal.
- B. Inserts shall be equal to P3200 Series by Unistrut.

#### 2.4 FINISHES

- A. All rods, clamps, hangers, inserts, anchor bolts, brackets and components for interior pipe supports shall be furnished with galvanized finish. Supports for copper pipe shall be copper plated or shall have a 1/16-inch plastic coating.

## PART 3 - EXECUTION

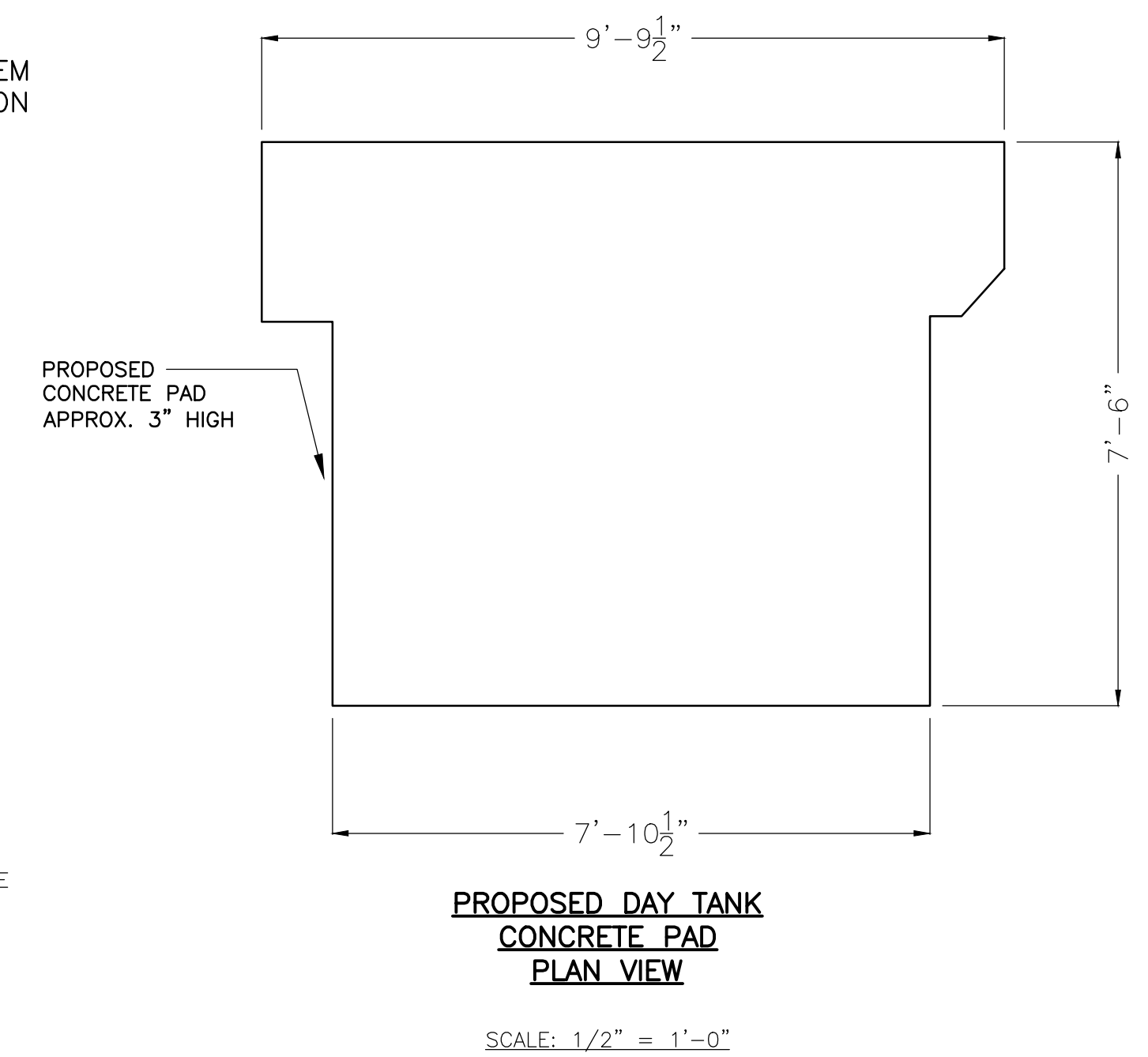
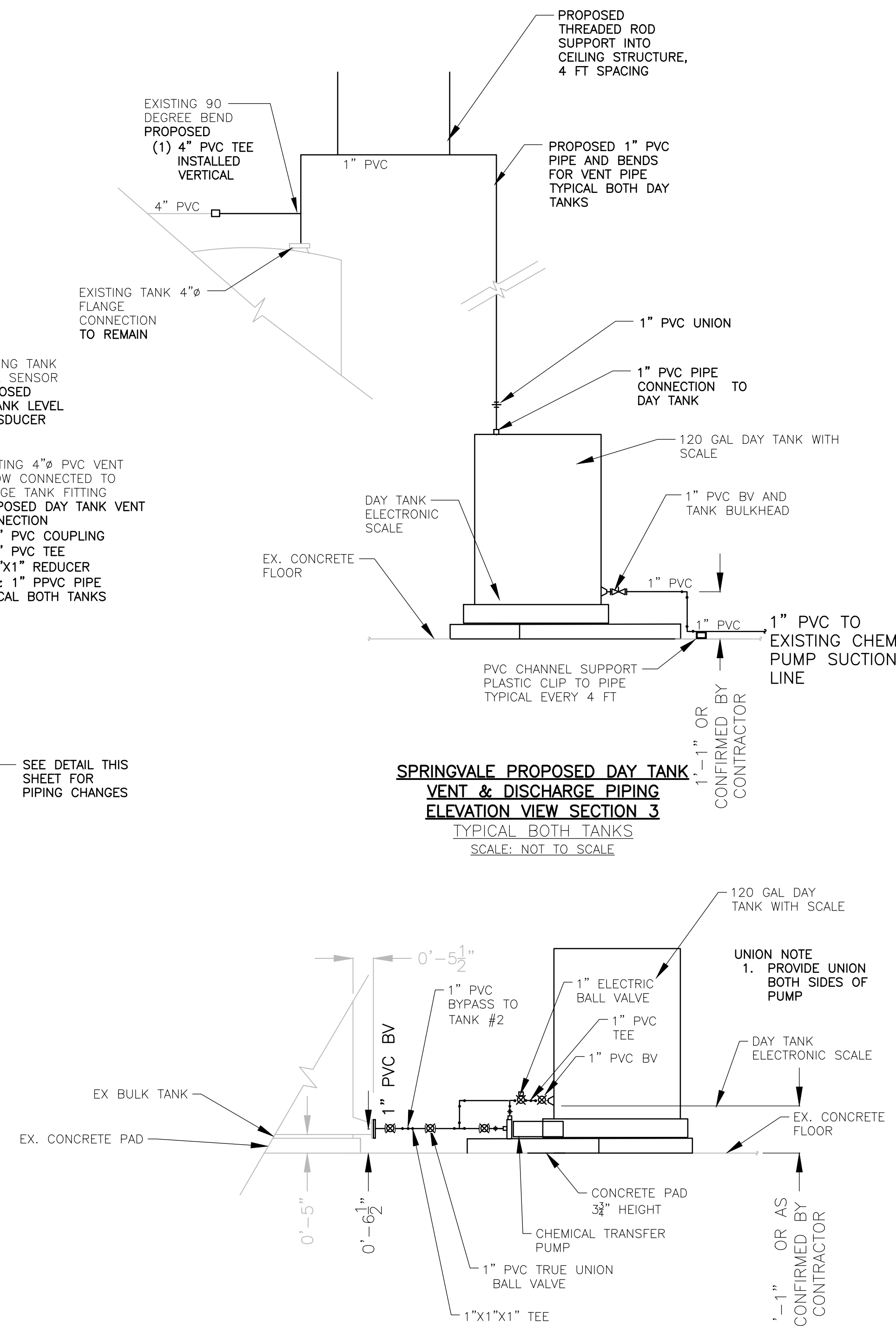
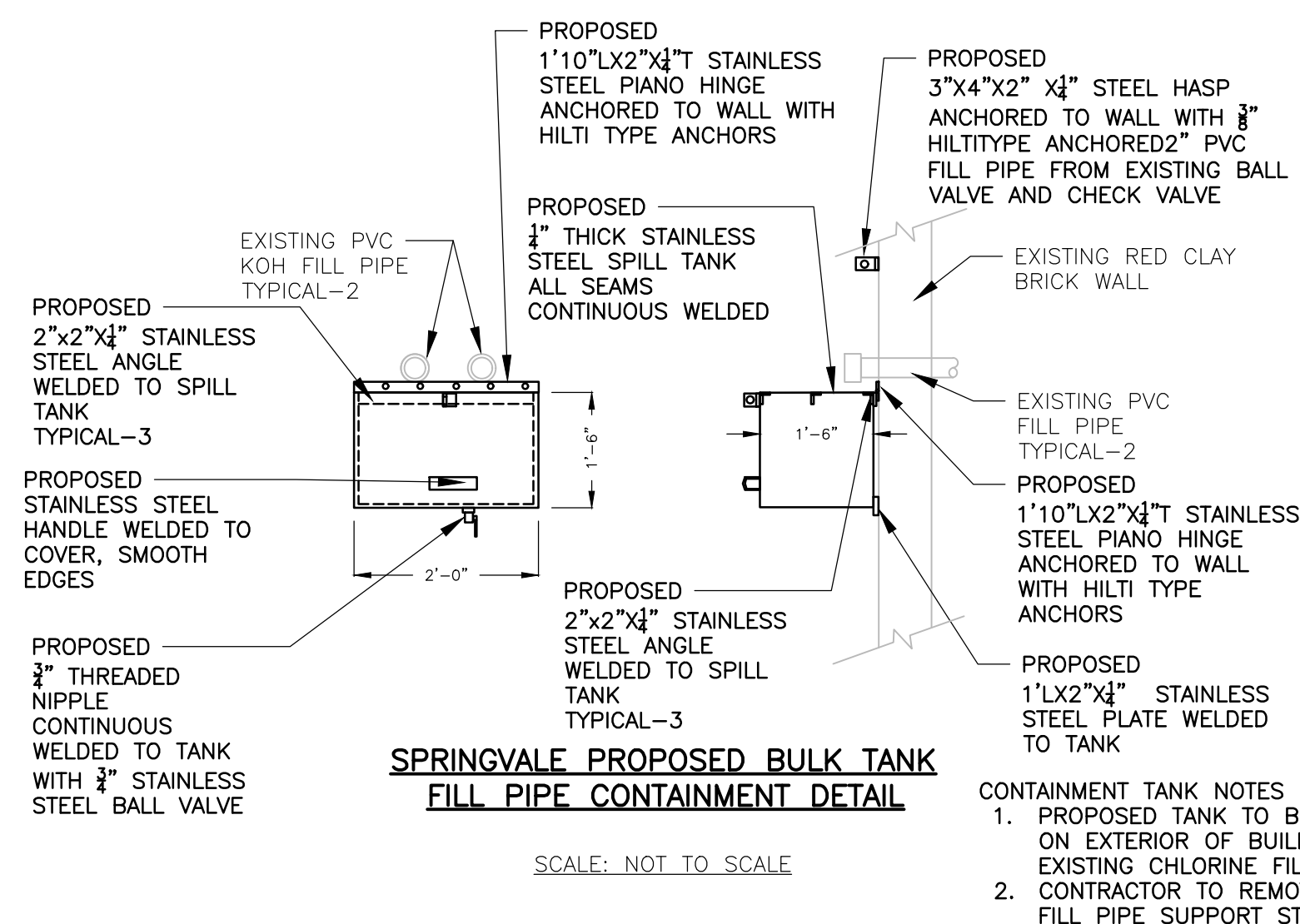
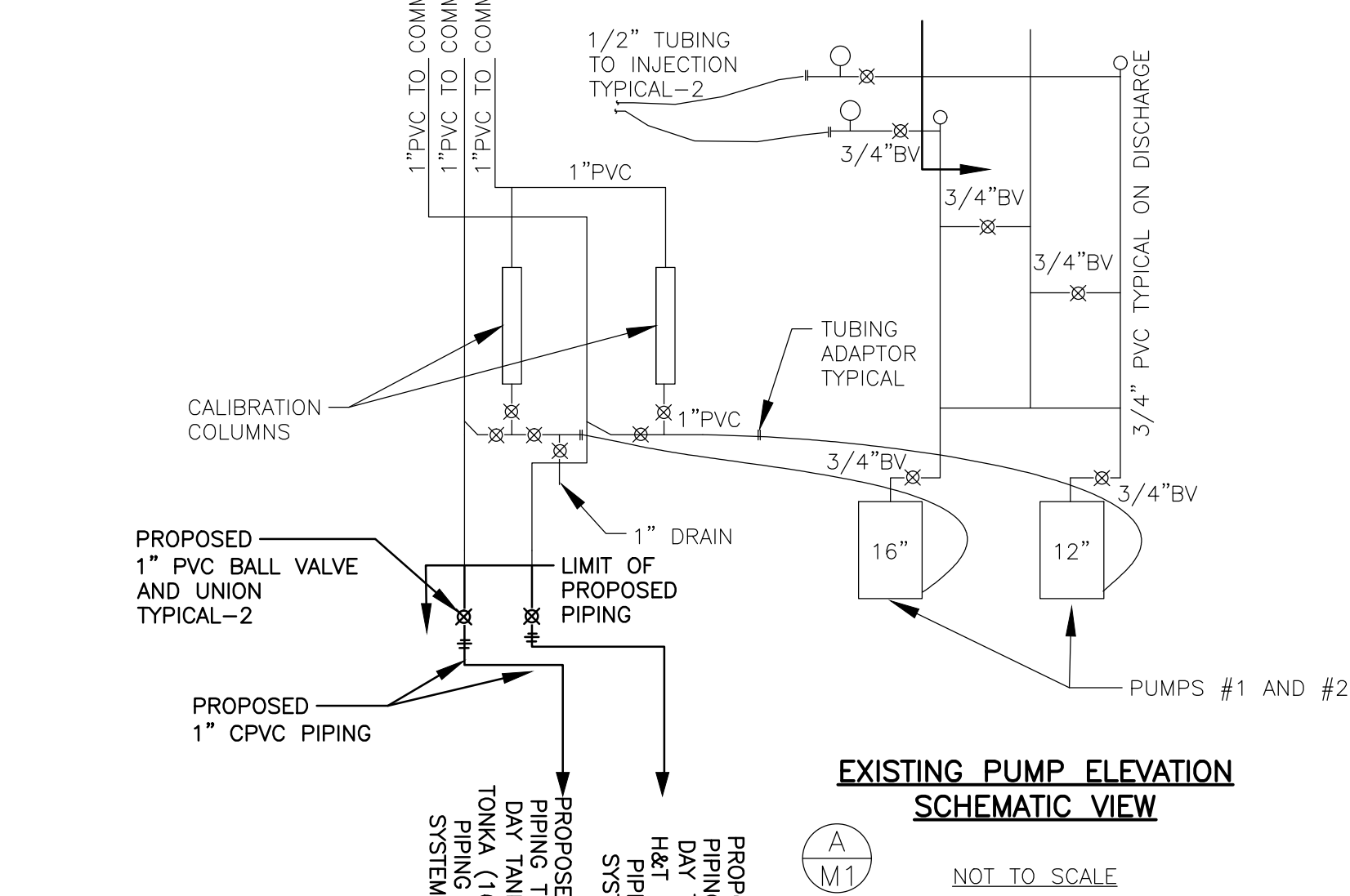
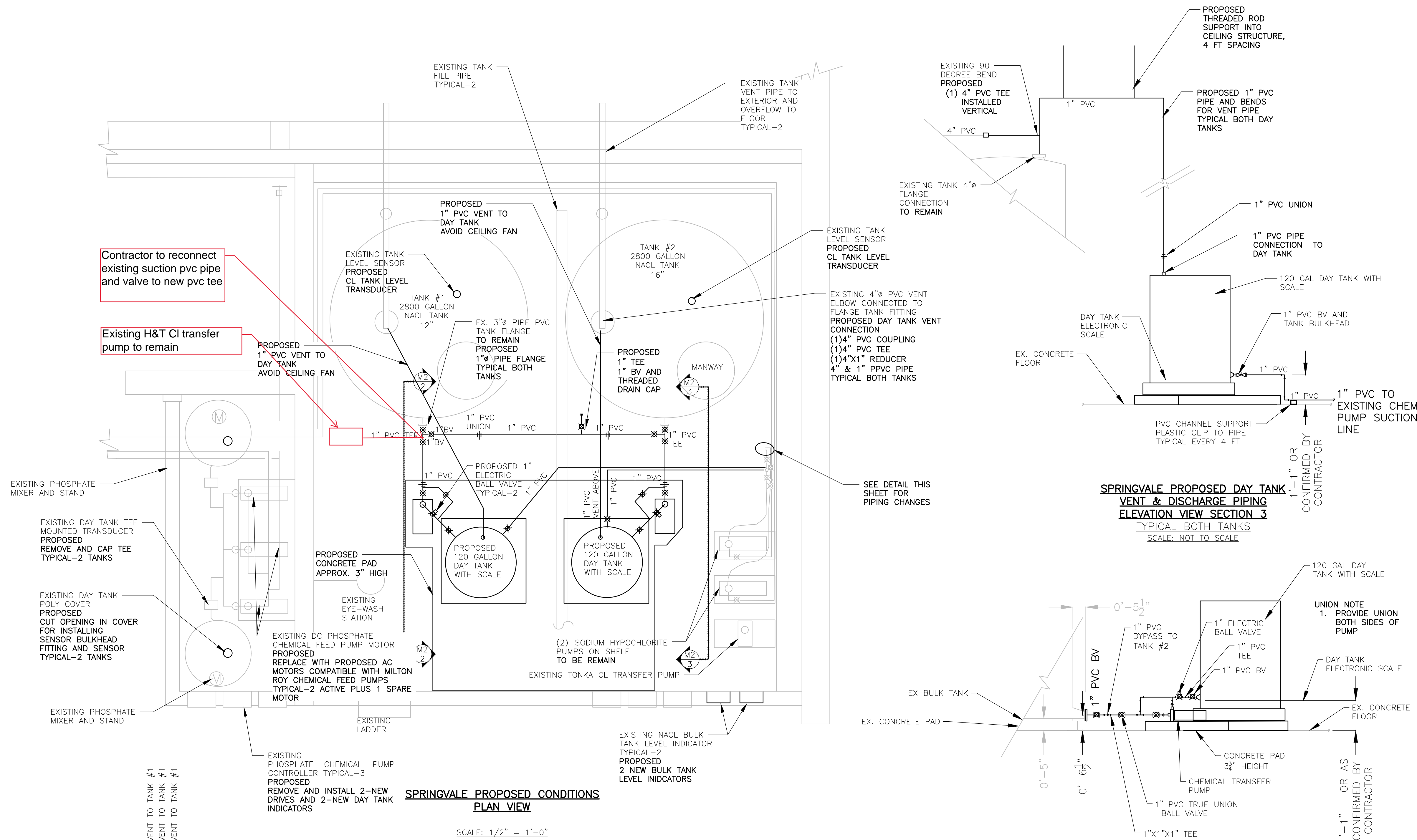
### 3.1 SURFACE CONDITIONS



- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 INSTALLATION

- A. All piping shall be rigidly supported from structures by approved hangers, inserts, or supports with provisions for expansion or contraction.
  - 1. No piping shall be supported from other pipes.
  - 2. Continuous metal inserts shall be embedded flush with the concrete surface.
- B. Pipe supports shall be provided as follows and as shown on the Drawings:
  - 1. Supports for PVC shall be as recommended by the manufacturer except that support spacing shall not exceed three (3) feet.
  - 2. Support spacing for copper tubing shall not exceed five (5) feet.

END OF SECTION



|  |  |             |              |            |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
|--|--|-------------|--------------|------------|-------|------|--|----------|-----|-------------|-----|------------|-----|-------------|-----------------|--|--------------|-------|--|-------------|---------------|--|--|-----|--|--|--|--|
|  <p><b>HALEY WARD</b><br/>ENGINEERING   ENVIRONMENTAL   SURVEYING</p> <p>63 Great Road, Suite 200<br/>Maynard, Massachusetts 01754<br/>978.648.6025</p> <p><a href="http://WWW.HALEYWARD.COM">WWW.HALEYWARD.COM</a></p> |  |             |              |            |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
| <p>PROJECT</p> <p><b>TOWN OF NATICK, MASSACHUSETTS<br/>SELECT BOARD<br/>CHEMICAL FEED UPGRADES</b></p>   |  |             |              |            |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
| <p>TITLE</p> <p><b>PROPOSED SPRINGVALE<br/>DAY TANKS, PIPING &amp;<br/>APPURTENANCES</b></p>   |  |             |              |            |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
|   | <table border="1"> <tr> <td>DATE</td> <td colspan="2">2023.1.20</td> <td>SCALE</td> <td colspan="2">NONE</td> </tr> <tr> <td>DRAWN BY</td> <td>LJC</td> <td>DESIGNED BY</td> <td>GJE</td> <td>CHECKED BY</td> <td>GJE</td> </tr> <tr> <td>PROJECT No.</td> <td colspan="2">3010133.NAT-493</td> <td>CONTRACT No.</td> <td colspan="2">W-165</td> </tr> <tr> <td>DRAWING No.</td> <td colspan="3" rowspan="2"> <div>M2</div> </td> <td colspan="2">REV</td> </tr> <tr> <td></td> <td colspan="2"></td> </tr> </table> | DATE        | 2023.1.20    |            | SCALE | NONE |  | DRAWN BY | LJC | DESIGNED BY | GJE | CHECKED BY | GJE | PROJECT No. | 3010133.NAT-493 |  | CONTRACT No. | W-165 |  | DRAWING No. | <div>M2</div> |  |  | REV |  |  |  |  |
| DATE   | 2023.1.20  |             | SCALE        | NONE       |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
| DRAWN BY   | LJC  | DESIGNED BY | GJE          | CHECKED BY | GJE   |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
| PROJECT No.  | 3010133.NAT-493  |             | CONTRACT No. | W-165      |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
| DRAWING No.  | <div>M2</div>  |             |              | REV        |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |
|  |  |             |              |            |       |      |  |          |     |             |     |            |     |             |                 |  |              |       |  |             |               |  |  |     |  |  |  |  |







ADDENDUM NO. 1

DATED

MARCH 31, 2023

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

TO ALL BIDDERS OF RECORD:

This Addendum shall be part of the Contract Documents as provided in the Instructions to Bidders of Contract No. W-165. Acknowledgment of receipt of the Addendum shall be made by inserting its number on Page 00300-1 of the General Bid Form and Page 00350-1 of the Field Sub-Bids. Failure to do so may subject the bidder to disqualification.

Drawing M2 Eliminate the proposed day tank concrete pad from the work at Springvale.

Insert the following note on Drawing M2.

"Proposed RFP angle or channel to be installed under each of the 2 transfer pumps, approximately 2" high, pump anchored to channel and channel anchored to floor"

Insert the following note on Drawing M2.

"Proposed square ½" PE or FRP panel, sized to the outer dimensions of the day tank scale feet shall be installed under each day tank, not to be anchored to floor"



**Town of Natick**  
**Invitation for Bids**  
**Contract No. W-165**  
**Bid**  
**CHEMICAL FEED UPGRADES**

**SEALED GENERAL BIDS will be received at the Procurement Office by:**

**Date:** **April 27, 2023**  
**Time:** **9:00 A.M. Local Time**  
**Place:** **DPW Building**  
**75 West Street**  
**Natick, MA 01760**

**SEALED FILED SUB-BIDS will be received at the Procurement Office by:**

**Date:** **April 13, 2023**  
**Time:** **9:00 A.M. Local Time**  
**Place:** **DPW Building**  
**75 West Street**  
**Natick, MA 01760**

***Haley Ward, Inc.***  
63 Great Road, Suite 200  
Maynard, Massachusetts 01754  
PHONE: (978) 648-6025 FAX: (978) 648-6068



## TABLE OF CONTENTS

### INTRODUCTORY PAGES

#### DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS

|       |                                    |
|-------|------------------------------------|
| 00030 | Invitation for Bids                |
| 00100 | Instructions to Bidders            |
| 00300 | Bid                                |
| 00310 | Bid Bond                           |
| 00350 | Bid Form for Sub-Bid               |
| 00400 | Subcontract Agreement              |
| 00500 | Notice of Award                    |
| 00510 | Agreement                          |
| 00520 | Notice to Proceed                  |
| 00610 | Performance Bond                   |
| 00620 | Payment Bond                       |
| 00700 | General Conditions                 |
| 00800 | Supplementary Conditions - Part I  |
| 00810 | Supplementary Conditions - Part II |

### SPECIFICATIONS

#### DIVISION 1 - GENERAL REQUIREMENTS

|       |  |
|-------|--|
| 01010 | Summary of the Work                      |
| 01015 | Price Adjustments for Specific Materials |
| 01025 | Measurement and Payment                  |
| 01026 | Schedule of Values                       |
| 01027 | Application for Payment                  |
| 01036 | Changes in Contract Work, Cost or Time   |
| 01092 | Abbreviations                            |
| 01200 | Project Meetings                         |
| 01310 | Construction Schedules                   |
| 01340 | Submittals and Substitutions             |
| 01500 | Temporary Facilities                     |
| 01505 | Mobilization                             |
| 01601 | Control of Materials                     |
| 01610 | Product Handling                         |
| 01700 | Contract Closeout                        |
| 01710 | Cleaning                                 |
| 01730 | O and M Manual                           |

### DIVISION 3 – CONCRETE

|       |                        |
|-------|------------------------|
| 03100 | Concrete Formwork      |
| 03200 | Concrete Reinforcement |
| 03202 | Wall Penetration       |
| 03300 | Cast-In-Place Concrete |
| 03345 | Concrete Finishing     |

### DIVISION 9 - FINISHES

|       |          |
|-------|----------|
| 09900 | Painting |
|-------|----------|

### DIVISION 11 – EQUIPMENT

|       |   |
|-------|---|
| 11349 | Chemical Feed Systems and Appurtenances |
| 11500 | Materials Handling                      |

### DIVISION 13 – SPECIAL CONSTRUCTION

|       |                 |
|-------|-----------------|
| 13310 | Instrumentation |
|-------|-----------------|

### DIVISION 15 - MECHANICAL

|       |                           |
|-------|---------------------------|
| 15064 | Plastic Pipe and Fittings |
| 15100 | Valves and Appurtenances  |
| 15190 | Mechanical Identification |

### DIVISION 16 – ELECTRICAL

|       |                                 |
|-------|---------------------------------|
| 16000 | Electrical – General Provisions |
| 16110 | Raceways and Fittings           |
| 16120 | Wires and Cables                |
| 16191 | Miscellaneous Equipment         |
| 16483 | Variable Speed AC Drives        |

SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

INVITATION FOR BIDS

Bid

Pursuant to the provisions of Chapter 149, Sections 44A to 44H, inclusive, of the Massachusetts General Laws, the Town of Natick, Massachusetts, Natick Town Hall, 13 East Central Street, Natick, MA 01760, the Awarding Authority, (hereinafter referred to as "Owner"), by the Natick Select Board, will receive sealed bids for the General Contract from responsible and eligible bidders for the Chemical feed Upgrades (Contract No. W-165) until 9:00 A.M., Thursday, April 27, 2023 (local time), at the Procurement Office, located in the DPW Building, 75 West Street, Natick, MA 01760, at which time they will be opened in the presence of a witness, read, and registered. The general bid opening will be viewable on ZOOM at the following site: Join Zoom Meeting <https://us06web.zoom.us/j/89975389280> Meeting ID: 899 7538 9280 One tap mobile +16469313860,,89975389280# US +19292056099,,89975389280# US (New York)/. Sealed Bids for the Filed Sub-Contracts designated herein will be received at the Procurement Office located in the DPW Building, 75 West Street, Natick, MA 01760 until 9:00 A.M., April 13, 2023 (local time), at which time they will be opened in the presence of a witness, read, and registered. The sub-bid opening will be viewable on ZOOM at the following site: Join Zoom Meeting <https://us06web.zoom.us/j/85462837969> Meeting ID: 854 6283 7969 One tap mobile +19292056099,,85462837969# US (New York) +13017158592,,85462837969# US (Washington DC) No faxed, email, late, or conditional bids shall be accepted. If the Procurement Office within the DPW Building is closed due to weather or other emergency, the deadline for receipt of bids shall be extended until 9:00 A.M. local time on the next business day upon which the Procurement Office is open for business.

The DCAMM classification required for the general contractor is "Water Pump Stations or Water Treatment Plants".

The DCAMM classification required for the sub-bidder is "Division 16 - Electrical".

Files sub-contracts will be required on the work described in the following sections of the contract specifications:

|             |            |
|-------------|------------|
| Division 16 | Electrical |
|-------------|------------|

Each and every bid shall be submitted on the Bid Form furnished with the Bidding Documents and shall be sealed in an envelope which is clearly marked in the lower left hand corner "BID FOR CHEMICAL FEED UPGRADES".

A voluntary pre-bid meeting will be held for 9:00 A.M. local time Thursday, April 6, 2023 starting at the Springvale Water Treatment Plant site, 1080 Worcester Road Natick, Massachusetts.

This Invitation for Bids contemplates the following Work to be performed: chemical feed

upgrades at the Springvale and Elm Bank water treatment plant sites including but not limited to day tanks, day tank scales, transfer pumps, electrical and instrumentation work.

The Contractor shall supply all labor and materials and equipment necessary to complete the work shown on the Contract Drawings and hereafter contained in the Specifications.

Bidding Documents are available in electronic PDF file format and hard copy format. Electronic file can be obtained by contacting Haley Ward at (978) 648-6025 or at [aford@haleyward.com](mailto:aford@haleyward.com). Hard copy documents may be obtained from the office of Haley Ward, Inc., 63 Great Road, Suite 200, Maynard, MA 01754-2097, during normal business hours, generally 8:30 A.M. to 4:30 P.M. local time, Monday through Friday, beginning at 9:00 A.M. local time on Wednesday, March 22, 2023.

A complete hard copy set of the Bidding Documents may be obtained from the Engineer, Haley Ward, Inc., for a deposit of One Hundred Dollars (\$100.00) or Twenty Dollars (\$20.00) for plans only in cash or check, made payable to Haley Ward, Inc. This deposit will be refunded to document holders of record who return the Bidding Documents to the Engineer in good condition within fourteen (14) days after the opening of Bids.

All requests for mailing of Bidding Documents shall be accompanied by a separate, nonrefundable handling and mailing fee in the amount of Twenty-Five Dollars (\$25.00) in cash or a separate check made payable to Haley Ward, Inc. One (1) set of Bidding Documents will be furnished for the deposit and mailing fee stated.

Complete instructions for filing Bids are included in the Instructions to Bidders. Every Bid shall be submitted in full accordance with those Instructions to Bidders. Bids shall be valid only when accompanied by all of the following: (1) a fully completed and properly executed "Bid Form for General Bid", in the case of a Bid for the General Contract, or "Bid Form for Filed Sub-Bid", in the case of a Bid for a Filed Sub-Contract; (2) Bid security in the amount of five percent (5%) of the amount bid, in a form as described in the Instructions to Bidders and made payable to the "Town of Natick Select Board"; (3) a copy of a "Certificate of Eligibility" issued by the Deputy Commissioner of the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) showing that the Bidder has the classification and capacity rating to perform the work required; and (4) an update statement in such form as the Deputy Commissioner of DCAMM shall prescribe.

Wage rates paid under this Contract are subject to the minimum prevailing wage rates established under the provisions of Chapter 149, Sections 26 to 27G inclusive of the Massachusetts General Laws.

The successful Bidder shall furnish a Performance Bond in the amount of one hundred percent (100%) of the amount of the Contract and a Payment Bond in the amount of one hundred percent (100%) of the amount of the Contract with a surety company which is acceptable to Owner.

No Bidder may withdraw his Bid for a period of thirty (30) days (Saturdays, Sundays and legal holidays excluded) after the actual date of the opening of the General Bids.

Bids for this Contract are subject to the provisions of Massachusetts General Laws Chapter 149, Sections 44A *et seq.*

The Owner reserves the right to reject any or all bids or to accept any bid deemed by it to be in the

best interest of the Town of Natick, and to limit the extent of the work to keep within the limits of available funds.

Bidder's attention is directed to the Non-Discrimination in Employment requirements of this Contract. The requirements of these programs are explained in the Instructions to Bidders and in Part I of the Supplementary Conditions of the Contract.

The award of any contract pursuant to this Invitation for Bids is subject to appropriation by Natick Town Meeting.

Town of Natick, Massachusetts

SELECT BOARD

Paul R. Joseph, Chair  
Michael J. Hickey, Jr., Vice-Chair  
Bruce T. Evans, Clerk  
Kathryn M. Coughlin  
Richard Sidney

Town Administrator

James Errickson

Interim Director of Public Works

William Spratt

Haley Ward, Inc., Engineers

Maynard, MA 01754

## **INDEX**

### **INSTRUCTIONS TO BIDDERS**

| <b>ARTICLE</b> | <b>DESCRIPTION</b>                           | <b>PAGE NUMBER</b> |
|----------------|--|--------------------|
| 1.             | Defined Terms and Procedures                 | 00100-1            |
| 2.             | Copies of Bidding Documents                  | 00100-2            |
| 3.             | Qualifications of Bidders                    | 00100-2            |
| 4.             | Examination of Contract Documents and Site   | 00100-3            |
| 5.             | Interpretations and Addenda                  | 00100-5            |
| 6.             | Bid Security                                 | 00100-5            |
| 7.             | Contract Time                                | 00100-6            |
| 8.             | Liquidated Damages                           | 00100-6            |
| 9.             | Substitute or "OR EQUAL" Items               | 00100-7            |
| 10.            | Filed Sub-Bids and Sub-Contracts             | 00100-7            |
| 11.            | Bid Form                                     | 00100-8            |
| 12.            | Submission of General Bids                   | 00100-9            |
| 13.            | Modification and Withdrawal of Bids          | 00100-9            |
| 14.            | Opening of Bids                              | 00100-9            |
| 15.            | Bids to Remain Subject to Acceptance         | 00100-10           |
| 16.            | Award of Contract                            | 00100-10           |
| 17.            | Contract Security and Insurance Certificates | 00100-11           |
| 18.            | Signing of Agreement                         | 00100-11           |
| 19.            | Notice to Proceed                            | 00100-12           |
| 20.            | Sales and Use Tax Exemption                  | 00100-12           |
| 21.            | Laws, Regulations and Permits                | 00100-12           |
| 22.            | Minimum Prevailing Wage Rates                | 00100-12           |
| 23.            | Guarantee                                    | 00100-13           |
| 24.            | Weather Protection                           | 00100-13           |
| 25.            | Nondiscrimination in Employment              | 00100-14           |
| 26.            | Safety                                       | 00100-14           |
| 27.            | Manufacturer's Experience                    | 00100-14           |
| 28.            | Contract Termination                         | 00100-15           |
| 29.            | Unbalanced Bids                              | 00100-15           |



## INSTRUCTIONS TO BIDDERS

### ARTICLE 1. DEFINED TERMS AND PROCEDURES

1.1. Terms used in these Instructions to Bidders that are defined in the Standard General Conditions of the Construction Contract (EJCDC Document 1910-8, latest edition) and in the Supplementary Conditions have the meanings assigned to them in the General Conditions and in the Supplementary Conditions.

1.2. Other terms used in the Bidding Documents and not defined elsewhere have the following meanings which are applicable to both the singular and plural thereof:

1.2.1. Owner - the terms "Owner" and "Town" are interchangeable and shall mean the "Town of Natick, Massachusetts".

1.2.2. Engineer - shall mean Haley Ward, Inc., whose address for all correspondence concerning the Bidding Documents shall be 63 Great Road, Suite 200, Maynard, Massachusetts 01754.

1.2.3. Bidder - shall mean one who submits a Bid directly to Owner.

1.2.4. General Bidder - shall mean one who submits a Bid directly to Owner on the Work.

1.2.5. Filed Sub-Bidder - shall mean one who submits a Bid directly to Owner on the work of a Filed Sub-Contract.

1.2.6. Successful Bidder - shall mean the lowest, qualified, responsible and responsive Bidder, as those terms are defined in M.G.L. c. 149, §44A, to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

1.2.7. Bidding Documents - includes the Invitation for Bids, Instructions to Bidders, the Bid Form and the proposed Contract Documents (which include the Specifications, the Drawings and all Addenda issued prior to receipt of Bids).

1.2.8. Bid Form - shall mean either the "Bid Form for General Bid" or the "Bid Form for Filed Sub-Bid," unless a specific Bid Form is named.

1.2.9. Work - The furnishing all of labor, materials, equipment and other incidentals necessary for or convenient to the successful completion of the Contract and the carrying out of all the duties and obligations imposed by the Contract. Work shall include, in addition to work to be performed on the Contract location in the actual construction process, necessary shop plans, computations, ordering of materials and equipment, fabrication of material, parts and components, etc.

1.2.10. Provide - Wherever the word "provide" is used in the Specifications in reference to work to be performed by the Contractor, it shall be understood to mean "furnished and installed complete in place."

1.3. The procedure which is described in the Bidding Documents for Bidding and Award of a Contract for the Work will be in accordance with the provisions of Chapter 149, Sections 44A through 44H inclusive of the General Laws of the Commonwealth of Massachusetts, as last revised (hereinafter referred to as "M.G.L. c.149" appropriate Section).

## ARTICLE 2. COPIES OF BIDDING DOCUMENTS

### 2.1. DELETED.

2.2. Complete sets of the Bidding Documents may be obtained from the Engineer, during normal business hours, generally 8:30 A.M. to 4:30 P.M. local time, Monday through Friday, beginning on Wednesday, March 22, 2023, for the deposit sum stated in the Invitation for Bids. The deposit will be refunded to document holders of record who return the Bidding Documents to the Engineer in good condition within fourteen (14) calendar days after opening of Bids for work of the General Contract. One (1) set of the Bidding Documents will be furnished for the deposit sum stated in the Invitation for Bids.

2.3. All requests for mailing of Bidding Documents shall be accompanied by a separate nonrefundable mailing fee in the amount stated in the Invitation for Bids. The mailing fee shall be in cash or a separate check made payable to "Haley Ward, Inc.". One (1) set of Bidding Documents will be mailed for the mailing fee stated in the Invitation for Bids.

2.4. CONTRACTOR may request to download Bidding Documents for free by contacting Haley Ward, Inc.

2.5. Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.6. Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

## ARTICLE 3. QUALIFICATIONS OF BIDDERS

3.1. To demonstrate qualifications to perform the Work, each Bidder shall be prepared to submit, within five (5) calendar days of Owner's request, written evidence, such as financial data, previous experience, present commitments, and other such data as may be called for below. Each Bid shall contain evidence of Bidder's qualification to do business in the Commonwealth of Massachusetts or a covenant to obtain such qualification prior to award of the contract.

3.2. Bids shall be valid only when accompanied by all of the following: (1) a fully completed and properly executed "Bid Form for General Bid", in the case of a Bid for the General Contract, (2) Bid security in the amount of five percent (5%) of the amount bid, in a form as described in the Instructions to Bidders and made payable to the "Town of Natick Select Board"; (3) a copy of a "Certificate of Eligibility" issued by the Deputy Commissioner of the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) showing that the Bidder has the classification and capacity rating to perform the work required; and (4) an update statement in such form as the Deputy Commissioner of DCAMM shall prescribe.

Any Bid submitted without the appropriate certification and update statement shall be invalid; and Owner shall reject such Bid.

3.3. Owner reserves the right to reject any Bid if the evidence submitted by such Bidder, or the investigation of such Bidder, fails to satisfy Owner that such Bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

#### ARTICLE 4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1. It is the responsibility of each Bidder before submitting a Bid to: (a) attend the voluntary pre-bid meeting scheduled for 9:00 A.M. EST Thursday, April 6, 2023 starting at the Springvale Water Treatment Plant; (b) examine the Contract Documents thoroughly; (c) visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work; (d) consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work; (e) study and carefully correlate Bidder's observations with the Contract Documents; and (f) notify Engineer of all conflicts, errors or discrepancies in the Contract Documents.

4.2. Reference is made to the Supplementary Conditions for identification of:

4.2.1. Those reports of explorations and tests of subsurface conditions at the site which have been utilized by Engineer in preparation of the Contract Documents. Each Bidder may rely upon the accuracy of the technical data contained in such reports but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for the purposes of bidding or construction.

4.2.2. Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Facilities) which are at or contiguous to the site and which have been utilized by Engineer in preparation of the Contract Documents. Bidder may rely upon the accuracy of the technical data contained in such drawings, but not upon the completeness thereof, for the purposes of bidding or construction.

4.2.3 Copies of such reports and drawings will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.2.1 and 4.2.2 are incorporated therein by reference. Such technical data has been identified and established in the Supplementary Conditions.

4.3. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities or others, and Owner does not assume responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the Supplementary Conditions.

4.4. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Facilities and other physical conditions, and possible changes in the Contract Documents due to differing conditions appear in Paragraph 4.2 and 4.3 of the General Conditions.

4.5. Before submitting a Bid, each Bidder shall, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

4.6. Upon request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, shall clean up, and shall restore the site to its former condition upon completion of such exploration.

4.7. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

4.8. The submission of a Bid shall constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

4.9. The Contract Documents contain the provisions required for the construction of the project. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the Bidder or relieve him from fulfilling any of the conditions of the Contract.

## ARTICLE 5. INTERPRETATIONS AND ADDENDA

5.1. All questions about the meaning or intent of the Contract Documents are to be directed in writing to Engineer. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten (10) calendar days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications shall be without legal effect.

5.2. Addenda may also be issued to modify the Bidding Documents as deemed advisable by Owner or Engineer.

5.3 Addenda notification will be distributed by email to all parties recorded by Haley Ward, Inc. as having received bidding documents. Each Bidder shall download addendums from Haley Ward's website. Alternative methods of distributing addendum shall be requested by the party recorded as receiving bidding documents. Each Bidder shall be responsible for determining that it has received all Addenda that have been issued. If an Addendum notification is issued by email, Engineer will request a return email to verify receipt of the Addendum; however, failure by any Bidder or prospective Bidder to send a return email shall not invalidate the delivery of the Addendum notification.

5.4 Bidder shall be responsible for determining that it has received all Addenda which have been issued.

## ARTICLE 6. BID SECURITY

6.1. Each Bid shall be accompanied by Bid security in the form of a Bid Bond, or cash, or a certified check on, or a treasurer's or cashier's check issued by, a responsible bank or trust company, payable to the Owner. A Bid Bond shall be: (a) in a form satisfactory to Owner; (b) with a surety company qualified to do business in the Commonwealth of Massachusetts and satisfactory to Owner; and (c) conditional upon the faithful performance by the principal of the agreements contained in the Bid.

The amount of such Bid security shall be five (5%) per cent of the PROPOSED CONTRACT PRICE as entered in the Bid Form for General Bid and for sub-bidders the same applies.

6.2. All Bid security of General Bidders, except those of the three (3) lowest responsible and eligible General Bidders, shall be returned within five (5) days (Saturdays, Sundays and legal holidays excluded) after the opening of the General Bids.

The Bid security of the three (3) lowest responsible and eligible General Bidders shall be returned upon the execution and delivery of the General Contract or, if no award is made, within thirty (30) days (Saturday, Sundays and legal holidays excluded) after the opening of the General Bids; except that if any General Bidder who fails to perform its agreement to execute a General Contract and furnish a Performance Bond and also a Labor and Materials or Payment Bond as stated in its Bid in accordance with MGL c.149 Section 44E, its Bid security shall become the property of Owner, as liquidated damages; provided that the amount of the Bid security which becomes the property of Owner shall not, in any event, exceed the difference between its Bid and the Bid of the next lowest responsible and eligible Bidder; and provided further that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the General Bidder, its Bid security shall be returned.

6.3. All Bid securities of Filed Sub-Bidders, except: (a) those of the Filed Sub-Bidders named in the General Bids of the three (3) lowest responsible and eligible General Bidders; and (b) those of the three (3) lowest responsible and eligible Filed Sub-Bidders for each Filed Sub-Contract, shall be returned within five (5) days (Saturdays, Sundays and legal holidays excluded) after the opening of the General Bids. The Bid security of Filed Sub-Bidders not returned pursuant to the provisions of the preceding sentence shall be returned within five (5) days (Saturdays, Sundays and legal holidays excluded) after the execution of the General Contract; except that, if a selected Filed Sub-Bidder fails to perform its agreement to execute a Filed Sub-Contract with the General Bidder selected as the General Contractor, contingent upon the execution of the General Contract, and, if requested to do so in the General Bid by such General Bidder, to furnish a Performance and Payment Bond as stated in its Filed Sub-Bid in accordance with MGL Chapter 149, Section 44F(2), the Bid security of such Filed Sub-Bidder shall become and be the property of Owner, as liquidated damages, provided that, the amount of Bid security which becomes the property of Owner shall not, in any event, exceed the difference between its Filed Sub-Bid and the Filed Sub-Bid of the next lowest responsible and eligible Filed Sub-Bidder; and provided further that, in case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other unforeseen circumstances affecting any such Filed Sub-Bidder, its Bid security shall be returned.

6.4. Any Bid which is not accompanied by Bid security as described in Paragraph 6.1 shall be invalid; and Owner shall reject such Bid.

## ARTICLE 7. CONTRACT TIME

7.1. The number of days within which the Work is to be substantially completed and also completed and ready for final payment (the Contract Times) are set forth in the Bid Form and the Agreement, as may be modified by the General Conditions or Supplementary Conditions.

## ARTICLE 8. LIQUIDATED DAMAGES

8.1. Provisions for liquidated damages are set forth in the Agreement or in the General Conditions or Supplementary Conditions.

## ARTICLE 9. SUBSTITUTE OR "OR-EQUAL" ITEMS

9.1. The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement; all consideration shall comply with M.G.L. c. 30, §39M(b). The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in Paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions and may be supplemented in the General Requirements.

## ARTICLE 10. FILED SUB-BIDS AND SUB-CONTRACTS

10.1. As required by M.G.L. c.149, Section 44F, Bids for Filed Sub-Contracts will be received at the time and place stated in the Advertisement to Bid for the work described in the following Divisions of the Contract Specifications:

Division 16          Electrical

10.2. No later than the second day, Saturdays, Sundays and legal holidays excluded, before the day fixed by Owner for the opening of Bids for the work of the General Contract, Owner or its representative will forward to all parties recorded by Engineer as having received the Bidding Documents, a list of Filed Sub-Bids which were not rejected by Owner. The list will indicate the following:

- 10.2.1. the Section of the Contract Specifications for which the Filed Sub-Bid was received;
- 10.2.2. the Filed Sub-Bidder's name and address;
- 10.2.3. the Filed Sub-Bidder's amount; and
- 10.2.4. any General Bidder's which may be excluded from using the Filed Sub-Bid.

10.3. A Filed Sub-Bidder shall within five (5) days (Saturdays, Sundays and legal holidays excluded) after presentation of a Sub-Contract by the General Bidder selected as the General Contractor:

10.3.1. execute with such General Bidder a Sub-Contract in accordance with the terms of its Sub-Bid, and contingent upon the execution of the General Contract; and

10.3.2. if requested by such General Bidder in its General Bid shall furnish a Performance and Payment Bond of a surety company qualified to do business under the laws of the Commonwealth of Massachusetts and satisfactory to Owner, in the full sum of its Sub-Contract price.

## ARTICLE 11. BID FORM

11.1. The "Bid Form for General Bid" and the "Bid Form for Sub-Bid" are included with the Bidding Documents; additional copies of each form may be obtained from Engineer.

11.2. The term "Bid Form" shall apply to "Bid Form for General Bid" unless the specific Bid Form is named.

11.3. The Bid price of each item on the Bid Form shall be written in words and in figures. In the event there is a discrepancy in the Bid between a Bid price written in words and a Bid price written in figures, the Bid Price stated in words shall govern.

11.4. All Bids will be compared on the basis of the **"Proposed Lump Sum Contract Price"** listed on the Bid Form for General Bid. The Bid entered shall be for the complete Work as specified and shall include the work of the General Contractor and Sub-Bid Contractor, unless adequate funds are not available.

The work of the General Contractor (Item 1 and 2) includes all work other than that covered by Filed Sub-Contracts (Item 2). Item 2 is further subdivided into the individual Sub-Bids which the General Bidder proposes to use in its Bid. The General Bidder must include the following information on the Bid Form for General Bid for each Filed Sub-Bid it proposes to use: (a) name of the Filed Sub-Bidder; (b) the Filed Sub-Bid amount; and (c) whether it will require a Performance Bond and Payment Bond on that Filed Sub-Bidder.

11.5. Bids by corporations shall be executed in the corporate name by the president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

11.6. Bids by partnerships shall be executed in the partnership name and shall be signed by a partner, whose title shall appear under the signature and the official address of the partnership shall be shown below the signature.

11.7. All names shall be typed or printed in ink below the signature.

11.8. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form). If no Addenda are received the Bidder shall fill in "none" on the Bid Form.

11.9. The address, e-mail and telephone number for communications regarding the Bid shall be shown.

11.10. A conditional or qualified Bid shall not be accepted.

## ARTICLE 12. SUBMISSION OF GENERAL BIDS

12.1. General Bids shall be submitted at the time and place indicated in the Invitation for Bids and shall be enclosed in an opaque sealed envelope, marked with the Project title, as indicated in the Invitation for Bids, and name and address of the Bidder, and shall be accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it and addressed as indicated in the Invitation for Bids.

12.2. Bids submitted for the Work of the General Contract and Filed Sub-Contract shall be valid only when accompanied by all of the following: (1) a fully completed and properly executed "Bid Form



for General Bid"; (2) Bid security in the amount of five percent (5%) of the amount bid and in a form as described in the Instructions to Bidders; (3) a copy of a "Certificate of Eligibility" issued by the Deputy Commissioner of the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) showing that the Bidder has the classification and capacity rating to perform the work required. (The DCAMM classification required for this project is "Minimum Rating of Pump Stations Rehabilitation/Replacement"); and (4) an update statement in such form as the Deputy Commissioner of DCAMM shall prescribe.

12.3 Bids submitted for the work of any Filed Sub-Contract shall be valid only when accompanied by both of the following: (1) a fully completed and properly executed "Bid Form for Filed Sub-Bid"; and (2) Bid security in the amount of five percent (5%) of the amount Bid and in a form as described in the Instructions to Bidders.

12.4 The Bidder assumes all responsibility for the Bid arriving on time. Bids received after the time specified in the Invitation for Bids shall not be accepted. No faxed Bids shall be accepted. The time of receipt of a Bid will determine the acceptability of mailed Bids, regardless of postmark. It shall be the sole responsibility of the Bidder to assure that a Bid has arrived before the time for opening of Bids as specified in the Invitation for Bids.

#### ARTICLE 13. MODIFICATION AND WITHDRAWAL OF BIDS

13.1. Bids may be modified only by an appropriate document duly executed (in the manner that a Bid shall be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

13.2. Bids may be withdrawn at any time prior to the scheduled time (or authorized postponement thereof) for the opening of Bids.

#### ARTICLE 14. OPENING OF BIDS

14.1. All Bids will be opened and read aloud in the presence of a witness, with opening publicly viewable on ZOOM, at the time and place indicated in the Invitation for Bids.

14.2. Any Bid received after the time and date specified in the Invitation for Bids shall not be considered.

#### ARTICLE 15. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

15.1. All Bids will remain subject to acceptance by Owner for a period of thirty (30) days (Saturdays, Sundays and legal holidays excluded) after the actual day of opening of General Bids.

## ARTICLE 16. AWARD OF CONTRACT

16.1. The Contract will be awarded, pursuant to M.G.L. c. 149, §44A, to the lowest responsible and eligible Bidder. According to M.G.L. c. 149, §44A, the term “Responsible” means demonstrably possessing the skill, ability and integrity necessary to faithfully perform the work called for by a particular contract, based upon a determination of competent workmanship and financial soundness in accordance with the provisions of M.G.L. c. 149, §44D.

According to M.G.L. c. 149, §44A, the term “Eligible” means able to meet all requirements for bidders or offerors set forth in M.G.L. c. 149, §§44A-44H and not debarred from bidding under M.G.L. c. 149, §44C or any other applicable law, and who shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

16.2. The Owner reserves the right to eliminate sections of the work or parts of sections, as may be determined by them as a basis of award, to keep within the limits of available funds, or to add sections of the work previously eliminated, provided that such action comports with generally accepted principles of public bidding in the Commonwealth.

16.3. Owner reserves the right to reject any and all Bids, to waive any and all informalities if it is in the Owner's best interest to do so, and the right to disregard all nonconforming, non-responsive or conditional Bids.

16.4. Owner also reserves the right to reject the Bid of any Bidder that it considers to be unqualified relative to Article 3 of these Instructions to Bidders.

16.5. Every Bid which is not accompanied by all of the items required by Articles 12.2 and 12.3 of these Instructions to Bidders or which otherwise does not conform with MGL c.149 Section 44A to 44H inclusive, or which is on a form not completely filled in, or which is incomplete, conditional or obscure or which contains any addition not called for, shall be invalid and shall be rejected by Owner.

16.6. Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

16.7. If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within thirty (30) days (excluding Saturdays, Sundays and legal holidays) after the day of the General Bid opening. All Bids shall remain open for thirty (30) days (excluding Saturdays, Sundays and legal holidays) after the day of the General Bid opening, but Owner may, in their sole discretion, release any Bid and return the Bid security prior to that date. The time allowed between the opening of General Bids and the Notice of Award of the Contract specified above may be extended by mutual agreement between Owner and the Bidder.

## ARTICLE 17. CONTRACT SECURITY AND INSURANCE CERTIFICATES

17.1. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth Owner's requirements as to performance and payment Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required performance and payment Bonds.

17.2. Article 5 of the General Conditions and Supplementary Conditions sets forth Owner's requirements as to insurance. When the successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by certificates indicating that the required insurance has been secured.

17.3. Attorneys-in-fact who sign Bid Bonds or Payment Bond and Performance Bond shall file with each Bond, a certified and effective dated copy of their Power of Attorney.

17.4. The successful Bidder shall provide Commercial General Liability Insurance, Automotive Liability Insurance, Worker's Compensation and Employer's Liability Insurance, including other coverages such as indicated in the General Conditions and as amended in the Supplementary Conditions. The successful Bidder shall provide separate Owner's Protective Liability Insurance, with the Owner and Engineer only as insured. A Rider clause to the Contractor's Liability Insurance shall not be acceptable. Each certificate and policy of insurance required by this Agreement shall contain a cancellation provision as indicated below with **no variations**.

“Should any of the above described policies be cancelled or materially amended before the Expiration date therefore, the issuing insurer will mail within thirty (30) calendar days’ written notice to the certificate holder named to the left”.

17.5 The Successful Bidder shall provide to the Owner, with its proof of insurance coverage, endorsements or riders to the policies of Commercial General Liability Insurance, Automobile Liability Insurance, and Excess Liability Insurance, Umbrella Form, which indicate that the Town of Natick is named as an additional insured on each such policy.

## ARTICLE 18. SIGNING OF AGREEMENT

18.1. When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within five (5) calendar days (Saturdays, Sundays and legal holidays excluded) after presentation thereof by Owner, Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner with the required Bonds and insurance certificates. Within ten (10) calendar days thereafter, Owner will deliver one fully signed counterpart to Contractor.

18.2. If the Successful Bidder fails to perform its agreement to execute a Contract in accordance with the terms of its Bid, within the above time limits, and furnish the required Bonds and insurance certificates, which are acceptable to Owner, Owner may consider the Bidder in default.

If the Bidder is determined to be in default, Bidder's Bid security shall become the property of Owner, as liquidated damages, and Owner will consider the Bid of the next lowest responsible and eligible Bidder.

## ARTICLE 19. NOTICE TO PROCEED

19.1. The Notice to Proceed will be issued within thirty (30) calendar days of the execution of the Agreement by Owner. This time may be extended by mutual agreement between Owner and Successful Bidder.

19.2. The Notice to Proceed will establish the date of Commencement of the Work, the date of Substantial Completion and the date of Final Completion, as they are defined in the General Conditions and the Supplementary Conditions.

## ARTICLE 20. SALES AND USE TAX EXEMPTION

20.1. Owner is exempt from Commonwealth of Massachusetts Sales and Use Tax on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Contract Price. Owner shall provide a Certificate of Exemption Number at the pre-construction meeting.

## ARTICLE 21. LAWS, REGULATIONS AND PERMITS

21.1. The Bidder's attention is directed to the fact that all applicable local, federal and state laws; municipal ordinances; and the rules and regulations of all authorities having jurisdiction over the Work, shall apply to the Contract throughout, and they shall be deemed to be included in the Contract Documents as though they were written out in full therein.

21.2. Neither Owner nor Engineer shall be responsible for monitoring Bidder's compliance with any Laws or Regulations.

21.3 Contractor shall obtain building, electrical, road opening and trench opening permits.

## ARTICLE 22. MINIMUM PREVAILING WAGE RATES

22.1. Minimum Prevailing Wage Rates as determined by the Commissioner of the Executive Office of Labor and Workforce Development (EOLWD) under the provisions of the Commonwealth of Massachusetts General Laws, Chapter 149, Section 26 to 27D, as last revised, shall apply to the Work of this Contract. The Minimum Prevailing Wage Rates Determination of the Commissioner for the Work is included in the Supplementary Conditions.

22.2. The Minimum Prevailing Wage Rates Determination establishes minimum prevailing wage rates only. Owner will not consider any claims by Contractor for additional compensation which is paid in excess of these minimum prevailing wage rates.

22.3. The Minimum Prevailing Wage Rates Determination shall be kept posted in a conspicuous place at the site of the Work throughout the active progress of the Work.

22.4. Regulations for the Prevailing Wage Act state that payment of compensation to workmen for work performed on public work on a lump sum basis, piece work system, or a price certain for the completion of a certain amount of work, or the production of a certain result shall be deemed a violation of the Act regardless of the average hourly earning resulting therefrom. This shall result in the disqualification of any Bidder employing these methods.

22.5. The Contractor shall submit weekly payrolls to the Owner during the progress of this Contract for each day work is performed.

#### ARTICLE 23. GUARANTEE

23.1. The Successful Bidder, if selected as the Contractor, shall furnish all supplies, equipment, and labor necessary for the performance of the services and/or delivery of equipment required by this Contract and warrants that it has in its employ, and throughout the term of this Contract or any extension or renewal thereof, shall continue to have a sufficient number of persons experienced in performing services required by this Contract, such that the Contractor's obligations under this Contract shall be carried out in a prompt, safe and professional manner.

23.2 The Successful Bidder, if selected as the Contractor, shall further warrant that it shall perform services under this Contract with the highest degree of professionalism and care. Any equipment delivered, unless otherwise agreed by the parties, shall be of generally merchantable quality and shall be fit for the purpose sought by the Owner.

23.3 The Successful Bidder, if selected as the Contractor, shall warrant to the Owner that the work to be performed under the Contract shall be free from defects in material and workmanship for twelve (12) months after a) the Contractor fully completes the work and b) the Owner takes possession for occupancy. If any defects in material or workmanship regarding the work occur within said twelve (12) month period, the Contractor shall have the option of repairing or replacing the defective component(s) involved in the work.

#### ARTICLE 24. WEATHER PROTECTION

24.1. Pursuant to Section 44G of MGL 149, the Contractor is hereby reminded of the specific requirements to provide weather protection and adequate heat for all construction included in this Contract during the months of November through March.

#### ARTICLE 25. NONDISCRIMINATION IN EMPLOYMENT

25.1. The policy of the Program in brief states that:. In connection with the performance of work under the Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap. The aforesaid provision shall include, but not be limited to the following: advertising; recruitment; hiring; rates of pay or other forms of compensation; terms, conditions or privileges of employment; employment upgrading; transfer; demotion; layoff; and termination. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination or other applicable agency of the Commonwealth of Massachusetts setting forth the provisions of the Fair Employment Practices Law of the Commonwealth. The Contractor shall also undertake in good faith, affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap and to eliminate and remedy any effects of such discrimination in the past.

#### ARTICLE 26. SAFETY

26.1. This project is subject to the Safety and Health Regulations of the U.S. Department of Labor, as set forth in Title 29 CFR Part 1926, to all subsequent amendments thereto, and to the Massachusetts Executive Office of Labor and Workforce Development (EOLWD), Division of Industrial Safety “Rules and Regulations for the Prevention of Accidents in Construction Operations” (Chapter 454 CMR 10.00 *et seq.*). Contractors shall be familiar with the requirements of these regulations.

26.2. Each Bidder shall certify that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite shall have successfully completed a course in construction safety and health approved by the United State Occupational Safety and Health Administration that is at least ten (10) hours in duration at the time the employee begins work. He shall also certify that he shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he shall comply fully with all laws and regulations applicable to awards made subject to section 44A.

#### ARTICLE 27. MANUFACTURER’S EXPERIENCE

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

## ARTICLE 28. CONTRACT TERMINATION

28.1. In addition to rights afforded under the Contract General Conditions, the Town reserves the right to terminate this Contract upon written notice to the Contractor if a source of money to fund the Contract is not available during any year of the Contract term. In the alternative, the parties may agree in writing to amend the Contract to provide for a Contract price which represents the reduced appropriation for a Contract year.

## ARTICLE 29. UNBALANCED BIDS

29.1. Bidder shall not submit unbalanced prices for any of the bid items on the Bid. All prices shall be reasonable for the Work entailed. Owner reserves the right to reject any Bid which contains unbalanced prices, considering Bid as non-responsive to the Instructions to Bidders, and consider same as reason for rejecting bid.

29.2. Certain bid items may have set minimum and/or maximum prices to provide uniformity in the comparison of bids established by Owner and indicated on the Bid form. Bids submitted not in compliance with these established amounts, may be rejected for non-compliance with the Instructions to Bidders.

## **INDEX**

### **BID FORM FOR GENERAL BID**

| <b>DESCRIPTION</b>                 | <b>PAGE NUMBER</b> |
|------------------------------------|--------------------|
| Bid                                | 00300-1/3          |
| Signature Page                     | 00300-5            |
| Contractor's Certification         | 00300-6            |
| Certificate of Non-Collusion       | 00300-7            |
| Certificate of Non-Debarment       | 00300-8            |
| Tax Compliance Certification       | 00300-9            |
| Conflict of Interest Certification | 00300-10           |
| Certificate as to Corporate Bidder | 00300-11           |
| Certificate of Foreign Corporation | 00300-12           |
| OSHA Certification                 | 00300-13           |
| Bid Bond                           | 00310-1/3          |



NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

BID FORM FOR GENERAL BID

To the Awarding Authority : Town of Natick, Massachusetts  
Select Board  
Natick Town Hall  
13 East Central Street  
Natick, MA 01760

A. The undersigned Bidder proposes to furnish all labor and materials required for the Chemical Feed Upgrades in Natick, Massachusetts, in accordance with the accompanying plans and specifications prepared by Haley Ward, 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  
(use words)

(\$ \_\_\_\_\_  
(price in figures)

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

Item 1 The Base Work of the general contractor, being all work other than work of sub-contractor under Item 2.

Total Proposed Base Contract Price for General Bid (\$ \_\_\_\_\_)  
(price in figures)

\_\_\_\_\_  
(use words)

Item 2 The total price of the work of the Filed Sub-Contract is (\$ \_\_\_\_\_)  
(price in figures)

\_\_\_\_\_  
(use words)

The individual Sub-Bids for Item 2 in the above paragraph are as follows:

| <u>Filed</u><br><u>Sub-Contract</u> | <u>Name of</u><br><u>Filed Sub-Bidder</u> | <u>Amount of</u><br><u>Sub-Bid</u> | <u>Bonds Required</u><br><u>(Indicated by</u><br><u>"Yes" or "No")</u> |
|-------------------------------------|---|------------------------------------|--|
| a. Division 16<br>Electrical        | _____                                     | \$ _____                           | _____  |

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 he is selected as general contractor, he 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.

E. The undersigned agrees that, if he is selected as general contractor, he will within five (5) 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 one (1) surety company, the surety companies shall be jointly and severally liable.

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 ten (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.

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

The Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

The Bidder certifies that it has reviewed the insurance requirements contained in the Contract Documents and certifies that it can meet them. The Bidder also certifies its completion of the attached Contractor Certification forms.

The following documents are attached to and made a condition of this Bid:

(a) Required Bid Security in the amount of five (5%) percent of PROPOSED CONTRACT PRICE appearing in Paragraph 4 above, and in a form as described in the Instructions to Bidders.

(b) A copy of a "Certificate of Eligibility" issued by the Deputy Commissioner of the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) showing that the Bidder has the classification and capacity rating to perform the work required.

(c) An update statement in such form as the Deputy Commissioner of DCAMM shall prescribe.

The undersigned bidder hereby certifies he/she will comply with the minority workforce percentage ratio and specific affirmative action steps contained in the applicable EEO/AA provisions of this Contract. The Bidder receiving the award of the Contract shall be required to obtain from each of its subcontractors a copy of the certification by said subcontractor, regardless of tier, that it will comply with the minority workforce ratio and specific affirmative action steps contained in these EEO/AA Contract provisions and submit it to the contracting agency prior to the award of such subcontract.

The undersigned certifies under penalties of perjury that there have been no substantial changes in his financial position or business organization other than those changes noted within the application since the applicant's most recent pre-qualification statement and that the bid is in all respects *bona fide*, fair and made without collusion or fraud with any other person. "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. M.G.L. c. 149 §44D (1)(b).

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provision of Section 29F of Chapter 29, or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulation promulgated thereunder.

THIS BID SUBMITTED ON \_\_\_\_\_ 20\_\_

Name of General Bidder (Bidder): \_\_\_\_\_

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

(Corporate Seal)

Attest \_\_\_\_\_  
(Secretary)

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

Phone Number: (\_\_\_\_) \_\_\_\_\_

E-mail Address: \_\_\_\_\_

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

## 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:

1. It intends to use the following listed construction trades in the work under Contract:

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

2. It shall comply with the minority workforce ratio and specific affirmative action steps contained herein: and
3. It shall obtain from each of its subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this Contract, the subcontractor's certification required by this bid conditions.

\_\_\_\_\_  
Name of Contractor

\_\_\_\_\_  
Address of Contractor

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

## CERTIFICATE OF NON-COLLUSION

The undersigned as Bidder certifies under penalties of perjury that this Bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, business, joint ventures, partnership, corporation or other organization, entity or group of individuals.

Name of Bidder

---

Address of Bidder

---

By:

Signature

---

Printed Name

---

Printed Title

---

Date

---

## CERTIFICATE OF NON-DEBARMENT

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine or any other applicable debarment provisions of any other chapter of the General Law or any rule or regulation promulgated thereunder.

Name of Bidder

---

---

Address of Bidder

By:

---

Signature

---

Printed Name

---

Printed Title

---

Date

## TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. Chapter 62C, Section 49A, the undersigned hereby certifies under penalty of perjury that \_\_\_\_\_ has complied with all laws of the Commonwealth of Massachusetts relating to taxes, to the reporting of employees and contractors, and to the withholding and remitting of child support.

\_\_\_\_\_  
Name of Bidder

\_\_\_\_\_  
Address of Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date



## CONFLICT OF INTEREST CERTIFICATION

The Bidder named below hereby certifies that:

1. The Bidder has not given, offered, or agreed to give any gift, contribution, or, offer of employment as an inducement for, or in connection with, the award of a contract for these services.
2. No consultant to, or, subcontractor for the Bidder has given, offered, or agreed to give any gift, contribution, or, offer of employment to the Bidder, or, to any other person, corporation, or entity as an inducement for, or, in connection with, the award to the consultant or subcontractor of a contract by the Bidder.
3. No person, corporation, or, other entity, other than a bona fide full time employee of the Bidder has been retained or hired to solicit for or in any way assist the Bidder in obtaining the contract for services upon an agreement or understanding that such person, corporation, or entity be paid a fee or other compensation contingent upon the award of the contract to the Bidder.
4. The Bidder named below understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Bidder with respect to the services outlined in the Project Manual.
5. The Bidder understands that the Bidder, its officers, employees, agents, subcontractors and affiliated agencies, shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

Name of Bidder

\_\_\_\_\_

Address of Bidder

\_\_\_\_\_

By:

Signature

\_\_\_\_\_

Printed Name

\_\_\_\_\_

Printed Title

\_\_\_\_\_

Date

\_\_\_\_\_

CERTIFICATE AS TO CORPORATE BIDDER

I, \_\_\_\_\_ certify that I am the \_\_\_\_\_ of the corporation named as Bidder in the Bid included herein; that \_\_\_\_\_, who signed said Bid on behalf of the Bidder was then \_\_\_\_\_ of said corporation; that I know his signature; that his signature thereon is genuine and that said Bid was duly signed, sealed and executed for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

\_\_\_\_\_  
Secretary-Clerk

Dated: \_\_\_\_\_

Name of Bidder

\_\_\_\_\_

\_\_\_\_\_  
Address of Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

## CERTIFICATE OF FOREIGN CORPORATION

If the Bidder is a foreign corporation, by affixing his/her signature, the Bidder certifies that the corporation is qualified under the provisions of M.G.L. Chapter 181, Section 4 to do business in the Commonwealth of Massachusetts.

Name of Bidder

---

Address of Bidder

---

By:

Signature

---

Printed Name

---

Printed Title

---

Date

---

(Company Name)

---

(Signature/Title)

---

If awarded the Contract, the Contractor shall provide with his agreement package, a certificate from the Secretary of the Commonwealth of Massachusetts that the corporation is qualified under provisions of M.G.L. Chapter 181, Section 4, to do business in the Commonwealth.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
CERTIFICATION

The undersigned agrees that if he is selected as the contractor, he shall comply with the provisions of M.G.L. Chapter 30, Section 39S.

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 in 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 ten (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 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 ten (10) hours in duration.

Name of Bidder

\_\_\_\_\_

Address of Bidder

\_\_\_\_\_

By:

Signature

\_\_\_\_\_

Printed Name

\_\_\_\_\_

Printed Title

\_\_\_\_\_

Date

\_\_\_\_\_

END OF BID FORM FOR GENERAL BID

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that , on this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_,  
we, the undersigned,

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called PRINCIPAL and (Corporation, Partnership, or Individual)

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Town of Natick, Massachusetts

\_\_\_\_\_  
(Name of Owner)

Natick Town Hall, 13 East Central Street, Natick, MA 01760

\_\_\_\_\_  
(Address of Owner)

as OWNER in the total aggregate penal sum of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

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, successors, and assigns, jointly and severally, firmly by these presents.

The Condition of the above obligation is such that, whereas the Principal has submitted to the Town of Natick, Massachusetts a certain Bid, attached hereto and hereby made a part hereof and hereby incorporated by reference herein, to enter into a Contract in writing, for the Chemical Feed Upgrades.

NOW, THEREFORE,

(a) If said Bid shall be rejected, or

(b) If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal Secretary)

(SEAL)(s)

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

(Witness as to Surety)

By \_\_\_\_\_  
Attorney in Fact Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract.

If Contractor is partnership, all partners should execute Bond.

IMPORTANT Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state of Massachusetts.

## **INDEX**

### **BID FORM FOR FILED SUB-BIDS**

| <b>DESCRIPTION</b>  | <b>PAGE NUMBER</b> |
|---|--------------------|
| Bid   | 00350-1/4          |
| Contractor's Certification                                  | 00350-4            |
| Signature Page  | 00350-5            |
| Subcontractor's Certification                               | 00350-6            |
| Certificate of Non-Collusion                                | 00350-7            |
| Certificate of Non-Debarment                                | 00350-8            |
| Tax Compliance Certification                                | 00350-9            |
| Conflict of Interest Certification                          | 00350-10           |
| Certificate as to Corporate Sub-Bidder                      | 00350-11           |
| Certificate of Foreign Corporation                          | 00350-12           |
| Occupational Safety and Health Administration Certification | 00350-13           |
| Sub Contract  | 00400-1/3          |



NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

BID FORM FOR FILED SUB-BIDS

TO ALL GENERAL BIDDER EXCEPT THOSE EXCLUDED:

- A. The undersigned proposes to furnish all labor and materials required for completing the Chemical Feed Upgrades, in accordance with the Contract Documents, all the work specified in \_\_\_\_\_ of the specifications and in any plans specified in such section, prepared by Haley Ward, Inc., Engineers for Chemical Feed Upgrades in Natick, Massachusetts, for the contract sum of:

LUMP SUM SUBCONTRACT PRICE DIVISION \_\_\_\_\_ (\$ \_\_\_\_\_)  
(figures)

---

(price in words)

- B. These Sub-Bids include Addenda Numbered \_\_\_\_\_.

- C. These Sub-Bids

☐ may be used by any General Bidder except:

\_\_\_\_\_

☐ may only be used by the following General Bidders:

\_\_\_\_\_

(Instructions: To exclude General Bidders, insert "X" in one box only and fill in the names of the excluded General Bidders in the blank space following that box. Do not answer this Section C if no General Bidders are excluded.)

D. The Undersigned agrees that, if he is selected as a Sub-Bidder, he will, within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation of a Subcontract by the General Bidder selected as the General Contractor, execute with such General Bidder a Subcontract in accordance with the terms of this Sub-Bid, and contingent upon the execution of the General Contract, and, if requested so to do in the General Bid by such General Bidder, who shall pay the premiums therefor, or if prequalification is required pursuant to section 44D3/4, furnish a Performance and Payment Bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority, in the full sum of the Subcontract price.

E. The names of all persons, firms and corporations furnishing to the Undersigned labor or labor and materials for the class or classes or part thereof of work for which the provisions of the section of the specifications for this sub-trade require a listing in this paragraph, (including the Undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the specifications), the name of each such class of Work or part thereto and the Bid Price for each such class of Work or part thereof are:

| Name  | Class of Work | Bid Price |
|-------|---------------|-----------|
| <hr/> |               |           |
| <hr/> |               |           |
| <hr/> |               |           |
| <hr/> |               |           |

(Do not give Bid Price for any class or part thereof furnished by Undersigned)

F. The Undersigned agrees that the above list of Bids to the Undersigned represents bona fide bids based on the hereinbefore described plans, specifications and addenda and that, if the Undersigned is awarded the Contract, they will be used for the Work indicated at the amounts stated, if satisfactory to the Awarding Authority.

G. The Undersigned further agrees to be bound to the General Contractor by the terms of hereinbefore described plans, specifications (including all general conditions stated therein) and addenda, and to assume toward him all the obligations and responsibilities that he, by those documents, assumes toward the OWNER.

H. The Undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the plans and specifications:

1. Have been in business under present business name

\_\_\_\_\_ years.  
(No. of years)

2. Ever failed to complete any work awarded? \_\_\_\_\_.  
(yes or no)

3. List one (1) or more recent buildings with names of the General Contractor and Engineer/Architect on which you served as a Subcontractor for work of similar character as required for the above-named building.

| Building  | Engineer/<br>Architect | General<br>Contractor | Amount of<br>Contract |
|-----------|------------------------|-----------------------|-----------------------|
| (a) _____ |                        |                       |                       |
| (b) _____ |                        |                       |                       |
| (c) _____ |                        |                       |                       |

4. Bank reference \_\_\_\_\_

I. 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.

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

Date \_\_\_\_\_

\_\_\_\_\_  
(Name of Sub-bidder)

By \_\_\_\_\_

(Title and Name of Person Signing Bid)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
(City and State)

THIS SUB-BID SUBMITTED ON \_\_\_\_\_ 20\_\_

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

By \_\_\_\_\_  
(Corporation Name)

\_\_\_\_\_  
(State of Incorporation)

(Corporate Seal)

Attest \_\_\_\_\_  
(Secretary)

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

Phone Number: (\_\_\_\_) \_\_\_\_\_

E-mail Address: \_\_\_\_\_

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

Subcontractor's Certification

Name of Project\_\_\_\_\_

Prior to the award of any subcontract, regardless of tier, the prospective Subcontractor must execute and submit to the Contractor the following certification, which is deemed a part of the resulting contract:

SUBCONTRACTOR'S CERTIFICATION

\_\_\_\_\_certifies that

1. it intends to use the following listed construction trades in the work under the subcontract  
\_\_\_\_\_; and
2. will comply with the minority manpower ratio and specific affirmative action steps contained herein; and
3. will obtain from each of its Subcontractors and submit to the contracting or administering agency prior to the award of any subcontract under this contract the Subcontractor certification required by these bid conditions.

\_\_\_\_\_  
(Signature of authorized representative of Subcontractor)

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

In order to ensure that the said Subcontractor's certification becomes a part of all subcontracts under the contract, no subcontract shall be executed until an authorized representative of the Town agency (or agencies) administering this project has determined, in writing, that the said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

## CERTIFICATE OF NON-COLLUSION

The undersigned as Sub-Bidder certifies under penalties of perjury that this Bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, business, joint ventures, partnership, corporation or other organization, entity or group of individuals.

Name of Sub-Bidder

---

Address of Sub-Bidder

---

By:

Signature

---

Printed Name

---

Printed Title

---

Date

---

## CERTIFICATE OF NON-DEBARMENT

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the commonwealth under the provisions of section twenty-nine F of chapter twenty-nine or any other applicable debarment provisions of any other chapter of the General Law or any rule or regulation promulgated thereunder.

Name of Sub-Bidder

---

---

Address of Sub-Bidder

By:

---

Signature

---

Printed Name

---

Printed Title

---

Date

## TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. Chapter 62C, Section 49A, the undersigned hereby certifies under penalty of perjury that \_\_\_\_\_ has complied with all laws of the Commonwealth of Massachusetts relating to taxes, to the reporting of employees and contractors, and to the withholding and remitting of child support.

\_\_\_\_\_  
Name of Sub-Bidder

\_\_\_\_\_  
Address of Sub-Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date



## CONFLICT OF INTEREST CERTIFICATION

The Sub-Bidder named below hereby certifies that:

1. The Sub-Bidder has not given, offered, or agreed to give any gift, contribution, or, offer of employment as an inducement for, or in connection with, the award of a contract for these services.
2. No consultant to, or, subcontractor for the Sub-Bidder has given, offered, or agreed to give any gift, contribution, or, offer of employment to the Sub-Bidder, or, to any other person, corporation, or entity as an inducement for, or, in connection with, the award to the consultant or subcontractor of a contract by the Sub-Bidder.
3. No person, corporation, or, other entity, other than a bona fide full time employee of the Sub-Bidder has been retained or hired to solicit for or in any way assist the Sub-Bidder in obtaining the contract for services upon an agreement or understanding that such person, corporation, or entity be paid a fee or other compensation contingent upon the award of the contract to the Sub-Bidder.
4. The Sub-Bidder named below understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Sub-Bidder with respect to the services outlined in the Project Manual.
5. The Sub-Bidder understands that the Sub-Bidder, its officers, employees, agents, subcontractors and affiliated agencies, shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

Name of Sub-Bidder

\_\_\_\_\_

Address of Sub-Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

CERTIFICATE AS TO CORPORATE SUB-BIDDER

I, \_\_\_\_\_ certify that I am the \_\_\_\_\_ of the corporation named as Sub-Bidder in the Sub-Bid included herein; that \_\_\_\_\_, who signed said Sub-Bid on behalf of the Sub-Bidder was then \_\_\_\_\_ of said corporation; that I know his signature; that his signature thereon is genuine and that said Sub-Bid was duly signed, sealed and executed for and in behalf of said corporation by authority of its governing body.

(Corporate Seal)

\_\_\_\_\_  
Secretary-Clerk

Dated: \_\_\_\_\_

Name of Sub-Bidder

\_\_\_\_\_

\_\_\_\_\_  
Address of Sub-Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

## CERTIFICATE OF FOREIGN CORPORATION

If the Sub-Bidder is a foreign corporation, by affixing his/her signature, the Sub-Bidder certifies that the corporation is qualified under the provisions of M.G.L. Chapter 181, Section 4 to do business in the Commonwealth of Massachusetts.

Name of Sub-Bidder

\_\_\_\_\_

\_\_\_\_\_  
Address of Sub-Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature/Title)

If awarded the Contract, the Contractor shall provide with his agreement package, a certificate from the Secretary of the Commonwealth of Massachusetts that the corporation is qualified under provisions of M.G.L. Chapter 181, Section 4, to do business in the Commonwealth.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
CERTIFICATION

The undersigned agrees that if he is selected as the Sub-contractor, he shall comply with the provisions of M.G.L. Chapter 30, Section 39S.

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 in 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 all employees to be employed in the work subject to this Sub-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.

Name of Sub-Bidder

\_\_\_\_\_

\_\_\_\_\_  
Address of Sub-Bidder

By:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

END OF BID FORM FOR FILED SUB-BIDS

## SUBCONTRACT

THIS AGREEMENT MADE THIS \_\_\_\_ DAY OF \_\_\_\_\_ 20 \_\_, by and between  
\_\_\_\_\_ a corporation organized and  
existing under the laws of \_\_\_\_\_ an individual doing business  
as \_\_\_\_\_ hereinafter called the "Contractor"  
and \_\_\_\_\_ a corporation organized and existing  
under the laws of \_\_\_\_\_ an individual doing business as \_\_\_\_\_  
hereinafter called the "Subcontractor".

WITNESSETH that the Contractor and the Subcontractor for the considerations hereafter named,  
agree as follows:

1. The Subcontractor agrees to furnish all labor and materials required for the completion of all work  
specified in Section/Division No. \_\_\_\_ of the specifications for \_\_\_\_\_ and the  
plans referred to therein. (Name of Sub-Trade)

and addenda No. \_\_\_\_, \_\_\_\_, \_\_\_\_, and \_\_\_\_ for the

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

(complete title of the project and the project number taken from the title page of the specifications)

all as prepared by \_\_\_\_ Haley Ward, Inc. \_\_\_\_\_  
(Name of Engineer)

for the sum of \_\_\_\_\_ (\$ \_\_\_\_\_) and  
the Contractor agrees to pay the Subcontractor said sum for said work. The price includes the following  
alternates (and other items set forth in the sub-bid):

Alternate No(s). \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_.

(a) The Subcontractor agrees to be bound to the Contractor by the terms of the hereinbefore described plans; specifications (including all general conditions stated therein) and addenda No. \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_, and to assume to the Contractor all the obligations and responsibilities that the Contractor by those documents assumes to the

---

(Awarding Authority)

hereinafter called the "Awarding Authority", except to the extent that provisions contained therein are by their terms or by law applicable only to the Contractor.

(b) The Contractor agrees to be bound to the Subcontractor by the terms of the hereinbefore described documents and to assume to the Subcontractor all the obligations and responsibilities that the Awarding Authority by the terms of the hereinbefore described documents assumes to the Contractor, except to the extent that provisions contained therein are by their terms or by law applicable only to the Awarding Authority.

2. The Contractor agrees to begin, prosecute and complete the entire work specified by the Awarding Authority in an orderly manner so that the Subcontractor will be able to begin, prosecute and complete the work described in this subcontract; and, in consideration thereof, upon notice from the Contractor, either oral or in writing, the Subcontractor agrees to begin, prosecute and complete the work described in this Subcontract in an orderly manner and with due consideration to the date or time specified by the Awarding Authority for the completion of the entire work.

3. The Subcontractor agrees to furnish to the Contractor within a reasonable time after the execution of this subcontract, evidence of workmen's compensation insurance as required by law and evidence of public liability and property damage insurance of the type and in limits required to be furnished to the Awarding Authority by the Contractor.

4. The Contractor agrees that no claim for services rendered or materials furnished by the Contractor to the Subcontractor shall be valid unless written notice thereof is given by the Contractor to the Subcontractor during the first ten (10) days of the calendar month following that in which the claim originated.

5. This agreement is contingent upon the execution of a general contract between the Contractor and the Awarding Authority for the complete work.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the date and year first above-written.

SEAL  
ATTEST \_\_\_\_\_

\_\_\_\_\_  
(Name of Subcontractor)

By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

SEAL  
ATTEST \_\_\_\_\_

\_\_\_\_\_  
(Name of Contractor)

By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Date

NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

CONTRACT SIGNING DOCUMENTS

INDEX

| <u>DESCRIPTIONS</u>          | <u>PAGE NUMBER</u> |
|------------------------------|--------------------|
| Notice of Award              | 00500-1/2          |
| Agreement                    | 00510-1            |
| Signature Page               | 00510-8            |
| Certificate of Appropriation | 00510-9            |
| Certificate of Vote          | 00510-10           |
| Notice to Proceed            | 00520-1            |
| Performance Bond             | 00610-1/3          |
| Payment Bond                 | 00620-1/3          |



CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

NOTICE OF AWARD

DATED \_\_\_\_\_

To: BIDDER: \_\_\_\_\_

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

\_\_\_\_\_

The Owner has considered the Bid submitted by you for the above described Work in response to the Invitation for Bids dated \_\_\_\_\_ and Instructions to Bidders.

You are hereby notified that your Bid has been accepted in the amount of \$ \_\_\_\_\_.

You shall comply with the following conditions precedent within five (5) days (Saturdays, Sundays and legal holidays excluded) of the date of this Notice of Award, that is by \_\_\_\_\_.

1. You shall deliver to the OWNER three (3) fully executed counterparts of the Agreement including all the Contract Documents. Each of the Contract Documents shall bear your signature on the cover page.
2. You shall deliver with the executed Agreement, the Contract Security (Bonds - including both a fully-executed Performance Bond and a fully-executed Payment Bond - and Certificates of Insurance) as specified in the Instructions to Bidders, General Conditions and Supplementary Conditions.

Failure to comply with these conditions within the time specified will entitle OWNER to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

Three (3) copies of each of the proposed Contract Documents accompany this Notice of Award.

Within ten (10) calendar days after you comply with those conditions, OWNER will return to you one (1) fully signed counterpart of the Agreement with the Contract Documents attached.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

By:

\_\_\_\_\_  
Signature of Owner's Representative

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

#### ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By \_\_\_\_\_  
(Contractor)

this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

By \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

COPY TO ENGINEER

## AGREEMENT

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_\_\_, by and between the Town of Natick, Massachusetts having an address of Natick Town Hall, 13 East Central Street, Natick, MA 01760, (hereinafter called OWNER), by its Select Board, and

\_\_\_\_\_ having an address of \_\_\_\_\_  
\_\_\_\_\_ doing business as a (Corporation, Partnership or Individual) hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, OWNER and CONTRACTOR hereby agree as follows:

### ARTICLE 1. WORK

1.1 CONTRACTOR will commence the Work as specified or indicated in the Contract Documents as defined in Article 8 herein.

1.2 The work consists of chemical feed upgrades at the Springvale and Elm Bank water treatment plants, which includes new day tanks, day tank scales, electrical work and instrumentation work.

1.3 CONTRACTOR shall furnish all materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the Project described herein.

### ARTICLE 2. ENGINEER

2.1 The Project has been designed by Haley Ward, Inc., who is hereinafter called ENGINEER and who shall act as OWNER'S representative, who shall assume all duties and responsibilities, and shall have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### ARTICLE 3. CONTRACT TIME

3.1 CONTRACTOR shall commence the work required by the Contract Documents in accordance with the provisions of the Notice to Proceed and Contract Documents. The work will be substantially complete within two hundred twenty (220) consecutive calendar days after the date when the Contract Time commences to run in accordance with the Notice to Proceed and will be completed and ready for final payment within two hundred forty (240) consecutive calendar days after the date when the Contract Time commences to run in accordance with the Notice to Proceed.

3.2 The work at both plants will be done during the low water demand season beginning in October. Both plants cannot be offline at the same time, Contractor to schedule work accordingly.

3.3. Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER **Four Hundred** dollars (\$**400.00**) for each day that expires after the time in paragraph 3.1 of this section for Substantial Completion until the Work is substantially complete. After Substantial Completion if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work, within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER **Eight Hundred** dollars (\$**800.00**) for each day that expires after the time specified in paragraph 3.1 of this section for completion and readiness for final payment.

#### ARTICLE 4. CONTRACT PRICE

4.1. In consideration for performance of the work as required by the Contract Documents, OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds as follows:

TOTAL CONTRACT PRICE (\$\_\_\_\_\_)

---

Contractor's General Bid is attached to this Agreement as an exhibit.

#### ARTICLE 5. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions, as modified, if applicable, by the Supplementary Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1. Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER and as provided in Article 14 of the General Conditions, as modified, if applicable, by the Supplementary Conditions.

5.2. Final Payment. Upon final completion and acceptance of the Work in accordance with the General Conditions, as modified, if applicable, by the Supplementary Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER .

#### ARTICLE 6. TERMS

6.1. Terms used in this Agreement, which are defined in Article 1 of the General Conditions, as modified, if applicable, by the Supplementary Conditions, will have the meanings indicated in the General Conditions, as modified, if applicable, by the Supplementary Conditions

## ARTICLE 7. CONTRACTOR'S REPRESENTATIONS

In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

7.1. CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

7.2. CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.2 of the General Conditions, and accepts the determination set forth in paragraph SC-4.2 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.

7.3. CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in paragraph 7.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions, as modified, if applicable, by the Supplementary Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

7.4. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions, as modified, if applicable, by the Supplementary Conditions.

7.5. CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

7.6. CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

## ARTICLE 8. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1 Invitation for Bids
- 8.2 Instructions to Bidders
- 8.3 Contractor's Bid
- 8.4 This Agreement ("Agreement") (pages 1 to 10, inclusive).
- 8.5 Exhibits to this Agreement
- 8.6 General Conditions
- 8.7 Supplementary Conditions
- 8.8 CONTRACTOR'S Performance and Payment Bonds, and insurance certificates.
- 8.9 Notice of Award.
- 8.10 Notice to Proceed.
- 8.11 Specifications as listed in table of contents.
- 8.12 Drawings, consisting of a cover sheet and sheets numbered: I1, E1-E3, M1-M4  
with each sheet bearing the following general title:  
  
Town of Natick, Massachusetts  
Select Board  
  
Chemical Feed Upgrades  
Contract No. W-165
- 8.13 Addenda numbers \_\_\_\_ to \_\_\_\_, inclusive.
- 8.14 Change Order (s)

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.4 and 3.5 of the General Conditions.

## ARTICLE 9. INDEMNIFICATION

CONTRACTOR shall compensate the Town for all damage to Town of Natick property of any nature arising out of CONTRACTOR's work. CONTRACTOR shall indemnify, defend, and hold harmless the Town of Natick and all of its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by CONTRACTOR or its subcontractor(s) of their obligations under this Contract, or the act or omission of CONTRACTOR, its subcontractor(s), or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by CONTRACTOR under the Contract, or which arise out of the violation of any Federal, Massachusetts or Town of Natick statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by CONTRACTOR or any of its officers or employees regarding the subject matter of the Contract.

## ARTICLE 10: INSURANCE

10.1 CONTRACTOR shall provide insurance that satisfies the categories and amounts specified in Article 5 of the General Conditions, as modified by Article 5 of the Supplementary Conditions.

10.2. Each certificate and policy of insurance required by this Agreement shall contain a cancellation provision as indicated below with no variations.

“Should any of the above described policies be canceled or materially amended before the expiration date thereof, the issuing insurer will mail within thirty (30) calendar days’ written notice to the certificate holder named to the left”.

10.3 The Town of Natick and ENGINEER shall be named as an additional insured on each policy of insurance required by this agreement other than worker's compensation.

## ARTICLE 11: MISCELLANEOUS PROVISIONS

11.1. No assignment by CONTRACTOR of any rights under or interests in the Contract Documents will be binding on OWNER without the written consent of OWNER; and specifically, but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent, and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge CONTRACTOR from any duty or responsibility under the Contract Documents.

11.2. This Agreement shall be binding upon OWNER and CONTRACTOR, their respective heirs, executors, administrators, successors, or assigns and legal representative to the other party hereto, its partners, heirs, executors, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

11.3. If any provision of this Agreement shall be determined to be invalid or unenforceable by final judgment of a court of competent jurisdiction, the remaining provisions shall continue in effect to the extent permitted by law.

11.4 This Agreement may be amended only by a written instrument signed by the parties.

11.5 This Agreement shall be governed by and construed in accordance with the Massachusetts law.

11.6 CONTRACTOR shall provide, to the satisfaction of OWNER, adequate supervision of all work performed under this Agreement.

11.7 This Agreement shall be guided by the Commonwealth of Massachusetts Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program. The goal for Affirmative Action is five percent (5%) minority workforce. CONTRACTOR shall take all affirmative steps necessary to achieve these goals, and shall provide required reports.

11.8 CONTRACTOR shall comply with all provisions of law applicable to his work including without limitation statutes, by-laws rules, regulations, orders and directives. This Contract shall be considered to include in their entirety all terms respecting workers' compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, and any other laws, as though such terms were set forth in their entirety herein. CONTRACTOR shall comply with all applicable provisions of law and regulation as specified by the Williams-Steiger Occupational Safety and Health Act of 1970, as amended.

11.9 CONTRACTOR has made this Contract in reliance on his own examinations and estimates as to the amount and character of his work, and conditions which may be encountered in the performance thereof, and shall assume all risks and bear all losses pertaining thereto.

11.10 CONTRACTOR shall compensate the Town of Natick for all damages to the Town property of any nature arising out of CONTRACTOR'S work.

11.11 The Town of Natick may defer payment to CONTRACTOR of such sums otherwise due him under this Contract for such period of time as the Director of Public Works may deem required by law or expedient for protection of the Town or others against his noncompliance with the provisions thereof; and the Town may reimburse itself, by deduction from the money so retained, for all expense and loss resulting to it from his noncompliance.

11.12 No payment by the Town of Natick to CONTRACTOR shall be deemed to be a waiver of any right of the Town of Natick under this Contract or ratification by the Town of Natick of any breach hereof by CONTRACTOR.

11.13 CONTRACTOR shall provide services under this Agreement as an independent CONTRACTOR with the Town of Natick and CONTRACTOR and its employees shall not be entitled to receive any benefits of employment with the Town of Natick, including without limitation salary, overtime, vacation pay, holiday pay, health insurance, life insurance, pension or deferred compensation.



11.14 If any assignment shall be made by CONTRACTOR or by any guarantor of CONTRACTOR for the benefit of creditors, or if a petition is filed by CONTRACTOR or by any guarantor of CONTRACTOR for adjudication as a bankrupt, or for reorganization or an arrangement under any provision of the Bankruptcy Act as then in force and effect, or if an involuntary petition under any of the provisions of the Bankruptcy Act is filed against CONTRACTOR and such involuntary petition is not discharged within ninety (90) calendar days thereafter, in any event the Town may terminate this Contract upon written notice to CONTRACTOR.

11.15. The award of this Contract and the continued operation of this Contract are subject to appropriation by Natick Town Meeting of sufficient money to fund the Contract.

11.16 OWNER may terminate this Contract upon written notice to CONTRACTOR if a source of money to fund the Contract is lost during any year of the Contract term. In the alternative, the parties may agree in writing to amend the Contract to provide for a Contract price which represents the reduced appropriation for a contract year.

11.17 In the event of termination, CONTRACTOR shall be entitled to be paid for services rendered in accordance with this Contract prior to termination.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have executed or caused to be executed by their duly authorized officials this Agreement in five (5) copies, each of which shall be deemed as an original on the date first above written. One Counterpart each has been delivered to OWNER, CONTRACTOR, ENGINEER, Town Counsel and Town Accountant.

OWNER:

CONTRACTOR:

Town of Natick, Massachusetts

\_\_\_\_\_  
Printed Name of CONTRACTOR

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

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

The Natick Select Board

\_\_\_\_\_  
Paul Joseph, Chairman

\_\_\_\_\_  
Michael J. Hickey, Jr., Vice-Chairman

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Bruce T. Evans, Clerk

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
Kathryn M. Coughlin

\_\_\_\_\_  
Richard Sidney

Dated: \_\_\_\_\_

Dated: \_\_\_\_\_

\_\_\_\_\_  
[ CORPORATE SEAL ]

\_\_\_\_\_  
Attest

Address for giving notices:

Select Board

Natick Town Hall

13 East Central Street

Natick, MA 01760

Contractor Address for giving notices:

---

---

---

## CERTIFICATE OF APPROPRIATION

In accordance with the requirements of M.G.L. Chapter 44, Section 31C, this is to certify that an appropriation in the amount of this CONTRACT is available therefor, and that the Natick Select Board is authorized to execute this CONTRACT and to approve all requisitions and execute change orders.

---

Michelle L. Laramée  
Comptroller

---

Date

APPROVED AS TO FORM ONLY (AND NOT AS TO SUBSTANCE):

---

Karis L. North, Esq.  
Office of the Town Counsel

---

Date

CERTIFICATE OF VOTE

I, \_\_\_\_\_, hereby certify  
(Clerk/Secretary)

that I am the duly qualified and acting \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Corporation Name)

and I further certify that at a meeting of the Directors of said Corporation duly called and held on  
\_\_\_\_\_ 20 \_\_\_\_, at which meeting all Directors were present and voting, the following vote was  
unanimously passed:

VOTED: To authorize and empower either \_\_\_\_\_,  
\_\_\_\_\_  
(Name) (Title);  
\_\_\_\_\_, \_\_\_\_\_; or  
(Name) (Title)  
\_\_\_\_\_, \_\_\_\_\_  
(Name) (Title),

any one acting singly, to execute all contracts and bonds on behalf of the Corporation.

I, further certify that the above vote is still in effect on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and has  
not been changed or modified in any respect.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

The certification contained hereabove shall be executed by CONTRACTOR or copy of current  
"certification of authority to sign for the Corporation" shall be attached.)

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

NOTICE TO PROCEED

Dated \_\_\_\_\_, 20\_\_.

To: \_\_\_\_\_  
(Contractor)  
\_\_\_\_\_  
(Address)

You are hereby notified to commence work in accordance with the Agreement dated \_\_\_\_\_, 20\_\_, on or before \_\_\_\_\_, 20\_\_, and you are required to achieve substantial completion of all work within two hundred twenty (220) consecutive calendar days thereafter, and to achieve final completion within two hundred and forty (240) consecutive calendar days thereafter. In accordance with Article 3 of the Agreement, the dates of Substantial Completion and Final Completion are \_\_\_\_\_ and \_\_\_\_\_, respectively.

OWNER: TOWN OF NATICK

Select Board

By \_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by

\_\_\_\_\_  
this the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called PRINCIPAL and (Corporation, Partnership, or Individual)

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Town of Natick , Massachusetts

\_\_\_\_\_  
(Name of Owner)

Natick Town Hall, 13 East Central Street, Natick, MA 01760

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, in the total aggregate penal sum of

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

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, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the \_\_\_\_ day of \_\_\_\_\_ 20\_, a copy of which is hereto attached and made a part hereof for Contract No. W-165 – Chemical Feed Upgrade.

Now, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said 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 during the Owner, with or without notice to the Surety and during the one (1) year guarantee period, and if the Principal shall satisfy all claims and demands incurred under such 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 to remain in full force and effect.

PROVIDED, FURTHER, that the said security, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to Work to be performed thereunder or the Specifications accompanying 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.

PROVIDED, FURTHER, that it is expressly agreed that the Bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the Contract Price more than twenty percent (20%), so as to bind the Principal and the Surety to the full and faithful performance of the Contract as so amended. The term "Amendment", wherever used in this Bond, and whether referring to this Bond, the Contract or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED, FURTHER, that no final settlement between the Owner and the Principal shall abridge the right of the other beneficiary hereunder, whose claim may be unsatisfied. The Owner is the only beneficiary hereunder.



WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each of which number shall be deemed an original, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

ATTEST:

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal Secretary)

(SEAL)(s)

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

By \_\_\_\_\_  
(Witness as to Surety) Attorney in Fact Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract.

If Contractor is partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a \_\_\_\_\_, hereinafter called PRINCIPAL and (Corporation, Partnership, or Individual)

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

Town of Natick, Massachusetts

\_\_\_\_\_  
(Name of Owner)

Natick Town Hall, 13 East Central Street, Natick, MA 01760

\_\_\_\_\_  
(Address of Owner)

hereinafter called Owner, and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under the contract and to their successors and assigns in the total aggregate penal sum of

\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

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, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_, a copy of which is hereto attached and made a part hereof for Contract No. W-165 – Chemical Feed Upgrades.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, and corporations furnishing materials for or performing labor in prosecution of the Work provided for in such Contract, and any authorized extensions or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such Work, and for all labor cost incurred in such Work including that by a Subcontractor, and to any mechanic or materialman lienholder whether it acquires its lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, that beneficiaries or claimants hereunder shall be limited to the Subcontractors, and persons, firms, and corporations having a direct contract with the Principal or its Subcontractors.

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 to the terms of this contract or to the Work or to the Specifications.

PROVIDED, FURTHER, that no suit or action shall be commenced hereunder by any claimant: (a) unless claimant, other than one having a direct Contract with the Principal, shall have given written notice to any two of the following: The Principal, the Owner, or the Surety above named within sixty-five (65) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration date of one (1) year following the date of which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in the Bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED, FURTHER, that it is expressly agreed that this Bond shall be deemed amended automatically and immediately, without formal and separate amendments hereto, upon amendment to the Contract not increasing the Contract Price more than twenty percent (20%), so as to bind the Principal and the Surety to the full and faithful performance of the Contract as so amended.

The term "Amendment", wherever used in this Bond and whether referring to this Bond, the Contract or the Loan Documents shall include any alteration, addition, extension or modification of any character whatsoever.

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.

WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each of which number shall be deemed an original, this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

ATTEST:

\_\_\_\_\_  
Principal

ATTEST:

\_\_\_\_\_  
Principal

(Principal Secretary)

(SEAL)(s)

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

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Surety)

ATTEST:

By \_\_\_\_\_  
(Witness as to Surety) Attorney in Fact Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Title

\_\_\_\_\_  
(Address)

NOTE: Date of Bond must not be prior to date of Contract.

If Contractor is partnership, all partners should execute Bond.

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the Project is located.

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

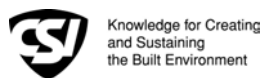
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

Copyright ©2002

National Society of Professional Engineers  
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies  
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers  
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 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 Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

**NOTE:**

**Highlighted text** (*Substantial Completion*) indicates the paragraph has been amended.

**Stricken text** indicates the paragraph has been deleted or superseded.

**→** Indicates a paragraph(s) has/have been inserted.

**TABLE OF CONTENTS**

If there is a contradiction between the General Conditions amendments or superseded notation and the Supplementary Conditions, the requirement in the Supplementary Conditions supersedes the General Conditions.

Page

|   |    |
|---|----|
| ARTICLE 1 - DEFINITIONS AND TERMINOLOGY .....   | 6  |
| 1.01 <i>Defined Terms</i> .....   | 6  |
| 1.02 <i>Terminology</i> .....   | 8  |
| ARTICLE 2 - PRELIMINARY MATTERS .....   | 9  |
| 2.01 <i>Delivery of Bonds and Evidence of Insurance</i> .....   | 9  |
| 2.02 <i>Copies of Documents</i> .....   | 9  |
| 2.03 <i>Commencement of Contract Times; Notice to Proceed</i> .....   | 9  |
| 2.04 <i>Starting the Work</i> .....   | 9  |
| 2.05 <i>Before Starting Construction</i> .....  | 9  |
| 2.06 <i>Preconstruction Conference</i> .....  | 9  |
| 2.07 <i>Initial Acceptance of Schedules</i> .....   | 9  |
| ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE .....   | 10 |
| 3.01 <i>Intent</i> .....  | 10 |
| 3.02 <i>Reference Standards</i> .....   | 10 |
| 3.03 <i>Reporting and Resolving Discrepancies</i> .....   | 10 |
| 3.04 <i>Amending and Supplementing Contract Documents</i> .....   | 11 |
| 3.05 <i>Reuse of Documents</i> .....  | 11 |
| 3.06 <i>Electronic Data</i> .....   | 11 |
| ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS ..... | 11 |
| 4.01 <i>Availability of Lands</i> .....   | 11 |
| 4.02 <i>Subsurface and Physical Conditions</i> .....  | 12 |
| 4.03 <i>Differing Subsurface or Physical Conditions</i> .....   | 12 |
| 4.04 <i>Underground Facilities</i> .....  | 13 |
| 4.05 <i>Reference Points</i> .....  | 13 |
| 4.06 <i>Hazardous Environmental Condition at Site</i> .....   | 13 |
| ARTICLE 5 - BONDS AND INSURANCE .....   | 14 |
| 5.01 <i>Performance, Payment, and Other Bonds</i> .....   | 14 |
| 5.02 <i>Licensed Sureties and Insurers</i> .....  | 15 |
| 5.03 <i>Certificates of Insurance</i> .....   | 15 |
| 5.04 <i>Contractor's Liability Insurance</i> .....  | 15 |
| 5.05 <i>Owner's Liability Insurance</i> .....   | 16 |
| 5.06 <i>Property Insurance</i> .....  | 16 |
| 5.07 <i>Waiver of Rights</i> .....  | 17 |
| 5.08 <i>Receipt and Application of Insurance Proceeds</i> .....   | 17 |
| 5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i> .....  | 17 |
| 5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i> .....   | 18 |
| ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES .....   | 18 |
| 6.01 <i>Supervision and Superintendence</i> .....   | 18 |
| 6.02 <i>Labor; Working Hours</i> .....  | 18 |
| 6.03 <i>Services, Materials, and Equipment</i> .....  | 18 |
| 6.04 <i>Progress Schedule</i> .....   | 18 |
| 6.05 <i>Substitutes and "Or-Equals"</i> .....   | 19 |
| 6.06 <i>Concerning Subcontractors, Suppliers, and Others</i> .....  | 20 |
| 6.07 <i>Patent Fees and Royalties</i> .....   | 21 |
| 6.08 <i>Permits</i> .....   | 21 |
| 6.09 <i>Laws and Regulations</i> .....  | 21 |
| 6.10 <i>Taxes</i> .....   | 22 |
| 6.11 <i>Use of Site and Other Areas</i> .....   | 22 |
| 6.12 <i>Record Documents</i> .....  | 22 |

|   |  |    |
|---|--|----|
| 6.13  | <i>Safety and Protection</i> .....   | 22 |
| 6.14  | <i>Safety Representative</i> .....   | 23 |
| 6.15  | <i>Hazard Communication Programs</i> .....   | 23 |
| 6.16  | <i>Emergencies</i> .....   | 23 |
| 6.17  | <i>Shop Drawings and Samples</i> .....   | 23 |
| 6.18  | <i>Continuing the Work</i> .....   | 24 |
| 6.19  | <i>Contractor's General Warranty and Guarantee</i> .....                               | 24 |
| 6.20  | <i>Indemnification</i> .....   | 24 |
| 6.21  | <i>Delegation of Professional Design Services</i> .....                                | 25 |
| ARTICLE 7 - OTHER WORK AT THE SITE .....  |  | 25 |
| 7.01  | <i>Related Work at Site</i> .....  | 25 |
| 7.02  | <i>Coordination</i> .....  | 26 |
| 7.03  | <i>Legal Relationships</i> .....   | 26 |
| ARTICLE 8 - OWNER'S RESPONSIBILITIES .....  |  | 26 |
| 8.01  | <i>Communications to Contractor</i> .....  | 26 |
| 8.02  | <i>Replacement of Engineer</i> .....   | 26 |
| 8.03  | <i>Furnish Data</i> .....  | 26 |
| 8.04  | <i>Pay When Due</i> .....  | 26 |
| 8.05  | <i>Lands and Easements; Reports and Tests</i> .....                                    | 26 |
| 8.06  | <i>Insurance</i> .....   | 26 |
| 8.07  | <i>Change Orders</i> .....   | 26 |
| 8.08  | <i>Inspections, Tests, and Approvals</i> .....   | 26 |
| 8.09  | <i>Limitations on Owner's Responsibilities</i> .....                                   | 27 |
| 8.10  | <i>Undisclosed Hazardous Environmental Condition</i> .....                             | 27 |
| 8.11  | <i>Evidence of Financial Arrangements</i> .....  | 27 |
| ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION .....                                       |  | 27 |
| 9.01  | <i>Owner's Representative</i> .....  | 27 |
| 9.02  | <i>Visits to Site</i> .....  | 27 |
| 9.03  | <i>Project Representative</i> .....  | 27 |
| 9.04  | <i>Authorized Variations in Work</i> .....   | 27 |
| 9.05  | <i>Rejecting Defective Work</i> .....  | 27 |
| 9.06  | <i>Shop Drawings, Change Orders and Payments</i> .....                                 | 28 |
| 9.07  | <i>Determinations for Unit Price Work</i> .....  | 28 |
| 9.08  | <i>Decisions on Requirements of Contract Documents and Acceptability of Work</i> ..... | 28 |
| 9.09  | <i>Limitations on Engineer's Authority and Responsibilities</i> .....                  | 28 |
| ARTICLE 10 - CHANGES IN THE WORK; CLAIMS .....  |  | 28 |
| 10.01   | <i>Authorized Changes in the Work</i> .....  | 28 |
| 10.02   | <i>Unauthorized Changes in the Work</i> .....  | 29 |
| 10.03   | <i>Execution of Change Orders</i> .....  | 29 |
| 10.04   | <i>Notification to Surety</i> .....  | 29 |
| 10.05   | <i>Claims</i> .....  | 29 |
| ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK .....                              |  | 30 |
| 11.01   | <i>Cost of the Work</i> .....  | 30 |
| 11.02   | <i>Allowances</i> .....  | 31 |
| 11.03   | <i>Unit Price Work</i> .....   | 31 |
| ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES .....                         |  | 32 |
| 12.01   | <i>Change of Contract Price</i> .....  | 32 |
| 12.02   | <i>Change of Contract Times</i> .....  | 33 |
| 12.03   | <i>Delays</i> .....  | 33 |
| ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK ..... |  | 33 |
| 13.01   | <i>Notice of Defects</i> .....   | 33 |
| 13.02   | <i>Access to Work</i> .....  | 33 |
| 13.03   | <i>Tests and Inspections</i> .....   | 33 |
| 13.04   | <i>Uncovering Work</i> .....   | 34 |
| 13.05   | <i>Owner May Stop the Work</i> .....   | 34 |
| 13.06   | <i>Correction or Removal of Defective Work</i> .....                                   | 34 |
| 13.07   | <i>Correction Period</i> .....   | 34 |
| 13.08   | <i>Acceptance of Defective Work</i> .....  | 35 |
| 13.09   | <i>Owner May Correct Defective Work</i> .....  | 35 |
| ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION .....                                      |  | 36 |
| 14.01   | <i>Schedule of Values</i> .....  | 36 |



|            |  |    |
|------------|--|----|
| 14.02      | <i>Progress Payments</i> .....                     | 36 |
| 14.03      | <i>Contractor's Warranty of Title</i> .....        | 37 |
| 14.04      | <i>Substantial Completion</i> .....                | 37 |
| 14.05      | <i>Partial Utilization</i> .....                   | 38 |
| 14.06      | <i>Final Inspection</i> .....                      | 38 |
| 14.07      | <i>Final Payment</i> .....                         | 38 |
| 14.08      | <i>Final Completion Delayed</i> .....              | 39 |
| 14.09      | <i>Waiver of Claims</i> .....                      | 39 |
| ARTICLE 15 | - SUSPENSION OF WORK AND TERMINATION .....         | 39 |
| 15.01      | <i>Owner May Suspend Work</i> .....                | 39 |
| 15.02      | <i>Owner May Terminate for Cause</i> .....         | 39 |
| 15.03      | <i>Owner May Terminate For Convenience</i> .....   | 40 |
| 15.04      | <i>Contractor May Stop Work or Terminate</i> ..... | 40 |
| ARTICLE 16 | - DISPUTE RESOLUTION .....                         | 41 |
| 16.01      | <i>Methods and Procedures</i> .....                | 41 |
| ARTICLE 17 | - MISCELLANEOUS .....                              | 41 |
| 17.01      | <i>Giving Notice</i> .....                         | 41 |
| 17.02      | <i>Computation of Times</i> .....                  | 41 |
| 17.03      | <i>Cumulative Remedies</i> .....                   | 41 |
| 17.04      | <i>Survival of Obligations</i> .....               | 41 |
| 17.05      | <i>Controlling Law</i> .....                       | 41 |
| 17.06      | <i>Headings</i> .....                              | 41 |

## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

---

#### 1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

~~5. *Bid* The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.~~

~~6. *Bidder* The individual or entity who submits a Bid directly to Owner.~~

~~7. *Bidding Documents* The Bidding Requirements and the proposed Contract Documents (including all Addenda).~~

~~8. *Bidding Requirements* The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.~~

~~9. *Change Order* A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.~~

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

~~12. *Contract Documents* Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.~~

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

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.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. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

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

~~22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.~~

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

~~24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.~~

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

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

~~29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.~~

30. *PCBs*--Polychlorinated biphenyls.

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

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

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. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *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.

42. *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.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain

administrative requirements and procedural matters applicable thereto.

44. *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.

~~45. *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.~~

~~46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.~~

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

48. *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.

49. *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.

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

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

~~52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times~~

~~but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.~~

## 1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

### B. Intent of Certain Terms or Adjectives

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the 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 is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

### C. Day

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

### D. Defective

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer's - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

### *E. Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

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

F. Unless stated otherwise in the Contract Documents, words or phrases 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 and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

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

### *2.02 Copies of Documents*

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

### *2.03 Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement

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

### *2.04 Starting the Work*

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

### *2.05 Before Starting Construction*

A. Preliminary Schedules: Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

### *2.06 Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

### *2.07 Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.



1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

#### ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

---

##### 3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that 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. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

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

###### A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and 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 promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor 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 by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

### 3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. 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.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

### 3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's

sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

### 4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

~~B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.~~

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

#### 4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports 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 or Engineer, or any of their Related Entities 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 9.07 and 11.03.~~

~~2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:~~

~~a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or~~

~~b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or~~



~~e. Contractor failed to give the written notice as required by Paragraph 4.03.A.~~

~~3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities 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 or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

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, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 - BONDS AND INSURANCE

### 5.01 Performance, Payment, and Other Bonds

~~A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified~~

~~in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.~~

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the 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 the 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 promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

#### 5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

#### 5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured 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:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 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 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

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.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

#### 5.05 Owner's Liability Insurance

~~A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.~~

#### 5.06 Property Insurance

~~A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:~~

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or 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, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other 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, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as 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. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.~~

#### 5.07 *Waiver of Rights*

~~A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.~~

~~B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:~~

~~1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and~~

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

~~C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.~~

#### 5.08 *Receipt and Application of Insurance Proceeds*

~~A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the 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.~~

~~B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.~~

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

~~A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract~~

~~Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.~~

#### 5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

### ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

#### 6.01 *Supervision and Superintendence*

~~A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.~~

~~B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. 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 and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

#### 6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

#### 6.05 *Substitutes and "Or-Equals"*

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

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

~~a. in the exercise of reasonable judgment Engineer determines that:~~

~~1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;~~

~~2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;~~

~~3) it has a proven record of performance and availability of responsive service; and~~

~~b. Contractor certifies that, if approved and incorporated into the Work:~~

~~1) there will be no increase in cost to the Owner or increase in Contract Times; and~~

~~2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.~~

#### 2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine 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 requirements 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 make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether 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 other work on the Project) to adapt the design to the proposed substitute item; and

c) 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;

**3) will identify:**

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

**B. Substitute Construction Methods or Procedures:** If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

**C. Engineer's Evaluation:** Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by 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 Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract

Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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

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

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

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents 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, and Engineer, 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, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

#### 6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

~~B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.~~

#### 6.08 *Permits*

~~A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.~~

#### 6.09 *Laws and Regulations*

~~A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.~~

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's 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 shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

## 6.10 Taxes

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

## 6.11 Use of Site and Other Areas

### ~~A. Limitation on Use of Site and Other Areas~~

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

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

~~3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.~~

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

## 6.12 Record Documents

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

## 6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

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

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

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

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

~~C. 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 Draw~~

~~ings or Specifications or to the acts or omissions of Owner or Engineer or , 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).~~

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

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

#### 6.15 *Hazard Communication Programs*

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

#### 6.16 *Emergencies*

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

#### 6.17 *Shop Drawings and Samples*

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

##### 1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:* Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals , any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

##### C. Submittal Procedures

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

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

b. the suitability of 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 Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. 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 certification that Contractor has satisfied Contractor's obligations under the Contract Documents

with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

#### *D. Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

#### *E. Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

#### *6.18 Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or

disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

#### *6.19 Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

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

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

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

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

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

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

7. any correction of defective Work by Owner.

#### *6.20 Indemnification*

~~A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or~~



~~arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.~~

~~B. In any and all claims against Owner or Engineer or any of their 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 officers, directors, partners, employees, agents, consultants and subcontractors arising out of:~~

~~1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or~~

~~2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.~~

#### 6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal

shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

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

## ARTICLE 7 - OTHER WORK AT THE SITE

### 7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. ~~If such other work is not noted in the Contract Documents, then:~~

~~1. written notice thereof will be given to Contractor prior to starting any such other work; and~~

~~2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.~~

~~B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, 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. 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.~~

#### ~~7.03 Legal Relationships~~

~~A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.~~

~~B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.~~

~~C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.~~

## ARTICLE 8 - OWNER'S RESPONSIBILITIES

---

### 8.01 *Communications to Contractor*

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

### 8.02 *Replacement of Engineer*

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

### 8.03 *Furnish Data*

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

### 8.04 *Pay When Due*

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

### 8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties 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 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

### 9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

### 9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

### 9.05 *Rejecting Defective Work*

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

#### 9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

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

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

#### 9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

~~A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question~~

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show

partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

#### 9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

### ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

#### ~~10.01 *Authorized Changes in the Work*~~

~~A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall~~



~~promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).~~

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

#### ~~10.02 Unauthorized Changes in the Work~~

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

#### ~~10.03 Execution of Change Orders~~

~~A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:~~

~~1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;~~

~~2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and~~

~~3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.~~

#### ~~10.04 Notification to Surety~~

~~A. If 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~~

~~A. Engineer's Decision Required: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.~~

~~B. Notice: Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract 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).~~

~~C. Engineer's Action: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:~~

~~1. deny the Claim in whole or in part,~~

~~2. approve the Claim, or~~

~~3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.~~

~~D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.~~

~~E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.~~

~~F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.~~

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

### 11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall 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, expresses, and similar petty cash items in connection with the Work.~~

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

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A 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 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

### B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

### C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

## 11.03 Unit Price Work

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

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

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

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

### 12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

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

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

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an

allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

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

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

1. a mutually acceptable fixed fee; or

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

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

~~b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;~~

~~c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of 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 may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted



by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

~~B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.~~

### 12.03 Delays

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

---

### 13.01 Notice of Defects

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

### 13.02 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, 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.C; and~~

~~3. as otherwise specifically provided in the Contract Documents.~~

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to

be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, 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.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 13.05 *Owner May Stop the Work*

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

#### 13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

#### 13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

#### 13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

#### 13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.



### ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

#### 14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress

payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

#### 14.02 *Progress Payments*

##### *A. Applications for Payments*

1. ~~At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.~~

2. ~~Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.~~

3. ~~The amount of retainage with respect to progress payments will be as stipulated in the Agreement.~~

##### *B. Review of Applications*

1. ~~Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.~~

2. ~~Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations 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 9.07, 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:~~

a. ~~inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or~~

b. ~~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:~~

a. ~~to supervise, direct, or control the Work, or~~

b. ~~for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or~~

c. ~~for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or~~

d. ~~to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or~~

e. ~~to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.~~

5. ~~Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent~~



~~inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:~~

~~a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;~~

~~b. the Contract Price has been reduced by Change Orders;~~

~~c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or~~

~~d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.~~

#### ~~C. Payment Becomes Due~~

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

#### ~~D. Reduction in Payment~~

~~1. Owner may refuse to make payment of the full amount recommended by Engineer because:~~

~~a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;~~

~~b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;~~

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

~~d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.~~

~~2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor 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.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

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

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

~~Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.~~

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor 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.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

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

#### 14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

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

#### ~~14.07 *Final Payment*~~

##### ~~A. Application for Payment~~

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

~~2. The final Application for Payment shall be accompanied (except as previously delivered) by:~~

~~a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;~~

~~b. consent of the surety, if any, to final payment;~~

~~c. a list of all Claims against Owner that Contractor believes are unsettled; and~~

~~d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.~~

~~3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner 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. Engineer's Review of Application and Acceptance~~

~~1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations~~

~~under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.~~

#### C. Payment Becomes Due

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

#### 14.08 *Final Completion Delayed*

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

#### 14.09 *Waiver of Claims*

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

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

~~2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance~~

~~with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.~~

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

---

### 15.01 *Owner May Suspend Work*

~~A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.~~

### 15.02 *Owner May Terminate for Cause*

~~A. The occurrence of any one or more of the following events will justify termination for cause:~~

~~1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);~~

~~2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;~~

~~3. Contractor's disregard of the authority of Engineer; or~~

~~4. Contractor's violation in any substantial way of any provisions of the Contract Documents.~~

~~B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:~~

~~1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);~~

~~2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and~~

~~3. complete the Work as Owner may deem expedient.~~

~~C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.~~

~~D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.~~

~~E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.~~

~~F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.~~

#### ~~15.03 Owner May Terminate For Convenience~~

~~A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):~~

~~1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;~~

~~2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;~~

~~3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and~~

~~4. reasonable expenses directly attributable to termination.~~

~~B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.~~

#### ~~15.04 Contractor May Stop Work or Terminate~~

~~A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.~~

~~B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.~~

## ARTICLE 16 - DISPUTE RESOLUTION

### ~~16.01 Methods and Procedures~~

~~A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be~~



~~governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.~~

~~B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.~~

~~C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:~~

~~1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or~~

~~2. agrees with the other party to submit the Claim to another dispute resolution process, or~~

~~3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.~~

## ARTICLE 17 - MISCELLANEOUS

### 17.01 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### 17.02 Computation of Times

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

### 17.03 Cumulative Remedies

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

### 17.04 Survival of Obligations

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

### 17.05 Controlling Law

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

### 17.06 Headings

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

SUPPLEMENTARY CONDITIONS  
TABLE OF CONTENTS  
Part I

| <u>DESCRIPTION</u>   | <u>PAGE</u><br><u>NUMBER</u> |
|--|------------------------------|
| 1. Definitions and Terminology   | 00800-1                      |
| 2. Preliminary Matters   | 00800-4                      |
| 3. Contract Documents:<br>Intent, Amending, Reuse  | 00800-5                      |
| 4. Availability of Lands; Subsurface and<br>Physical Conditions; Hazardous Environmental<br>Conditions; Reference Points | 00800-6                      |
| 5. Bonds and Insurance   | 00800-8                      |
| 6. Contractor's Responsibilities   | 00800-12                     |
| 7. Other Work at the Site  | 00800-22                     |
| 8. Owner's Responsibilities  | 00800-22                     |
| 9. Engineer Status During Construction   | 00800-22                     |
| 10. Changes in the Work; Claims  | 00800-23                     |
| 11. Cost of the Work; Allowances; Unit Price Work  | 00800-26                     |
| 12. Change of Contract Price:<br>Change of Contract Times  | 00800-28                     |
| 13. Tests and Inspections; Correction, Removal<br>or Acceptance of Defective Work  | 00800-33                     |
| 14. Payments to Contractor and Completion  | 00800-34                     |
| 15. Suspension of Work and Termination   | 00800-37                     |
| 16. Dispute Resolution   | 00800-39                     |

|     |   |          |
|-----|---|----------|
| 17. | Contractor's Accounting Method Requirements | 00800-40 |
| 18. | Nondiscrimination in Employment             | 00800-43 |
| 19. | Miscellaneous                               | 00800-44 |
| 20. | Additional Provisions                       | 00800-48 |

## SUPPLEMENTARY CONDITIONS

### Part I AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC No. C-700, 2002 Edition)(the General Conditions) 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.

Paragraphs or subparagraphs as noted below are required by or are intended to be consistent with the requirements of Massachusetts statutes governing public construction contracts in the Commonwealth of Massachusetts (the "Commonwealth"). Any other provisions required by statute to be included herein shall be deemed to be so included. In addition, the Owner and Contractor recognize that other rights, duties and obligations with respect to public construction contracts are provided for by statute, notwithstanding the fact that they are not provided for in the Contract Documents. In case of conflict between the asterisked provisions and other provisions of the Contract Documents, the asterisked provisions shall govern. In case of conflict between the provisions of the Contract Documents and the provisions of any applicable statute, the statutory provisions shall govern. Where the term "Awarding Authority" appears in any asterisked provision, it shall mean the Owner.

### ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

#### SC-1.01

#### Defined Terms

Delete the definition of 5. Bid in its entirety and insert in its place the following:

“Bid shall mean the price submission by the individual, partnership, corporation, or other entity setting forth the monetary amount of the total contract, together with any unit prices requested, on a form prescribed by the Owner, pursuant to M.G.L. c. 149, §§44A et seq..”

Delete the definition of 6. Bidder in its entirety and insert in its place the following:

“Bidder shall mean the individual, partnership, corporation, or other entity who submits a Bid pursuant to an Invitation for Bids by the Owner.”

Delete the definition of 7. Bidding Documents in its entirety and insert in its place the following:

“Bidding documents shall mean any and all documents issued by the Owner in requesting Bids pursuant to M.G.L. c.149, §§44A et seq., which shall include, but shall not be limited to, the Invitation for Bids, the Information for Bidders, Bid Bond (if any), Performance Bond, Payment Bond, Contract, General Conditions of the Contract, Supplementary General Conditions of the Contract, Supplier Diversity Office (SDO) Forms (if applicable), Minimum Prevailing Wage Rates (as applicable), and other additional information provided to potential Bidders by the Owner.”

Delete the definition of 8. Bidding Requirements in its entirety and insert in its place the following:



“Bidding requirements shall mean any and all requirements contained in any portion of the Bidding Documents issued by the Owner.”

Delete the definition of 9. Change Order in its entirety and insert in its place the following:

“Change Order shall mean a written order to the Contract signed to show the recommendation of the Project Manager, if any, the approval of the Engineer and the authorization of the Owner, executed with the same formality as the Contract, issued after the execution of the Contract, authorizing a change in the Work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates the Contractor’s Contract therewith, including the adjustment in the Contract Sum or the Contract Time.

A Change Order request may originate with the Owner, the Engineer, if any, or the Contractor and shall be submitted to the Owner. The Change Order request shall be made in writing and in accordance with the provisions of the Contract and applicable procedures of the Owner. The term equitable adjustment, as used in this paragraph, shall include all adjustments to the Contract Price or to the Time to which the Contractor is entitled, pursuant to M.G.L. c.30, Sections 39N and 39O. Such equitable adjustment shall be made in accordance with the provisions of this Article.

A Change Order may be submitted for changes in the Contract work, including but not limited to, changes in:

- a. the plans and specifications
- b, in the method or manner or performance of the work; and/or
- c. in the schedule for performance of the work.”

In the definition of 11. Contract, insert the following sentence at the end:

“The word “Agreement” in the Bidding Requirements or Contract Documents shall mean the same as the word Contract.”

Delete the definition of 12. Contract Documents and insert in its place the following:

“Contract documents are those documents enumerated in the written Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, the General Conditions of the Contract, the Supplementary General Conditions of the Contract, other Conditions of the Contract, Drawings, Specifications, Addenda issued prior to the execution of the contract, other documents listed in the Agreement, and modifications issued after the execution of the Contract. A modification is a written amendment signed by both parties to the Agreement, a Change Order, a Work Change Directive, or a minor written change in the Work Ordered by the Engineer (Field Order).”

Delete the definition of 22. Hazardous Environmental Condition and insert in its place the following:

“Hazardous Environmental Condition is the presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material or other material in such quantities or circumstances that may present a substantial or notable danger or harm to persons or property exposed thereto in connection with the Work.”

Delete the definition of 24. Laws and Regulations; Laws or Regulations and insert in its place the following:

“Laws and Regulations shall mean all Federal, Massachusetts and Town of Natick law applicable to his work including, without limitation, statutes, by-laws, rules, regulations, orders and directives, as amended, and including, without limitation, the Williams-Steiger Occupational Safety and Health Act, as amended, and related regulations, as amended, in effect throughout the term of the Contract and any extension or renewal thereof, with which the Contractor shall be required to comply. Without limitation, the Contractor shall comply with the provisions of Chapter 149, Section 26 to 27D of the Massachusetts General Laws, as amended, and the applicable minimum prevailing wage rates as determined by the Massachusetts Commissioner of Labor and Industries. The Contract shall be considered to include in their entirety all terms respecting workers’ compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, and any other laws, as though such terms were set forth in their entirety herein.”

Delete the definition of 29. Owner and insert in its place the following:

“Owner, sometimes referred to as Town or Awarding Authority, is the Town of Natick, a body corporate and politic located in Natick, Middlesex County, Massachusetts. The Owner and its authorized representatives, as well as Engineer and Owner’s Project Manager, if any, shall at all times have access to and be permitted to observe and review all Work, materials, payrolls, records of personnel, conditions of employment, invoices for materials, and generally all records relating to the Work. No member, officer, agent, employee, representative or official of the Owner shall in any way, directly or indirectly, be personally liable, under any provisions of the Contract.”

In the definition of 36. Related Entity, insert “board, commission, committee or member thereof” between “employee” and “agent”.

Delete the definition of 45. Substantial Completion in its entirety and insert in its place the following definition:

"45. Substantial Completion shall mean either that the Work required by the Contract has been completed except for Work having a Contract Price of less than one (1) 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."

Delete the definition of 46. Successful Bidder in its entirety and insert in its place the following:

“Successful bidder shall mean the lowest responsible and eligible bidder, as defined in M.G.L. c. 149, §§44A et seq., on the basis of competitive bids publicly opened and read by the Awarding Authority forthwith upon expiration of the time for the filing thereof; provided, however, that the Awarding Authority may reject any and all bids, if it is in the public interest to do so.”

Add the following to the definition of 51. Work:

“All Work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of the Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others. Should the Drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of Work unless otherwise directed by written addendum to the Contract. All indications or notations which apply to one of a number of similar situations, materials or processes shall be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents. Where codes, regulations, standards, requirements and publications of public and private bodies are referred to in the

Specifications, references shall be understood to be to the latest revision prior to the date of receiving bids, except where otherwise indicated. Where no explicit quality or standards for workmanship are established for Work, such Work is to be of good quality and consistent with the quality required by the Contract Documents. The Drawings are diagrammatic only, and are not intended to show the alignment, physical locations or configurations of such Work. The Owner and Engineer assume no liability arising out of jurisdictional issues raised or claims advanced by trade organizations or other interested parties based on the arrangement or manner of subdivision of the content of the Drawings and Specifications. The Contractor shall make all necessary arrangements to reconcile any such jurisdictional conflicts without delay, damage or cost to the Owner, unless otherwise agreed by the parties hereto.”

Delete the definition of 52. Work Change Directive in its entirety and insert in its place the following:

“Work Change Directive shall mean a written order prepared by the Engineer and signed off on by the Owner and Engineer, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Price or Contract Times, or both. The Owner may, by Work Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract, consisting of additions, deletions, or other revisions, the Contract Price and Contract Times being adjusted accordingly.”

Add the definition of "Complete and/or Completion" after paragraph 52, which is to read as follows:

"53. Complete and/or Completion - Whenever the word “Complete and/or Completion” is utilized in the Contract in reference to work completed when referring to the completion date of the contract and the assessment of liquidated damages, it shall be understood to mean that all work on the project is completed, the facilities are fully operational, the data required to closeout the project has been submitted and approved, and incidental items included in the closeout punch list have been completed to the Owner’s satisfaction”.

## ARTICLE 2 PRELIMINARY MATTERS

SC-2.01-B Delete paragraph 2.01-B of the General Conditions in its entirety.

SC-2.03-A Delete the last sentence of paragraph 2.03-A.

## ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.01  
3.01-B of the General Conditions shall read:

The last clause in paragraph

“shall be provided by  
the Contractor, at no additional cost to the Owner, whether or not specifically called for”.

SC-3.01-D Add a new section 3.01-D to the General Conditions as follows:

“In the event of any conflict among the Contract Documents, the Documents shall be construed according to the following priorities:

|  |                   |                                   |
|--|-------------------|-----------------------------------|
|  | Highest Priority: | Amendments                        |
|  | Second Priority:  | Contract                          |
|  | Third Priority:   | Addenda--later date to take       |
| precedence                             |                   |                                   |
|  | Fourth Priority:  | Supplementary General Conditions  |
|  | Fifth Priority:   | General Conditions                |
|  | Sixth Priority:   | Division 1, General Requirements  |
|  | Seventh Priority: | Technical Specifications          |
| drawings to take precedence            | Eighth Priority:  | Drawings, with larger scale       |
| Bidders, The Contractor’s General Bid. | Ninth Priority:   | Invitation to Bid, Instruction to |

Notwithstanding the order of priority of documents set forth in Subparagraph 3.01-D, any matters contained in the Specifications which have been omitted from the Drawings or vice versa shall be construed as though contained in both. In the event of any duplication, conflict, or discrepancy between the Drawings and the Specifications or between other contract clauses, so far as the same pertains to the Drawings, the Specifications or any modifications to the Drawings or the Specifications, the matter shall be promptly brought to the attention of the Engineer, without whose instructions the Contractor shall not adjust the matter except at his own risk. Any instructions of the Engineer shall be given in writing.”

SC-3.02 Insert a new paragraph SC-  
3.02-A.3 in the General Conditions as follows:

“Paragraphs or subparagraphs herein are intended to be consistent with the requirements of Massachusetts statutes governing public building construction contracts in the Commonwealth. Any other provisions required by statute to be included herein shall be deemed to be so included. In addition, the Owner and Contractor recognize that other rights, duties and obligations with respect to public construction contracts are provided for by statute, notwithstanding the fact that they are not provided for in the Contract Documents.”

SC-3.03 Insert the following language at the beginning of the second sentence in paragraph 3.03-A.2 of the General Conditions:

“In the event that such a conflict, error, ambiguity or discrepancy actually exists which requires an amendment or supplement to the Contract Documents,”.

SC-3.04 Insert a new paragraph 3.04-C in the General Conditions as follows:

No officer, official, agent or employee of the Town of Natick shall have the power to amend, modify or alter the Contract or waive any of its provisions or to bind the Town of Natick by making any promise or representation not contained herein except by an amendment, in writing, executed by the Owner in the same manner as the Contract is executed. Neither party may rely on any conduct, statement, action, inaction or course of conduct of the employees, agents or officers of the other party as having changed, modified or amended the Contract. Neither party shall be construed as waiving any provision of the Contract unless the waiver is executed in writing as an amendment to the Contract. No waiver by either party of any default or breach shall constitute a waiver of any subsequent default or breach. Forbearance or indulgence in any form or manner by either party shall not be construed as waiver of any term or condition hereto nor shall it limit the legal or equitable remedies available to that party.

Information or services required of the Owner hereunder shall be furnished by the Owner with reasonable promptness and in accordance with M.G.L. c.30, §39P, as applicable, after receipt from the Contractor of a reasonably detailed written request for such information or services. Reference is made to General Laws Chapter 30, Section 39P, the provisions of which are incorporated herein.”

SC-3.05 In paragraph 3.05-A.2 of the General Conditions, in the third line, insert “prior” between “without” and “written” and in the fourth line, insert “prior” between “specific” and “written”.

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

SC 4.01 Insert the following language at the end of the third sentence of paragraph 4.01-A of the General Conditions “, which easements are required under the circumstances”.

SC-4.01-CA Add the following language to the last sentence in paragraph 4.01-C of the General Conditions:  
", at his own expense and without liability to the Owner"

SC-4.01-B Delete paragraph 4.01-B of the General Conditions in its entirety.

SC-4.03 Delete paragraph 4.03 A, B and C of the General Conditions in their entirety and insert in its place the following language:

“(Statutory reference: M.G.L.

c.30 §39N)

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 Awarding 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 Awarding 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 methods required for the performance of the work which results in an increase or decrease in the cost of the work, the Awarding Authority shall make an equitable adjustment in the Contract price and the Contract shall be modified in writing accordingly.

If the Contractor claims that any acts or omissions of the Owner or the Engineer, including any instructions or orders, whether oral, written, by Drawings, or otherwise, involve extra cost or time, and the Contractor has not received a written acknowledgment by the Owner or Engineer that extra payment will be made or time extended on account thereof, the Contractor shall promptly so notify the Engineer in writing of such Claim and shall not proceed with the Work relating to such Claim until the Contractor has received a further written order to proceed in accordance with this Agreement. No Claim by the Contractor on account of such acts, omissions, instructions or orders shall be valid unless the Contractor has so notified the Engineer in writing, before proceeding, and has received the further written order to proceed.

The Contractor shall have the burden of demonstrating the effect of the claimed delay on the Contract Time, and shall furnish the Engineer with such documentation relating thereto as the Engineer may reasonably require. Estimates of the extension of time shall be accompanied by a schedule showing how the Critical Path has been affected.”

SC 4.04 Insert the following sentence just prior to the last sentence of paragraph 4.04-A of the General Conditions:

“The locations of existing underground facilities shown on the Contract Drawings are approximate only, and are included to indicate that the underground facilities are present, and it shall be the Contractor’s responsibility to make arrangements with all utility companies for field locations. The Contractor shall also contact "Dig Safe" and other appropriate departments, agencies and companies to insure that all underground facilities are located prior to excavation, regardless of the fact that they may or may not be shown on the Contract Drawings”.

SC-4.04-B.2 Delete the final sentence of paragraph 4.04-B.2 of the General Conditions.

SC-4.06 Insert the following sentence after paragraph 4.06-A of the General Conditions:

“The following reports and drawings relating to a Hazardous Environmental Condition identified at the site have been utilized by the Engineer in the preparation of the Contract Documents.

- None”

SC-4.06-C Insert the following sentence at the end of paragraph 4.06-C of the General Conditions:

“Nothing in the Contract Documents shall limit the responsibility of the Contractor for any Hazardous Environmental Condition which is caused by the Contractor or by any of its officers, employees, boards, commissions, committees, agents or representatives.”

SC-4.06-D Insert the following sentences  
at the end of paragraph 4.06-D of the General Conditions:

“In that event Contractor and its officers, employees, agents and representatives shall have no authority to handle, transport, remove or dispose of any materials the presence of which at the site constitutes a Hazardous Environmental Condition. In any event Contractor shall be liable for its negligence or willful misconduct.”

SC-4.06-G Delete paragraph 4.06-G of the  
General Conditions.

## ARTICLE 5 BONDS AND INSURANCE

SC-5.01 Delete paragraph 5.01-A of the General Conditions in its entirety and insert in its place the following:

“As required by M.G.L. c. 149, §44E, or by these Supplementary Conditions, the Contractor shall furnish a Performance Bond, acceptable to the Town of Natick, as security for the faithful performance of its obligations under the Contract. Said Performance Bond shall be in the amount of one hundred percent (100%) of the Contract Price and shall be issued by a surety company qualified to do business under the laws of the Commonwealth of Massachusetts and approved by the Owner. Said Performance Bond shall obligate the Contractor, its surety, and their successors and assigns for all of the work required to be performed by the Contractor under the Contract. Said Performance Bond shall remain in effect no less than one (1) year after the expiration of the term of the Contract, or any extension or renewal thereof.

As also required by M.G.L. c. 149, §44E, or by these Supplementary Conditions, the Contractor shall furnish a Payment Bond, acceptable to the Town of Natick, as security for the faithful payment of its obligations under the Contract. Said Payment Bond shall be in the amount of one hundred percent (100%) of the Contract Price and shall be issued by a surety company qualified to do business under the laws of the Commonwealth of Massachusetts and approved by the Owner. Said Payment Bond shall obligate the Contractor, its surety, and their successors and assigns to pay for labor, materials and equipment furnished for use regarding the work to be performed by the Contractor under the Contract. Said Payment Bond shall remain in effect no less than one (1) year after the expiration of the term of the Contract, or any extension or renewal thereof.”

SC-5.04 Insert the following language at the end of paragraph 5.04-B.1 of the General Conditions:

“Notwithstanding any other provision of the Contract Documents, the Contractor shall provide to the Owner, with its proof of insurance coverage, endorsements or riders to the policies of Commercial General Liability Insurance, Automobile Liability Insurance, and Excess Liability Insurance, Umbrella Form, which indicate that the Town of Natick and Haley and Ward are named as an additional insured on each such policy.”

SC-5.04 Add the following language after paragraph 5.04.B-5 of the General Conditions:

“Each certificate and policy of insurance required by this Agreement shall contain a cancellation provision as indicated below with no variations.

The above policies will not be cancelled or materially amended before the expiration date thereof, until at least thirty (30) calendar days prior written notice has been given to the certificate holders and the named insured and the Owner.”

SC-5.04 Add the following paragraphs at the end of paragraph 5.04-B.2 of the General Conditions:

"5.04-B-2.a “The Contractor shall provide and maintain throughout the term of the Contract and any extension or renewal thereof the following insurance with companies that are authorized and licensed in the Commonwealth of Massachusetts to issue policies for the coverages and limits so required. The Contractor shall also ensure that any and all Subcontractors and sub-subcontractors provide insurance in the following limits and that the Town of Natick is named as an additional insured and meet the following requirements.

A 1 Commercial General Liability including but not limited to:

1. Premises/Operations
2. Products/Completed Operations
3. Contractual
4. Independent Contractors
5. Broad Form Property Damage
6. Personal Injury
7. Medical Expense
8. Underground Explosion and Collapse Hazard (XCU)

A 2 Limits for Commercial General Liability at a minimum shall be:

- |                   |                               |              |
|-------------------|-------------------------------|--------------|
| 1.                | General Liability             |              |
| General Aggregate | \$2,000,000.                  |              |
| Each Occurrence   | \$1,000,000.                  |              |
| 2.                | Products/Completed Operations | \$2,000,000. |
| 3.                | Personal Injury               | \$1,000,000. |
| 4.                | Medical Expense               | \$ 5,000.    |



B 1 Automotive Liability including but not limited to:

1. Scheduled Autos
2. Hired Autos
3. Non Owned Autos

B 2 Limit for Automotive Liability at a minimum shall be:

1. Combined Single Limit \$1,000,000.

C 1 Worker's Compensation and Employer's Liability

C 2 Limits for Worker's Compensation and Employer's Liability at a minimum shall be:

|                       |                       |              |
|-----------------------|-----------------------|--------------|
| 1.                    | Worker's Compensation | Statutory    |
| Amount                |                       |              |
| 2.                    | Employer's Liability  |              |
|                       | Each Accident         | \$1,000,000. |
| Disease Policy Limit  | \$1,000,000.          |              |
| Disease Each Employee |                       | \$1,000,000. |

D-1 Provide Excess Umbrella for Liability Coverage. Use of Umbrella to meet other insurance limits will not be accepted. Limits for liability at a minimum shall be:

|    |                   |             |
|----|-------------------|-------------|
| 1. | Each Occurrence   | \$5,000,000 |
| 2. | General Aggregate | \$5,000,000 |

Excess Liability Insurance, Umbrella Form shall be following form, providing coverage over commercial general liability insurance, automobile liability insurance, and employer's liability under workers' compensation insurance.

E-1 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.

F-1 Certificates evidencing such insurance in five (5) copies shall be furnished to the Town of Natick at the execution of the Contract. Such certificates shall not merely name the types of policies provided, but shall specifically refer to the Contract and shall state that such insurance is as required by the Contract. With the certificates, the Contractor shall submit an insurance certification form from insurer/insurers, indicating that the coverages provided do in fact satisfy all the insurance requirements listed under ARTICLE 5 of the General Conditions, and the amendments thereto under the Supplementary Conditions. The insurance certification form is included in Part II of the Supplementary Conditions.

The Contractor shall also be required to provide to the Owner with its proof of insurance coverage endorsements or riders to the policies of commercial general liability insurance, automobile liability insurance, and excess umbrella liability insurance, umbrella form, which indicate that the Town of Natick is named as an additional insured on each such policy.

No insurance shall be obtained from an insurer which:

- a. is not licensed to sell insurance in the Commonwealth of Massachusetts; or
- b. is not authorized to provide insurance as an excess or surplus lines insurer, and does not have a current Best's rating of A or better."

G-1 The Contractor shall make no claims against the Town of Natick or its officers for any injury to any officers or employees or for damage to its equipment arising out of work contemplated by the Contract."

SC 5.05 Delete paragraph 5.05 of the General Conditions in its entirety, and insert the following paragraphs in its place:

"5.05-A Contractor shall purchase and maintain a separate Owner's Protective Liability policy, issued to Owner at the expense of Contractor, with the Owner and Engineer only as named insured. This insurance shall provide coverage for not less than the following amounts:

- |    |                   |              |
|----|-------------------|--------------|
| 1. | General Aggregate | \$3,000,000. |
| 2. | Each Occurrence   | \$1,000,000. |

5.05-A.1. A rider on the Contractor's Liability Insurance will not be acceptable."

5.05.-A.2 The provisions of paragraph 5.04-B.2.aE-1 and 5.04B-2.aF-1 of the General Conditions are incorporated herein by reference.

SC 5.06 Delete paragraph 5.06-A of the General Conditions in its entirety and insert the following paragraph in its place:

"5.06-A. For projects that includes work within existing structures or buildings, the Contractor shall be required to provide Installation Floater coverage in the full amount of the work being performed, and for projects that include construction of a new structure or building, the Contractor shall provide Builder's All Risk coverage in the full value of the structure and contents. This insurance shall:"

SC-5.06-A.1 Add the following sentence to the end of paragraph 5.06-A.1 of the General Conditions, as follows:

"The additional insured for this project shall be the Owner and Engineer."

SC-5.06 Delete paragraphs 5.06-B, C, D, E of the General Conditions in their entirety.

SC 5.07 Delete paragraphs 5.07-A and 5.07-B and 5.07-C of the General Conditions in their entirety, and insert the following paragraphs in their place:

"5.07 The Contractor shall waive all rights against the Owner for all losses and damages caused by any perils covered by the policies of insurance provided in response to paragraph SC 5.06 of the Supplementary Conditions and any other property insurance applicable to the Work, and also waive such rights against the Subcontractors, Engineer, Engineer's consultant and all other parties named as insured in such policies for loss and damages so caused.

5.07.1 As required by paragraph 6.06-G of the General Conditions each subcontract between Contractor and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of Owner, Contractor, Engineer, Engineer's consultants and all other parties named as insureds.

5.07.2 All such policies provided in response to paragraph 5.06 of the General Conditions, as amended in SC 5.06 of the Supplementary Conditions shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights or recovery against the Owner, Engineer or Engineer's consultant."

SC 5.08 Delete paragraph 5.08-A and  
5.08-B of the General Conditions in their entirety.

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

"5.09 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 paragraph 5.02 thru 5.06 on the General Conditions, as amended by SC 5.04 thru SC 5.06 of the Supplementary Conditions, on the basis of its not complying with the Contract Documents. Owner will notify Contractor in writing thereof within fourteen (14) calendar days of the date of delivery of such certificates to Owner in accordance with paragraph 2.01-B. 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-A and 6.01-B Delete paragraphs 6.01A and 6.01B of the General Conditions and insert in their place the following:

"The Contractor shall employ a competent superintendent, reasonably acceptable to the Owner, and necessary assistants who shall be in attendance at the Project site full time and at all times during the progress of the Work until the date of Substantial Completion, and for such additional time thereafter as the Engineer may determine to be necessary for the expeditious completion of the Work. The Contractor shall remove the superintendent if requested to do so in writing by the Owner or by the Engineer on behalf of the Owner, and shall promptly replace him with a competent person reasonably acceptable to the Owner, at no increase in the Contract Sum or Contract Time.

The Contractor shall not replace such superintendent without the prior written approval of the Engineer.

The Contractor shall retain a competent engineer or surveyor who shall establish sufficient lines and grades for the Work.

The Contractor shall coordinate and supervise the Work performed by Subcontractors to the end that the Work is carried out without conflict between trades and so that no trade, at any time, causes delay to the general progress of the Work. The Contractor and all Subcontractors shall at all times afford each trade, any separate contractor, or the Owner, every reasonable opportunity for the storage of materials.

The Contractor shall arrange for and attend job meetings with the Engineer and such other persons as the Engineer and the Owner may from time to time wish to have present. The Contractor shall be represented by a principal, or project manager, as well as by the Contractor's own superintendent. An authorized representative of any Subcontractor or Sub-subcontractor shall attend such meetings if the representative's presence is requested by the Engineer. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings, including costs, payments, Change Orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives.

The Contractor warrants that its financial condition is sound and that the Contractor shall be capable of obtaining any bonds required by the Contract Documents. The Contractor shall promptly advise the Owner of any occurrence, event, fact, or other matter that has had or will have a materially adverse effect upon the financial condition of the Contractor.

The Contractor hereby represents and warrants to the Owner that the Contractor is a business entity which is experienced and skilled in the construction of projects of the type described in the Contract Documents, is licensed to engage in the general construction business in the Commonwealth of Massachusetts, and is in compliance with all applicable governmental laws and regulations and all case law relative thereto.

Before starting the Work, and at frequent intervals during the progress thereof, the Contractor shall carefully study and compare the Contract Documents with each other and with the information furnished by the Owner, the Engineer and the Contractor and shall at once report to the Engineer any error, inconsistency or omission the Contractor may discover. Any necessary change shall be ordered as provided in the Contract Documents. If the Contractor proceeds with the Work without such notice to the Engineer, having discovered such errors, inconsistencies or omissions, or if by reasonable study of the Contract Documents the Contractor could have discovered such errors, inconsistencies or omissions the Contractor shall bear all costs arising therefrom."

SC-6.02-B In paragraph 6.02-B of the General Conditions, in the seventh line, insert "prior" between "Owner's" and "written".

SC-6.05-A Delete paragraph 6.05-A of the General Conditions, in its entirety and insert in its place the following:

“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.” Statutory reference M.G.L. c. 30, §39M(b)

SC-6.05-A.2.d.2) and 3) In paragraphs 6.05-A.2.d.2) and 3) of the General Conditions, delete the first word “will” and insert in its place the word “shall”.

SC-6.05-B

In paragraph 6.05-B of the

General Conditions, in the sixth line, insert “in advance, in writing,” between “approved” and “by”.

SC 6.05-F

Add the following language to

the end of paragraph 6.05-F of the General Conditions.

"Contractor shall submit to the Engineer for review, drawings to scale, showing the effect this substitute will have upon the adjoining materials, piping, equipment, etc., at no additional cost to the Owner."

SC-6.06-B

Add the following to the end of

paragraph 6.06-B of the General Conditions:

“The Contractor shall be required to submit to the Owner a list of Subcontractors it intends to use at a certain date to be specified by the Owner. The Contractor shall not use any Subcontractor to which the Owner objects and to which the Owner provides written notice of such objection to the Contractor.”

SC-6.06-C.2 In paragraph 6.06-C.2 of the General Conditions, in the first line, delete the words “anything in the Contract Documents”.

SC 6.07-B Delete paragraph 6.07-B of the General Conditions in its entirety and insert in its place the following:

“To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Town of Natick and the Engineer and all of their officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the Contractor’s or subcontractors’ infringement of patent rights or copyrights incident to the use in the performance of the Work of, or resulting from the Contractor’s or subcontractors’ incorporation of, any invention, design, product or device not specified in the Contract Documents.

Neither the Town of Natick, nor the Engineer, nor any of their officers, employees, boards, committees, commissions, agents and representatives shall be under any personal obligation or shall incur any personal liability by reason of this Contract, the execution thereof or anything relating thereto which arises out of the Contractor's or a subcontractor's infringement of patent rights or copyrights incident to the use in the performance of the Work of, or resulting from the Contractor's or a subcontractor's incorporation of, any invention, design, product or device not specified in the Contract Documents.

Nothing herein shall modify the Contractor's general indemnification obligations, as set forth in this Agreement."

SC 6.08

Delete paragraph 6.08 of the

General Conditions in its entirety and insert in its place the following:

"It is the specific responsibility of the Contractor to make, in proper and timely fashion, all necessary notifications to relevant federal, state, and local governing bodies and to obtain and comply with the provisions of all permits, inspections or applications required by the work specified, as well as to make all required submittals required under those auspices. The Contractor shall indemnify the Owner from, and pay for all claims resulting from, failure to adhere to these requirements. The Contractor shall promptly provide the Engineer and the Owner with reproductions of all permits, licenses and permissions.

The Owner has waived the building permit fee only for this Project. All other pertinent permit and inspectional service fees shall apply.

The Contractor shall pay the then current inspection fee to the Town of Natick for all inspections required by state and local codes, and required by the Town of Natick.

The Contractor shall pay all charges of utility companies for connections to the Work. The Contractor shall be aware of, observe and comply with all laws, ordinances, regulations, orders, permits, licenses, etc., and shall conduct his operations in compliance thereto, and shall indemnify the Owner and Engineer from any claim or liability arising from, or based upon a violation of same."

SC-6.09-A Delete paragraph 6.09-A of the General Conditions in its entirety and insert in its place the following:

"The Contractor shall comply with all provisions of Federal, Massachusetts and Town of Natick law applicable to his work including, without limitation, statutes, by-laws, rules, regulations, orders and directives, as amended, and including, without limitation, the Williams-Steiger Occupational Safety and Health Act, as amended, and related regulations, as amended, in effect throughout the term of this Contract and any extension or renewal thereof. Without limitation, the Contractor shall comply with the provisions of Chapter 149, Section 26 to 27D of the Massachusetts General Laws, as amended, and the applicable minimum prevailing wage rates as determined by the Massachusetts Commissioner of Labor and Industries. This Contract shall be considered to include in their entirety all terms respecting workers' compensation insurance and other terms required to be included in it by Chapter 152 of the Massachusetts General Laws, as amended, and any other laws, as though such terms were set forth in their entirety herein."

paragraph 6.10-A of the General Conditions delete the words "Place of the Project" and insert in their place the words "Commonwealth of Massachusetts".

SC 6.10 Add the following language at the end of paragraph 6.10-A of the General Conditions:

The Town is exempt from Commonwealth of Massachusetts sales tax. M.G.L. c.64, §6(h) exempts "sales of building materials and supplies to be used in the construction, reconstruction, alteration, remodeling or repair of (1) any building structure, public highway, bridge or other public works owned by or held in trust for the benefit of any governmental body or agency mentioned in paragraph (d) and used exclusively for public purposes; (2) any building or structure owned by or held in trust for the benefit of any corporation, foundation, organization or institution described in paragraph (e) and used exclusively in the conduct of its religious, scientific, charitable or educational purposes; and (3) any building, structure, residence, school or other facility included under any written contract dated on or after January 1, 1985 arising out of or related to the Massachusetts Port Authority residential and school soundproofing programs, notwithstanding whether such building, structure, residence, school or other facility is owned by or held in trust for the benefit of the Massachusetts Port Authority or is used exclusively for public purposes; provided, however, that such governmental body or agency or such corporation, foundation, organization or institution shall have first obtained a certificate from the Commissioner stating that it is entitled to such exemption and the vendor keeps a record of the sales price of each such separate sale, the name of the purchaser, the date of each such separate sale and the number of such certificate. In this paragraph the words "building materials and supplies" shall include all materials and supplies consumed, employed or expended in the construction, reconstruction, alteration, remodeling or repair of any building, structure, public highway, bridge or other such public work, as well as such materials and supplies physically incorporated therein. Said terms shall also include rental charges for construction vehicles, equipment and machinery rented specifically for use on the site of any such tax exempt project or while being used exclusively for the transportation of materials for any such tax exempt project." M.G.L. c.64I, §7 exempts from use tax "Sales exempt from the taxes imposed under chapter sixty-four H; provided, however, that in the case of the purchase of any motor vehicle or trailer, as defined in section one of chapter ninety, or any boat or airplane, other than from a vendor who is regularly engaged in the business of making sales at retail of such motor vehicles, trailers, boats or airplanes, the receipts from which are exempt from the tax imposed under said chapter sixty-four H, the purchaser thereof, except when said purchaser is the spouse, mother, father, brother, sister or child of the seller, shall pay the tax imposed by this chapter". The Contractor shall not pay, and the Town shall not reimburse or pay the Contractor or any other party, either directly or indirectly, for this or any other tax for which an exemption is provided under law. The Town will provide a state sales tax exemption number to the Contractor for use with response to this Project."

SC-6.11 Delete paragraph 6.11-A of the General Conditions in its entirety and insert in its place the following:

"The right of possession of the premises shall remain at all times in the Owner.

The Contractor's right to entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents. The Contractor shall confine the Contractor's apparatus, the storage of materials and the operations of the Contractor's workmen to limits indicated by Laws and Regulations, the Contract Documents, permits, and/or directions of the Engineer and shall not unreasonably encumber the premises with the Contractor's materials. The Owner shall not be liable to the Contractor, the Subcontractors, their employees or anyone else with respect to the conditions of the premises, except only for a condition caused directly and solely by the negligence of the Owner.

The Contractor shall at all times maintain a safe workplace, in full compliance with all federal, state, and local health and safety Laws and Regulations and shall indemnify and hold the Owner, the Engineer and the Construction Manager harmless from and against any and all liability, loss, damage or expense arising from Contractor's failure to do so.

The Contractor shall use only areas specifically assigned by the Owner for parking, storage of materials and construction operations and shall comply with all local municipal regulations regarding use of and parking on public ways.

The Contractor shall repair any and all streets, drives, curbs, sidewalks, and landscaping which are disturbed by construction operations and shall leave them in as good condition after completion of the Work as they were in before commencement of the Work.

The Contractor shall not place or maintain, or allow to be placed or maintained, on or about the Project site any advertising matter, sign, bill, poster, or billboard of any kind, except those required by law or the Contract Documents, without the prior written consent of the Owner.”

SC-6.12 Delete paragraph 6-12 of the General Conditions in its entirety and insert in its place the following:

“The Contractor shall maintain a record set of Contract Documents which shall record all deviations from the Drawings and Specifications and shall be updated in detail to reflect the actual progress of the Work. The Owner and the Engineer shall have free and complete access to such Contract Documents during the Work. Upon Substantial Completion, the Contractor shall furnish to the Owner through the Engineer one set of “as built” plans in such form as the Owner shall require. The Contractor shall also maintain a record set of the Specifications, Addenda, Change Orders and other Modifications in good order and marked and annotated currently to record changes made during the Work. Record documents in relation thereto shall be in compliance with M.G.L. Chapter 30, Section 39R.”

SC-6.13 Delete paragraphs 6.13-B and 6.13-C of the General Conditions in their entirety.

SC-6.19 In paragraph 6.19-A of the General Conditions insert at the beginning of the second sentence the words “Owner and”.

SC-6.20 Delete paragraph 6.20 of the General Conditions in its entirety and insert in its place the following:



“The Contractor shall compensate the Town of Natick for all damage to Town property of any nature arising out of the Contractor’s work. To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Town of Natick and all of its officers, employees, boards, commissions, committees, agents and representatives from and against all claims, causes of action, suits, costs, damages, and liability of any kind which arise out of the breach by the Contractor or its subcontractor(s) of their obligations under this Contract, or the act or omission of the Contractor, its subcontractor(s), or their officers, employees, agents and representatives or anyone directly or indirectly employed by them, or anyone for whose acts or omissions they may be liable, regarding the work to be performed by the Contractor under the Contract, or which arise out of the violation of any Federal, Massachusetts or Town of Natick statute, by-law, rule, regulation, order or directive, or which relate to personal injury or property damage suffered by the Contractor or any of its officers or employees regarding the subject matter of the Contract.

Neither the Town of Natick, nor any of its officers, employees, boards, committees, commissions, agents and representatives shall be under any personal obligation or shall incur any personal liability by reason of this Contract, the execution thereof or anything relating thereto which arises out of the violation of any provision of this Contract, or the violation of any Federal, Massachusetts or Town of Natick Law or Regulation, or which relates to personal injury or property damage suffered by the Contractor or its employees, regarding the subject matter of the Contract.”

SC-6.21 In paragraph 6.21-A of the General Conditions, delete the words “or unless such services are required to carry out contractor’s responsibilities for construction means, methods, techniques, sequences and procedures”

SC-6.22 Insert the following new paragraph 6.22 in the General Conditions:

“SC-6.22 Miscellaneous  
6.22-A The Contractor shall give the Engineer timely notice of any additional Drawings, Specifications, or instructions required to define the Work in greater detail, or to permit the proper progress of the Work. The Contractor shall not proceed with any Work not clearly and consistently defined in the Contract Documents, but shall request additional drawings or instructions from the Engineer. If the Contractor proceeds with such Work without obtaining further Drawings, Specifications or instructions, the Contractor shall correct Work incorrectly done at the Contractor's own expense. The Contractor shall give continuous attention to the faithful prosecution of the Work and shall keep the same under its personal control. It shall be responsible for all the acts and omissions of its employees, subcontractors, and of all persons directly or indirectly employed by it in connection with the prosecution of this Work.

6.22-B The Contractor may submit Requests For Information to the Engineer to help facilitate the Contractor's performance of the Contract. Prior to submitting each Request for Information, the Contractor shall first carefully study and compare the Contract Documents, field conditions, Owner-provided information, Contractor prepared Coordination Drawings, and prior Project correspondence and documentation to determine that the information to be requested is not reasonably obtainable from such sources.

Each Request for Information shall be submitted to the Engineer, in writing, on such form and with such accompanying information as the Engineer may require for such purpose. Each Request for Information shall identify the specific sources which were reviewed by the Contractor in its efforts to determine the information requested, and a statement to the effect that the information being requested could not be determined from such sources.

The Contractor shall submit each Request for Information sufficiently in advance of the date by which such information is required in order to allow the Engineer sufficient time, in the Engineer's professional judgment, to permit adequate review and response and to permit Contractor compliance with the latest Construction Schedule. The Contractor shall maintain a log at the Project site that sequentially numbers and lists each Request For Information. This log shall also contain the Drawing reference or Specification section to which the request pertains, the date of request, to whom the request was made, by whom the request was made, the nature of the request, and the Engineer's resolution thereof. This log shall be updated weekly by the Contractor and reviewed at each Project meeting, and the resolution of requests for information shall be made part of the minutes of such meetings.

The Contractor shall reimburse the Owner amounts charged to the Owner by the Engineer for responding to Contractor's Requests for Information where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner provided information, Contractor prepared Coordination Drawings, or project correspondence or documentation.

6.22-C The Contractor shall be responsible to the Owner for the acts and omissions of all entities or persons performing or supplying the Work regardless of tier.

6.22-D The Contractor shall furnish sufficient forces, plant and equipment as may be necessary to insure the progress of the Work in accordance with the Project Schedule. If, in the opinion of the Owner, the Contractor has fallen behind the Project Schedule, the Contractor shall submit its bid demonstrating the manner in which the desired rate of progress may be increased and shall take such steps, at the Contractor's own cost, as may be necessary to meet the Project Schedule. It shall be the responsibility of the Contractor to maintain its schedule so as not to delay the progress of the Work or the scheduled work of separate Contractors.

6.22-E The Contractor shall be solely responsible for properly laying out the Work, and for all lines, elevations and measurements for all of the Work. It shall verify the figures shown on the Drawings before laying out the work and will be responsible for any error or inaccuracies resulting from its failure to do so. In the event that the Contractor shall, while laying out the Work, become aware of (i) any conflicts among or between the Drawings, the Specifications or any Modification to the Drawings or the Specifications and the actual layout of the Work, or (ii) any conflicts or inconsistencies in the Drawings and Specification themselves, it shall promptly notify the Engineer, without whose instructions the Contractor shall not adjust the matter except at his own risk.

6.22-F If this Project requires the containment, abatement or removal of asbestos or material containing asbestos, lead or waste containing lead-based paint, the Contractor shall ensure that the person or entity performing the asbestos or lead related services is licensed pursuant to applicable State laws and regulations.

6.22-G Chemical waste shall be stored in corrosion resistant containers, removed from the Project site, and disposed of not less frequently than every three weeks unless directed otherwise. Disposal of chemical waste shall be in accordance with requirements of the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP). Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants to be discarded or burned shall be disposed of in accordance with approved procedures meeting all applicable Federal, State and Local regulations. In the event of an oil or hazardous materials spill large enough to violate Federal, State or Local regulations, the Contractor shall notify the Engineer immediately. The Contractor shall be responsible for immediately cleaning up any oil or hazardous waste spills resulting from its operations. Any costs incurred in cleaning up any such spills shall be borne exclusively by the Contractor.

The Contractor shall be solely responsible for compliance with laws and regulations governing the handling, storage, use or disposal of hazardous materials or wastes used, stored, generated or disposed of in connection with construction of the Work and shall obtain all permits and approvals, give all required notices, and observe all applicable procedures prescribed by the EPA, DEP or other governmental authorities having jurisdiction with respect to such activities. At the Owner's request, the Contractor shall properly furnish the Owner with evidence satisfactory to the Owner demonstrating the Contractor's compliance with such procedures, the giving of such notices, and the issuance of such permits and approvals.

6.22-H The Contractor shall provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and shall comply with all reasonable recommendations regarding fire protection made by the representatives of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site.

6.22-I The Contractor shall at all times protect excavations, trenches, adjacent buildings and materials from rain water, ground water, backup or leakage of sewers, drains and other piping, and from water of any other origin, and shall remove promptly any accumulation of water. The Contractor shall provide and operate all pumps, piping and other equipment necessary to this end.

6.22-J The Contractor shall be responsible for all security measures necessary and appropriate to protect the Work area until acceptance by the Owner to assure that the Work, and all materials and equipment stored at the Site, are fully and completely protected against loss or damage due to vandalism, theft, or malicious mischief. The Contractor shall not use guard dogs for this purpose unless authorized in advance in writing by the Owner. If the Owner approves the use of guard dogs, each dog shall at all times be accompanied by an adult handler.

6.22-K The Contractor shall be responsible for the adequate strength and safety of all scaffolding, staging, and hoisting equipment and for temporary shoring, bracing, and tying.

6.22-L The Contractor shall furnish on site all personal protective equipment as required, approved first aid supplies, the name of its first-aid attendant, and a posted list of emergency facilities.

6.22-M No unauthorized visitors shall be allowed on the work site without permission from the Contractor.

6.22-N The Contractor shall employ labor subject to contract terms and conditions in order to ensure harmonious labor relations on the site and

prevent strikes or labor disputes. The Contractor, in the event of a labor dispute including strikes, shall take whatever action is required at no expense to the Owner to prevent the disruption of the work. The Contractor shall also not permit employment of any person who is not of good character and morals nor permit disorderly or indecent conduct on the job site. He shall not permit the consumption of alcoholic beverages or illegal drugs on the job site nor permit any employment or person under his supervision or control to be under the influence thereof.”

6.22-O (Statutory reference:

M.G.L. c.149, §§30 and 34)

No laborer, worker, mechanic, foreman or inspector working within this Commonwealth in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or 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 (48) hours in any one week, or more than six (6) days in any one (1) week, except in cases of emergency.

6.22-P (Statutory reference: M.G.L. c.149,§25)

Every employee under this Contract shall lodge, board and trade where and with whom he elects, and neither the Contractor nor his agents or employees shall, either directly or indirectly, require as a condition of the employment of any person that the employee shall lodge, board or trade at a particular place or with a particular person.

6.22-Q (Statutory Reference: M.G.L. c.149,§34B)

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.”

6.22-R The Contractor is solely responsible for the proper and safe operation and maintenance of all utility systems within the construction limits, whether these are supplied by the Owner’s distribution system or otherwise, until the work is accepted by the Owner, and until the Owner has notified the Contractor that other arrangements have been made. The Contractor shall maintain and operate appurtenances within the construction area which serve the distribution system, subject to periodic inspection by the Owner’s operating personnel. Inspection by any representative or personnel of the Owner shall not relieve the Contractor of his responsibilities in connection with operation and maintenance of these facilities and equipment. The Contractor shall provide the Owner at least seventy-two (72) hours’ advance notice of the Contractor’s desire to extend, connect, disconnect, or turn on or off any steam, electric, water, or other service from the Owner’s supply systems. The actual operation shall be witnessed and approved by an authorized representative of the Owner. All plumbing, heating, and electrical work, including installation of equipment, and other work to be performed by the Contractor, shall be carried out without interference with the Owner’s normal operation. Where any work requires interruption of any service, the Contractor shall make advance arrangements with the Owner for dealing with and minimizing such interruption.

6.22-S The Contractor agrees to procure materials, equipment, labor and supplies from such sources and to perform all Work on the Project with labor, material suppliers and Subcontractors that will work harmoniously with the Owner's employees, employees of other contractors employed by the Owner, and with other elements of labor involved in the construction of the Project or the operation of the building in which the Project is located, including, without limitation, any tenant improvement work contractors engaged by Owner or any tenants of Owner."

6.22-T Weather Protection Devices – Pursuant to M.G.L. Chapter 149, Section 44G(D), the Contractor shall install weather protection devices and shall furnish adequate heat in the area so the work is protected during the months of November through March.

#### ARTICLE 7 – OTHER WORK AT THE SITE

SC-7.01 and  
SC-7.02 and  
SC-7.03

Delete paragraphs 7.01, 7.02  
and 7.03 of the General Conditions in their entirety except for the first sentence in paragraph 7.01(A).

#### ARTICLE 8 - OWNER'S RESPONSIBILITIES

SC-8.06 In paragraph 8.02-A of the  
General Conditions, in the second and third lines, delete the words "to whom Contractor makes no reasonable  
objection".

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

SC-8.06 Delete paragraphs 8.10 and  
8.11 of the General Conditions.

SC-8.09 Add the following at the end of  
paragraph 8.09 of the General Conditions:

"The Contractor shall provide services under any Contract with the Owner as an independent contractor with the Town of Natick and not as an employee of the Town of Natick. No employee, agent or representative of the Contractor shall be entitled to receive any benefits of employment with the Town of Natick, including without limitation salary, overtime, vacation pay, holiday pay, sick leave, health insurance, life insurance, pension or deferred compensation."

#### ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.01 Delete the first sentence of  
paragraph 9.01 of the General Conditions.

SC-9.02 Add the words “and Owner”  
after the word “Engineer” in the third line of paragraph 9.02-A of the General Conditions. Substitute the word  
“deem” for “deems” in the same line. Delete the second and third sentences of said paragraph 9.02-A.

SC-9.08-A Delete paragraph 9.08-A of the  
General Conditions.

SC-9.09-A Insert the following language  
at the beginning of paragraph 9.09-A “To the extent permitted by law”

#### ARTICLE 10 -CHANGES IN THE WORK: CLAIMS

SC 10.01-A Delete Article 10 of the General Conditions in its entirety and insert in its place the following:

“SC-10.01 Change Orders

A Change Order may be submitted for changes in the Contract work, including but not limited to, changes in:

- a. the plans and specifications
- b. in the method or manner or performance of the work; and/or
- c. in the schedule for performance of the work.

Whenever a Change Order is requested or ordered, and said Change Order will cause an adjustment in the Contractor’s cost, the Contractor may request an equitable adjustment in writing in the Contract price.

The Owner and the Contractor shall attempt to negotiate an equitable adjustment in the Contract price before commencement of the pertinent work. In the absence of a Contract for an equitable adjustment and when so directed, the Contractor shall proceed with the Change Order work on a time and material basis, and the Contractor will provide the Owner with a written notice to that effect.

Contractor shall provide the Owner with all cost and pricing data used in computing the amount of the equitable adjustment, and the Contractor shall certify that the pricing data used was accurate, complete, and current.

With respect to any sum of money due to be paid by the Contractor to the Owner under the Contract, an appropriate Change Order shall be issued deducting said sum of money from payments then due or thereafter due to the Contractor from the Owner. If such deductions from payments then due or thereafter due to the Contractor from the Owner are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

Equitable adjustments in the Contract price shall be determined according to one of the following methods, or a combination thereof, as determined by the Owner:

a. fixed price basis, provided that the fixed price shall be inclusive of items (1) through (5) (below) and shall be computed in accordance with those provisions;

b. estimated lump sum basis, to be adjusted in accordance with contract unit prices, or other agreed upon unit prices provided that the unit prices shall be inclusive of all costs related to such equitable adjustment;

c. time and materials basis, on a not-to-exceed predetermined upset amount to be subsequently adjusted on the basis of actual costs based on the following items (1) through (5):

(1) the cost at minimum prevailing rates for direct labor, material, supplies and use of equipment exclusive of hand tools;

(2) plus cost of Workers' Compensation Insurance, union fringe benefits, federal unemployment taxes, Federal Social Security, and Massachusetts Unemployment Compensation, or, as an alternative the Contractor may elect to use a flat twenty (20%) percent of the total labor rate in item (1);

(3) plus fifteen (15%) percent of item (1) for overhead, superintendence, and profit, which will be paid to the Contractor for work performed by the Contractors' own trade forces (for work performed by a Subcontractor, the Subcontractor will be entitled to a fifteen (15%) percent mark-up and the Contractor to a five (5%) percent mark-up; for work performed by a Sub-subcontractor, the Sub-subcontractor will be entitled to a fifteen (15%) percent mark-up, the Subcontractor to a five (5%) percent mark-up, and the Contractor to a five (5%) percent mark-up);

(4) if the net change is in addition to the contract price, it shall include the Contractor's overhead, superintendence, and profit. On any change which involves a net credit, no allowances for overhead, superintendence, and profit shall be figured;

(5) plus actual direct premium cost of payment and performance bonds required of the Contractor and its Subcontractors, provided there will be an appropriate credit for bond premiums in the case of a credit Change Order.

d. If unit prices are stated in the Contract Documents or subsequently agreed upon, or if quantities originally contemplated are so changed in a proposed Change Order or Construction Change Directive that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

The Contractor shall perform all work as directed by the Owner and if the Owner determines that certain work for which the Contractor has requested a Change Order does not represent a change in the Contract, or if the Contractor and Owner cannot agree to the amount of compensation for a Change Order, the Contractor shall perform said work under protest and shall follow the procedures described in the following subparagraphs a. and b.:

a. If the Contractor claims compensation for a Change Order not approved by the Owner, the Contractor shall, on or before the first working day following commencement of any such work or sustaining of any such damage, submit to the Owner's representative a written statement of the nature of such work or damage sustained. The Contractor will not be entitled to compensation for any portion of its Change Order claim related to work performed prior to the Owner's receipt of the written statement referred to in the previous sentence.

b. On or before the second (2nd) working day after the commencement of such work or sustaining of such damage, and daily thereafter, the Contractor shall file to the extent possible with the Engineer and the Owner itemized statements of the details and costs of such work performed or damage sustained; and unless such statements shall be made as so required, its claim for such compensation shall be forfeited and invalid and it shall not be entitled to payment on account of any such work or damage.

c. The Owner shall have the right to reject Change Orders executed by the Contractor under a reservation of rights.

#### SC-10.04

#### COMPUTING TIME

#### EXTENSIONS

Contract Time shall not be changed due to a delay in the Contractor's early completion date until all Contract Float is used and performance of the specified work necessarily extends beyond the Contract Time. An extension in Contract Time will not be approved unless the Contractor demonstrates through a detailed CPM schedule analysis that unforeseeable causes, beyond the control of and without the fault or negligence of both the Contractor and the Subcontractors or Suppliers at any tier, led to performance or completion of all or part of the work beyond the corresponding Contract Time despite the Contractor's reasonable and diligent actions. If granted, an extension in Contract Time shall be the Contractor's sole and exclusive remedy for any delay, disruption, interference, hindrance, and associated costs, however caused.

#### SC-10.05 STATUTORY PROVISIONS – DIFFERING SITE CONDITIONS; TIMELY DECISIONS

The Contractor's attention is directed to M.G.L. c.30, Sections 39I, 39J, 39N, 39O, and 39P, the provisions of which apply to the Contract.

a. Differing Site Conditions, M.G.L. c.30,  
Section 39N.



If, during the progress of the work, the Contractor or the Owner 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 Owner may request an equitable adjustment in the Contract price 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 as discovered. Upon receipt of such a claim from a Contractor, or upon its own initiative, the Owner 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 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 Owner shall upon submission by the Contractor of a properly submitted change order request, make an equitable adjustment in the Contract price and the Contract shall be modified in writing accordingly.

b. Timely decision by  
the Owner. M.G.L.

c.30, Section 39P.

Whenever the Contract requires the Owner or the Engineer to make a decision during construction of the Project on interpretation of the specifications, approval of equipment, material, or any other approval, or progress of the work, that decision shall be made promptly and, in the event, no later than thirty (30) days after receipt of a written submission for such decision by the Contractor, but if such decision requires extended investigation and study, the Owner or the Engineer shall, within thirty (30) days after the receipt of the submission, give the Contractor written notice of the reasons why the decision cannot be made within the thirty (30) day period and the date by which the decision will be made.”

SC-10.06

CERTIFICATE OF

APPROPRIATION

(Statutory reference: M.G.L. c.44 §31C)

The contract shall not be deemed to have been made until the auditor or accountant or other officer of the city or town having similar duties has certified thereon that an appropriation in the amount of the contract is available therefor and that an officer or agent of the city, town, or Awarding Authority has been authorized to execute said contract and approve all requisitions and change orders. No order to the Contractor for a change in or addition to the work, whether in the form of a drawing, plan, detail or any other written instruction, unless it is an order which the Contractor is willing to perform without any increase in the contract price, shall be deemed to be given until the auditor or accountant, or other officer of the Awarding Authority having similar duties, has certified thereon that an appropriation in the amount of such order is available therefore; but such certificate shall not be construed as an admission by the Awarding Authority of its liability to pay for such work. The certificate of the auditor or accountant or other officer of the Awarding Authority having similar duties that an appropriation in the amount of the contract or in the amount of such order is available shall bar any defense by the Awarding Authority on the grounds of insufficient appropriation.”

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

SC-11.01-A In paragraph 11.01-A of the General Conditions, in the last sentence, delete the word “and”, in the second last line, and insert at the end of the last sentence the following text “, and shall include no markup”.

SC-11.01-A In paragraph 11.01-A.1 of the General Conditions, in the last line, insert “in advance, in writing,” between the words “authorized” and “by”.

SC 11.01-A Add the following paragraph at the end of paragraph 11.01-A.2 of the General Conditions:

“11.01-A.2.a. Only those materials required as a result of such Work and reasonable freight charges for delivery of same are allowable. Only the equipment and machinery required as a result of such Work is allowable. Costs for equipment and machinery shall be based upon the current Nielson/Dataquest Rental 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 Contractor’s Fee as detailed in paragraphs 11.6 of the General Conditions.

(1 month (normal use) = 176 hours) (See 11.01-A.5.c. for equipment and machinery actually rented)."

Amend paragraph 11.01-A.5.a. of the General Conditions by adding the following language at the end of the paragraph:

" , provided that the Contractor shall substantiate that this reimbursement payment is customarily considered normal to his operations."

Delete paragraph 11.01-A.5.c. of the General Conditions in its entirety and insert the following language in its place:

"11.01-A.5.c. All construction equipment and machinery and the parts thereof actually rented from others in accordance with rental agreements approved in advance, in writing, by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof all in accordance with 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."

Amend the first sentence of paragraph 11.01-A.5.f. of the General Conditions by striking out the following words:

"(except losses and damages within the deductible amounts of property insurance established by Owner in accordance with paragraph 5.06.D)."

and by deleting in the ninth line the word “negligence” and inserting in its place the words “act or omission”.

Delete paragraph 11.01-A.5.h. of the General Conditions in its entirety.

SC-11.01-B In paragraph 11.01-B.4 of the General Conditions, in the first line, insert “or willful misconduct” between the words “negligence” and “of”.

SC 11.01-D In paragraph 11.01-D of the General Conditions, in the first paragraph, third line, delete the word “will” and insert in its place the word “shall”.

SC-11.01-D Add the following paragraphs after paragraph 11.01-D of the General Conditions:

"11.01-D.1. Executed change orders shall be submitted to Owner in triplicate on the Change Order Form included in Part II of the Supplementary Conditions, and to the format of the Example Calculation Sheet also located in Part II of the Supplementary Conditions.

11.01-D.2. The Contractor shall include three (3) copies of invoices to substantiate all costs for materials and equipment directly associated with work involved in the change order.

11.01-D.3. The Contractor shall include three (3) copies of labor summary to include name, classification, wage and date for all personnel directly involved in the work associated with the change order."

## ARTICLE 12 – CHANGE OF CONTRACT PRICE: CHANGE OF CONTRACT TIMES

SC-12.01  
General Conditions, last line, delete “10.05” and insert in its place “10.03”.

In paragraph 12.01-A of the

SC-12.01  
through 12.01-C.2.c. of the General Conditions.

Delete paragraphs 12.01-C.2.a,

SC-12.01-C Paragraphs 12.01-C.2.d. through 12.01-C.2.f. of the General Conditions shall be renumbered 12.-1-C.2.a. through 12-1-C.2.c., respectively.

SC-12.01-C New paragraph 12.-1-C.2.a of the General Conditions (former paragraph 12.01-C-2.d.) shall read”

“No fee shall be paid on the  
basis of costs.”

SC-12.02  
the General Conditions in its entirety and insert in its place the following:

Delete paragraph 12.02-B of

“SC-12.02 TIME

12.02-B TIME IS OF THE

ESSENCE

Time is of the essence in the performance of the Contract. By executing the Contract, the Contractor represents that the time for performance stated in the Contract documents is a reasonable period for completing the Work to be performed under the Contract.

The Contractor shall prosecute the work with the diligence necessary to ensure its completion within the required time. The Contractor shall provide sufficient labor, materials, and equipment, and shall promptly take such appropriate action to recover schedule as may be necessary. The Contractor shall carry on the work and adhere to the schedule during all disputes and disagreements with the Owner. No work shall be delayed or postponed pending resolution of any disputes and disagreements. The Contractor shall exercise reasonable precautions, efforts, and measures to avoid or mitigate situations which would cause delays.

If no specific date is identified in the Contract Documents for Final Completion of the Project or a particular phase of the Project, Final Completion of the Project or Project phase shall be achieved by the Contractor within thirty (30) calendar days after the date of Substantial Completion of the Project or Project phase.”

12.02-C At least ten (10) working days before the first Application for Payment, the Contractor shall submit to the Engineer a Progress Schedule showing for each class of work included in the Schedule of Values, the percentage completion to be obtained and the total dollar value of work to be completed as of the first of each month until Substantial Completion. All calculations shall be on the basis of work in place, but not including the value of materials delivered but not in place.

12.02-D The Progress Schedule shall be based on an orderly progression of the Work, allowing adequate time for each operation (including adequate time for submission and review of submittals), and leading to a reasonable certainty of Substantial Completion by the date established in the Contract. The Progress Schedule will be reviewed by the Engineer for compliance with the requirements of this Article and will be accepted by the Engineer or returned to the Contractor for revision and resubmittal. Unless specifically required by law, no payment under this Contract shall be due until the Progress Schedule has been approved by the Engineer. The Engineer's review of the Progress Schedule shall not impose any duty on the Engineer or the Owner with respect to the timing, planning, scheduling, or execution of the Work. In particular, if the Contractor proposes a Progress Schedule indicating a date of Substantial Completion which is earlier than the Contract Time, the Contractor shall not be entitled to additional payment or compensation of any kind if, for any reason, the full Contract Time is required to achieve Substantial Completion of the Work.

12.02-E If in any Application for Payment the total value of the completed Work in place, as certified by the Engineer, is less than ninety (90%) percent of the total value of the Work in place estimated in the Progress Schedule, the Owner shall have the right, at the Owner's option and without cost to the Owner, to order the Contractor to take corrective measures necessary to expedite the progress of construction, including without limitations: (i) working additional shifts or overtime, (ii) supplying additional workers, equipment, and facilities, and (iii) other similar measures (hereinafter referred to as “Extraordinary Measures”). The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule.

12.02-F If each of three successive applications for payment, as certified by the Engineer, indicate that the actual Work completed is less than ninety (90%) percent of the values estimated in the Progress Schedule to be completed by the respective dates, the Owner may at the Owner's option, treat the Contractor's delinquency as a default.

12.02-G If the Engineer has determined that the Contractor should be permitted to extend the time for completion, the calendar dates in the Progress Schedule shall be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of Work to be completed as of the first of each month shall be adjusted prorata.

12.02-H If the Contractor fails to submit any Application for Payment in any month, the Engineer shall, for the purpose of this evaluation of progress, certify separately to the actual value of the Work in place completed as of the first of the month to the best of the Engineer's knowledge.

12.02-I The Owner and the Contractor shall comply with M.G.L. c.30, §39K, which provides:

Within fifteen (15) days (thirty (30) days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five per cent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one per cent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate than charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

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

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

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

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

12.02-J Nothing herein shall limit the Owner's right to liquidated or other damages for delays by the Contractor or to any other remedy which the Owner may possess under other provisions of the Contract Documents or by law.

12.02-K Should the Contractor request additional time to complete the work, it shall document its reasons therefor and request an extension of time the alleged delay occurred. Failure to notify the Owner of any delay as provided in this Article shall preclude the Contractor from subsequently claiming any time extension or other relief due to said delay. Request for extensions of time shall be submitted as a Change Order request to the Owner.

The Contractor shall submit the amount of a claim to the Owner 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 the Contract and, except for costs due to a suspension order, the Owner shall not approve any costs in the claim incurred more than twenty (20) days before the Contractor notified the Owner in writing of the act or failure to act involved in the claim.

The Owner and the Contractor agree that they understand that this subparagraph places a burden on the Contractor to inform the Owner, as soon as practicable, whenever the Contractor considers that an action or inaction of the Owner or the Engineer could result or has resulted in a delay in the Project, thereby providing the Owner and the Engineer with the opportunity to take action to avoid or lessen the time extensions or damages that might be associated with such action or inaction.

The Contractor and the Surety on the Contractor's performance bond shall be jointly and severally liable for, and shall pay to the Owner the expenses for inspection of Work performed after the time stipulated in the Owner-Contractor Contract for Substantial Completion. Such inspection costs shall include fees paid to the Engineer and its consultants as extra services at the rate stipulated in the Owner-Engineer Contract, the costs of any other project representatives of the Owner at the current salary rate and any other direct expenses due to inspection. The Owner may retain from monies otherwise due the Contractor whatever sums accrue to the Owner pursuant to this provision. The Contractor shall not be liable for inspection costs for delay in performance as provided hereunder for any period for which an extension of the Contract Time has been granted.

12.02-L No claim for extension of time shall be allowed on account of failure of the Engineer to furnish Drawings, Specifications or instructions until fifteen (15) days after receipt by the Engineer by registered or certified mail, or by hand delivery acknowledged by the Engineer, of written demand for such instructions, Drawings, or Samples, and not then unless such claim be reasonable.

No extension of time shall be granted because of seasonal or abnormal variations in temperature, humidity or precipitation, which conditions shall be wholly at the risk of the Contractor, whether occurring within the time originally scheduled for completion or within the period of any extension granted. There shall be no increase in the Contract Sum on account of any additional costs of operations or conditions resulting therefrom.

The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Owner or the Engineer on account of any delay in the commencement of the Work and/or any hindrance, delay or suspension of any portion of the Work, whether such delay is caused by the Owner, the Engineer, or otherwise, except as and to the extent expressly provided under M.G.L. c.30, §39O in the case of written orders by the Owner. The Contractor acknowledges that the Contractor's sole remedy for any such delay and/or suspension will be an extension of time as provided in this Article.

12.02-M (Statutory reference: M.G.L. c.30 §39O)

a. The Awarding Authority may order the 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 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 Contractor shall 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 (20) days before the Contractor notified the Awarding Authority in writing of the act or failure to act involved in the claim.

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 Contractor for payment for an increase in the cost of his performance as provisions a. and b. give the 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 Contractor or the Subcontractor may have against each other.

## 12.02-N LIQUIDATED DAMAGES

If the Contractor shall fail to achieve Substantial Completion within the Contract Time, it shall be liable to pay the Owner the daily amount as stipulated in the Contract not as a penalty, but as fixed and agreed upon damages for breach of contract. The said amount is fixed and agreed upon because of the difficulty of ascertaining the Owner's actual damages. It is mutually understood that the said amount is a reasonable approximation or estimate thereof as of the date of the Contract. The said amount may be withheld from periodic or final payments due to the Contractor, in addition to retainage and other backcharges."

SC-12.03 In paragraph 12.03-A of the General Conditions, in the eighth line, insert "acts or neglect by Engineer," after "acts or neglect by Owner".

SC-12.03 In paragraph 12.03-C of the General Conditions, in the fifth line, insert "and Engineer" between "Owner" and "and".

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

SC-13.03 Delete paragraph 13.03-B of the General Conditions in its entirety.

SC-13.07 In paragraph 13.07-B of the General Conditions, in the last line, delete "will" and insert in its place "shall".

SC 13.09 Add the following paragraph immediately after paragraph 13.09-D of the General Conditions:



"13.09-E In the event of an emergency caused by defective Work, if the Contractor fails to respond to notification within twelve (12) hours, the Owner may proceed with alleviating the condition, and at his option may impose a surcharge upon the Contractor or a decrease in the Contract Price to cover associated costs in relation thereto."

#### ARTICLE 14 -PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02 Delete paragraph 14.02 A, B and C of the General Conditions in their entirety and insert in its place the following:

"M.G.L. c.30, § 39K is incorporated herein by reference. See Part II of the SUPPLEMENTARY CONDITIONS, p. 00810-7."

SC 14.03-A Add a new paragraph immediately after paragraph 14.03-A of the General Conditions:

"14.03-A.1. No materials or supplies for the Work shall be purchased by Contractor or Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. Contractor shall warrant that he has clear title to all materials and supplies used by him in the Work, free from all liens, claims or encumbrances."

SC 14.04 Delete paragraphs 14.04-A through 14.04-D of the General Conditions in their entirety and insert in their place the following:

"14.04-A Substantial completion and payment in relation thereto shall be in compliance with M.G.L. Chapter 30, Section 39G for Utility Contracts, and M.G.L. Chapter 30, Section 39K for Building Associated Contracts, as included in Part II of the Supplementary Conditions.

14.04-A.1. For utility contracts, Owner, within twenty one (21) days of receipt of certification from Contractor that the work has been Substantially Complete, shall present to Contractor a written declaration that work has been Substantially Complete, or an itemized list of incomplete or unsatisfactory work items.

14.04-A.1.a. Within sixty five (65) days after the effective date of Substantial Completion and receipt of an Application for Payment, Owner shall submit to Contractor payment for the quantity and price of the work done with the following deductions:

- a. A retainer of one (1%) percent of the undisputed Substantial Completion payment amount.
- b. Less the estimated cost of completing all incomplete and unsatisfactory work items.
- c. An amount equal to sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in a joint account."

SC-14.07-14.09 Delete paragraphs 14.07 through 14.09 of the General Conditions and insert in their place the following:

“(Statutory Reference – M.G.L. c.30, §39F:

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

Not later than the sixty-fifth (65th) 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 Contractor. The 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 Contractor.

Each payment made by the Awarding Authority to the Contractor for the labor performed and the materials furnished by a Subcontractor shall be made to the Contractor for the account of that Subcontractor; and the Awarding Authority shall take reasonable steps to compel the 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 Contractor or which is to be included in a payment to the Contractor for payment to the Subcontractor, the Awarding Authority shall act upon the demand as provided herein.

If, within seventy (70) days after the Subcontractor has substantially completed the subcontract work, the Subcontractor has not received from the Contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the Contractor, less any amount retained by the 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 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 (70th) day after the Subcontractor has substantially completed the subcontract work. Within ten (10) days after the Subcontractor has delivered or so mailed the demand to the Awarding Authority and delivered or so mailed a copy to the Contractor, the Contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the 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 Contractor and of the amount due for each claim made by the Contractor against the Subcontractor.

Within fifteen (15) days after receipt of the demand by the Awarding Authority, but in no event prior to the seventieth (70th) 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 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 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 M.G.L. c 30, §39F. The Awarding Authority shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deductions from direct payments made.

The Awarding Authority shall forthwith deposit the amount deducted from a direct payment in an interest-bearing joint account in the names of the Contractor and the Subcontractor in a bank in Massachusetts selected by the Awarding Authority or agreed upon by the Contractor and the Subcontractor and shall notify the Contractor and the Subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in a Contract between the Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.

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

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

If the Subcontractor does not receive payment as provided herein or if the Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment for same when due less the deductions provided for herein, the Subcontractor may demand direct payment by following the procedure provided for in M.G.L. c.30, §39F, and the Contractor may file a sworn reply as provided in that same Sub-subparagraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the Contractor. Thereafter the Awarding Authority shall proceed as provided in M.G.L. c.30, §39F.

Any assignment by a Subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of M.G.L. c.149, §29 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 the provisions herein 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

A Contractor or a Subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited pursuant to M.G.L. c.30, §39F 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 by a petition in equity in the superior court against the Awarding Authority and the 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. M.G.L. c.231, §§59 and 59B 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 §§59 and 59B 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 of 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 Contractor are available for direct payment shall have a right to file a petition in a 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.

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 Contractor, reduce by the amount of any deposit of a disputed amount by the Awarding Authority as provided herein any amount held under a trustee writ or pursuant to a restraining order or injunction."

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

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

"15.01-A The Owner may order the 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 Owner; provided however, that if there is a suspension, delay or interruption for fifteen (15) days or more or due to a failure of the Owner to act within the time specified in this Contract, the Owner 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 Contractor on such increase; and provided further, that the Owner 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.

The Contractor shall submit the amount of said claim to the Owner 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 Owner shall not approve any costs in the claim incurred more than twenty (20) days before the Contractor notified the Owner in writing of act or failure to act involved in the claim.

15.01-A-1. The above revisions contained in paragraph under SC 15.01 are in compliance with Massachusetts General Laws Chapter 30, Section 39O."

#### SC-15.02

Delete paragraph 15.02 A, B, C, D, E and F of the General Conditions in their entirety and insert in its place the follow provision:

"15.02-A If the Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if the Contractor fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction or disregards an instruction, order or decision of the Engineer, or otherwise is guilty of a substantial violation of any provision of the Contract, then the Contractor shall be in default, and the Owner may, without prejudice to any other right or remedy and upon written notice to the Contractor of such default, take possession of all materials, tools, appliances, equipment, construction equipment and machinery and vehicles, offices and other facilities on the Project site, and all materials intended for the Work, wherever stored, and, if such default is not cured within seven (7) days after such notice, may terminate the employment of the Contractor, accept assignment of any or all subcontracts, and finish the Work by whatever method the Owner may deem expedient. The Owner shall be entitled to collect from the Contractor all direct, indirect, and consequential damages suffered by the Owner on account of the Contractor's default, including without limitation additional services and expenses of the Engineer made necessary thereby. The Owner shall be entitled to hold all amounts due the Contractor at the date of termination until all of the Owner's damages have been established, and to apply such amounts to such damages.

If, after final completion of the Work, the Owner determines that the unpaid amount (if any) due to the Contractor for the portion of the Work performed by the Contractor in accordance with the Contract exceeds any costs and damages incurred by the Owner as the result of the Contractor's breach of this Contract, such excess shall be paid to the Contractor. If the costs and damages incurred by the Owner as the result of the Contractor's breach of this Contract exceeds the unpaid amount (if any) due to the Contractor for the portion of the Work performed by the Contractor, the Contractor shall promptly pay such excess upon written demand by the Owner. In the event of a termination of the Contract pursuant to this Article, the Owner and the Contractor shall forthwith return to the other all papers, materials and other properties of the other held by each for the purposes of execution of the Contract. In addition, each party will make reasonable efforts to assist the other party in an orderly termination of this Contract."

15.02-B If the Contractor is determined by a court of competent jurisdiction to be bankrupt, or if any assignment shall be made by the Contractor or by any guarantor of the Contractor for the benefit of creditors, or if a petition is filed by the Contractor or by guarantor of the Contractor for adjudication as a bankrupt, or for reorganization or an arrangement under any provision of the Bankruptcy Act as then in force and effect, or in an involuntary petition under any of the provisions of the Bankruptcy Act is filed against the Contractor and such involuntary petition is not discharged within ninety (90) days thereafter, in any event the Owner may terminate this Contract upon written notice to the Contractor."

SC-15.03 Delete paragraph 15.03 of the General Conditions in its entirety and insert in its place the following:

#### "15.03 OWNER'S TERMINATION FOR CONVENIENCE

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and/or purchase orders.

In the event of such termination for the Owner's convenience, the Contractor shall be compensated only for Work performed and expenses incurred in accordance with the Contract prior to termination, together with reasonable demobilization expenses (provided that there are appropriated Project funds available for such demobilization expenses). The Owner, however, shall not compensate the Contractor for lost profits, overhead expenses, termination expenses, or other such costs or expenses."

#### ARTICLE 16 - DISPUTE RESOLUTION

SC 16.01 Delete paragraph 16.01 A, B and C of the General Conditions in their entirety and insert in its place the following:

“Any Claim arising out of or related to the Contract, except those waived as provided in herein, shall, after final decision by the Engineer or thirty (30) days after submission of the Claim to the Engineer, be subject to mediation as a condition precedent to the institution of legal or equitable proceedings by either party.

The Owner and Contractor shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be conducted under the auspices of the American Arbitration Association in accordance with the most current version of the Association’s Construction Industry Mediation Rules in effect at the time the request for mediation is filed. Request for mediation shall be filed in writing with the other party to this Contract and with the American Arbitration Association. All necessary parties may be brought into such mediation.

The parties shall bear equally the mediator’s fee and any filing fees required for the mediation. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Written Contracts reached in mediation shall be enforceable as written settlement Contracts in any court having jurisdiction thereof. In the event that any such claim, dispute or controversy is not resolved through the mediation process, either party is free to pursue any such claim, dispute or other matter in an appropriate court proceeding.

This paragraph 16.01 shall not prohibit the initiation of legal proceedings or equitable proceedings in circumstances where mediation will not be completed before the expiration of the applicable time within which to initiate legal proceedings or equitable proceedings. Under no circumstances shall either party call for mediation of any claim or dispute arising out of this Contract after such period of time as would normally bar the initiation of legal proceedings to litigate such a claim or dispute under the laws of the Commonwealth of Massachusetts.

This Paragraph 16.01 shall survive completion or termination of the Contract.”

ARTICLE 17 Renumber Article 17 as Article 19, and renumber paragraphs 17.01 thru 17.06 as paragraphs 19.01 thru 19.06.

Insert new paragraphs 17.01

through 17.06 in the General Conditions:

“ARTICLE 17 - CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS  
(Statutory reference: M.G.L. c.30, §39R)

SC\_17.01\*-SC-17.06\* Add new paragraphs 17.01 through 17.06, to the General Conditions as follows:

“17.01-A\* The words defined herein shall have the meaning stated below whenever they appear in this Article 17:

17.01-A.1 "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to §39M of c.30, §§44A-44H inclusive, of c.149, §11C of c.25, or §§44-58, inclusive, of c.7C, which is for an amount or estimated amount greater than one hundred thousand dollars.

17.01-A.2 "Contract" means any contract awarded or executed pursuant to §§44-58, inclusive of c.7C, and any contract awarded or executed pursuant to §11C of c.25A, §39M of c.30, or §§44A-44H, inclusive, of c.149, which is for an amount or estimated amount greater than one hundred thousand dollars.

17.01-A.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.

17.01-A.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/her 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.

17.01-A.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.

17.01-A.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 s/he has made and sets forth his/her 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.

17.01-A.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.

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

17.02-A Every Contract or contract awarded or executed pursuant to §§44-58, inclusive of c.7C, §11C of c.25A, and pursuant to §39M of c.30 or to §§44A-44H, inclusive, of c.149, shall provide that:



17.02-A.1 The Contractor shall make, and keep for at least six (6) years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor.

17.02-A.2 Until the expiration of six (6) years after final payment, the Awarding Authority, 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/her Subcontractors that directly pertain to, and involve transactions relating to, the Contractor or his/her Subcontractors.

17.02-A.3 If the Contract 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/her 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.

17.02-A.4 If the Contract is a contract as defined herein, the Contractor has filed a statement of management on internal accounting controls as set forth in Paragraph 17.03 below prior to the execution of the contract.

17.02-A.5 If the Contract 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 17.05 below.

17.03-A

Every Contractor awarded a contract shall file with the Awarding Authority a statement of management as to whether the system of internal accounting controls of the Contractor and its subsidiaries reasonably assures that:

17.03-A.1 transactions are executed in accordance with management's general and specific authorization;

17.03-A.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;

17.03-A.3 access to assets is permitted only in accordance with management's general or specific authorization; and

17.03-A.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.

17.04-A 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 or she has examined the statement of management on internal accounting controls, and expressing an opinion as to

17.04-A.1 whether the representations of management in response to this paragraph and Paragraph 17.02 above are consistent with the result of management's evaluation of the system of internal accounting controls; and

17.04-A.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.

17.05-A Every Contractor awarded a contract by the Commonwealth or by any political subdivision thereof shall annually file with the Commissioner of Division of Capital Asset Management 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 statement shall be made available to the Owner upon request.

17.06-A Records and statements required to be made, kept or filed under the provisions of this Article 17 shall not be public records as defined in M.G.L. c.4, §7 and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of Subparagraph 17.02-A.2 and 17.05-A.”

ARTICLE 18 INSERT A NEW ARTICLE 18 IN THE GENERAL CONDITIONS AS FOLLOWS:

“ARTICLE 18:

NONDISCRIMINATION IN EMPLOYMENT

18.01-A Contracts for work under this bid will obligate the Contractor and Subcontractors not to discriminate in employment practices.

18.02-A Contracts for work under this project will obligate the Contractor and Subcontractors to maintain not less than five (5%) percent ratio of minority employee man hours to total man hours.

18.03-A In connection with the performance of work under the Contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object), genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap. The aforesaid provision shall include, but not be limited to the following: advertising; recruitment; hiring; rates of pay or other forms of compensation; terms, conditions or privileges of employment; employment upgrading; transfer; demotion; layoff; and termination. The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination or other applicable agency of the Commonwealth of Massachusetts setting forth the provisions of the Fair Employment Practices Law of the Commonwealth. The Contractor shall also undertake in good faith, affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age, sex, gender identity, sexual orientation (which shall not include persons whose sexual orientation involves minor children as the sex object; genetic information, ancestry, children, marital status, veteran status or membership in the armed services, the receiving of public assistance, and handicap, and to eliminate and remedy any effects of such discrimination in the past.

18.04-A Successful Bidder shall submit a Contractor's Certification Form and a Subcontractor's Certification Form concerning its employment practices and policies in order to maintain its eligibility to receive the award of the Contract. These forms shall be submitted with the signed Contract Documents."

#### ARTICLE 19 -MISCELLANEOUS

SC 19.01-B Add the following new paragraph immediately after paragraph 19.01-A.2. of the General Conditions:

"19.01-B Both the address given in the Bid Form upon which this Agreement is founded, and Contractor's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to Contractor shall be certified, mailed, or delivered, the delivering at the above named place, or depositing in a postpaid wrapper directed to the first named place, in any post office box regularly maintained by the post office department, of any notice, letter or other communication to Contractor shall be deemed sufficient service thereof upon Contractor; and the date of said service shall be the date of such delivery or mailing.

The first named address may be changed at any time by an instrument in writing, executed and acknowledged by Contractor, and delivered to Owner and Engineer in accordance with this Article 19. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon Contractor personally."

SC-19.01-C Add the following new paragraph 19.01-C to the General Conditions:

Notices given to the Owner shall be given to the Town Administrator, Town of Natick, Natick Town Hall, 13 East Central Street, Natick, MA 01760, to the Director, Natick Department of Public Works, 75 West Street, Natick, MA 01760 and to the Engineer.

SC-19.05-A Delete paragraph 19.05-A (formerly 17.05-A) of the General Conditions and insert the following paragraph:

“A. This Contract shall be  
governed by and interpreted in accordance with the laws of the Commonwealth of Massachusetts, regardless of  
choice of law principles”.

Insert the following new paragraphs 19.07 through 19.15 in the General Conditions.

**“19.07 MINIMUM PREVAILING WAGE RATES**

19.07 -A The requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to the employment of labor, and to the schedule of minimum prevailing wage rates established in compliance with laws, including without limitation M.G.L. c.149, §26-27G, shall be a part of these Contract Documents. Copies of Federal and/or State wage schedules are included at the end of Part I of these Supplementary Conditions. If, after the Notice to Proceed, 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 wages as shall be determined by the officials administering the laws mentioned above. Such approved minimum rate shall be retroactive to the time of the initial employment of such person on such trade or occupation. Contractor shall notify Owner of his intention to employ persons in trades or occupations not classified in sufficient time for Owner to obtain approved rates for such trades or occupations.

19.07-A.1. The schedules of wages referred to above are minimum rates only, and Owner will not consider any claims for additional compensation made by Contractor because of payment by Contractor of any wage rate in excess of the applicable rate contained in these Contract Documents. All disputes in regard to the payment of wages in excess of these specified in the schedules shall be adjusted by Contractor.

19.07-A.2 The said schedules of wages shall continue to be the minimum rates to be paid during the life of the Agreement and a legible copy of said schedules shall be kept posted in a conspicuous place at the site of the Work.

19.07-A.3 Federal and/or State schedule of minimum prevailing wage rates are included in Part I of these Supplementary Conditions. Where rates differ, the higher rates shall apply as a minimum for that trade.

19.07-A.4 The Contractor shall submit weekly payroll records to the Owner during the progress of the Contract, for each day work is performed and keep them on file for three (3) years.

19.07-A.5 The Contractor should obtain a schedule of minimum prevailing wage rates for every public building construction project from the Owner. It is the Owner's responsibility to ensure that a copy of the wage schedule is provided to all Contractors from whom estimates or bids are solicited for all projects. The Department of Labor and Workforce Development will not issue wage schedules directly to contractors or employees.

19.07-A.6 Once a wage schedule has been issued for a project by the Department of Labor and Workforce Development, it will remain in effect for the entire project. Appeals of wage determinations or classifications of employment may be made to the Department of Labor and Workforce Development Commissioner.

19.07-A.7 A wage schedule issued for a project may not be issued on any other project. If, by chance, the Owner fails to provide a wage schedule to use when figuring your bid, do not use one from another project. In this case, the Contractor should contact the Department of Labor and Workforce Development immediately and urge the Owner to contact the Department of Labor and Workforce Development to correct the oversight.

19.07-A.8 The failure of the Owner to provide a wage schedule does not excuse the Contractor from paying the minimum prevailing wage rate.

19.07-A.9 The Attorney General's Division of Fair Labor & Business Practices enforces the minimum prevailing wage law. All bids shall reflect minimum prevailing wage rates. CONTRACTORS may be required by an awarding authority to "demonstrate how they could complete the project and comply with Mass. Gen. Laws". The Division issued an "Advisory" discussing these and other points. For a copy, please contact the Attorney General's Office.

19.07-A.10 Minimum prevailing wages shall be paid to all employees on public building construction projects regardless of whether they are employed by the General Contractor, a filed sub-bidder or any sub-contractor. The minimum prevailing wage applies equally to unionized and non-unionized workers.

19.07-A.11 All employees who perform work on a public building construction project shall be paid hourly according to the wage schedule issued for the particular project.

19.07-A.12 The wage schedule issued for each project is in effect for the duration of that project. All wage increases listed on the schedule shall be paid on the specified dates.

19.07-A.13 Contractors are limited in the deductions that can be made from the hourly rate (represented as the "total rate" on the wage schedules). Only contributions to the following plans may be deducted:

- Health and Welfare
- Pension
- Supplementary Unemployment

All contributions shall be made to bona fide plans.

19.07-A.14 If the Contractor contributes to any, or all, of the above plans, it may deduct the hourly amount contributed from the "total rate". If the Contractor does not contribute to any of the benefit plans listed above, then the hourly rate of pay will be the "total rate" from the wage schedule.

19.07-A.15 All other deductions, including but not limited to the following, may not be subtracted from the employee's hourly minimum prevailing wage rate:

- Vacation Time
- Sick Time
- Training Funds
- Charitable Contributions
- Workers Compensation
- Unemployment Insurance
- Uniforms

19.07-A.16 Overtime, which shall be paid to all employees who work more than forty (40) hours per week, shall be at least time-and-one-half the base rate ("total rate" less benefits, if any).

19.07-A.17 Any "separate check" given to any employee as the "benefit portion" of the minimum prevailing wage may not be treated differently than the check for "base wages". All "separate checks" are considered wages and subject to state and federal taxes, unemployment insurance and worker's compensation requirements.

19.07-A.18 A reporting form is sent along with each wage schedule that may be used. Each report shall contain at least: the employee's name, address, occupational classification, hours worked and wages paid. Do not submit weekly payroll reports to the Department of Labor and Workforce Development.

19.07-A.19 After the Contractor completes its portion of the public building construction project, the Contractor shall submit a Statement of Compliance to the Department of Labor and Workforce Development. A Statement of Compliance form is also sent along with each wage schedule issued.

19.07-A.20 Apprentices shall be registered with the Division of Apprentice Training (DAT). All persons not registered with DAT shall be paid the "total rate" listed on the wage schedule. An apprentice sheet showing percentages based on the apprentice steps is included with all wage schedules.

19.07-A.21 Failure to pay the minimum prevailing wage subjects the Contractor to potential civil and criminal liability.

"SC-19.08-A If any provision of the Contract Documents is determined to be invalid or unenforceable by final judgment of a court of competent jurisdiction, the remaining provisions shall continue in effect to the extent permitted by law.

SC-19.09-A All provisions of law required to be inserted in the Contract Documents shall be and are inserted herein. If any such provision is not herein inserted or inserted in improper form, upon the application of either party, the Contract Documents shall be changed by the Owner, at no increase in contract sum or contract time, so as to strictly comply with the law and without prejudice to the rights of either party herein.

SC-19.10-A No forbearance or indulgence in any form or manner by the Owner shall be construed as a waiver or in any way limit the legal or equitable remedies available to the Owner. No waiver by the Owner of any default or breach shall constitute a waiver of any subsequent default or breach.

SC-19.11-A Attorney's Fees. In the event that any legal or equitable action, suit, or claim, counter-claim, cross-claim, or third-party claim of any kind relating to the Contract is filed, pleaded or initiated by the Owner or Contractor against the other party to the Contract, which results in a judgment, award or order of any kind in favor of the Owner, the Contractor shall be responsible for all reasonable costs, expenses, attorney's fees and expert witness fees incurred by the Owner in filing, prosecuting, maintaining, appealing or defending against such action, suit, or claim, counter-claim, cross-claim, or third-party claim.

SC-19.12-A Any cause of action which the Owner may have in connection with Work shall be deemed to accrue only when the Owner has obtained actual knowledge of the act of omission which gives rise to the cause of action, not before.

SC-19.13-A No officer, member of a board, commission or committee, employee or agent of the Owner shall be personally or individually liable to the Contractor with respect to the Contract or the Work. Each subcontract shall include the foregoing limitation, which shall be effective if the Owner ever succeeds to the Contractor's rights and obligations under the subcontract.

SC-19.14-A The Contract may be amended only by written Contract of the parties.

SC-19.15-A The Contract may not be assigned by the Contractor without the prior written assent of the Owner."

Insert a new Article 20 in the

General Conditions, as follows:

## ARTICLE 20: ADDITIONAL PROVISIONS

20.01 Certification of Tax Compliance - By entering into an Contract with the Owner, the Contractor certifies under the penalties of perjury, pursuant to M.G.L. Chapter 62C, Section 49A(b), that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes, to the reporting of employees and Contractors, and to the withholding and remitting of child support.

20.02 Conflict of Interest - The Contractor understands that the Massachusetts Conflict of Interest Law, Chapter 268A of the Massachusetts General Laws, applies to the Contractor with respect to the services required to be provided under the Contract. The Contractor and its officers, employees, agents, Subcontractors and affiliated agencies shall not participate in any activity which constitutes a violation of the Massachusetts Conflict of Interest Law or which creates an appearance of a violation of the Massachusetts Conflict of Interest Law.

20.03 Non-Collusion - By entering into the Contract with the Owner, the Contractor certifies under penalties of perjury that its bid has been made and submitted in good faith and without collusion or fraud with any 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.

20.04 Independent Contractor Status - The Contractor shall provide services under any Contract with the Owner as an independent contractor with the Town of Natick and not as an employee of the Town of Natick. No employee, agent or representative of the Contractor shall be entitled to receive any benefits of employment with the Town of Natick, including without limitation salary, overtime, vacation pay, holiday pay, sick leave, health insurance, life insurance, pension or deferred compensation.

20.05 Additional Statutory Incorporations - The provisions of M.G.L. Chapter 149, Sections 34 (Public contracts; stipulation as to hours and days of work; void contracts), 34A (Contracts for public works; workers' compensation insurance; breach of contract; enforcement and violation of statute ), and 34B (Contracts for public works; wages for reserve police officer) shall hereby be incorporated into this Contract by reference.

SUPPLEMENTARY CONDITIONS

TABLE OF CONTENTS

PART II

| <u>DESCRIPTION</u>                          | <u>PAGE NUMBER</u> |
|---|--------------------|
| 1. Commonwealth of Massachusetts Provisions |                    |
| M.G.L. Chapter 30 Section 39F               | 00810-1            |
| M.G.L. Chapter 30 Section 39G               | 00810-4            |
| M.G.L. Chapter 30 Section 39K               | 00810-6            |
| M.G.L. Chapter 30 Section 39M               | 00810-8            |
| M.G.L. Chapter 30 Section 39N               | 00810-10           |
| M.G.L. Chapter 30 Section 39O               | 00810-11           |
| M.G.L. Chapter 30 Section 39P               | 00810-11           |
| M.G.L. Chapter 30 Section 39R               | 00810-12           |
| M.G.L. Chapter 149 Section 25               | 00810-14           |
| M.G.L. Chapter 149 Section 26               | 00810-15           |
| M.G.L. Chapter 149 Section 34               | 00810-15           |
| M.G.L. Chapter 149 Section 34A              | 00810-16           |
| M.G.L. Chapter 149 Section 34B              | 00810-17           |
| M.G.L. Chapter 149 Section 44A              | 00810-17           |
| M.G.L. Chapter 149 Section 44G(D)           | 00810-20           |
| <br>Insurance Certification Form            | <br>00810-21       |
| <br>Change Order Form                       | <br>00810-24       |
| <br>Example Calculation Sheet               | <br>00810-25       |



## SUPPLEMENTARY CONDITIONS

### PART II - STATE AND LEGAL GOVERNMENT PROVISIONS

State and Local Government provisions included herein, have been selected from those to which specific references have been made elsewhere in the Contract Documents. Each and every other provision of law or clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein and our provision contrary to such law or clause shall be deemed null and void. If through mistake or otherwise any such provision is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

1.0 State Government Provisions were current as of March 6, 2019.

1.1 Contractor and Owner agree that the following provisions of the Commonwealth of Massachusetts apply to the work to be performed under this Contract, and that these provisions supersede any conflicting provisions of said Contract.

1.1.1 CHAP. 30 M.G.L, SECTION 39F

Construction contracts; assignment and subrogation; Subcontractor defined; enforcement of claim for direct payment; deposit, reduction of disputed amounts

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

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

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

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

subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

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

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

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

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

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts

shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

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

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

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

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right

to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1).

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

#### 1.1.2 CHAP. 30 M.G.L. SECTION 39G

Completion of public works; semi-final and final estimates; payments; extra work; disputed items

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

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

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

payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

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

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

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

that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

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

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

### 1.1.3 CHAP. 30 MGL SECTION 39K

#### Public building construction contracts; payments

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

for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

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

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

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

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

**Contracts for construction and materials; manner of awarding**

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

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

An awarding authority may utilize a vendor list established through a statewide contract procured through the operational services division to identify 1 or more of the persons from whom it will seek written responses for purposes of this subsection. An awarding authority may also procure a blanket contract to establish a listing of vendors in certain defined categories of work that are under contract to provide services for multiple individual tasks of not more than \$50,000 each, and from whom written responses will be sought. Any such blanket contract procured by the awarding authority shall be procured pursuant to this section or sections 44A to 44J, inclusive, of chapter 149 which are applicable to projects over \$50,000.

Every contract for the construction, reconstruction, alteration, remodeling or repair of any public work, or for the purchase of any material, as hereinafter defined, by the commonwealth, or political subdivision thereof, or by any county, city, town, district or housing authority that is estimated by the awarding authority to cost more than \$50,000, and every contract for the construction, reconstruction, installation,



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

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

(Name of person signing bid)

(Company)

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

(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full competition for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the item so named or described if, in the opinion of the awarding authority: (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said name or described materials.

(c) The term "lowest responsible and eligible bidder" shall mean the bidder: (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health

approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; (4) who, where the provisions of section 8B of chapter 29 apply, shall have been determined to be qualified thereunder; and (5) who obtains within 10 days of the notification of contract award the security by bond required under section 29 of chapter 149; provided that for the purposes of this section the term "security by bond" shall mean the bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority; provided further, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

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

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

#### 1.1.5 CHAP. 30 MGL 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.

1.1.6 CHAP. 30 MGL 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.

1.1.7 CHAP. 30 MGL 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) transactions are recorded as necessary

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

ii. to maintain accountability for assets;

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

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

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

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

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

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

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

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

#### 1.1.9 CHAP. 149 MGL 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.

1.1.10 CHAP. 149 MGL 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. Each county, town or district in the construction of public works, or persons contracting or sub-contracting for such works, shall give preference to veterans and citizens who are residents of such county, town, authority or district and, within such preference, preference shall be given to service-disabled veterans. The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the commissioner as hereinafter provided; provided, that the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided, further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal service of the town paying the highest rate; provided, further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established; provided further, that in towns where no such rate or rates have been so established, the wages paid to mechanics, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the commonwealth or of a county, town, authority or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriations of more than one thousand dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

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

1.1.11 CHAP. 149 MGL 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, sub-contractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid; provided, that in contracts entered into by the department of highways for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or sub-contractor for said department, may employ laborers, workmen, mechanics, foremen and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner, public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void.

1.1.12 CHAP. 149 MGL 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. An affidavit of any officer, agent or employee of the insurer or of the insured, as the case may be, duly authorized for the purpose, that he has so sent such notice addressed as aforesaid shall be prima facie evidence of the sending thereof as aforesaid. This section shall apply to the legal representative, trustee in bankruptcy, receiver, assignee, trustee and the successor in interest of any such contractor. The superior court shall have jurisdiction in equity to enforce this section.

Whoever violates any provision of this section shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months, or both; and, in addition, any contractor who violates any provision of this section shall be prohibited from contracting, directly or indirectly, with the commonwealth or any political subdivision thereof, for the construction, alteration, demolition, maintenance or repair of, or addition to, any public works or public building for a period of two years from the date of conviction of said violation.



1.1.13 CHAP. 149 MGL 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.

1.1.14 CHAP.149 MGL SECTION 44A

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

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

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

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

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

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

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

"Proprietary environmental technology systems", systems, in the town of Nantucket, including solid waste related equipment, supporting structures, and buildings, designed, manufactured, and produced under exclusive individual right to sell such product, pertaining to solid waste related environmental protection or remediation. Such systems shall include, but not be limited to, sequential,

turnkey, construction management, design/build procurement, and the phasing of such procurement, including approval of design and construction stages as separate or combined phases.

(A) Every contract or procurement for the construction, reconstruction, installation, demolition, maintenance or repair of a building by a public agency estimated to cost less than \$10,000 shall be obtained through the exercise of sound business practices as defined in section 2 of chapter 30B. The public agency shall make and keep a record of each procurement that, at a minimum, shall include the name and address of the person from whom the services were procured. A public agency that utilizes a vendor on a statewide contract procured through the operational services division of the commonwealth, or a blanket contract procured by the public agency pursuant to this subsection, shall be deemed to have obtained the contract through sound business practices.

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

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

(D) Every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency estimated to cost more than \$150,000, except for a pumping station to be constructed as an integral part of a sewer construction or water construction project bid under the provisions of section 39M of chapter 30, shall be awarded to the lowest responsible and eligible general bidder on the basis of competitive bids in accordance with the procedure set forth in section 44A to 44H, inclusive.

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

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

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

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

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

Where the nature of the emergency prevents the awarding authority from obtaining the prior approval of the commissioner, the awarding authority may contract for the necessary work without said prior approval; provided, however, that the approval of the commissioner shall still be sought at the earliest possible time; and provided, further, that if the commissioner at that time fails to approve the emergency determination the awarding authority shall promptly cease all work for which the emergency determination was denied. In such cases, the contractor shall be entitled to payment for the fair value of the labor and materials furnished prior to cessation of the work.

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

(5) (a) Notwithstanding the provisions of this section or any other general or special law to the contrary, a municipality may enter into a contract for proprietary environmental technology systems as defined in subsection (1) of this section without said contract being subject to the competitive bid process as set forth in sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven; this section and sections forty-four B to forty-four H, inclusive, of this chapter, and section thirty-nine M of chapter thirty; provided that the awarding authority meets the conditions set forth and receives the approvals required in paragraph (b) of this subsection.

(b) Prior to the issuance of any request for proposal with respect to the awarding of any contract pursuant to the provisions of paragraph (a) of this subsection, the awarding authority shall meet or obtain each of the following conditions or required approvals: (1) the municipality shall appoint qualified persons to conduct a thorough review of all available environmental technology, including both proprietary and non-proprietary environmental technology, and if the conclusion of this review is that a contract for proprietary environmental technology systems is in the public interest, such conclusion shall be supported by sound documented reasons in writing available for public inspection; (2) the city council, the select board, or the town meeting shall take a majority vote finding that it is in the public interest to enter into a contract for proprietary environmental technology systems, as defined in subsection (1) of this section, providing such vote is supported by the conclusion of the review conducted pursuant to condition (1); (3) both the attorney general and the commissioner of the department of environmental protection shall grant written approval; (4) said contract shall be subject to any limitation in the waiver of sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven, sections forty-four A to forty-four H of chapter one hundred and forty-nine, and section thirty-nine M of chapter thirty imposed by either the attorney general or the commissioner of the department of environmental protection as a condition for a grant of approval by said officers; and (5) every proprietary environmental technology systems contract shall be as compatible with sections thirty-eight A to thirty-eight O, inclusive, of chapter seven, sections forty-four A to forty-four H of chapter one hundred and forty-nine, and section thirty-nine M of chapter thirty as is feasible for the procurement of the proprietary environmental technology systems chosen.

#### 1.1.15 CHAP.149 MGL SECTION 44G(D)

(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.

## INSURANCE CERTIFICATION FORM

This form is to be completed by an authorized representative of each insurance company providing coverages, to verify that contract insurance requirements are provided.

| CONTRACT<br>PARAGRAPH<br>NUMBER | DESCRIPTION<br>OF COVERAGE | COMPANY<br>LETTER | POLICY<br>NUMBER | LIMITS | LIMIT<br>EXTENDED BY<br>UMBRELLA |
|---------------------------------|----------------------------|-------------------|------------------|--------|----------------------------------|
|---------------------------------|----------------------------|-------------------|------------------|--------|----------------------------------|

### WORKMAN'S COMPENSATION (Contractor as Insured)

|        |                          |       |         |          |       |
|--------|--------------------------|-------|---------|----------|-------|
| SC 5.4 | Workman's Compensation   | _____ | # _____ | \$ _____ | _____ |
| SC 5.4 | Employer's Liability     | _____ | # _____ |          |       |
|        | a. Each Accident         |       |         | \$ _____ | _____ |
|        | b. Disease Policy Limit  |       |         | \$ _____ | _____ |
|        | c. Disease Each Employee |       |         | \$ _____ | _____ |

### COMMERCIAL GENERAL LIABILITY (Contractor as Insured, Owner and Engineer as Additional Insured)

|        |                                 |       |         |          |       |
|--------|---------------------------------|-------|---------|----------|-------|
| SC 5.4 | General Liability               | _____ | # _____ |          |       |
|        | a. General Aggregate            |       |         | \$ _____ | _____ |
|        | b. Each Occurrence              |       |         | \$ _____ | _____ |
|        | 1. Premises/Operations          |       |         | \$ _____ | _____ |
|        | 2. Products/Completed Operation |       |         | \$ _____ | _____ |
|        | 3. Contractual                  |       |         | \$ _____ | _____ |
|        | 4. Independent Contractors      |       |         | \$ _____ | _____ |
|        | 5. Broad Form Property Damage   |       |         | \$ _____ | _____ |
|        | 6. Personal Injury              |       |         | \$ _____ | _____ |
|        | 7. Medical Expense              |       |         | \$ _____ | _____ |
|        | 8. XCU                          |       |         | \$ _____ | _____ |

### AUTOMOTIVE LIABILITY (Contractor as Named Insured)

|    |                       |       |         |          |       |
|----|-----------------------|-------|---------|----------|-------|
| a. | Combined Single Limit | _____ | # _____ | \$ _____ | _____ |
|    | 1. Scheduled Autos    |       |         | \$ _____ | _____ |
|    | 2. Hired Autos        |       |         | \$ _____ | _____ |
|    | 3. Non Owned Autos    |       |         | \$ _____ | _____ |

INSURANCE CERTIFICATION FORM (Continued)

| CONTRACT<br>PARAGRAPH<br>NUMBER | DESCRIPTION<br>OF COVERAGE | COMPANY<br>LETTER | POLICY<br>NUMBER | LIMITS | LIMIT<br>EXTENDED BY<br>UMBRELLA |
|---------------------------------|----------------------------|-------------------|------------------|--------|----------------------------------|
|---------------------------------|----------------------------|-------------------|------------------|--------|----------------------------------|

EXCESS UMBRELLA LIABILITY

(Contractor as Named Insured, Owner and Engineer as Additional Insured)

|    |                   |       |         |          |       |
|----|-------------------|-------|---------|----------|-------|
| a. | General Aggregate | _____ | # _____ | \$ _____ | _____ |
| b. | Each Occurrence   | _____ | # _____ | \$ _____ | _____ |

INSTALLATION FLOATER

(Contractor as Named Insured, Owner and Engineer as Additional Insured)

|    |                      |       |         |          |       |
|----|----------------------|-------|---------|----------|-------|
| a. | General Aggregate    | _____ | # _____ | \$ _____ | _____ |
| b. | Each Occurrence      | _____ | # _____ | \$ _____ | _____ |
| c. | Installation Floater | _____ | # _____ | \$ _____ | _____ |

BUILDER'S ALL RISK

(Contractor as Named Insured, Owner and Engineer as Additional Insured)

|    |                   |       |         |          |       |
|----|-------------------|-------|---------|----------|-------|
| a. | General Aggregate | _____ | # _____ | \$ _____ | _____ |
| b. | Each Occurrence   | _____ | # _____ | \$ _____ | _____ |
| c. | All Risk          | _____ | # _____ | \$ _____ | _____ |

OWNER'S PROTECTIVE LIABILITY

(Owner and Engineer as Named Insured)

|    |                   |       |         |          |       |
|----|-------------------|-------|---------|----------|-------|
| a. | General Aggregate | _____ | # _____ | \$ _____ | _____ |
| b. | Each Occurrence   | _____ | # _____ | \$ _____ | _____ |

I hereby certify that the information contain herein is accurate to the best of knowledge.

\_\_\_\_\_  
SIGNATURE

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

\_\_\_\_\_  
DATE

\_\_\_\_\_  
PRINTED TITLE

TOWN OF NATICK, MASSACHUSETTS  
SELECT BOARD

CONTRACT NO. W-165

CHEMICAL FEED UPGRADES

CHANGE ORDER FORM

|  |          |
|--|----------|
| Original Contract Price                  | \$ _____ |
| Previous Change Orders #                 | \$ _____ |
| Present Contract Price                   | \$ _____ |
| This Change Order #    Increase/Decrease | \$ _____ |

|                               |          |
|-------------------------------|----------|
| Total Adjusted Contract Price | \$ _____ |
|-------------------------------|----------|

This Change Order changes the time of completion by \_\_\_\_ calendar Days.

The extended completion date is \_\_\_\_\_

|                                    |       |
|------------------------------------|-------|
| This Change Order checked by _____ | _____ |
| Engineer                           | Date  |

This Change Order requested by \_\_\_\_\_

|                                     |       |
|-------------------------------------|-------|
| This Change Order prepared by _____ | _____ |
| Engineer                            |       |

The undersigned agree to the terms of the Change Order.

|                     |               |
|---------------------|---------------|
| _____<br>Contractor | _____<br>Date |
|---------------------|---------------|

|                |               |
|----------------|---------------|
| _____<br>Owner | _____<br>Date |
|----------------|---------------|

Certification of Appropriation under M.G.L. c.44, §31C: Adequate funding in the amount sufficient to cover the total cost of this Change Order is available.

|                          |               |
|--------------------------|---------------|
| _____<br>Town Accountant | _____<br>Date |
|--------------------------|---------------|

Change Order Form (continued)

Public Entity \_\_\_\_\_

Project Number \_\_\_\_\_

Contract Number: \_\_\_\_\_

Change Order Number: \_\_\_\_\_

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

\_\_\_\_\_

Owner's Name: \_\_\_\_\_

Owner's Address: \_\_\_\_\_

\_\_\_\_\_

Contractor's Name: \_\_\_\_\_

Contractor's Address: \_\_\_\_\_

\_\_\_\_\_

Description of Change

Reason for Change



## Example Calculation Sheet

|     |   |                      |              |
|-----|---|----------------------|--------------|
| (1) | Labor   |                      |              |
|     | Foreman   | 10 hrs @ \$45.00/hr. | \$ 450.00    |
|     | Engineer  | 10 hrs @ 35.00/hr.   | 350.00       |
|     | Operator  | 10 hrs @ 40.00/hr.   | 400.00       |
|     | Laborers  | 24 hrs @ 28.00/hr.   | 672.00       |
|     |   |                      | \$ 1,872.00  |
| (2) | Direct Labor Cost (use the agreed upon<br>Direct Labor Cost)<br>*(30) % of \$1,872<br>*(used for example purposes only) |                      | 561.60       |
| (3) | Materials & Freight   |                      |              |
|     | 150 l.f. of 12" pipe @ \$15.00/l.f.   | \$2,250.00           |              |
|     | 15 v.f. precast SMH   | 2,500.00             |              |
|     | Freight (slip #      Enclosed)  | 110.00               |              |
|     |   |                      | 4,860.00     |
| (4) | Equipment   |                      |              |
|     | 1 Backhoe 10 hrs @ \$140.00/hr.   | \$1,400.00           |              |
|     | 1 Truck crane 10 hrs @ \$180.00/hr.   | 1,800.00             |              |
|     |   |                      | - 3,200.00   |
|     | Total items 1 through 4)  |                      | \$ 10,493.60 |
| (5) | 15% markup for Overhead, Profit   |                      |              |
|     | 15% of \$10,493.60  |                      | \$ 1,574.04  |
| (6) | 5% markup for General Contractor<br>(if Subcontractor is involved)  |                      |              |
|     | 5% of \$10,493.60   |                      | 524.68       |
| (7) | Credits deductible  |                      | - 323.00     |
|     | Total Cost  |                      | \$ 12,269.32 |

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence, calculations, Blue Book equipment rental rate printouts, photographs, reports, etc.



MAURA HEALEY  
Governor

KIM DRISCOLL  
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

**Prevailing Wage Rates**

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES  
Secretary

MICHAEL FLANAGAN  
Director

**Awarding Authority:** Town of Natick DPW  
**Contract Number:** W-165 **City/Town:** NATICK  
**Description of Work:** Chemical Feed Upgrade at the Springvale and Elm Bank water treatment plant sites including but not limited to day tanks, day tank scales, transfer pumps, electrical and instrumentation work  
**Job Location:** Springvale & Elm WTP, Natick, MA

---

**Information about Prevailing Wage Schedules for Awarding Authorities and Contractors**

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| <b>Construction</b>  |                |           |         |         |                              |            |
| (2 AXLE) DRIVER - EQUIPMENT<br><i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>                    | 12/01/2021     | \$35.95   | \$13.41 | \$16.01 | \$0.00                       | \$65.37    |
| (3 AXLE) DRIVER - EQUIPMENT<br><i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>                    | 12/01/2021     | \$36.02   | \$13.41 | \$16.01 | \$0.00                       | \$65.44    |
| (4 & 5 AXLE) DRIVER - EQUIPMENT<br><i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>                | 12/01/2021     | \$36.14   | \$13.41 | \$16.01 | \$0.00                       | \$65.56    |
| ADS/SUBMERSIBLE PILOT<br><i>PILE DRIVER LOCAL 56 (ZONE 1)</i>                                  | 08/01/2020     | \$103.05  | \$9.40  | \$23.12 | \$0.00                       | \$135.57   |
| For apprentice rates see "Apprentice- PILE DRIVER"   |                |           |         |         |                              |            |
| AIR TRACK OPERATOR<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.91   | \$9.10  | \$16.64 | \$0.00                       | \$63.65    |
|  | 06/01/2023     | \$38.81   | \$9.10  | \$16.64 | \$0.00                       | \$64.55    |
|  | 12/01/2023     | \$39.71   | \$9.10  | \$16.64 | \$0.00                       | \$65.45    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| AIR TRACK OPERATOR (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>         | 12/01/2022     | \$37.31   | \$9.35  | \$16.89 | \$0.00                       | \$63.55    |
|  | 06/01/2023     | \$38.21   | \$9.35  | \$16.89 | \$0.00                       | \$64.45    |
|  | 12/01/2023     | \$39.11   | \$9.35  | \$16.89 | \$0.00                       | \$65.35    |
|  | 06/01/2024     | \$40.44   | \$9.35  | \$16.89 | \$0.00                       | \$66.68    |
|  | 12/01/2024     | \$41.77   | \$9.35  | \$16.89 | \$0.00                       | \$68.01    |
|  | 06/01/2025     | \$43.16   | \$9.35  | \$16.89 | \$0.00                       | \$69.40    |
|  | 12/01/2025     | \$44.54   | \$9.35  | \$16.89 | \$0.00                       | \$70.78    |
|  | 06/01/2026     | \$45.98   | \$9.35  | \$16.89 | \$0.00                       | \$72.22    |
|  | 12/01/2026     | \$47.42   | \$9.35  | \$16.89 | \$0.00                       | \$73.66    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                             |                |           |         |         |                              |            |
| ASBESTOS REMOVER - PIPE / MECH. EQUIPT.<br><i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i> | 12/01/2020     | \$38.10   | \$12.80 | \$9.45  | \$0.00                       | \$60.35    |
| ASPHALT RAKER<br><i>LABORERS - ZONE 2</i>  | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|  | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|  | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| ASPHALT RAKER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>              | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|  | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|  | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|  | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|  | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|  | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|  | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|  | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|  | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                             |                |           |         |         |                              |            |

| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE<br><i>OPERATING ENGINEERS LOCAL 4</i>                          | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|   | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|   | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|   | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|   | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|   | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|   | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|   | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|   | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |           |         |         |                              |            |
| BACKHOE/FRONT-END LOADER<br><i>OPERATING ENGINEERS LOCAL 4</i>  | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|   | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|   | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|   | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|   | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|   | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|   | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|   | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|   | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |           |         |         |                              |            |
| BARCO-TYPE JUMPING TAMPER<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|   | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |                              |            |
| BLOCK PAVER, RAMMER / CURB SETTER<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.91   | \$9.10  | \$16.64 | \$0.00                       | \$63.65    |
|   | 06/01/2023     | \$38.81   | \$9.10  | \$16.64 | \$0.00                       | \$64.55    |
|   | 12/01/2023     | \$39.71   | \$9.10  | \$16.64 | \$0.00                       | \$65.45    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |                              |            |
| BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$37.31   | \$9.35  | \$16.89 | \$0.00                       | \$63.55    |
|   | 06/01/2023     | \$38.21   | \$9.35  | \$16.89 | \$0.00                       | \$64.45    |
|   | 12/01/2023     | \$39.11   | \$9.35  | \$16.89 | \$0.00                       | \$65.35    |
|   | 06/01/2024     | \$40.44   | \$9.35  | \$16.89 | \$0.00                       | \$66.68    |
|   | 12/01/2024     | \$41.77   | \$9.35  | \$16.89 | \$0.00                       | \$68.01    |
|   | 06/01/2025     | \$43.16   | \$9.35  | \$16.89 | \$0.00                       | \$69.40    |
|   | 12/01/2025     | \$44.54   | \$9.35  | \$16.89 | \$0.00                       | \$70.78    |
|   | 06/01/2026     | \$45.98   | \$9.35  | \$16.89 | \$0.00                       | \$72.22    |
|   | 12/01/2026     | \$47.42   | \$9.35  | \$16.89 | \$0.00                       | \$73.66    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                                    |                |           |         |         |                              |            |
| BOILER MAKER<br><i>BOILERMAKERS LOCAL 29</i>  | 01/01/2023     | \$47.37   | \$7.07  | \$20.31 | \$0.00                       | \$74.75    |
|   | 01/01/2024     | \$48.12   | \$7.07  | \$20.60 | \$0.00                       | \$75.79    |

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 65      | \$30.79              | \$7.07 | \$13.22 | \$0.00                       | \$51.08    |
| 2    | 65      | \$30.79              | \$7.07 | \$13.22 | \$0.00                       | \$51.08    |
| 3    | 70      | \$33.16              | \$7.07 | \$14.23 | \$0.00                       | \$54.46    |
| 4    | 75      | \$35.53              | \$7.07 | \$15.24 | \$0.00                       | \$57.84    |
| 5    | 80      | \$37.90              | \$7.07 | \$16.25 | \$0.00                       | \$61.22    |
| 6    | 85      | \$40.26              | \$7.07 | \$17.28 | \$0.00                       | \$64.61    |
| 7    | 90      | \$42.63              | \$7.07 | \$18.28 | \$0.00                       | \$67.98    |
| 8    | 95      | \$45.00              | \$7.07 | \$19.32 | \$0.00                       | \$71.39    |

Effective Date - 01/01/2024

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 65      | \$31.28              | \$7.07 | \$13.22 | \$0.00                       | \$51.57    |
| 2    | 65      | \$31.28              | \$7.07 | \$13.22 | \$0.00                       | \$51.57    |
| 3    | 70      | \$33.68              | \$7.07 | \$14.23 | \$0.00                       | \$54.98    |
| 4    | 75      | \$36.09              | \$7.07 | \$15.24 | \$0.00                       | \$58.40    |
| 5    | 80      | \$38.50              | \$7.07 | \$16.25 | \$0.00                       | \$61.82    |
| 6    | 85      | \$40.90              | \$7.07 | \$17.28 | \$0.00                       | \$65.25    |
| 7    | 90      | \$43.31              | \$7.07 | \$18.28 | \$0.00                       | \$68.66    |
| 8    | 95      | \$45.71              | \$7.07 | \$19.32 | \$0.00                       | \$72.10    |

Notes:

Apprentice to Journeyworker Ratio:1:4

|   |            |         |         |         |        |          |
|---|------------|---------|---------|---------|--------|----------|
| BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY<br>WATERPROOFING)<br>BRICKLAYERS LOCAL 3 (LOWELL) | 02/01/2023 | \$58.21 | \$11.49 | \$21.65 | \$0.00 | \$91.35  |
|   | 08/01/2023 | \$60.26 | \$11.49 | \$21.65 | \$0.00 | \$93.40  |
|   | 02/01/2024 | \$61.51 | \$11.49 | \$21.65 | \$0.00 | \$94.65  |
|   | 08/01/2024 | \$63.61 | \$11.49 | \$21.65 | \$0.00 | \$96.75  |
|   | 02/01/2025 | \$64.91 | \$11.49 | \$21.65 | \$0.00 | \$98.05  |
|   | 08/01/2025 | \$67.06 | \$11.49 | \$21.65 | \$0.00 | \$100.20 |
|   | 02/01/2026 | \$68.41 | \$11.49 | \$21.65 | \$0.00 | \$101.55 |
|   | 08/01/2026 | \$70.61 | \$11.49 | \$21.65 | \$0.00 | \$103.75 |
|   | 02/01/2027 | \$72.01 | \$11.49 | \$21.65 | \$0.00 | \$105.15 |

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

**Effective Date - 02/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 50      | \$29.11              | \$11.49 | \$21.65 | \$0.00                    | \$62.25    |
| 2    | 60      | \$34.93              | \$11.49 | \$21.65 | \$0.00                    | \$68.07    |
| 3    | 70      | \$40.75              | \$11.49 | \$21.65 | \$0.00                    | \$73.89    |
| 4    | 80      | \$46.57              | \$11.49 | \$21.65 | \$0.00                    | \$79.71    |
| 5    | 90      | \$52.39              | \$11.49 | \$21.65 | \$0.00                    | \$85.53    |

**Effective Date - 08/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 50      | \$30.13              | \$11.49 | \$21.65 | \$0.00                    | \$63.27    |
| 2    | 60      | \$36.16              | \$11.49 | \$21.65 | \$0.00                    | \$69.30    |
| 3    | 70      | \$42.18              | \$11.49 | \$21.65 | \$0.00                    | \$75.32    |
| 4    | 80      | \$48.21              | \$11.49 | \$21.65 | \$0.00                    | \$81.35    |
| 5    | 90      | \$54.23              | \$11.49 | \$21.65 | \$0.00                    | \$87.37    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

|                             |            |         |         |         |        |         |
|-----------------------------|------------|---------|---------|---------|--------|---------|
| BULLDOZER/GRADER/SCRAPER    | 12/01/2022 | \$53.05 | \$14.25 | \$16.05 | \$0.00 | \$83.35 |
| OPERATING ENGINEERS LOCAL 4 | 06/01/2023 | \$54.29 | \$14.25 | \$16.05 | \$0.00 | \$84.59 |
|                             | 12/01/2023 | \$55.53 | \$14.25 | \$16.05 | \$0.00 | \$85.83 |
|                             | 06/01/2024 | \$56.81 | \$14.25 | \$16.05 | \$0.00 | \$87.11 |
|                             | 12/01/2024 | \$58.25 | \$14.25 | \$16.05 | \$0.00 | \$88.55 |
|                             | 06/01/2025 | \$59.53 | \$14.25 | \$16.05 | \$0.00 | \$89.83 |
|                             | 12/01/2025 | \$60.97 | \$14.25 | \$16.05 | \$0.00 | \$91.27 |
|                             | 06/01/2026 | \$62.25 | \$14.25 | \$16.05 | \$0.00 | \$92.55 |
|                             | 12/01/2026 | \$63.69 | \$14.25 | \$16.05 | \$0.00 | \$93.99 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                                   |            |         |        |         |        |         |
|-----------------------------------|------------|---------|--------|---------|--------|---------|
| CAISSON & UNDERPINNING BOTTOM MAN | 12/01/2022 | \$43.73 | \$9.35 | \$17.97 | \$0.00 | \$71.05 |
| LABORERS - FOUNDATION AND MARINE  | 06/01/2023 | \$44.73 | \$9.35 | \$17.97 | \$0.00 | \$72.05 |
|                                   | 12/01/2023 | \$45.98 | \$9.35 | \$17.97 | \$0.00 | \$73.30 |
|                                   | 06/01/2024 | \$47.46 | \$9.35 | \$17.97 | \$0.00 | \$74.78 |
|                                   | 12/01/2024 | \$48.93 | \$9.35 | \$17.97 | \$0.00 | \$76.25 |
|                                   | 06/01/2025 | \$50.43 | \$9.35 | \$17.97 | \$0.00 | \$77.75 |
|                                   | 12/01/2025 | \$51.93 | \$9.35 | \$17.97 | \$0.00 | \$79.25 |
|                                   | 06/01/2026 | \$53.48 | \$9.35 | \$17.97 | \$0.00 | \$80.80 |
|                                   | 12/01/2026 | \$54.98 | \$9.35 | \$17.97 | \$0.00 | \$82.30 |

For apprentice rates see "Apprentice- LABORER"

| Classification  | Effective Date | Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|--------|---------|------------------------------|------------|
| CAISSON & UNDERPINNING LABORER<br><i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2022     | \$42.58   | \$9.35 | \$17.97 | \$0.00                       | \$69.90    |
|   | 06/01/2023     | \$43.58   | \$9.35 | \$17.97 | \$0.00                       | \$70.90    |
|   | 12/01/2023     | \$44.83   | \$9.35 | \$17.97 | \$0.00                       | \$72.15    |
|   | 06/01/2024     | \$46.31   | \$9.35 | \$17.97 | \$0.00                       | \$73.63    |
|   | 12/01/2024     | \$47.78   | \$9.35 | \$17.97 | \$0.00                       | \$75.10    |
|   | 06/01/2025     | \$49.28   | \$9.35 | \$17.97 | \$0.00                       | \$76.60    |
|   | 12/01/2025     | \$50.78   | \$9.35 | \$17.97 | \$0.00                       | \$78.10    |
|   | 06/01/2026     | \$52.33   | \$9.35 | \$17.97 | \$0.00                       | \$79.65    |
|   | 12/01/2026     | \$53.83   | \$9.35 | \$17.97 | \$0.00                       | \$81.15    |
| For apprentice rates see "Apprentice- LABORER"                            |                |           |        |         |                              |            |
| CAISSON & UNDERPINNING TOP MAN<br><i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2022     | \$42.58   | \$9.35 | \$17.97 | \$0.00                       | \$69.90    |
|   | 06/01/2023     | \$43.58   | \$9.35 | \$17.97 | \$0.00                       | \$70.90    |
|   | 12/01/2023     | \$44.83   | \$9.35 | \$17.97 | \$0.00                       | \$72.15    |
|   | 06/01/2024     | \$46.31   | \$9.35 | \$17.97 | \$0.00                       | \$73.63    |
|   | 12/01/2024     | \$47.78   | \$9.35 | \$17.97 | \$0.00                       | \$75.10    |
|   | 06/01/2025     | \$49.28   | \$9.35 | \$17.97 | \$0.00                       | \$76.60    |
|   | 12/01/2025     | \$50.78   | \$9.35 | \$17.97 | \$0.00                       | \$78.10    |
|   | 06/01/2026     | \$52.33   | \$9.35 | \$17.97 | \$0.00                       | \$79.65    |
|   | 12/01/2026     | \$53.83   | \$9.35 | \$17.97 | \$0.00                       | \$81.15    |
| For apprentice rates see "Apprentice- LABORER"                            |                |           |        |         |                              |            |
| CARBIDE CORE DRILL OPERATOR<br><i>LABORERS - ZONE 2</i>                   | 12/01/2022     | \$37.41   | \$9.10 | \$16.64 | \$0.00                       | \$63.15    |
|   | 06/01/2023     | \$38.31   | \$9.10 | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21   | \$9.10 | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"                            |                |           |        |         |                              |            |
| CARPENTER<br><i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>            | 03/01/2023     | \$45.78   | \$8.68 | \$19.97 | \$0.00                       | \$74.43    |

**Apprentice - CARPENTER - Zone 2 Eastern MA**

**Effective Date - 03/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$22.89              | \$8.68 | \$1.73  | \$0.00                       | \$33.30    |
| 2    | 60      | \$27.47              | \$8.68 | \$1.73  | \$0.00                       | \$37.88    |
| 3    | 70      | \$32.05              | \$8.68 | \$14.78 | \$0.00                       | \$55.51    |
| 4    | 75      | \$34.34              | \$8.68 | \$14.78 | \$0.00                       | \$57.80    |
| 5    | 80      | \$36.62              | \$8.68 | \$16.51 | \$0.00                       | \$61.81    |
| 6    | 80      | \$36.62              | \$8.68 | \$16.51 | \$0.00                       | \$61.81    |
| 7    | 90      | \$41.20              | \$8.68 | \$18.24 | \$0.00                       | \$68.12    |
| 8    | 90      | \$41.20              | \$8.68 | \$18.24 | \$0.00                       | \$68.12    |

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
Step 1&2 \$30.71/ 3&4 \$36.93/ 5&6 \$56.82/ 7&8 \$63.06

**Apprentice to Journeyworker Ratio:1:5**

|   |            |         |        |        |        |         |
|---|------------|---------|--------|--------|--------|---------|
| CARPENTER WOOD FRAME<br><i>CARPENTERS-ZONE 3 (Wood Frame)</i> | 04/01/2022 | \$23.66 | \$7.21 | \$4.80 | \$0.00 | \$35.67 |
|   | 04/01/2023 | \$24.16 | \$7.21 | \$4.80 | \$0.00 | \$36.17 |
| All Aspects of New Wood Frame Work                            |            |         |        |        |        |         |

**Apprentice - CARPENTER (Wood Frame) - Zone 3****Effective Date - 04/01/2022**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$14.20              | \$7.21 | \$0.00  | \$0.00                       | \$21.41    |
| 2    | 60      | \$14.20              | \$7.21 | \$0.00  | \$0.00                       | \$21.41    |
| 3    | 65      | \$15.38              | \$7.21 | \$0.00  | \$0.00                       | \$22.59    |
| 4    | 70      | \$16.56              | \$7.21 | \$0.00  | \$0.00                       | \$23.77    |
| 5    | 75      | \$17.75              | \$7.21 | \$3.80  | \$0.00                       | \$28.76    |
| 6    | 80      | \$18.93              | \$7.21 | \$3.80  | \$0.00                       | \$29.94    |
| 7    | 85      | \$20.11              | \$7.21 | \$3.80  | \$0.00                       | \$31.12    |
| 8    | 90      | \$21.29              | \$7.21 | \$3.80  | \$0.00                       | \$32.30    |

**Effective Date - 04/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$14.50              | \$7.21 | \$0.00  | \$0.00                       | \$21.71    |
| 2    | 60      | \$14.50              | \$7.21 | \$0.00  | \$0.00                       | \$21.71    |
| 3    | 65      | \$15.70              | \$7.21 | \$0.00  | \$0.00                       | \$22.91    |
| 4    | 70      | \$16.91              | \$7.21 | \$0.00  | \$0.00                       | \$24.12    |
| 5    | 75      | \$18.12              | \$7.21 | \$3.80  | \$0.00                       | \$29.13    |
| 6    | 80      | \$19.33              | \$7.21 | \$3.80  | \$0.00                       | \$30.34    |
| 7    | 85      | \$20.54              | \$7.21 | \$3.80  | \$0.00                       | \$31.55    |
| 8    | 90      | \$21.74              | \$7.21 | \$3.80  | \$0.00                       | \$32.75    |

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
 Step 1&2 \$17.86/ 3&4 \$20.22/ 5&6 \$27.57/ 7&8 \$29.94

**Apprentice to Journeyworker Ratio:1:5**

CEMENT MASONRY/PLASTERING

BRICKLAYERS LOCAL 3 (LOWELL)

01/01/2023

\$49.45

\$12.75

\$22.74

\$0.87

\$85.81

07/01/2023

\$50.59

\$12.75

\$22.74

\$0.87

\$86.95

01/01/2024

\$51.73

\$12.75

\$22.74

\$0.87

\$88.09



| Classification | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|----------------|----------------|-----------|--------|---------|---------------------------|------------|
|----------------|----------------|-----------|--------|---------|---------------------------|------------|

**Apprentice - CEMENT MASONRY/PLASTERING - Lowell**

**Effective Date - 01/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 50      | \$24.73              | \$12.75 | \$15.49 | \$0.00                    | \$52.97    |
| 2    | 60      | \$29.67              | \$12.75 | \$22.74 | \$0.62                    | \$65.78    |
| 3    | 65      | \$32.14              | \$12.75 | \$22.74 | \$0.62                    | \$68.25    |
| 4    | 70      | \$34.62              | \$12.75 | \$22.74 | \$0.62                    | \$70.73    |
| 5    | 75      | \$37.09              | \$12.75 | \$22.74 | \$0.62                    | \$73.20    |
| 6    | 80      | \$39.56              | \$12.75 | \$22.74 | \$0.62                    | \$75.67    |
| 7    | 90      | \$44.51              | \$12.75 | \$22.74 | \$0.62                    | \$80.62    |

**Effective Date - 07/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 50      | \$25.30              | \$12.75 | \$15.49 | \$0.00                    | \$53.54    |
| 2    | 60      | \$30.35              | \$12.75 | \$22.74 | \$0.62                    | \$66.46    |
| 3    | 65      | \$32.88              | \$12.75 | \$22.74 | \$0.62                    | \$68.99    |
| 4    | 70      | \$35.41              | \$12.75 | \$22.74 | \$0.62                    | \$71.52    |
| 5    | 75      | \$37.94              | \$12.75 | \$22.74 | \$0.62                    | \$74.05    |
| 6    | 80      | \$40.47              | \$12.75 | \$22.74 | \$0.62                    | \$76.58    |
| 7    | 90      | \$45.53              | \$12.75 | \$22.74 | \$0.62                    | \$81.64    |

**Notes:**

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

**Apprentice to Journeyworker Ratio:1:3**

|  |            |         |         |         |        |         |
|--|------------|---------|---------|---------|--------|---------|
| CHAIN SAW OPERATOR   | 12/01/2022 | \$37.41 | \$9.10  | \$16.64 | \$0.00 | \$63.15 |
| LABORERS - ZONE 2  | 06/01/2023 | \$38.31 | \$9.10  | \$16.64 | \$0.00 | \$64.05 |
|  | 12/01/2023 | \$39.21 | \$9.10  | \$16.64 | \$0.00 | \$64.95 |
| For apprentice rates see "Apprentice- LABORER"             |            |         |         |         |        |         |
| CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES                | 12/01/2022 | \$54.68 | \$14.25 | \$16.05 | \$0.00 | \$84.98 |
| OPERATING ENGINEERS LOCAL 4                                | 06/01/2023 | \$55.95 | \$14.25 | \$16.05 | \$0.00 | \$86.25 |
|  | 12/01/2023 | \$57.23 | \$14.25 | \$16.05 | \$0.00 | \$87.53 |
|  | 06/01/2024 | \$58.55 | \$14.25 | \$16.05 | \$0.00 | \$88.85 |
|  | 12/01/2024 | \$60.03 | \$14.25 | \$16.05 | \$0.00 | \$90.33 |
|  | 06/01/2025 | \$61.36 | \$14.25 | \$16.05 | \$0.00 | \$91.66 |
|  | 12/01/2025 | \$62.83 | \$14.25 | \$16.05 | \$0.00 | \$93.13 |
|  | 06/01/2026 | \$64.16 | \$14.25 | \$16.05 | \$0.00 | \$94.46 |
|  | 12/01/2026 | \$65.64 | \$14.25 | \$16.05 | \$0.00 | \$95.94 |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" |            |         |         |         |        |         |

| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| COMPRESSOR OPERATOR<br><i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2022     | \$35.08   | \$14.25 | \$16.05 | \$0.00                       | \$65.38    |
|   | 06/01/2023     | \$35.90   | \$14.25 | \$16.05 | \$0.00                       | \$66.20    |
|   | 12/01/2023     | \$36.72   | \$14.25 | \$16.05 | \$0.00                       | \$67.02    |
|   | 06/01/2024     | \$37.57   | \$14.25 | \$16.05 | \$0.00                       | \$67.87    |
|   | 12/01/2024     | \$38.52   | \$14.25 | \$16.05 | \$0.00                       | \$68.82    |
|   | 06/01/2025     | \$39.37   | \$14.25 | \$16.05 | \$0.00                       | \$69.67    |
|   | 12/01/2025     | \$40.32   | \$14.25 | \$16.05 | \$0.00                       | \$70.62    |
|   | 06/01/2026     | \$41.18   | \$14.25 | \$16.05 | \$0.00                       | \$71.48    |
|   | 12/01/2026     | \$42.13   | \$14.25 | \$16.05 | \$0.00                       | \$72.43    |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|  |            |         |        |         |        |         |
|--|------------|---------|--------|---------|--------|---------|
| DELEADER (BRIDGE)<br><i>PAINTERS LOCAL 35 - ZONE 2</i> | 01/01/2023 | \$56.06 | \$8.65 | \$23.05 | \$0.00 | \$87.76 |
|  | 07/01/2023 | \$57.26 | \$8.65 | \$23.05 | \$0.00 | \$88.96 |
|  | 01/01/2024 | \$58.46 | \$8.65 | \$23.05 | \$0.00 | \$90.16 |
|  | 07/01/2024 | \$59.66 | \$8.65 | \$23.05 | \$0.00 | \$91.36 |
|  | 01/01/2025 | \$60.86 | \$8.65 | \$23.05 | \$0.00 | \$92.56 |

#### Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$28.03              | \$8.65 | \$0.00  | \$0.00                       | \$36.68    |
| 2    | 55      | \$30.83              | \$8.65 | \$6.27  | \$0.00                       | \$45.75    |
| 3    | 60      | \$33.64              | \$8.65 | \$6.84  | \$0.00                       | \$49.13    |
| 4    | 65      | \$36.44              | \$8.65 | \$7.41  | \$0.00                       | \$52.50    |
| 5    | 70      | \$39.24              | \$8.65 | \$19.63 | \$0.00                       | \$67.52    |
| 6    | 75      | \$42.05              | \$8.65 | \$20.20 | \$0.00                       | \$70.90    |
| 7    | 80      | \$44.85              | \$8.65 | \$20.77 | \$0.00                       | \$74.27    |
| 8    | 90      | \$50.45              | \$8.65 | \$21.91 | \$0.00                       | \$81.01    |

Effective Date - 07/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$28.63              | \$8.65 | \$0.00  | \$0.00                       | \$37.28    |
| 2    | 55      | \$31.49              | \$8.65 | \$6.27  | \$0.00                       | \$46.41    |
| 3    | 60      | \$34.36              | \$8.65 | \$6.84  | \$0.00                       | \$49.85    |
| 4    | 65      | \$37.22              | \$8.65 | \$7.41  | \$0.00                       | \$53.28    |
| 5    | 70      | \$40.08              | \$8.65 | \$19.63 | \$0.00                       | \$68.36    |
| 6    | 75      | \$42.95              | \$8.65 | \$20.20 | \$0.00                       | \$71.80    |
| 7    | 80      | \$45.81              | \$8.65 | \$20.77 | \$0.00                       | \$75.23    |
| 8    | 90      | \$51.53              | \$8.65 | \$21.91 | \$0.00                       | \$82.09    |

#### Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

|   |            |         |        |         |        |         |
|---|------------|---------|--------|---------|--------|---------|
| DEMO: ADZEMAN<br><i>LABORERS - ZONE 2</i> | 12/01/2022 | \$43.33 | \$9.10 | \$17.57 | \$0.00 | \$70.00 |
|   | 06/01/2023 | \$44.33 | \$9.10 | \$17.57 | \$0.00 | \$71.00 |
|   | 12/01/2023 | \$45.58 | \$9.10 | \$17.57 | \$0.00 | \$72.25 |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DEMO: BACKHOE/LOADER/HAMMER OPERATOR<br><i>LABORERS - ZONE 2</i>         | 12/01/2022     | \$44.33   | \$9.10  | \$17.57 | \$0.00                       | \$71.00    |
|  | 06/01/2023     | \$45.33   | \$9.10  | \$17.57 | \$0.00                       | \$72.00    |
|  | 12/01/2023     | \$46.58   | \$9.10  | \$17.57 | \$0.00                       | \$73.25    |
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DEMO: BURNERS<br><i>LABORERS - ZONE 2</i>                                | 12/01/2022     | \$44.08   | \$9.10  | \$17.57 | \$0.00                       | \$70.75    |
|  | 06/01/2023     | \$45.08   | \$9.10  | \$17.57 | \$0.00                       | \$71.75    |
|  | 12/01/2023     | \$46.33   | \$9.10  | \$17.57 | \$0.00                       | \$73.00    |
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DEMO: CONCRETE CUTTER/SAWYER<br><i>LABORERS - ZONE 2</i>                 | 12/01/2022     | \$44.33   | \$9.10  | \$17.57 | \$0.00                       | \$71.00    |
|  | 06/01/2023     | \$45.33   | \$9.10  | \$17.57 | \$0.00                       | \$72.00    |
|  | 12/01/2023     | \$46.58   | \$9.10  | \$17.57 | \$0.00                       | \$73.25    |
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DEMO: JACKHAMMER OPERATOR<br><i>LABORERS - ZONE 2</i>                    | 12/01/2022     | \$44.08   | \$9.10  | \$17.57 | \$0.00                       | \$70.75    |
|  | 06/01/2023     | \$45.08   | \$9.10  | \$17.57 | \$0.00                       | \$71.75    |
|  | 12/01/2023     | \$46.33   | \$9.10  | \$17.57 | \$0.00                       | \$73.00    |
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DEMO: WRECKING LABORER<br><i>LABORERS - ZONE 2</i>                       | 12/01/2022     | \$43.33   | \$9.10  | \$17.57 | \$0.00                       | \$70.00    |
|  | 06/01/2023     | \$44.33   | \$9.10  | \$17.57 | \$0.00                       | \$71.00    |
|  | 12/01/2023     | \$45.58   | \$9.10  | \$17.57 | \$0.00                       | \$72.25    |
| For apprentice rates see "Apprentice- LABORER"                           |                |           |         |         |                              |            |
| DIRECTIONAL DRILL MACHINE OPERATOR<br><i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|  | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|  | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|  | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|  | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|  | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|  | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|  | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|  | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"               |                |           |         |         |                              |            |
| DIVER<br><i>PILE DRIVER LOCAL 56 (ZONE 1)</i>                            | 08/01/2020     | \$68.70   | \$9.40  | \$23.12 | \$0.00                       | \$101.22   |
| For apprentice rates see "Apprentice- PILE DRIVER"                       |                |           |         |         |                              |            |
| DIVER TENDER<br><i>PILE DRIVER LOCAL 56 (ZONE 1)</i>                     | 08/01/2020     | \$49.07   | \$9.40  | \$23.12 | \$0.00                       | \$81.59    |
| For apprentice rates see "Apprentice- PILE DRIVER"                       |                |           |         |         |                              |            |
| DIVER TENDER (EFFLUENT)<br><i>PILE DRIVER LOCAL 56 (ZONE 1)</i>          | 08/01/2020     | \$73.60   | \$9.40  | \$23.12 | \$0.00                       | \$106.12   |
| For apprentice rates see "Apprentice- PILE DRIVER"                       |                |           |         |         |                              |            |
| DIVER/SLURRY (EFFLUENT)<br><i>PILE DRIVER LOCAL 56 (ZONE 1)</i>          | 08/01/2020     | \$103.05  | \$9.40  | \$23.12 | \$0.00                       | \$135.57   |
| For apprentice rates see "Apprentice- PILE DRIVER"                       |                |           |         |         |                              |            |
| DRAWBRIDGE OPERATOR (Construction)<br><i>DRAWBRIDGE - SEIU LOCAL 888</i> | 07/01/2020     | \$26.77   | \$6.67  | \$3.93  | \$0.16                       | \$37.53    |
| ELECTRICIAN<br><i>ELECTRICIANS LOCAL 103</i>                             | 03/01/2023     | \$59.23   | \$13.00 | \$21.63 | \$0.00                       | \$93.86    |

## Classification

Effective Date

Base Wage

Health

Pension

Supplemental  
Unemployment

Total Rate

**Apprentice -** *ELECTRICIAN - Local 103***Effective Date -** 03/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 40      | \$23.69              | \$13.00 | \$0.71  | \$0.00                       | \$37.40    |
| 2    | 40      | \$23.69              | \$13.00 | \$0.71  | \$0.00                       | \$37.40    |
| 3    | 45      | \$26.65              | \$13.00 | \$16.13 | \$0.00                       | \$55.78    |
| 4    | 45      | \$26.65              | \$13.00 | \$16.13 | \$0.00                       | \$55.78    |
| 5    | 50      | \$29.62              | \$13.00 | \$16.63 | \$0.00                       | \$59.25    |
| 6    | 55      | \$32.58              | \$13.00 | \$17.13 | \$0.00                       | \$62.71    |
| 7    | 60      | \$35.54              | \$13.00 | \$17.63 | \$0.00                       | \$66.17    |
| 8    | 65      | \$38.50              | \$13.00 | \$18.13 | \$0.00                       | \$69.63    |
| 9    | 70      | \$41.46              | \$13.00 | \$18.62 | \$0.00                       | \$73.08    |
| 10   | 75      | \$44.42              | \$13.00 | \$19.13 | \$0.00                       | \$76.55    |

**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*

01/01/2022

\$65.62

\$16.03

\$20.21

\$0.00

\$101.86

**Apprentice -** *ELEVATOR CONSTRUCTOR - Local 4***Effective Date -** 01/01/2022

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$32.81              | \$16.03 | \$0.00  | \$0.00                       | \$48.84    |
| 2    | 55      | \$36.09              | \$16.03 | \$20.21 | \$0.00                       | \$72.33    |
| 3    | 65      | \$42.65              | \$16.03 | \$20.21 | \$0.00                       | \$78.89    |
| 4    | 70      | \$45.93              | \$16.03 | \$20.21 | \$0.00                       | \$82.17    |
| 5    | 80      | \$52.50              | \$16.03 | \$20.21 | \$0.00                       | \$88.74    |

**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*

01/01/2022

\$45.93

\$16.03

\$20.21

\$0.00

\$82.17

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|  | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|  | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|  | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|  | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|  | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|  | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|  | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|  | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                             |                |           |         |         |                              |            |
| FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY<br><i>OPERATING ENGINEERS LOCAL 4</i>                  | 11/05/2022     | \$48.67   | \$14.25 | \$16.05 | \$0.00                       | \$78.97    |
|  | 05/01/2023     | \$49.91   | \$14.25 | \$16.05 | \$0.00                       | \$80.21    |
|  | 11/01/2023     | \$51.15   | \$14.25 | \$16.05 | \$0.00                       | \$81.45    |
|  | 05/01/2024     | \$52.39   | \$14.25 | \$16.05 | \$0.00                       | \$82.69    |
|  | 11/01/2024     | \$53.68   | \$14.25 | \$16.05 | \$0.00                       | \$83.98    |
|  | 05/01/2025     | \$55.12   | \$14.25 | \$16.05 | \$0.00                       | \$85.42    |
|  | 11/01/2025     | \$56.41   | \$14.25 | \$16.05 | \$0.00                       | \$86.71    |
|  | 05/01/2026     | \$57.85   | \$14.25 | \$16.05 | \$0.00                       | \$88.15    |
|  | 11/01/2026     | \$59.14   | \$14.25 | \$16.05 | \$0.00                       | \$89.44    |
|  | 05/01/2027     | \$60.57   | \$14.25 | \$16.05 | \$0.00                       | \$90.87    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                                     |                |           |         |         |                              |            |
| FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY<br><i>OPERATING ENGINEERS LOCAL 4</i>                  | 11/01/2022     | \$50.22   | \$14.25 | \$16.05 | \$0.00                       | \$80.52    |
|  | 05/01/2023     | \$51.47   | \$14.25 | \$16.05 | \$0.00                       | \$81.77    |
|  | 11/01/2023     | \$52.72   | \$14.25 | \$16.05 | \$0.00                       | \$83.02    |
|  | 05/01/2024     | \$53.97   | \$14.25 | \$16.05 | \$0.00                       | \$84.27    |
|  | 11/01/2024     | \$55.27   | \$14.25 | \$16.05 | \$0.00                       | \$85.57    |
|  | 05/01/2025     | \$56.72   | \$14.25 | \$16.05 | \$0.00                       | \$87.02    |
|  | 11/01/2025     | \$58.02   | \$14.25 | \$16.05 | \$0.00                       | \$88.32    |
|  | 05/01/2026     | \$59.47   | \$14.25 | \$16.05 | \$0.00                       | \$89.77    |
|  | 11/01/2026     | \$60.77   | \$14.25 | \$16.05 | \$0.00                       | \$91.07    |
|  | 05/01/2027     | \$62.22   | \$14.25 | \$16.05 | \$0.00                       | \$92.52    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                                     |                |           |         |         |                              |            |
| FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY<br><i>OPERATING ENGINEERS LOCAL 4</i>                   | 11/01/2022     | \$24.31   | \$14.25 | \$16.05 | \$0.00                       | \$54.61    |
|  | 05/01/2023     | \$25.05   | \$14.25 | \$16.05 | \$0.00                       | \$55.35    |
|  | 11/01/2023     | \$25.78   | \$14.25 | \$16.05 | \$0.00                       | \$56.08    |
|  | 05/01/2024     | \$26.51   | \$14.25 | \$16.05 | \$0.00                       | \$56.81    |
|  | 11/01/2024     | \$27.27   | \$14.25 | \$16.05 | \$0.00                       | \$57.57    |
|  | 05/01/2025     | \$28.12   | \$14.25 | \$16.05 | \$0.00                       | \$58.42    |
|  | 11/01/2025     | \$28.88   | \$14.25 | \$16.05 | \$0.00                       | \$59.18    |
|  | 05/01/2026     | \$29.73   | \$14.25 | \$16.05 | \$0.00                       | \$60.03    |
|  | 11/01/2026     | \$30.49   | \$14.25 | \$16.05 | \$0.00                       | \$60.79    |
|  | 05/01/2027     | \$31.34   | \$14.25 | \$16.05 | \$0.00                       | \$61.64    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                                     |                |           |         |         |                              |            |
| FIRE ALARM INSTALLER<br><i>ELECTRICIANS LOCAL 103</i>  | 03/01/2023     | \$59.23   | \$13.00 | \$21.63 | \$0.00                       | \$93.86    |
| For apprentice rates see "Apprentice- ELECTRICIAN"   |                |           |         |         |                              |            |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| FIRE ALARM REPAIR / MAINTENANCE<br>/ COMMISSIONING <i>ELECTRICIANS</i>                   | 03/01/2023     | \$48.34   | \$13.00 | \$19.01 | \$0.00                       | \$80.35    |
| <i>LOCAL 103</i><br>For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN" |                |           |         |         |                              |            |
| FIREMAN (ASST. ENGINEER)<br><i>OPERATING ENGINEERS LOCAL 4</i>                           | 12/01/2022     | \$43.54   | \$14.25 | \$16.05 | \$0.00                       | \$73.84    |
|  | 06/01/2023     | \$44.56   | \$14.25 | \$16.05 | \$0.00                       | \$74.86    |
|  | 12/01/2023     | \$45.57   | \$14.25 | \$16.05 | \$0.00                       | \$75.87    |
|  | 06/01/2024     | \$46.63   | \$14.25 | \$16.05 | \$0.00                       | \$76.93    |
|  | 12/01/2024     | \$47.81   | \$14.25 | \$16.05 | \$0.00                       | \$78.11    |
|  | 06/01/2025     | \$48.87   | \$14.25 | \$16.05 | \$0.00                       | \$79.17    |
|  | 12/01/2025     | \$50.04   | \$14.25 | \$16.05 | \$0.00                       | \$80.34    |
|  | 06/01/2026     | \$51.10   | \$14.25 | \$16.05 | \$0.00                       | \$81.40    |
|  | 12/01/2026     | \$52.28   | \$14.25 | \$16.05 | \$0.00                       | \$82.58    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                               |                |           |         |         |                              |            |
| FLAGGER & SIGNALER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>   | 12/01/2022     | \$25.23   | \$9.35  | \$16.89 | \$0.00                       | \$51.47    |
|  | 06/01/2023     | \$25.98   | \$9.35  | \$16.89 | \$0.00                       | \$52.22    |
|  | 12/01/2023     | \$25.98   | \$9.35  | \$16.89 | \$0.00                       | \$52.22    |
|  | 06/01/2024     | \$27.01   | \$9.35  | \$16.89 | \$0.00                       | \$53.25    |
|  | 12/01/2024     | \$27.01   | \$9.35  | \$16.89 | \$0.00                       | \$53.25    |
|  | 06/01/2025     | \$28.09   | \$9.35  | \$16.89 | \$0.00                       | \$54.33    |
|  | 12/01/2025     | \$28.09   | \$9.35  | \$16.89 | \$0.00                       | \$54.33    |
|  | 06/01/2026     | \$29.21   | \$9.35  | \$16.89 | \$0.00                       | \$55.45    |
|  | 12/01/2026     | \$29.21   | \$9.35  | \$16.89 | \$0.00                       | \$55.45    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                       |                |           |         |         |                              |            |
| FLOORCOVERER<br><i>FLOORCOVERERS LOCAL 2168 ZONE I</i>                                   | 03/01/2022     | \$49.93   | \$8.68  | \$20.27 | \$0.00                       | \$78.88    |

**Apprentice - FLOORCOVERER - Local 2168 Zone I**

**Effective Date - 03/01/2022**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$24.97              | \$8.68 | \$1.79  | \$0.00                       | \$35.44    |
| 2    | 55      | \$27.46              | \$8.68 | \$1.79  | \$0.00                       | \$37.93    |
| 3    | 60      | \$29.96              | \$8.68 | \$14.90 | \$0.00                       | \$53.54    |
| 4    | 65      | \$32.45              | \$8.68 | \$14.90 | \$0.00                       | \$56.03    |
| 5    | 70      | \$34.95              | \$8.68 | \$16.69 | \$0.00                       | \$60.32    |
| 6    | 75      | \$37.45              | \$8.68 | \$16.69 | \$0.00                       | \$62.82    |
| 7    | 80      | \$39.94              | \$8.68 | \$18.48 | \$0.00                       | \$67.10    |
| 8    | 85      | \$42.44              | \$8.68 | \$18.48 | \$0.00                       | \$69.60    |

**Notes:** Steps are 750 hrs.  
% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)  
Step 1&2 \$32.94/ 3&4 \$39.66/ 5&6 \$60.32/ 7&8 \$67.10

**Apprentice to Journeyworker Ratio:1:1**

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| FORK LIFT/CHERRY PICKER<br><i>OPERATING ENGINEERS LOCAL 4</i>                              | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|  | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|  | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|  | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|  | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|  | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|  | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|  | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|  | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                                 |                |           |         |         |                              |            |
| GENERATOR/LIGHTING PLANT/HEATERS<br><i>OPERATING ENGINEERS LOCAL 4</i>                     | 12/01/2022     | \$35.08   | \$14.25 | \$16.05 | \$0.00                       | \$65.38    |
|  | 06/01/2023     | \$35.90   | \$14.25 | \$16.05 | \$0.00                       | \$66.20    |
|  | 12/01/2023     | \$36.72   | \$14.25 | \$16.05 | \$0.00                       | \$67.02    |
|  | 06/01/2024     | \$37.57   | \$14.25 | \$16.05 | \$0.00                       | \$67.87    |
|  | 12/01/2024     | \$38.52   | \$14.25 | \$16.05 | \$0.00                       | \$68.82    |
|  | 06/01/2025     | \$39.37   | \$14.25 | \$16.05 | \$0.00                       | \$69.67    |
|  | 12/01/2025     | \$40.32   | \$14.25 | \$16.05 | \$0.00                       | \$70.62    |
|  | 06/01/2026     | \$41.18   | \$14.25 | \$16.05 | \$0.00                       | \$71.48    |
|  | 12/01/2026     | \$42.13   | \$14.25 | \$16.05 | \$0.00                       | \$72.43    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                                 |                |           |         |         |                              |            |
| GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR<br>SYSTEMS)<br><i>GLAZIERS LOCAL 35 (ZONE 2)</i> | 01/01/2023     | \$45.56   | \$8.65  | \$23.05 | \$0.00                       | \$77.26    |
|  | 07/01/2023     | \$46.76   | \$8.65  | \$23.05 | \$0.00                       | \$78.46    |
|  | 01/01/2024     | \$47.96   | \$8.65  | \$23.05 | \$0.00                       | \$79.66    |
|  | 07/01/2024     | \$49.16   | \$8.65  | \$23.05 | \$0.00                       | \$80.86    |
|  | 01/01/2025     | \$50.36   | \$8.65  | \$23.05 | \$0.00                       | \$82.06    |

**Classification**

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

**Apprentice -    GLAZIER - Local 35 Zone 2**

**Effective Date -    01/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$22.78              | \$8.65 | \$0.00  | \$0.00                       | \$31.43    |
| 2    | 55      | \$25.06              | \$8.65 | \$6.27  | \$0.00                       | \$39.98    |
| 3    | 60      | \$27.34              | \$8.65 | \$6.84  | \$0.00                       | \$42.83    |
| 4    | 65      | \$29.61              | \$8.65 | \$7.41  | \$0.00                       | \$45.67    |
| 5    | 70      | \$31.89              | \$8.65 | \$19.63 | \$0.00                       | \$60.17    |
| 6    | 75      | \$34.17              | \$8.65 | \$20.20 | \$0.00                       | \$63.02    |
| 7    | 80      | \$36.45              | \$8.65 | \$20.77 | \$0.00                       | \$65.87    |
| 8    | 90      | \$41.00              | \$8.65 | \$21.91 | \$0.00                       | \$71.56    |

**Effective Date -    07/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$23.38              | \$8.65 | \$0.00  | \$0.00                       | \$32.03    |
| 2    | 55      | \$25.72              | \$8.65 | \$6.27  | \$0.00                       | \$40.64    |
| 3    | 60      | \$28.06              | \$8.65 | \$6.84  | \$0.00                       | \$43.55    |
| 4    | 65      | \$30.39              | \$8.65 | \$7.41  | \$0.00                       | \$46.45    |
| 5    | 70      | \$32.73              | \$8.65 | \$19.63 | \$0.00                       | \$61.01    |
| 6    | 75      | \$35.07              | \$8.65 | \$20.20 | \$0.00                       | \$63.92    |
| 7    | 80      | \$37.41              | \$8.65 | \$20.77 | \$0.00                       | \$66.83    |
| 8    | 90      | \$42.08              | \$8.65 | \$21.91 | \$0.00                       | \$72.64    |

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

**HOISTING ENGINEER/CRANES/GRADALLS**

*OPERATING ENGINEERS LOCAL 4*

|            |         |         |         |        |         |
|------------|---------|---------|---------|--------|---------|
| 12/01/2022 | \$53.63 | \$14.25 | \$16.05 | \$0.00 | \$83.93 |
| 06/01/2023 | \$54.88 | \$14.25 | \$16.05 | \$0.00 | \$85.18 |
| 12/01/2023 | \$56.13 | \$14.25 | \$16.05 | \$0.00 | \$86.43 |
| 06/01/2024 | \$57.43 | \$14.25 | \$16.05 | \$0.00 | \$87.73 |
| 12/01/2024 | \$58.88 | \$14.25 | \$16.05 | \$0.00 | \$89.18 |
| 06/01/2025 | \$60.18 | \$14.25 | \$16.05 | \$0.00 | \$90.48 |
| 12/01/2025 | \$61.63 | \$14.25 | \$16.05 | \$0.00 | \$91.93 |
| 06/01/2026 | \$62.93 | \$14.25 | \$16.05 | \$0.00 | \$93.23 |
| 12/01/2026 | \$64.38 | \$14.25 | \$16.05 | \$0.00 | \$94.68 |



**Apprentice - OPERATING ENGINEERS - Local 4**

**Effective Date -** 12/01/2022

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 55      | \$29.50              | \$14.25 | \$0.00  | \$0.00                       | \$43.75    |
| 2    | 60      | \$32.18              | \$14.25 | \$16.05 | \$0.00                       | \$62.48    |
| 3    | 65      | \$34.86              | \$14.25 | \$16.05 | \$0.00                       | \$65.16    |
| 4    | 70      | \$37.54              | \$14.25 | \$16.05 | \$0.00                       | \$67.84    |
| 5    | 75      | \$40.22              | \$14.25 | \$16.05 | \$0.00                       | \$70.52    |
| 6    | 80      | \$42.90              | \$14.25 | \$16.05 | \$0.00                       | \$73.20    |
| 7    | 85      | \$45.59              | \$14.25 | \$16.05 | \$0.00                       | \$75.89    |
| 8    | 90      | \$48.27              | \$14.25 | \$16.05 | \$0.00                       | \$78.57    |

**Effective Date -** 06/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 55      | \$30.18              | \$14.25 | \$0.00  | \$0.00                       | \$44.43    |
| 2    | 60      | \$32.93              | \$14.25 | \$16.05 | \$0.00                       | \$63.23    |
| 3    | 65      | \$35.67              | \$14.25 | \$16.05 | \$0.00                       | \$65.97    |
| 4    | 70      | \$38.42              | \$14.25 | \$16.05 | \$0.00                       | \$68.72    |
| 5    | 75      | \$41.16              | \$14.25 | \$16.05 | \$0.00                       | \$71.46    |
| 6    | 80      | \$43.90              | \$14.25 | \$16.05 | \$0.00                       | \$74.20    |
| 7    | 85      | \$46.65              | \$14.25 | \$16.05 | \$0.00                       | \$76.95    |
| 8    | 90      | \$49.39              | \$14.25 | \$16.05 | \$0.00                       | \$79.69    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:6**

|   |            |         |         |         |        |          |
|---|------------|---------|---------|---------|--------|----------|
| HVAC (DUCTWORK)   | 02/01/2023 | \$55.31 | \$14.11 | \$26.64 | \$2.83 | \$98.89  |
| SHEETMETAL WORKERS LOCAL 17 - A                           | 08/01/2023 | \$57.01 | \$14.11 | \$26.64 | \$2.83 | \$100.59 |
|   | 02/01/2024 | \$58.71 | \$14.11 | \$26.64 | \$2.83 | \$102.29 |
|   | 08/01/2024 | \$60.46 | \$14.11 | \$26.64 | \$2.83 | \$104.04 |
|   | 02/01/2025 | \$62.21 | \$14.11 | \$26.64 | \$2.83 | \$105.79 |
|   | 08/01/2025 | \$64.06 | \$14.11 | \$26.64 | \$2.83 | \$107.64 |
|   | 02/01/2026 | \$66.01 | \$14.11 | \$26.64 | \$2.83 | \$109.59 |
| For apprentice rates see "Apprentice- SHEET METAL WORKER" |            |         |         |         |        |          |
| HVAC (ELECTRICAL CONTROLS)                                | 03/01/2023 | \$59.23 | \$13.00 | \$21.63 | \$0.00 | \$93.86  |
| ELECTRICIANS LOCAL 103                                    |            |         |         |         |        |          |
| For apprentice rates see "Apprentice- ELECTRICIAN"        |            |         |         |         |        |          |
| HVAC (TESTING AND BALANCING - AIR)                        | 02/01/2023 | \$55.31 | \$14.11 | \$26.64 | \$2.83 | \$98.89  |
| SHEETMETAL WORKERS LOCAL 17 - A                           | 08/01/2023 | \$57.01 | \$14.11 | \$26.64 | \$2.83 | \$100.59 |
|   | 02/01/2024 | \$58.71 | \$14.11 | \$26.64 | \$2.83 | \$102.29 |
|   | 08/01/2024 | \$60.46 | \$14.11 | \$26.64 | \$2.83 | \$104.04 |
|   | 02/01/2025 | \$62.21 | \$14.11 | \$26.64 | \$2.83 | \$105.79 |
|   | 08/01/2025 | \$64.06 | \$14.11 | \$26.64 | \$2.83 | \$107.64 |
|   | 02/01/2026 | \$66.01 | \$14.11 | \$26.64 | \$2.83 | \$109.59 |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| For apprentice rates see "Apprentice- SHEET METAL WORKER"                            |                |           |         |         |                              |            |
| HVAC (TESTING AND BALANCING -WATER)<br><i>PIPEFITTERS LOCAL 537</i>                  | 03/01/2023     | \$63.43   | \$12.50 | \$20.80 | \$0.00                       | \$96.73    |
|  | 09/01/2023     | \$65.18   | \$12.50 | \$20.80 | \$0.00                       | \$98.48    |
|  | 03/01/2024     | \$66.98   | \$12.50 | \$20.80 | \$0.00                       | \$100.28   |
|  | 09/01/2024     | \$68.78   | \$12.50 | \$20.80 | \$0.00                       | \$102.08   |
|  | 03/01/2025     | \$70.58   | \$12.50 | \$20.80 | \$0.00                       | \$103.88   |
| For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"            |                |           |         |         |                              |            |
| HVAC MECHANIC<br><i>PIPEFITTERS LOCAL 537</i>  | 03/01/2023     | \$63.43   | \$12.25 | \$20.80 | \$0.00                       | \$96.48    |
|  | 09/01/2023     | \$65.18   | \$12.25 | \$20.80 | \$0.00                       | \$98.23    |
|  | 03/01/2024     | \$66.98   | \$12.25 | \$20.80 | \$0.00                       | \$100.03   |
|  | 09/01/2024     | \$68.78   | \$12.25 | \$20.80 | \$0.00                       | \$101.83   |
|  | 03/01/2025     | \$70.58   | \$12.25 | \$20.80 | \$0.00                       | \$103.63   |
| For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"            |                |           |         |         |                              |            |
| HYDRAULIC DRILLS<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.91   | \$9.10  | \$16.64 | \$0.00                       | \$63.65    |
|  | 06/01/2023     | \$38.81   | \$9.10  | \$16.64 | \$0.00                       | \$64.55    |
|  | 12/01/2023     | \$39.71   | \$9.10  | \$16.64 | \$0.00                       | \$65.45    |
| For apprentice rates see "Apprentice- LABORER"                                       |                |           |         |         |                              |            |
| HYDRAULIC DRILLS (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$37.31   | \$9.35  | \$16.89 | \$0.00                       | \$63.55    |
|  | 06/01/2023     | \$38.21   | \$9.35  | \$16.89 | \$0.00                       | \$64.45    |
|  | 12/01/2023     | \$39.11   | \$9.35  | \$16.89 | \$0.00                       | \$65.35    |
|  | 06/01/2024     | \$40.44   | \$9.35  | \$16.89 | \$0.00                       | \$66.68    |
|  | 12/01/2024     | \$41.77   | \$9.35  | \$16.89 | \$0.00                       | \$68.01    |
|  | 06/01/2025     | \$43.16   | \$9.35  | \$16.89 | \$0.00                       | \$69.40    |
|  | 12/01/2025     | \$44.54   | \$9.35  | \$16.89 | \$0.00                       | \$70.78    |
|  | 06/01/2026     | \$45.98   | \$9.35  | \$16.89 | \$0.00                       | \$72.22    |
|  | 12/01/2026     | \$47.42   | \$9.35  | \$16.89 | \$0.00                       | \$73.66    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                   |                |           |         |         |                              |            |
| INSULATOR (PIPES & TANKS)<br><i>HEAT &amp; FROST INSULATORS LOCAL 6 (BOSTON)</i>     | 09/01/2022     | \$53.85   | \$13.80 | \$17.14 | \$0.00                       | \$84.79    |

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

**Effective Date -** 09/01/2022

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$26.93              | \$13.80 | \$12.42 | \$0.00                       | \$53.15    |
| 2    | 60      | \$32.31              | \$13.80 | \$13.36 | \$0.00                       | \$59.47    |
| 3    | 70      | \$37.70              | \$13.80 | \$14.31 | \$0.00                       | \$65.81    |
| 4    | 80      | \$43.08              | \$13.80 | \$15.25 | \$0.00                       | \$72.13    |

**Notes:**

Steps are 1 year

**Apprentice to Journeyworker Ratio:1:4**

|   |            |         |        |         |        |         |
|---|------------|---------|--------|---------|--------|---------|
| IRONWORKER/WELDER<br><i>IRONWORKERS LOCAL 7 (BOSTON AREA)</i> | 09/16/2022 | \$51.59 | \$8.25 | \$26.70 | \$0.00 | \$86.54 |
|---|------------|---------|--------|---------|--------|---------|

Apprentice - IRONWORKER - Local 7 Boston

Effective Date - 09/16/2022

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$30.95              | \$8.25 | \$26.70 | \$0.00                       | \$65.90    |
| 2    | 70      | \$36.11              | \$8.25 | \$26.70 | \$0.00                       | \$71.06    |
| 3    | 75      | \$38.69              | \$8.25 | \$26.70 | \$0.00                       | \$73.64    |
| 4    | 80      | \$41.27              | \$8.25 | \$26.70 | \$0.00                       | \$76.22    |
| 5    | 85      | \$43.85              | \$8.25 | \$26.70 | \$0.00                       | \$78.80    |
| 6    | 90      | \$46.43              | \$8.25 | \$26.70 | \$0.00                       | \$81.38    |

Notes:

Apprentice to Journeyworker Ratio:1:4

|                                      |            |         |        |         |        |         |
|--------------------------------------|------------|---------|--------|---------|--------|---------|
| JACKHAMMER & PAVING BREAKER OPERATOR | 12/01/2022 | \$37.41 | \$9.10 | \$16.64 | \$0.00 | \$63.15 |
| LABORERS - ZONE 2                    | 06/01/2023 | \$38.31 | \$9.10 | \$16.64 | \$0.00 | \$64.05 |
|                                      | 12/01/2023 | \$39.21 | \$9.10 | \$16.64 | \$0.00 | \$64.95 |

For apprentice rates see "Apprentice- LABORER"

|                   |            |         |        |         |        |         |
|-------------------|------------|---------|--------|---------|--------|---------|
| LABORER           | 12/01/2022 | \$37.16 | \$9.10 | \$16.64 | \$0.00 | \$62.90 |
| LABORERS - ZONE 2 | 06/01/2023 | \$38.06 | \$9.10 | \$16.64 | \$0.00 | \$63.80 |
|                   | 12/01/2023 | \$38.96 | \$9.10 | \$16.64 | \$0.00 | \$64.70 |

Apprentice - LABORER - Zone 2

Effective Date - 12/01/2022

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$22.30              | \$9.10 | \$16.64 | \$0.00                       | \$48.04    |
| 2    | 70      | \$26.01              | \$9.10 | \$16.64 | \$0.00                       | \$51.75    |
| 3    | 80      | \$29.73              | \$9.10 | \$16.64 | \$0.00                       | \$55.47    |
| 4    | 90      | \$33.44              | \$9.10 | \$16.64 | \$0.00                       | \$59.18    |

Effective Date - 06/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$22.84              | \$9.10 | \$16.64 | \$0.00                       | \$48.58    |
| 2    | 70      | \$26.64              | \$9.10 | \$16.64 | \$0.00                       | \$52.38    |
| 3    | 80      | \$30.45              | \$9.10 | \$16.64 | \$0.00                       | \$56.19    |
| 4    | 90      | \$34.25              | \$9.10 | \$16.64 | \$0.00                       | \$59.99    |

Notes:

Apprentice to Journeyworker Ratio:1:5

| Classification                      | Effective Date | Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|-------------------------------------|----------------|-----------|--------|---------|------------------------------|------------|
| LABORER (HEAVY & HIGHWAY)           | 12/01/2022     | \$36.56   | \$9.35 | \$16.89 | \$0.00                       | \$62.80    |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY) | 06/01/2023     | \$37.46   | \$9.35 | \$16.89 | \$0.00                       | \$63.70    |
|                                     | 12/01/2023     | \$38.36   | \$9.35 | \$16.89 | \$0.00                       | \$64.60    |
|                                     | 06/01/2024     | \$39.69   | \$9.35 | \$16.89 | \$0.00                       | \$65.93    |
|                                     | 12/01/2024     | \$41.02   | \$9.35 | \$16.89 | \$0.00                       | \$67.26    |
|                                     | 06/01/2025     | \$42.41   | \$9.35 | \$16.89 | \$0.00                       | \$68.65    |
|                                     | 12/01/2025     | \$43.79   | \$9.35 | \$16.89 | \$0.00                       | \$70.03    |
|                                     | 06/01/2026     | \$45.23   | \$9.35 | \$16.89 | \$0.00                       | \$71.47    |
|                                     | 12/01/2026     | \$46.67   | \$9.35 | \$16.89 | \$0.00                       | \$72.91    |

**Apprentice - LABORER (Heavy & Highway) - Zone 2**

**Effective Date - 12/01/2022**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$21.94              | \$9.35 | \$16.89 | \$0.00                       | \$48.18    |
| 2    | 70      | \$25.59              | \$9.35 | \$16.89 | \$0.00                       | \$51.83    |
| 3    | 80      | \$29.25              | \$9.35 | \$16.89 | \$0.00                       | \$55.49    |
| 4    | 90      | \$32.90              | \$9.35 | \$16.89 | \$0.00                       | \$59.14    |

**Effective Date - 06/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$22.48              | \$9.35 | \$16.89 | \$0.00                       | \$48.72    |
| 2    | 70      | \$26.22              | \$9.35 | \$16.89 | \$0.00                       | \$52.46    |
| 3    | 80      | \$29.97              | \$9.35 | \$16.89 | \$0.00                       | \$56.21    |
| 4    | 90      | \$33.71              | \$9.35 | \$16.89 | \$0.00                       | \$59.95    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

|  |            |         |        |         |        |         |
|--|------------|---------|--------|---------|--------|---------|
| LABORER: CARPENTER TENDER                      | 12/01/2022 | \$37.16 | \$9.10 | \$16.64 | \$0.00 | \$62.90 |
| LABORERS - ZONE 2                              | 06/01/2023 | \$38.06 | \$9.10 | \$16.64 | \$0.00 | \$63.80 |
|  | 12/01/2023 | \$38.96 | \$9.10 | \$16.64 | \$0.00 | \$64.70 |
| For apprentice rates see "Apprentice- LABORER" |            |         |        |         |        |         |
| LABORER: CEMENT FINISHER TENDER                | 12/01/2022 | \$37.16 | \$9.10 | \$16.64 | \$0.00 | \$62.90 |
| LABORERS - ZONE 2                              | 06/01/2023 | \$38.06 | \$9.10 | \$16.64 | \$0.00 | \$63.80 |
|  | 12/01/2023 | \$38.96 | \$9.10 | \$16.64 | \$0.00 | \$64.70 |
| For apprentice rates see "Apprentice- LABORER" |            |         |        |         |        |         |
| LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER      | 12/01/2022 | \$37.25 | \$9.10 | \$16.70 | \$0.00 | \$63.05 |
| LABORERS - ZONE 2                              | 06/01/2023 | \$38.15 | \$9.10 | \$16.70 | \$0.00 | \$63.95 |
|  | 12/01/2023 | \$39.05 | \$9.10 | \$16.70 | \$0.00 | \$64.85 |
| For apprentice rates see "Apprentice- LABORER" |            |         |        |         |        |         |
| LABORER: MASON TENDER                          | 12/01/2022 | \$37.41 | \$9.10 | \$16.64 | \$0.00 | \$63.15 |
| LABORERS - ZONE 2                              | 06/01/2023 | \$38.31 | \$9.10 | \$16.64 | \$0.00 | \$64.05 |
|  | 12/01/2023 | \$39.21 | \$9.10 | \$16.64 | \$0.00 | \$64.95 |
| For apprentice rates see "Apprentice- LABORER" |            |         |        |         |        |         |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| LABORER: MASON TENDER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>  | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|  | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|  | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|  | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|  | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|  | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|  | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|  | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|  | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)  |                |           |         |         |                              |            |
| LABORER: MULTI-TRADE TENDER<br><i>LABORERS - ZONE 2</i>  | 12/01/2022     | \$37.16   | \$9.10  | \$16.64 | \$0.00                       | \$62.90    |
|  | 06/01/2023     | \$38.06   | \$9.10  | \$16.64 | \$0.00                       | \$63.80    |
|  | 12/01/2023     | \$38.96   | \$9.10  | \$16.64 | \$0.00                       | \$64.70    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| LABORER: TREE REMOVER<br><i>LABORERS - ZONE 2</i>  | 12/01/2022     | \$37.16   | \$9.10  | \$16.64 | \$0.00                       | \$62.90    |
|  | 06/01/2023     | \$38.06   | \$9.10  | \$16.64 | \$0.00                       | \$63.80    |
|  | 12/01/2023     | \$38.96   | \$9.10  | \$16.64 | \$0.00                       | \$64.70    |
| This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER" |                |           |         |         |                              |            |
| LASER BEAM OPERATOR<br><i>LABORERS - ZONE 2</i>  | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|  | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|  | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| LASER BEAM OPERATOR (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>  | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|  | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|  | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|  | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|  | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|  | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|  | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|  | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|  | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)  |                |           |         |         |                              |            |
| MARBLE & TILE FINISHERS<br><i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>  | 02/01/2023     | \$46.25   | \$11.49 | \$20.37 | \$0.00                       | \$78.11    |
|  | 08/01/2023     | \$47.89   | \$11.49 | \$20.37 | \$0.00                       | \$79.75    |
|  | 02/01/2024     | \$48.89   | \$11.49 | \$20.37 | \$0.00                       | \$80.75    |
|  | 08/01/2024     | \$50.57   | \$11.49 | \$20.37 | \$0.00                       | \$82.43    |
|  | 02/01/2025     | \$51.61   | \$11.49 | \$20.37 | \$0.00                       | \$83.47    |
|  | 08/01/2025     | \$53.33   | \$11.49 | \$20.37 | \$0.00                       | \$85.19    |
|  | 02/01/2026     | \$54.41   | \$11.49 | \$20.37 | \$0.00                       | \$86.27    |
|  | 08/01/2026     | \$56.17   | \$11.49 | \$20.37 | \$0.00                       | \$88.03    |
|  | 02/01/2027     | \$57.29   | \$11.49 | \$20.37 | \$0.00                       | \$89.15    |

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

Effective Date - 02/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$23.13              | \$11.49 | \$20.37 | \$0.00                       | \$54.99    |
| 2    | 60      | \$27.75              | \$11.49 | \$20.37 | \$0.00                       | \$59.61    |
| 3    | 70      | \$32.38              | \$11.49 | \$20.37 | \$0.00                       | \$64.24    |
| 4    | 80      | \$37.00              | \$11.49 | \$20.37 | \$0.00                       | \$68.86    |
| 5    | 90      | \$41.63              | \$11.49 | \$20.37 | \$0.00                       | \$73.49    |

Effective Date - 08/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$23.95              | \$11.49 | \$20.37 | \$0.00                       | \$55.81    |
| 2    | 60      | \$28.73              | \$11.49 | \$20.37 | \$0.00                       | \$60.59    |
| 3    | 70      | \$33.52              | \$11.49 | \$20.37 | \$0.00                       | \$65.38    |
| 4    | 80      | \$38.31              | \$11.49 | \$20.37 | \$0.00                       | \$70.17    |
| 5    | 90      | \$43.10              | \$11.49 | \$20.37 | \$0.00                       | \$74.96    |

Notes:

Apprentice to Journeyworker Ratio:1:3

|  |            |         |         |         |        |          |
|--|------------|---------|---------|---------|--------|----------|
| MARBLE MASONS,TILELAYERS & TERRAZZO MECH | 02/01/2023 | \$60.37 | \$11.49 | \$22.31 | \$0.00 | \$94.17  |
| BRICKLAYERS LOCAL 3 - MARBLE & TILE      | 08/01/2023 | \$62.42 | \$11.49 | \$22.31 | \$0.00 | \$96.22  |
|  | 02/01/2024 | \$63.67 | \$11.49 | \$22.31 | \$0.00 | \$97.47  |
|  | 08/01/2024 | \$65.77 | \$11.49 | \$22.31 | \$0.00 | \$99.57  |
|  | 02/01/2025 | \$67.07 | \$11.49 | \$22.31 | \$0.00 | \$100.87 |
|  | 08/01/2025 | \$69.22 | \$11.49 | \$22.31 | \$0.00 | \$103.02 |
|  | 02/01/2026 | \$70.57 | \$11.49 | \$22.31 | \$0.00 | \$104.37 |
|  | 08/01/2026 | \$72.77 | \$11.49 | \$22.31 | \$0.00 | \$106.57 |
|  | 02/01/2027 | \$74.17 | \$11.49 | \$22.31 | \$0.00 | \$107.97 |

| Classification | Effective Date | Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|----------------|----------------|-----------|--------|---------|------------------------------|------------|
|----------------|----------------|-----------|--------|---------|------------------------------|------------|

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

**Effective Date - 02/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$30.19              | \$11.49 | \$22.31 | \$0.00                       | \$63.99    |
| 2    | 60      | \$36.22              | \$11.49 | \$22.31 | \$0.00                       | \$70.02    |
| 3    | 70      | \$42.26              | \$11.49 | \$22.31 | \$0.00                       | \$76.06    |
| 4    | 80      | \$48.30              | \$11.49 | \$22.31 | \$0.00                       | \$82.10    |
| 5    | 90      | \$54.33              | \$11.49 | \$22.31 | \$0.00                       | \$88.13    |

**Effective Date - 08/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$31.21              | \$11.49 | \$22.31 | \$0.00                       | \$65.01    |
| 2    | 60      | \$37.45              | \$11.49 | \$22.31 | \$0.00                       | \$71.25    |
| 3    | 70      | \$43.69              | \$11.49 | \$22.31 | \$0.00                       | \$77.49    |
| 4    | 80      | \$49.94              | \$11.49 | \$22.31 | \$0.00                       | \$83.74    |
| 5    | 90      | \$56.18              | \$11.49 | \$22.31 | \$0.00                       | \$89.98    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:5**

|  |            |         |         |         |        |         |
|--|------------|---------|---------|---------|--------|---------|
| MECH. SWEEPER OPERATOR (ON CONST. SITES) | 12/01/2022 | \$53.05 | \$14.25 | \$16.05 | \$0.00 | \$83.35 |
| OPERATING ENGINEERS LOCAL 4              | 06/01/2023 | \$54.29 | \$14.25 | \$16.05 | \$0.00 | \$84.59 |
|  | 12/01/2023 | \$55.53 | \$14.25 | \$16.05 | \$0.00 | \$85.83 |
|  | 06/01/2024 | \$56.81 | \$14.25 | \$16.05 | \$0.00 | \$87.11 |
|  | 12/01/2024 | \$58.25 | \$14.25 | \$16.05 | \$0.00 | \$88.55 |
|  | 06/01/2025 | \$59.53 | \$14.25 | \$16.05 | \$0.00 | \$89.83 |
|  | 12/01/2025 | \$60.97 | \$14.25 | \$16.05 | \$0.00 | \$91.27 |
|  | 06/01/2026 | \$62.25 | \$14.25 | \$16.05 | \$0.00 | \$92.55 |
|  | 12/01/2026 | \$63.69 | \$14.25 | \$16.05 | \$0.00 | \$93.99 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                             |            |         |         |         |        |         |
|-----------------------------|------------|---------|---------|---------|--------|---------|
| MECHANICS MAINTENANCE       | 12/01/2022 | \$53.05 | \$14.25 | \$16.05 | \$0.00 | \$83.35 |
| OPERATING ENGINEERS LOCAL 4 | 06/01/2023 | \$54.29 | \$14.25 | \$16.05 | \$0.00 | \$84.59 |
|                             | 12/01/2023 | \$55.53 | \$14.25 | \$16.05 | \$0.00 | \$85.83 |
|                             | 06/01/2024 | \$56.81 | \$14.25 | \$16.05 | \$0.00 | \$87.11 |
|                             | 12/01/2024 | \$58.25 | \$14.25 | \$16.05 | \$0.00 | \$88.55 |
|                             | 06/01/2025 | \$59.53 | \$14.25 | \$16.05 | \$0.00 | \$89.83 |
|                             | 12/01/2025 | \$60.97 | \$14.25 | \$16.05 | \$0.00 | \$91.27 |
|                             | 06/01/2026 | \$62.25 | \$14.25 | \$16.05 | \$0.00 | \$92.55 |
|                             | 12/01/2026 | \$63.69 | \$14.25 | \$16.05 | \$0.00 | \$93.99 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|                                 |            |         |        |         |        |         |
|---------------------------------|------------|---------|--------|---------|--------|---------|
| MILLWRIGHT (Zone 2)             | 01/02/2023 | \$41.92 | \$8.58 | \$21.57 | \$0.00 | \$72.07 |
| MILLWRIGHTS LOCAL 1121 - Zone 2 |            |         |        |         |        |         |

| Classification  | Effective Date | Base Wage            | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|----------------------|---------|---------|------------------------------|------------|
| <b>Apprentice - MILLWRIGHT - Local 1121 Zone 2</b>  |                |                      |         |         |                              |            |
| <b>Effective Date - 01/02/2023</b>  |                |                      |         |         |                              |            |
| Step  | percent        | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
| 1   | 55             | \$23.06              | \$8.58  | \$5.72  | \$0.00                       | \$37.36    |
| 2   | 65             | \$27.25              | \$8.58  | \$17.93 | \$0.00                       | \$53.76    |
| 3   | 75             | \$31.44              | \$8.58  | \$18.98 | \$0.00                       | \$59.00    |
| 4   | 85             | \$35.63              | \$8.58  | \$20.01 | \$0.00                       | \$64.22    |
| <b>Notes:</b> Step 1&2 Appr. indentured after 1/6/2020 receive no pension,<br>but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)<br>Steps are 2,000 hours |                |                      |         |         |                              |            |
| <b>Apprentice to Journeyworker Ratio:1:4</b>  |                |                      |         |         |                              |            |
| <hr/>   |                |                      |         |         |                              |            |
| MORTAR MIXER  | 12/01/2022     | \$37.41              | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
| LABORERS - ZONE 2   | 06/01/2023     | \$38.31              | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21              | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"  |                |                      |         |         |                              |            |
| <hr/>   |                |                      |         |         |                              |            |
| OILER (OTHER THAN TRUCK CRANES,GRADALLS)  | 12/01/2022     | \$24.37              | \$14.25 | \$16.05 | \$0.00                       | \$54.67    |
| OPERATING ENGINEERS LOCAL 4   | 06/01/2023     | \$24.94              | \$14.25 | \$16.05 | \$0.00                       | \$55.24    |
|   | 12/01/2023     | \$25.51              | \$14.25 | \$16.05 | \$0.00                       | \$55.81    |
|   | 06/01/2024     | \$26.11              | \$14.25 | \$16.05 | \$0.00                       | \$56.41    |
|   | 12/01/2024     | \$26.77              | \$14.25 | \$16.05 | \$0.00                       | \$57.07    |
|   | 06/01/2025     | \$27.37              | \$14.25 | \$16.05 | \$0.00                       | \$57.67    |
|   | 12/01/2025     | \$28.03              | \$14.25 | \$16.05 | \$0.00                       | \$58.33    |
|   | 06/01/2026     | \$28.62              | \$14.25 | \$16.05 | \$0.00                       | \$58.92    |
|   | 12/01/2026     | \$29.29              | \$14.25 | \$16.05 | \$0.00                       | \$59.59    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |                      |         |         |                              |            |
| <hr/>   |                |                      |         |         |                              |            |
| OILER (TRUCK CRANES, GRADALLS)  | 12/01/2022     | \$29.57              | \$14.25 | \$16.05 | \$0.00                       | \$59.87    |
| OPERATING ENGINEERS LOCAL 4   | 06/01/2023     | \$30.27              | \$14.25 | \$16.05 | \$0.00                       | \$60.57    |
|   | 12/01/2023     | \$30.96              | \$14.25 | \$16.05 | \$0.00                       | \$61.26    |
|   | 06/01/2024     | \$31.68              | \$14.25 | \$16.05 | \$0.00                       | \$61.98    |
|   | 12/01/2024     | \$32.48              | \$14.25 | \$16.05 | \$0.00                       | \$62.78    |
|   | 06/01/2025     | \$33.20              | \$14.25 | \$16.05 | \$0.00                       | \$63.50    |
|   | 12/01/2025     | \$34.00              | \$14.25 | \$16.05 | \$0.00                       | \$64.30    |
|   | 06/01/2026     | \$34.72              | \$14.25 | \$16.05 | \$0.00                       | \$65.02    |
|   | 12/01/2026     | \$35.52              | \$14.25 | \$16.05 | \$0.00                       | \$65.82    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |                      |         |         |                              |            |
| <hr/>   |                |                      |         |         |                              |            |
| OTHER POWER DRIVEN EQUIPMENT - CLASS II   | 12/01/2022     | \$53.05              | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
| OPERATING ENGINEERS LOCAL 4   | 06/01/2023     | \$54.29              | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|   | 12/01/2023     | \$55.53              | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|   | 06/01/2024     | \$56.81              | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|   | 12/01/2024     | \$58.25              | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|   | 06/01/2025     | \$59.53              | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|   | 12/01/2025     | \$60.97              | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|   | 06/01/2026     | \$62.25              | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|   | 12/01/2026     | \$63.69              | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |



| Classification   | Effective Date | Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|--|----------------|-----------|--------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- OPERATING ENGINEERS" |                |           |        |         |                           |            |
| PAINTER (BRIDGES/TANKS)                                    | 01/01/2023     | \$56.06   | \$8.65 | \$23.05 | \$0.00                    | \$87.76    |
| PAINTERS LOCAL 35 - ZONE 2                                 | 07/01/2023     | \$57.26   | \$8.65 | \$23.05 | \$0.00                    | \$88.96    |
|  | 01/01/2024     | \$58.46   | \$8.65 | \$23.05 | \$0.00                    | \$90.16    |
|  | 07/01/2024     | \$59.66   | \$8.65 | \$23.05 | \$0.00                    | \$91.36    |
|  | 01/01/2025     | \$60.86   | \$8.65 | \$23.05 | \$0.00                    | \$92.56    |

**Apprentice - PAINTER Local 35 - BRIDGES/TANKS**

**Effective Date - 01/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1    | 50      | \$28.03              | \$8.65 | \$0.00  | \$0.00                    | \$36.68    |
| 2    | 55      | \$30.83              | \$8.65 | \$6.27  | \$0.00                    | \$45.75    |
| 3    | 60      | \$33.64              | \$8.65 | \$6.84  | \$0.00                    | \$49.13    |
| 4    | 65      | \$36.44              | \$8.65 | \$7.41  | \$0.00                    | \$52.50    |
| 5    | 70      | \$39.24              | \$8.65 | \$19.63 | \$0.00                    | \$67.52    |
| 6    | 75      | \$42.05              | \$8.65 | \$20.20 | \$0.00                    | \$70.90    |
| 7    | 80      | \$44.85              | \$8.65 | \$20.77 | \$0.00                    | \$74.27    |
| 8    | 90      | \$50.45              | \$8.65 | \$21.91 | \$0.00                    | \$81.01    |

**Effective Date - 07/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1    | 50      | \$28.63              | \$8.65 | \$0.00  | \$0.00                    | \$37.28    |
| 2    | 55      | \$31.49              | \$8.65 | \$6.27  | \$0.00                    | \$46.41    |
| 3    | 60      | \$34.36              | \$8.65 | \$6.84  | \$0.00                    | \$49.85    |
| 4    | 65      | \$37.22              | \$8.65 | \$7.41  | \$0.00                    | \$53.28    |
| 5    | 70      | \$40.08              | \$8.65 | \$19.63 | \$0.00                    | \$68.36    |
| 6    | 75      | \$42.95              | \$8.65 | \$20.20 | \$0.00                    | \$71.80    |
| 7    | 80      | \$45.81              | \$8.65 | \$20.77 | \$0.00                    | \$75.23    |
| 8    | 90      | \$51.53              | \$8.65 | \$21.91 | \$0.00                    | \$82.09    |

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

|   |            |         |        |         |        |         |
|---|------------|---------|--------|---------|--------|---------|
| PAINTER (SPRAY OR SANDBLAST, NEW) *   | 01/01/2023 | \$46.96 | \$8.65 | \$23.05 | \$0.00 | \$78.66 |
| * If 30% or more of surfaces to be painted are new construction,<br>NEW paint rate shall be used. | 07/01/2023 | \$48.16 | \$8.65 | \$23.05 | \$0.00 | \$79.86 |
| PAINTERS LOCAL 35 - ZONE 2  | 01/01/2024 | \$49.36 | \$8.65 | \$23.05 | \$0.00 | \$81.06 |
|   | 07/01/2024 | \$50.56 | \$8.65 | \$23.05 | \$0.00 | \$82.26 |
|   | 01/01/2025 | \$51.76 | \$8.65 | \$23.05 | \$0.00 | \$83.46 |

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New

Effective Date - 01/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$23.48              | \$8.65 | \$0.00  | \$0.00                       | \$32.13    |
| 2    | 55      | \$25.83              | \$8.65 | \$6.27  | \$0.00                       | \$40.75    |
| 3    | 60      | \$28.18              | \$8.65 | \$6.84  | \$0.00                       | \$43.67    |
| 4    | 65      | \$30.52              | \$8.65 | \$7.41  | \$0.00                       | \$46.58    |
| 5    | 70      | \$32.87              | \$8.65 | \$19.63 | \$0.00                       | \$61.15    |
| 6    | 75      | \$35.22              | \$8.65 | \$20.20 | \$0.00                       | \$64.07    |
| 7    | 80      | \$37.57              | \$8.65 | \$20.77 | \$0.00                       | \$66.99    |
| 8    | 90      | \$42.26              | \$8.65 | \$21.91 | \$0.00                       | \$72.82    |

Effective Date - 07/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$24.08              | \$8.65 | \$0.00  | \$0.00                       | \$32.73    |
| 2    | 55      | \$26.49              | \$8.65 | \$6.27  | \$0.00                       | \$41.41    |
| 3    | 60      | \$28.90              | \$8.65 | \$6.84  | \$0.00                       | \$44.39    |
| 4    | 65      | \$31.30              | \$8.65 | \$7.41  | \$0.00                       | \$47.36    |
| 5    | 70      | \$33.71              | \$8.65 | \$19.63 | \$0.00                       | \$61.99    |
| 6    | 75      | \$36.12              | \$8.65 | \$20.20 | \$0.00                       | \$64.97    |
| 7    | 80      | \$38.53              | \$8.65 | \$20.77 | \$0.00                       | \$67.95    |
| 8    | 90      | \$43.34              | \$8.65 | \$21.91 | \$0.00                       | \$73.90    |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

|                                       |            |         |        |         |        |         |
|---------------------------------------|------------|---------|--------|---------|--------|---------|
| PAINTER (SPRAY OR SANDBLAST, REPAINT) | 01/01/2023 | \$45.02 | \$8.65 | \$23.05 | \$0.00 | \$76.72 |
| PAINTERS LOCAL 35 - ZONE 2            | 07/01/2023 | \$46.22 | \$8.65 | \$23.05 | \$0.00 | \$77.92 |
|                                       | 01/01/2024 | \$47.42 | \$8.65 | \$23.05 | \$0.00 | \$79.12 |
|                                       | 07/01/2024 | \$48.62 | \$8.65 | \$23.05 | \$0.00 | \$80.32 |
|                                       | 01/01/2025 | \$49.82 | \$8.65 | \$23.05 | \$0.00 | \$81.52 |

**Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint****Effective Date - 01/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$22.51              | \$8.65 | \$0.00  | \$0.00                       | \$31.16    |
| 2    | 55      | \$24.76              | \$8.65 | \$6.27  | \$0.00                       | \$39.68    |
| 3    | 60      | \$27.01              | \$8.65 | \$6.84  | \$0.00                       | \$42.50    |
| 4    | 65      | \$29.26              | \$8.65 | \$7.41  | \$0.00                       | \$45.32    |
| 5    | 70      | \$31.51              | \$8.65 | \$19.63 | \$0.00                       | \$59.79    |
| 6    | 75      | \$33.77              | \$8.65 | \$20.20 | \$0.00                       | \$62.62    |
| 7    | 80      | \$36.02              | \$8.65 | \$20.77 | \$0.00                       | \$65.44    |
| 8    | 90      | \$40.52              | \$8.65 | \$21.91 | \$0.00                       | \$71.08    |

**Effective Date - 07/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$23.11              | \$8.65 | \$0.00  | \$0.00                       | \$31.76    |
| 2    | 55      | \$25.42              | \$8.65 | \$6.27  | \$0.00                       | \$40.34    |
| 3    | 60      | \$27.73              | \$8.65 | \$6.84  | \$0.00                       | \$43.22    |
| 4    | 65      | \$30.04              | \$8.65 | \$19.06 | \$0.00                       | \$57.75    |
| 5    | 70      | \$32.35              | \$8.65 | \$19.63 | \$0.00                       | \$60.63    |
| 6    | 75      | \$34.67              | \$8.65 | \$20.20 | \$0.00                       | \$63.52    |
| 7    | 80      | \$36.98              | \$8.65 | \$20.77 | \$0.00                       | \$66.40    |
| 8    | 90      | \$41.60              | \$8.65 | \$21.91 | \$0.00                       | \$72.16    |

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

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*

|            |         |        |         |        |         |
|------------|---------|--------|---------|--------|---------|
| 01/01/2023 | \$45.56 | \$8.65 | \$23.05 | \$0.00 | \$77.26 |
| 07/01/2023 | \$46.76 | \$8.65 | \$23.05 | \$0.00 | \$78.46 |
| 01/01/2024 | \$47.96 | \$8.65 | \$23.05 | \$0.00 | \$79.66 |
| 07/01/2024 | \$49.16 | \$8.65 | \$23.05 | \$0.00 | \$80.86 |
| 01/01/2025 | \$50.36 | \$8.65 | \$23.05 | \$0.00 | \$82.06 |

Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$22.78              | \$8.65 | \$0.00  | \$0.00                       | \$31.43    |
| 2    | 55      | \$25.06              | \$8.65 | \$6.27  | \$0.00                       | \$39.98    |
| 3    | 60      | \$27.34              | \$8.65 | \$6.84  | \$0.00                       | \$42.83    |
| 4    | 65      | \$29.61              | \$8.65 | \$7.41  | \$0.00                       | \$45.67    |
| 5    | 70      | \$31.89              | \$8.65 | \$19.63 | \$0.00                       | \$60.17    |
| 6    | 75      | \$34.17              | \$8.65 | \$20.20 | \$0.00                       | \$63.02    |
| 7    | 80      | \$36.45              | \$8.65 | \$20.77 | \$0.00                       | \$65.87    |
| 8    | 90      | \$41.00              | \$8.65 | \$21.91 | \$0.00                       | \$71.56    |

Effective Date - 07/01/2023

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$23.38              | \$8.65 | \$0.00  | \$0.00                       | \$32.03    |
| 2    | 55      | \$25.72              | \$8.65 | \$6.27  | \$0.00                       | \$40.64    |
| 3    | 60      | \$28.06              | \$8.65 | \$6.84  | \$0.00                       | \$43.55    |
| 4    | 65      | \$30.39              | \$8.65 | \$7.41  | \$0.00                       | \$46.45    |
| 5    | 70      | \$32.73              | \$8.65 | \$19.63 | \$0.00                       | \$61.01    |
| 6    | 75      | \$35.07              | \$8.65 | \$20.20 | \$0.00                       | \$63.92    |
| 7    | 80      | \$37.41              | \$8.65 | \$20.77 | \$0.00                       | \$66.83    |
| 8    | 90      | \$42.08              | \$8.65 | \$21.91 | \$0.00                       | \$72.64    |

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

|                                  |            |         |        |         |        |         |
|----------------------------------|------------|---------|--------|---------|--------|---------|
| PAINTER / TAPER (BRUSH, REPAINT) | 01/01/2023 | \$43.62 | \$8.65 | \$23.05 | \$0.00 | \$75.32 |
| PAINTERS LOCAL 35 - ZONE 2       | 07/01/2023 | \$44.82 | \$8.65 | \$23.05 | \$0.00 | \$76.52 |
|                                  | 01/01/2024 | \$46.02 | \$8.65 | \$23.05 | \$0.00 | \$77.72 |
|                                  | 07/01/2024 | \$47.22 | \$8.65 | \$23.05 | \$0.00 | \$78.92 |
|                                  | 01/01/2025 | \$48.42 | \$8.65 | \$23.05 | \$0.00 | \$80.12 |

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

**Effective Date - 01/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1    | 50      | \$21.81              | \$8.65 | \$0.00  | \$0.00                    | \$30.46    |
| 2    | 55      | \$23.99              | \$8.65 | \$6.27  | \$0.00                    | \$38.91    |
| 3    | 60      | \$26.17              | \$8.65 | \$6.84  | \$0.00                    | \$41.66    |
| 4    | 65      | \$28.35              | \$8.65 | \$7.41  | \$0.00                    | \$44.41    |
| 5    | 70      | \$30.53              | \$8.65 | \$19.63 | \$0.00                    | \$58.81    |
| 6    | 75      | \$32.72              | \$8.65 | \$20.20 | \$0.00                    | \$61.57    |
| 7    | 80      | \$34.90              | \$8.65 | \$20.77 | \$0.00                    | \$64.32    |
| 8    | 90      | \$39.26              | \$8.65 | \$21.91 | \$0.00                    | \$69.82    |

**Effective Date - 07/01/2023**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|---------------------------|------------|
| 1    | 50      | \$22.41              | \$8.65 | \$0.00  | \$0.00                    | \$31.06    |
| 2    | 55      | \$24.65              | \$8.65 | \$6.27  | \$0.00                    | \$39.57    |
| 3    | 60      | \$26.89              | \$8.65 | \$6.84  | \$0.00                    | \$42.38    |
| 4    | 65      | \$29.13              | \$8.65 | \$7.41  | \$0.00                    | \$45.19    |
| 5    | 70      | \$31.37              | \$8.65 | \$19.63 | \$0.00                    | \$59.65    |
| 6    | 75      | \$33.62              | \$8.65 | \$20.20 | \$0.00                    | \$62.47    |
| 7    | 80      | \$35.86              | \$8.65 | \$20.77 | \$0.00                    | \$65.28    |
| 8    | 90      | \$40.34              | \$8.65 | \$21.91 | \$0.00                    | \$70.90    |

**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:1:1**

|   |            |         |         |         |        |         |
|---|------------|---------|---------|---------|--------|---------|
| PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)                          | 12/01/2022 | \$36.56 | \$9.35  | \$16.89 | \$0.00 | \$62.80 |
| LABORERS - ZONE 2 (HEAVY & HIGHWAY)                               | 06/01/2023 | \$37.46 | \$9.35  | \$16.89 | \$0.00 | \$63.70 |
|   | 12/01/2023 | \$38.36 | \$9.35  | \$16.89 | \$0.00 | \$64.60 |
|   | 06/01/2024 | \$39.69 | \$9.35  | \$16.89 | \$0.00 | \$65.93 |
|   | 12/01/2024 | \$41.02 | \$9.35  | \$16.89 | \$0.00 | \$67.26 |
|   | 06/01/2025 | \$42.41 | \$9.35  | \$16.89 | \$0.00 | \$68.65 |
|   | 12/01/2025 | \$43.79 | \$9.35  | \$16.89 | \$0.00 | \$70.03 |
|   | 06/01/2026 | \$45.23 | \$9.35  | \$16.89 | \$0.00 | \$71.47 |
|   | 12/01/2026 | \$46.67 | \$9.35  | \$16.89 | \$0.00 | \$72.91 |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway) |            |         |         |         |        |         |
| PANEL & PICKUP TRUCKS DRIVER                                      | 12/01/2021 | \$35.78 | \$13.41 | \$16.01 | \$0.00 | \$65.20 |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B                             |            |         |         |         |        |         |
| PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)                 | 08/01/2020 | \$49.07 | \$9.40  | \$23.12 | \$0.00 | \$81.59 |
| PILE DRIVER LOCAL 56 (ZONE 1)                                     |            |         |         |         |        |         |
| For apprentice rates see "Apprentice- PILE DRIVER"                |            |         |         |         |        |         |
| PILE DRIVER   | 08/01/2020 | \$49.07 | \$9.40  | \$23.12 | \$0.00 | \$81.59 |
| PILE DRIVER LOCAL 56 (ZONE 1)                                     |            |         |         |         |        |         |

**Apprentice - PILE DRIVER - Local 56 Zone 1****Effective Date - 08/01/2020**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 50      | \$24.54              | \$9.40 | \$23.12 | \$0.00                       | \$57.06    |
| 2    | 60      | \$29.44              | \$9.40 | \$23.12 | \$0.00                       | \$61.96    |
| 3    | 70      | \$34.35              | \$9.40 | \$23.12 | \$0.00                       | \$66.87    |
| 4    | 75      | \$36.80              | \$9.40 | \$23.12 | \$0.00                       | \$69.32    |
| 5    | 80      | \$39.26              | \$9.40 | \$23.12 | \$0.00                       | \$71.78    |
| 6    | 80      | \$39.26              | \$9.40 | \$23.12 | \$0.00                       | \$71.78    |
| 7    | 90      | \$44.16              | \$9.40 | \$23.12 | \$0.00                       | \$76.68    |
| 8    | 90      | \$44.16              | \$9.40 | \$23.12 | \$0.00                       | \$76.68    |

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
 Step 1&2 \$34.01/ 3&4 \$41.46/ 5&6 \$62.80/ 7&8 \$69.25

**Apprentice to Journeyworker Ratio:1:5****PIPEFITTER & STEAMFITTER***PIPEFITTERS LOCAL 537*

|            |         |         |         |        |          |
|------------|---------|---------|---------|--------|----------|
| 03/01/2023 | \$63.43 | \$12.25 | \$20.80 | \$0.00 | \$96.48  |
| 09/01/2023 | \$65.18 | \$12.25 | \$20.80 | \$0.00 | \$98.23  |
| 03/01/2024 | \$66.98 | \$12.25 | \$20.80 | \$0.00 | \$100.03 |
| 09/01/2024 | \$68.78 | \$12.25 | \$20.80 | \$0.00 | \$101.83 |
| 03/01/2025 | \$70.58 | \$12.25 | \$20.80 | \$0.00 | \$103.63 |

**Apprentice - PIPEFITTER - Local 537****Effective Date - 03/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 40      | \$25.37              | \$12.25 | \$8.55  | \$0.00                       | \$46.17    |
| 2    | 45      | \$28.54              | \$12.25 | \$20.80 | \$0.00                       | \$61.59    |
| 3    | 60      | \$38.06              | \$12.25 | \$20.80 | \$0.00                       | \$71.11    |
| 4    | 70      | \$44.40              | \$12.25 | \$20.80 | \$0.00                       | \$77.45    |
| 5    | 80      | \$50.74              | \$12.25 | \$20.80 | \$0.00                       | \$83.79    |

**Effective Date - 09/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 40      | \$26.07              | \$12.25 | \$8.55  | \$0.00                       | \$46.87    |
| 2    | 45      | \$29.33              | \$12.25 | \$20.80 | \$0.00                       | \$62.38    |
| 3    | 60      | \$39.11              | \$12.25 | \$20.80 | \$0.00                       | \$72.16    |
| 4    | 70      | \$45.63              | \$12.25 | \$20.80 | \$0.00                       | \$78.68    |
| 5    | 80      | \$52.14              | \$12.25 | \$20.80 | \$0.00                       | \$85.19    |

**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<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| PIPELAYER<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|   | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"                                |                |           |         |         |                              |            |
| PIPELAYER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|   | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|   | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|   | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|   | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|   | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|   | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|   | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|   | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"            |                |           |         |         |                              |            |
| PLUMBERS & GASFITTERS<br><i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>            | 02/26/2023     | \$65.19   | \$14.07 | \$18.36 | \$0.00                       | \$97.62    |
|   | 09/03/2023     | \$66.94   | \$14.07 | \$18.36 | \$0.00                       | \$99.37    |
|   | 03/03/2024     | \$68.74   | \$14.07 | \$18.36 | \$0.00                       | \$101.17   |
|   | 09/01/2024     | \$70.54   | \$14.07 | \$18.36 | \$0.00                       | \$102.97   |
|   | 03/02/2025     | \$72.34   | \$14.07 | \$18.36 | \$0.00                       | \$104.77   |

**Apprentice - PLUMBER/GASFITTER - Local 12**

**Effective Date - 02/26/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 35      | \$22.82              | \$14.07 | \$6.63  | \$0.00                       | \$43.52    |
| 2    | 40      | \$26.08              | \$14.07 | \$7.52  | \$0.00                       | \$47.67    |
| 3    | 55      | \$35.85              | \$14.07 | \$10.24 | \$0.00                       | \$60.16    |
| 4    | 65      | \$42.37              | \$14.07 | \$12.04 | \$0.00                       | \$68.48    |
| 5    | 75      | \$48.89              | \$14.07 | \$13.85 | \$0.00                       | \$76.81    |

**Effective Date - 09/03/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 35      | \$23.43              | \$14.07 | \$6.63  | \$0.00                       | \$44.13    |
| 2    | 40      | \$26.78              | \$14.07 | \$7.52  | \$0.00                       | \$48.37    |
| 3    | 55      | \$36.82              | \$14.07 | \$10.24 | \$0.00                       | \$61.13    |
| 4    | 65      | \$43.51              | \$14.07 | \$12.04 | \$0.00                       | \$69.62    |
| 5    | 75      | \$50.21              | \$14.07 | \$13.85 | \$0.00                       | \$78.13    |

**Notes:**

\*\* 1:2; 2:6; 3:10; 4:14; 5:19/Steps are 1 yr  
Step4 with lic\$69.00, Step5 with lic\$76.87

**Apprentice to Journeyworker Ratio:\*\***

|  |            |         |         |         |        |          |
|--|------------|---------|---------|---------|--------|----------|
| PNEUMATIC CONTROLS (TEMP.)<br><i>PIPEFITTERS LOCAL 537</i> | 03/01/2023 | \$63.43 | \$12.00 | \$20.80 | \$0.00 | \$96.23  |
|  | 09/01/2023 | \$65.18 | \$12.00 | \$20.80 | \$0.00 | \$97.98  |
|  | 03/01/2024 | \$66.98 | \$12.00 | \$20.80 | \$0.00 | \$99.78  |
|  | 09/01/2024 | \$68.78 | \$12.00 | \$20.80 | \$0.00 | \$101.58 |
|  | 03/01/2025 | \$70.58 | \$12.00 | \$20.80 | \$0.00 | \$103.38 |

| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"                         |                |           |         |         |                              |            |
| PNEUMATIC DRILL/TOOL OPERATOR<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|   | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |                              |            |
| PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|   | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|   | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|   | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|   | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|   | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|   | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|   | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|   | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                                |                |           |         |         |                              |            |
| POWDERMAN & BLASTER<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$38.16   | \$9.10  | \$16.64 | \$0.00                       | \$63.90    |
|   | 06/01/2023     | \$39.06   | \$9.10  | \$16.64 | \$0.00                       | \$64.80    |
|   | 12/01/2023     | \$39.96   | \$9.10  | \$16.64 | \$0.00                       | \$65.70    |
| For apprentice rates see "Apprentice- LABORER"  |                |           |         |         |                              |            |
| POWDERMAN & BLASTER (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>           | 12/01/2022     | \$37.56   | \$9.35  | \$16.89 | \$0.00                       | \$63.80    |
|   | 06/01/2023     | \$38.46   | \$9.35  | \$16.89 | \$0.00                       | \$64.70    |
|   | 12/01/2023     | \$39.36   | \$9.35  | \$16.89 | \$0.00                       | \$65.60    |
|   | 06/01/2024     | \$40.69   | \$9.35  | \$16.89 | \$0.00                       | \$66.93    |
|   | 12/01/2024     | \$42.02   | \$9.35  | \$16.89 | \$0.00                       | \$68.26    |
|   | 06/01/2025     | \$43.41   | \$9.35  | \$16.89 | \$0.00                       | \$69.65    |
|   | 12/01/2025     | \$44.79   | \$9.35  | \$16.89 | \$0.00                       | \$71.03    |
|   | 06/01/2026     | \$46.23   | \$9.35  | \$16.89 | \$0.00                       | \$72.47    |
|   | 12/01/2026     | \$47.67   | \$9.35  | \$16.89 | \$0.00                       | \$73.91    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                                |                |           |         |         |                              |            |
| POWER SHOVEL/DERRICK/TRENCHING MACHINE<br><i>OPERATING ENGINEERS LOCAL 4</i>                      | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|   | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|   | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|   | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|   | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|   | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|   | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|   | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|   | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |           |         |         |                              |            |



| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| PUMP OPERATOR (CONCRETE)<br><i>OPERATING ENGINEERS LOCAL 4</i>              | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|   | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|   | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|   | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|   | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|   | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|   | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|   | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|   | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                  |                |           |         |         |                              |            |
| PUMP OPERATOR (DEWATERING, OTHER)<br><i>OPERATING ENGINEERS LOCAL 4</i>     | 12/01/2022     | \$35.08   | \$14.25 | \$16.05 | \$0.00                       | \$65.38    |
|   | 06/01/2023     | \$35.90   | \$14.25 | \$16.05 | \$0.00                       | \$66.20    |
|   | 12/01/2023     | \$36.72   | \$14.25 | \$16.05 | \$0.00                       | \$67.02    |
|   | 06/01/2024     | \$37.57   | \$14.25 | \$16.05 | \$0.00                       | \$67.87    |
|   | 12/01/2024     | \$38.52   | \$14.25 | \$16.05 | \$0.00                       | \$68.82    |
|   | 06/01/2025     | \$39.37   | \$14.25 | \$16.05 | \$0.00                       | \$69.67    |
|   | 12/01/2025     | \$40.32   | \$14.25 | \$16.05 | \$0.00                       | \$70.62    |
|   | 06/01/2026     | \$41.18   | \$14.25 | \$16.05 | \$0.00                       | \$71.48    |
|   | 12/01/2026     | \$42.13   | \$14.25 | \$16.05 | \$0.00                       | \$72.43    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                  |                |           |         |         |                              |            |
| READY-MIX CONCRETE DRIVER<br><i>TEAMSTERS 170 - Dauphinais (Bellingham)</i> | 01/01/2023     | \$26.40   | \$10.26 | \$4.75  | \$0.00                       | \$41.41    |
|   | 12/01/2023     | \$27.00   | \$10.76 | \$5.45  | \$0.00                       | \$43.21    |
|   | 01/01/2024     | \$27.00   | \$10.76 | \$5.45  | \$0.00                       | \$43.21    |
|   | 12/01/2024     | \$27.60   | \$11.26 | \$6.15  | \$0.00                       | \$45.01    |
|   | 01/01/2025     | \$27.60   | \$11.26 | \$6.15  | \$0.00                       | \$45.01    |
| RECLAIMERS<br><i>OPERATING ENGINEERS LOCAL 4</i>                            | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|   | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|   | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|   | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|   | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|   | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|   | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|   | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|   | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                  |                |           |         |         |                              |            |
| RIDE-ON MOTORIZED BUGGY OPERATOR<br><i>LABORERS - ZONE 2</i>                | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|   | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|   | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"                              |                |           |         |         |                              |            |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| ROLLER/SPREADER/MULCHING MACHINE<br><i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|  | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|  | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|  | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|  | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|  | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|  | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|  | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|  | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

|  |            |         |         |         |        |         |
|--|------------|---------|---------|---------|--------|---------|
| ROOFER (Inc.Roofers Waterproofing &Roofers Damproofg)<br><i>ROOFERS LOCAL 33</i> | 02/01/2023 | \$48.53 | \$12.78 | \$20.20 | \$0.00 | \$81.51 |
|  | 08/01/2023 | \$50.03 | \$12.78 | \$20.20 | \$0.00 | \$83.01 |
|  | 02/01/2024 | \$51.28 | \$12.78 | \$20.20 | \$0.00 | \$84.26 |
|  | 08/01/2024 | \$52.78 | \$12.78 | \$20.20 | \$0.00 | \$85.76 |
|  | 02/01/2025 | \$54.03 | \$12.78 | \$20.20 | \$0.00 | \$87.01 |
|  | 08/01/2025 | \$55.53 | \$12.78 | \$20.20 | \$0.00 | \$88.51 |
|  | 02/01/2026 | \$56.78 | \$12.78 | \$20.20 | \$0.00 | \$89.76 |

#### Apprentice - ROOFER - Local 33

Effective Date - 02/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$24.27              | \$12.78 | \$5.59  | \$0.00                       | \$42.64    |
| 2    | 60      | \$29.12              | \$12.78 | \$20.20 | \$0.00                       | \$62.10    |
| 3    | 65      | \$31.54              | \$12.78 | \$20.20 | \$0.00                       | \$64.52    |
| 4    | 75      | \$36.40              | \$12.78 | \$20.20 | \$0.00                       | \$69.38    |
| 5    | 85      | \$41.25              | \$12.78 | \$20.20 | \$0.00                       | \$74.23    |

Effective Date - 08/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$25.02              | \$12.78 | \$5.59  | \$0.00                       | \$43.39    |
| 2    | 60      | \$30.02              | \$12.78 | \$20.20 | \$0.00                       | \$63.00    |
| 3    | 65      | \$32.52              | \$12.78 | \$20.20 | \$0.00                       | \$65.50    |
| 4    | 75      | \$37.52              | \$12.78 | \$20.20 | \$0.00                       | \$70.50    |
| 5    | 85      | \$42.53              | \$12.78 | \$20.20 | \$0.00                       | \$75.51    |

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<br><i>ROOFERS LOCAL 33</i> | 02/01/2023 | \$48.78 | \$12.78 | \$20.20 | \$0.00 | \$81.76 |
|   | 08/01/2023 | \$50.28 | \$12.78 | \$20.20 | \$0.00 | \$83.26 |
|   | 02/01/2024 | \$51.53 | \$12.78 | \$20.20 | \$0.00 | \$84.51 |
|   | 08/01/2024 | \$53.03 | \$12.78 | \$20.20 | \$0.00 | \$86.01 |
|   | 02/01/2025 | \$54.28 | \$12.78 | \$20.20 | \$0.00 | \$87.26 |
|   | 08/01/2025 | \$55.78 | \$12.78 | \$20.20 | \$0.00 | \$88.76 |
|   | 02/01/2026 | \$57.03 | \$12.78 | \$20.20 | \$0.00 | \$90.01 |

| Classification                                | Effective Date | Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|---------------------------|------------|
| For apprentice rates see "Apprentice- ROOFER" |                |           |         |         |                           |            |
| SHEETMETAL WORKER                             | 02/01/2023     | \$55.31   | \$14.11 | \$26.64 | \$2.83                    | \$98.89    |
| SHEETMETAL WORKERS LOCAL 17 - A               | 08/01/2023     | \$57.01   | \$14.11 | \$26.64 | \$2.83                    | \$100.59   |
|   | 02/01/2024     | \$58.71   | \$14.11 | \$26.64 | \$2.83                    | \$102.29   |
|   | 08/01/2024     | \$60.46   | \$14.11 | \$26.64 | \$2.83                    | \$104.04   |
|   | 02/01/2025     | \$62.21   | \$14.11 | \$26.64 | \$2.83                    | \$105.79   |
|   | 08/01/2025     | \$64.06   | \$14.11 | \$26.64 | \$2.83                    | \$107.64   |
|   | 02/01/2026     | \$66.01   | \$14.11 | \$26.64 | \$2.83                    | \$109.59   |

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

**Effective Date - 02/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 42      | \$23.23              | \$14.11 | \$6.13  | \$0.00                    | \$43.47    |
| 2    | 42      | \$23.23              | \$14.11 | \$6.13  | \$0.00                    | \$43.47    |
| 3    | 47      | \$26.00              | \$14.11 | \$11.90 | \$1.54                    | \$53.55    |
| 4    | 47      | \$26.00              | \$14.11 | \$11.90 | \$1.54                    | \$53.55    |
| 5    | 52      | \$28.76              | \$14.11 | \$12.88 | \$1.65                    | \$57.40    |
| 6    | 52      | \$28.76              | \$14.11 | \$13.13 | \$1.65                    | \$57.65    |
| 7    | 60      | \$33.19              | \$14.11 | \$14.54 | \$1.83                    | \$63.67    |
| 8    | 65      | \$35.95              | \$14.11 | \$15.52 | \$1.94                    | \$67.52    |
| 9    | 75      | \$41.48              | \$14.11 | \$17.48 | \$2.16                    | \$75.23    |
| 10   | 85      | \$47.01              | \$14.11 | \$18.94 | \$2.36                    | \$82.42    |

**Effective Date - 08/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|---------------------------|------------|
| 1    | 42      | \$23.94              | \$14.11 | \$6.13  | \$0.00                    | \$44.18    |
| 2    | 42      | \$23.94              | \$14.11 | \$6.13  | \$0.00                    | \$44.18    |
| 3    | 47      | \$26.79              | \$14.11 | \$11.90 | \$1.58                    | \$54.38    |
| 4    | 47      | \$26.79              | \$14.11 | \$11.90 | \$1.58                    | \$54.38    |
| 5    | 52      | \$29.65              | \$14.11 | \$12.88 | \$1.70                    | \$58.34    |
| 6    | 52      | \$29.65              | \$14.11 | \$13.13 | \$1.70                    | \$58.59    |
| 7    | 60      | \$34.21              | \$14.11 | \$14.54 | \$1.89                    | \$64.75    |
| 8    | 65      | \$37.06              | \$14.11 | \$15.52 | \$2.00                    | \$68.69    |
| 9    | 75      | \$42.76              | \$14.11 | \$17.48 | \$2.23                    | \$76.58    |
| 10   | 85      | \$48.46              | \$14.11 | \$18.94 | \$2.45                    | \$83.96    |

**Notes:**

Steps are 6 mos.

**Apprentice to Journeyworker Ratio:1:4**

|  |            |         |         |         |        |         |
|--|------------|---------|---------|---------|--------|---------|
| SPECIALIZED EARTH MOVING EQUIP < 35 TONS | 12/01/2021 | \$36.24 | \$13.41 | \$16.01 | \$0.00 | \$65.66 |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B    |            |         |         |         |        |         |
| SPECIALIZED EARTH MOVING EQUIP > 35 TONS | 12/01/2021 | \$36.53 | \$13.41 | \$16.01 | \$0.00 | \$65.95 |
| TEAMSTERS JOINT COUNCIL NO. 10 ZONE B    |            |         |         |         |        |         |

| Classification                                   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| SPRINKLER FITTER                                 | 03/01/2023     | \$66.20   | \$10.90 | \$23.20 | \$0.00                       | \$100.30   |
| SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1 | 10/01/2023     | \$67.95   | \$10.90 | \$23.20 | \$0.00                       | \$102.05   |
|  | 03/01/2024     | \$69.75   | \$10.90 | \$23.20 | \$0.00                       | \$103.85   |
|  | 10/01/2024     | \$71.55   | \$10.90 | \$23.20 | \$0.00                       | \$105.65   |
|  | 03/01/2025     | \$73.35   | \$10.90 | \$23.20 | \$0.00                       | \$107.45   |

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

**Effective Date -** 03/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 35      | \$23.17              | \$10.90 | \$9.70  | \$0.00                       | \$43.77    |
| 2    | 40      | \$26.48              | \$10.90 | \$9.70  | \$0.00                       | \$47.08    |
| 3    | 45      | \$29.79              | \$10.90 | \$9.70  | \$0.00                       | \$50.39    |
| 4    | 50      | \$33.10              | \$10.90 | \$9.70  | \$0.00                       | \$53.70    |
| 5    | 55      | \$36.41              | \$10.90 | \$9.70  | \$0.00                       | \$57.01    |
| 6    | 60      | \$39.72              | \$10.90 | \$11.20 | \$0.00                       | \$61.82    |
| 7    | 65      | \$43.03              | \$10.90 | \$11.20 | \$0.00                       | \$65.13    |
| 8    | 70      | \$46.34              | \$10.90 | \$11.20 | \$0.00                       | \$68.44    |
| 9    | 75      | \$49.65              | \$10.90 | \$11.20 | \$0.00                       | \$71.75    |
| 10   | 80      | \$52.96              | \$10.90 | \$11.20 | \$0.00                       | \$75.06    |

**Effective Date -** 10/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 35      | \$23.78              | \$10.90 | \$9.70  | \$0.00                       | \$44.38    |
| 2    | 40      | \$27.18              | \$10.90 | \$9.70  | \$0.00                       | \$47.78    |
| 3    | 45      | \$30.58              | \$10.90 | \$9.70  | \$0.00                       | \$51.18    |
| 4    | 50      | \$33.98              | \$10.90 | \$9.70  | \$0.00                       | \$54.58    |
| 5    | 55      | \$37.37              | \$10.90 | \$9.70  | \$0.00                       | \$57.97    |
| 6    | 60      | \$40.77              | \$10.90 | \$11.20 | \$0.00                       | \$62.87    |
| 7    | 65      | \$44.17              | \$10.90 | \$11.20 | \$0.00                       | \$66.27    |
| 8    | 70      | \$47.57              | \$10.90 | \$11.20 | \$0.00                       | \$69.67    |
| 9    | 75      | \$50.96              | \$10.90 | \$11.20 | \$0.00                       | \$73.06    |
| 10   | 80      | \$54.36              | \$10.90 | \$11.20 | \$0.00                       | \$76.46    |

**Notes:** Apprentice entered prior 9/30/10:  
40/45/50/55/60/65/70/75/80/85  
Steps are 850 hours

**Apprentice to Journeyworker Ratio:1:3**

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| STEAM BOILER OPERATOR<br><i>OPERATING ENGINEERS LOCAL 4</i>                    | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|  | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|  | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|  | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|  | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|  | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|  | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|  | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|  | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                     |                |           |         |         |                              |            |
| TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN<br><i>OPERATING ENGINEERS LOCAL 4</i> | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|  | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|  | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|  | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|  | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|  | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|  | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|  | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|  | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                     |                |           |         |         |                              |            |
| TELECOMMUNICATION TECHNICIAN<br><i>ELECTRICIANS LOCAL 103</i>                  | 03/01/2023     | \$48.34   | \$13.00 | \$19.01 | \$0.00                       | \$80.35    |

**Apprentice - TELECOMMUNICATION TECHNICIAN - Local 103**

**Effective Date - 03/01/2023**

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 45      | \$21.75              | \$13.00 | \$0.65  | \$0.00                       | \$35.40    |
| 2    | 45      | \$21.75              | \$13.00 | \$0.65  | \$0.00                       | \$35.40    |
| 3    | 50      | \$24.17              | \$13.00 | \$15.20 | \$0.00                       | \$52.37    |
| 4    | 50      | \$24.17              | \$13.00 | \$15.20 | \$0.00                       | \$52.37    |
| 5    | 55      | \$26.59              | \$13.00 | \$15.58 | \$0.00                       | \$55.17    |
| 6    | 60      | \$29.00              | \$13.00 | \$15.96 | \$0.00                       | \$57.96    |
| 7    | 65      | \$31.42              | \$13.00 | \$16.34 | \$0.00                       | \$60.76    |
| 8    | 70      | \$33.84              | \$13.00 | \$16.73 | \$0.00                       | \$63.57    |
| 9    | 75      | \$36.26              | \$13.00 | \$17.11 | \$0.00                       | \$66.37    |
| 10   | 80      | \$38.67              | \$13.00 | \$17.48 | \$0.00                       | \$69.15    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:1**

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| TERRAZZO FINISHERS<br><i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i> | 02/01/2023     | \$59.29   | \$11.49 | \$22.34 | \$0.00                       | \$93.12    |
|  | 08/01/2023     | \$61.34   | \$11.49 | \$22.34 | \$0.00                       | \$95.17    |
|  | 02/01/2024     | \$62.59   | \$11.49 | \$22.34 | \$0.00                       | \$96.42    |
|  | 08/01/2024     | \$64.69   | \$11.49 | \$22.34 | \$0.00                       | \$98.52    |
|  | 02/01/2025     | \$65.99   | \$11.49 | \$22.34 | \$0.00                       | \$99.82    |
|  | 08/01/2025     | \$68.14   | \$11.49 | \$22.34 | \$0.00                       | \$101.97   |
|  | 02/01/2026     | \$69.49   | \$11.49 | \$22.34 | \$0.00                       | \$103.32   |
|  | 08/01/2026     | \$71.69   | \$11.49 | \$22.34 | \$0.00                       | \$105.52   |
|  | 02/01/2027     | \$73.09   | \$11.49 | \$22.34 | \$0.00                       | \$106.92   |

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

**Effective Date -** 02/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$29.65              | \$11.49 | \$22.34 | \$0.00                       | \$63.48    |
| 2    | 60      | \$35.57              | \$11.49 | \$22.34 | \$0.00                       | \$69.40    |
| 3    | 70      | \$41.50              | \$11.49 | \$22.34 | \$0.00                       | \$75.33    |
| 4    | 80      | \$47.43              | \$11.49 | \$22.34 | \$0.00                       | \$81.26    |
| 5    | 90      | \$53.36              | \$11.49 | \$22.34 | \$0.00                       | \$87.19    |

**Effective Date -** 08/01/2023

| Step | percent | Apprentice Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|---------|---------|------------------------------|------------|
| 1    | 50      | \$30.67              | \$11.49 | \$22.34 | \$0.00                       | \$64.50    |
| 2    | 60      | \$36.80              | \$11.49 | \$22.34 | \$0.00                       | \$70.63    |
| 3    | 70      | \$42.94              | \$11.49 | \$22.34 | \$0.00                       | \$76.77    |
| 4    | 80      | \$49.07              | \$11.49 | \$22.34 | \$0.00                       | \$82.90    |
| 5    | 90      | \$55.21              | \$11.49 | \$22.34 | \$0.00                       | \$89.04    |

**Notes:**

**Apprentice to Journeyworker Ratio:1:3**

|  |            |         |        |         |        |         |
|--|------------|---------|--------|---------|--------|---------|
| TEST BORING DRILLER<br><i>LABORERS - FOUNDATION AND MARINE</i> | 12/01/2022 | \$46.58 | \$9.35 | \$17.97 | \$0.00 | \$73.90 |
|  | 06/01/2023 | \$47.58 | \$9.35 | \$17.97 | \$0.00 | \$74.90 |
|  | 12/01/2023 | \$48.83 | \$9.35 | \$17.97 | \$0.00 | \$76.15 |
|  | 06/01/2024 | \$50.31 | \$9.35 | \$17.97 | \$0.00 | \$77.63 |
|  | 12/01/2024 | \$51.78 | \$9.35 | \$17.97 | \$0.00 | \$79.10 |
|  | 06/01/2025 | \$53.28 | \$9.35 | \$17.97 | \$0.00 | \$80.60 |
|  | 12/01/2025 | \$54.78 | \$9.35 | \$17.97 | \$0.00 | \$82.10 |
|  | 06/01/2026 | \$56.33 | \$9.35 | \$17.97 | \$0.00 | \$83.65 |
|  | 12/01/2026 | \$57.83 | \$9.35 | \$17.97 | \$0.00 | \$85.15 |

For apprentice rates see "Apprentice- LABORER"

| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| TEST BORING DRILLER HELPER<br><i>LABORERS - FOUNDATION AND MARINE</i>               | 12/01/2022     | \$42.70   | \$9.35  | \$17.97 | \$0.00                       | \$70.02    |
|   | 06/01/2023     | \$43.70   | \$9.35  | \$17.97 | \$0.00                       | \$71.02    |
|   | 12/01/2023     | \$44.95   | \$9.35  | \$17.97 | \$0.00                       | \$72.27    |
|   | 06/01/2024     | \$46.43   | \$9.35  | \$17.97 | \$0.00                       | \$73.75    |
|   | 12/01/2024     | \$47.90   | \$9.35  | \$17.97 | \$0.00                       | \$75.22    |
|   | 06/01/2025     | \$49.40   | \$9.35  | \$17.97 | \$0.00                       | \$76.72    |
|   | 12/01/2025     | \$50.90   | \$9.35  | \$17.97 | \$0.00                       | \$78.22    |
|   | 06/01/2026     | \$52.45   | \$9.35  | \$17.97 | \$0.00                       | \$79.77    |
|   | 12/01/2026     | \$53.95   | \$9.35  | \$17.97 | \$0.00                       | \$81.27    |
| For apprentice rates see "Apprentice- LABORER"                                      |                |           |         |         |                              |            |
| TEST BORING LABORER<br><i>LABORERS - FOUNDATION AND MARINE</i>                      | 12/01/2022     | \$42.58   | \$9.35  | \$17.97 | \$0.00                       | \$69.90    |
|   | 06/01/2023     | \$43.58   | \$9.35  | \$17.97 | \$0.00                       | \$70.90    |
|   | 12/01/2023     | \$44.83   | \$9.35  | \$17.97 | \$0.00                       | \$72.15    |
|   | 06/01/2024     | \$46.31   | \$9.35  | \$17.97 | \$0.00                       | \$73.63    |
|   | 12/01/2024     | \$47.78   | \$9.35  | \$17.97 | \$0.00                       | \$75.10    |
|   | 06/01/2025     | \$49.28   | \$9.35  | \$17.97 | \$0.00                       | \$76.60    |
|   | 12/01/2025     | \$50.78   | \$9.35  | \$17.97 | \$0.00                       | \$78.10    |
|   | 06/01/2026     | \$52.33   | \$9.35  | \$17.97 | \$0.00                       | \$79.65    |
|   | 12/01/2026     | \$53.83   | \$9.35  | \$17.97 | \$0.00                       | \$81.15    |
| For apprentice rates see "Apprentice- LABORER"                                      |                |           |         |         |                              |            |
| TRACTORS/PORTABLE STEAM GENERATORS<br><i>OPERATING ENGINEERS LOCAL 4</i>            | 12/01/2022     | \$53.05   | \$14.25 | \$16.05 | \$0.00                       | \$83.35    |
|   | 06/01/2023     | \$54.29   | \$14.25 | \$16.05 | \$0.00                       | \$84.59    |
|   | 12/01/2023     | \$55.53   | \$14.25 | \$16.05 | \$0.00                       | \$85.83    |
|   | 06/01/2024     | \$56.81   | \$14.25 | \$16.05 | \$0.00                       | \$87.11    |
|   | 12/01/2024     | \$58.25   | \$14.25 | \$16.05 | \$0.00                       | \$88.55    |
|   | 06/01/2025     | \$59.53   | \$14.25 | \$16.05 | \$0.00                       | \$89.83    |
|   | 12/01/2025     | \$60.97   | \$14.25 | \$16.05 | \$0.00                       | \$91.27    |
|   | 06/01/2026     | \$62.25   | \$14.25 | \$16.05 | \$0.00                       | \$92.55    |
|   | 12/01/2026     | \$63.69   | \$14.25 | \$16.05 | \$0.00                       | \$93.99    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"                          |                |           |         |         |                              |            |
| TRAILERS FOR EARTH MOVING EQUIPMENT<br><i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i> | 12/01/2021     | \$36.82   | \$13.41 | \$16.01 | \$0.00                       | \$66.24    |
| TUNNEL WORK - COMPRESSED AIR<br><i>LABORERS (COMPRESSED AIR)</i>                    | 12/01/2022     | \$54.81   | \$9.35  | \$18.42 | \$0.00                       | \$82.58    |
|   | 06/01/2023     | \$55.81   | \$9.35  | \$18.42 | \$0.00                       | \$83.58    |
|   | 12/01/2023     | \$57.06   | \$9.35  | \$18.42 | \$0.00                       | \$84.83    |
|   | 06/01/2024     | \$58.54   | \$9.35  | \$18.42 | \$0.00                       | \$86.31    |
|   | 12/01/2024     | \$60.01   | \$9.35  | \$18.42 | \$0.00                       | \$87.78    |
|   | 06/01/2025     | \$61.51   | \$9.35  | \$18.42 | \$0.00                       | \$89.28    |
|   | 12/01/2025     | \$63.01   | \$9.35  | \$18.42 | \$0.00                       | \$90.78    |
|   | 06/01/2026     | \$64.56   | \$9.35  | \$18.42 | \$0.00                       | \$92.33    |
|   | 12/01/2026     | \$66.06   | \$9.35  | \$18.42 | \$0.00                       | \$93.83    |
| For apprentice rates see "Apprentice- LABORER"                                      |                |           |         |         |                              |            |

| Classification   | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|--|----------------|-----------|---------|---------|------------------------------|------------|
| TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)<br><i>LABORERS (COMPRESSED AIR)</i>            | 12/01/2022     | \$56.81   | \$9.35  | \$18.42 | \$0.00                       | \$84.58    |
|  | 06/01/2023     | \$57.81   | \$9.35  | \$18.42 | \$0.00                       | \$85.58    |
|  | 12/01/2023     | \$59.06   | \$9.35  | \$18.42 | \$0.00                       | \$86.83    |
|  | 06/01/2024     | \$60.54   | \$9.35  | \$18.42 | \$0.00                       | \$88.31    |
|  | 12/01/2024     | \$62.01   | \$9.35  | \$18.42 | \$0.00                       | \$89.78    |
|  | 06/01/2025     | \$63.51   | \$9.35  | \$18.42 | \$0.00                       | \$91.28    |
|  | 12/01/2025     | \$65.01   | \$9.35  | \$18.42 | \$0.00                       | \$92.78    |
|  | 06/01/2026     | \$66.56   | \$9.35  | \$18.42 | \$0.00                       | \$94.33    |
|  | 12/01/2026     | \$68.06   | \$9.35  | \$18.42 | \$0.00                       | \$95.83    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| TUNNEL WORK - FREE AIR<br><i>LABORERS (FREE AIR TUNNEL)</i>                              | 12/01/2022     | \$46.88   | \$9.35  | \$18.42 | \$0.00                       | \$74.65    |
|  | 06/01/2023     | \$47.88   | \$9.35  | \$18.42 | \$0.00                       | \$75.65    |
|  | 12/01/2023     | \$49.13   | \$9.35  | \$18.42 | \$0.00                       | \$76.90    |
|  | 06/01/2024     | \$50.61   | \$9.35  | \$18.42 | \$0.00                       | \$78.38    |
|  | 12/01/2024     | \$52.08   | \$9.35  | \$18.42 | \$0.00                       | \$79.85    |
|  | 06/01/2025     | \$53.58   | \$9.35  | \$18.42 | \$0.00                       | \$81.35    |
|  | 12/01/2025     | \$55.08   | \$9.35  | \$18.42 | \$0.00                       | \$82.85    |
|  | 06/01/2026     | \$56.63   | \$9.35  | \$18.42 | \$0.00                       | \$84.40    |
|  | 12/01/2026     | \$58.13   | \$9.35  | \$18.42 | \$0.00                       | \$85.90    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| TUNNEL WORK - FREE AIR (HAZ. WASTE)<br><i>LABORERS (FREE AIR TUNNEL)</i>                 | 12/01/2022     | \$48.88   | \$9.35  | \$18.42 | \$0.00                       | \$76.65    |
|  | 06/01/2023     | \$49.88   | \$9.35  | \$18.42 | \$0.00                       | \$77.65    |
|  | 12/01/2023     | \$51.13   | \$9.35  | \$18.42 | \$0.00                       | \$78.90    |
|  | 06/01/2024     | \$52.61   | \$9.35  | \$18.42 | \$0.00                       | \$80.38    |
|  | 12/01/2024     | \$54.08   | \$9.35  | \$18.42 | \$0.00                       | \$81.85    |
|  | 06/01/2025     | \$55.58   | \$9.35  | \$18.42 | \$0.00                       | \$83.35    |
|  | 12/01/2025     | \$57.08   | \$9.35  | \$18.42 | \$0.00                       | \$84.85    |
|  | 06/01/2026     | \$58.63   | \$9.35  | \$18.42 | \$0.00                       | \$86.40    |
|  | 12/01/2026     | \$60.13   | \$9.35  | \$18.42 | \$0.00                       | \$87.90    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| VAC-HAUL<br><i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>                                 | 12/01/2021     | \$36.24   | \$13.41 | \$16.01 | \$0.00                       | \$65.66    |
| WAGON DRILL OPERATOR<br><i>LABORERS - ZONE 2</i>   | 12/01/2022     | \$37.41   | \$9.10  | \$16.64 | \$0.00                       | \$63.15    |
|  | 06/01/2023     | \$38.31   | \$9.10  | \$16.64 | \$0.00                       | \$64.05    |
|  | 12/01/2023     | \$39.21   | \$9.10  | \$16.64 | \$0.00                       | \$64.95    |
| For apprentice rates see "Apprentice- LABORER"   |                |           |         |         |                              |            |
| WAGON DRILL OPERATOR (HEAVY & HIGHWAY)<br><i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i> | 12/01/2022     | \$36.81   | \$9.35  | \$16.89 | \$0.00                       | \$63.05    |
|  | 06/01/2023     | \$37.71   | \$9.35  | \$16.89 | \$0.00                       | \$63.95    |
|  | 12/01/2023     | \$38.61   | \$9.35  | \$16.89 | \$0.00                       | \$64.85    |
|  | 06/01/2024     | \$39.94   | \$9.35  | \$16.89 | \$0.00                       | \$66.18    |
|  | 12/01/2024     | \$41.27   | \$9.35  | \$16.89 | \$0.00                       | \$67.51    |
|  | 06/01/2025     | \$42.66   | \$9.35  | \$16.89 | \$0.00                       | \$68.90    |
|  | 12/01/2025     | \$44.04   | \$9.35  | \$16.89 | \$0.00                       | \$70.28    |
|  | 06/01/2026     | \$45.48   | \$9.35  | \$16.89 | \$0.00                       | \$71.72    |
|  | 12/01/2026     | \$46.92   | \$9.35  | \$16.89 | \$0.00                       | \$73.16    |
| For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"                       |                |           |         |         |                              |            |



| Classification  | Effective Date | Base Wage | Health  | Pension | Supplemental<br>Unemployment | Total Rate |
|---|----------------|-----------|---------|---------|------------------------------|------------|
| WASTE WATER PUMP OPERATOR<br><i>OPERATING ENGINEERS LOCAL 4</i>                                     | 12/01/2022     | \$53.63   | \$14.25 | \$16.05 | \$0.00                       | \$83.93    |
|   | 06/01/2023     | \$54.88   | \$14.25 | \$16.05 | \$0.00                       | \$85.18    |
|   | 12/01/2023     | \$56.13   | \$14.25 | \$16.05 | \$0.00                       | \$86.43    |
|   | 06/01/2024     | \$57.43   | \$14.25 | \$16.05 | \$0.00                       | \$87.73    |
|   | 12/01/2024     | \$58.88   | \$14.25 | \$16.05 | \$0.00                       | \$89.18    |
|   | 06/01/2025     | \$60.18   | \$14.25 | \$16.05 | \$0.00                       | \$90.48    |
|   | 12/01/2025     | \$61.63   | \$14.25 | \$16.05 | \$0.00                       | \$91.93    |
|   | 06/01/2026     | \$62.93   | \$14.25 | \$16.05 | \$0.00                       | \$93.23    |
|   | 12/01/2026     | \$64.38   | \$14.25 | \$16.05 | \$0.00                       | \$94.68    |
| For apprentice rates see "Apprentice- OPERATING ENGINEERS"  |                |           |         |         |                              |            |
| WATER METER INSTALLER<br><i>PLUMBERS &amp; GASFITTERS LOCAL 12</i>                                  | 02/26/2023     | \$65.19   | \$14.07 | \$18.36 | \$0.00                       | \$97.62    |
|   | 09/03/2023     | \$66.94   | \$14.07 | \$18.36 | \$0.00                       | \$99.37    |
|   | 03/03/2024     | \$68.74   | \$14.07 | \$18.36 | \$0.00                       | \$101.17   |
|   | 09/01/2024     | \$70.54   | \$14.07 | \$18.36 | \$0.00                       | \$102.97   |
|   | 03/02/2025     | \$72.34   | \$14.07 | \$18.36 | \$0.00                       | \$104.77   |
| For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"                    |                |           |         |         |                              |            |
| <b>Outside Electrical - East</b>  |                |           |         |         |                              |            |
| CABLE TECHNICIAN (Power Zone)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>                 | 08/30/2020     | \$29.67   | \$9.25  | \$1.89  | \$0.00                       | \$40.81    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| CABLEMAN (Underground Ducts & Cables)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>         | 08/30/2020     | \$42.03   | \$9.25  | \$10.27 | \$0.00                       | \$61.55    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| DRIVER / GROUNDMAN CDL<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>                        | 08/30/2020     | \$34.62   | \$9.25  | \$10.07 | \$0.00                       | \$53.94    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i> | 08/30/2020     | \$27.20   | \$9.25  | \$1.82  | \$0.00                       | \$38.27    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| EQUIPMENT OPERATOR (Class A CDL)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>              | 08/30/2020     | \$42.03   | \$9.25  | \$14.35 | \$0.00                       | \$65.63    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| EQUIPMENT OPERATOR (Class B CDL)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>              | 08/30/2020     | \$37.09   | \$9.25  | \$10.87 | \$0.00                       | \$57.21    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| GROUNDMAN<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>                                     | 08/30/2020     | \$27.20   | \$9.25  | \$1.82  | \$0.00                       | \$38.27    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| GROUNDMAN -Inexperienced (<2000 Hrs.)<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>         | 08/30/2020     | \$22.25   | \$9.25  | \$1.82  | \$0.00                       | \$33.32    |
| For apprentice rates see "Apprentice- LINEMAN"  |                |           |         |         |                              |            |
| JOURNEYMAN LINEMAN<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>                            | 08/30/2020     | \$49.45   | \$9.25  | \$17.48 | \$0.00                       | \$76.18    |

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

**Effective Date - 08/30/2020**

| Step | percent | Apprentice Base Wage | Health | Pension | Supplemental<br>Unemployment | Total Rate |
|------|---------|----------------------|--------|---------|------------------------------|------------|
| 1    | 60      | \$29.67              | \$9.25 | \$3.39  | \$0.00                       | \$42.31    |
| 2    | 65      | \$32.14              | \$9.25 | \$3.46  | \$0.00                       | \$44.85    |
| 3    | 70      | \$34.62              | \$9.25 | \$3.54  | \$0.00                       | \$47.41    |
| 4    | 75      | \$37.09              | \$9.25 | \$5.11  | \$0.00                       | \$51.45    |
| 5    | 80      | \$39.56              | \$9.25 | \$5.19  | \$0.00                       | \$54.00    |
| 6    | 85      | \$42.03              | \$9.25 | \$5.26  | \$0.00                       | \$56.54    |
| 7    | 90      | \$44.51              | \$9.25 | \$7.34  | \$0.00                       | \$61.10    |

Notes:

**Apprentice to Journeyworker Ratio:1:2**

|   |            |         |        |        |        |         |
|---|------------|---------|--------|--------|--------|---------|
| TELEDATA CABLE SPLICER<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>                | 02/04/2019 | \$30.73 | \$4.70 | \$3.17 | \$0.00 | \$38.60 |
| TELEDATA LINEMAN/EQUIPMENT OPERATOR<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>   | 02/04/2019 | \$28.93 | \$4.70 | \$3.14 | \$0.00 | \$36.77 |
| TELEDATA WIREMAN/INSTALLER/TECHNICIAN<br><i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i> | 02/04/2019 | \$28.93 | \$4.70 | \$3.14 | \$0.00 | \$36.77 |

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.

## INDEX

### DIVISION 1 - GENERAL REQUIREMENTS

| <u>Section</u> | <u>Subject</u>                           | <u>Page</u>          |
|----------------|--|----------------------|
| 01010          | Summary of the Work                      | 01010-1 thru 01010-2 |
| 01015          | Price Adjustments for Specific Materials | 01015-1 thru 01015-4 |
| 01025          | Measurement and Payment                  | 01025-1              |
| 01026          | Schedule of Values                       | 01026-1              |
| 01027          | Application for Payment                  | 01027-1 thru 01027-2 |
| 01036          | Changes in Contract Work, Cost or Time   | 01036-1 thru 01036-3 |
| 01092          | Abbreviations                            | 01092-1 thru 01092-2 |
| 01200          | Project Meetings                         | 01200-1 thru 01200-3 |
| 01310          | Construction Schedules                   | 01310-1 thru 01310-3 |
| 01340          | Submittals and Substitutions             | 01340-1 thru 01340-4 |
| 01500          | Temporary Facilities                     | 01500-1 thru 01500-2 |
| 01505          | Mobilization                             | 01505-1 thru 01505-2 |
| 01601          | Control of Materials                     | 01601-1 thru 01601-2 |
| 01610          | Product Handling                         | 01610-1 thru 01610-2 |
| 01700          | Contract Closeout                        | 01700-1 thru 01700-2 |
| 01710          | Cleaning                                 | 01710-1 thru 01710-3 |
| 01730          | O and M Manual                           | 01730-1 thru 01730-3 |

## SECTION 01010

### SUMMARY OF THE WORK

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

###### A. Work included:

1. The Work of this Contract is located in the Town of Natick, MA, at the Springvale and Elm Bank water treatment facilities. Springvale WTP is located at 1080 Worcester Road (Route 9). The Elm Bank WTP is located in the Elm Bank Reservation in Wellesley off Eliot Street (Route 16)
2. The work at the Springvale WTP site shall include, but shall not necessarily be limited to, providing all labor, materials, equipment and incidentals required to provide the following.
  - a. Furnishing and installation of two new chlorine day tanks.
  - b. Furnishing and installation of two new chlorine day tank scales.
  - c. Furnishing and installation of two new bulk chlorine tank level sensors.
  - d. Furnishing and installation of two new polyphosphate day tank level sensors
  - e. Furnishing and installation of two new chlorine chemical transfer pumps.
  - f. Furnishing and installation of four new chemical feed pump control panels – 2-Chlorine & 2- Phosphate.
  - g. Installing 4 vfd's to power the chemical feed pumps. Owner to furnish the VFDs for installation under this contract.
  - h. Furnish electrical related work as shown on the drawings and as required to complete the work.
  - i. Furnishing and installation of concrete pads.
  - j. Secondary containment coating system.
  - k. Furnishing and installation of new process piping for chlorine day tank installation.
  - l. Furnishing and installation of new spill containment unit on exterior of the building.
3. The work at the Elm Bank WTP site shall include, but shall not necessarily be limited to, providing all labor, materials, equipment and incidentals required to provide the following.
  - a. Furnishing and installation of a new potassium hydroxide (KOH) day tank.
  - b. Furnishing and installation of two new bulk KOH tank level sensors.
  - c. Furnishing and installation of new chemical transfer pump.
  - d. Furnishing and installation of new chemical feed pump control panel.
  - e. Installing 2 vfd's to power the chemical feed pumps. Owner to furnish the VFDs for installation under this contract.
  - f. Furnish electrical related work as shown on the drawings and as required to complete the work.
  - g. Furnishing and installation of concrete pad.
  - h. Secondary containment coating system.

- i. Furnishing and installation of process piping for KOH bulk tanks and day tank installation.
- j. Furnishing and installation of spill containment unit on exterior of the building.

END OF SECTION

## SECTION 01015

### PRICE ADJUSTMENTS FOR SPECIFIC MATERIALS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. In accordance with the requirements of Chapter 30, Section 38A of the General Laws of Massachusetts municipal contracts for water and sewer projects bid under Chapter 30 Section 39M shall include a price adjustment clause for each of the following: fuel, both diesel and gasoline; liquid asphalt; and Portland cement contained in cast-in-place concrete.
1. Payment or Credit shall be applied to the monthly Application for Partial Payment and Application for Final Payment.
  2. Compliance with this provision is required; there is no “opting-in” or “opting-out”
  3. Price adjustments will only be made if the variance is 5% or more. A variance can result in the Period Price being either higher or lower than the Contractor’s Price. Once a 5% difference has been reached, the adjustment will apply.
  4. No adjustment will be paid for work done beyond the extended completion date of any contract unless the Awarding Authority has approved an extension of Contract Time for the Contract.
  5. Should the Contractor fail to submit delivery documentation as specified in this section, the Owner may calculate the price adjustment using alternative methods and include a credit for the Owners additional expense of estimating these values.
- B. This Contract is subject to Price Adjustments based on cost increases and cost decreases for diesel fuel per gallon and gasoline is per gallon. **Price Adjustments** shall be based on monthly price listings as provided by AAA’s Daily Fuel Gauge Report <http://fuelgaugereport.aaa.com>, Massachusetts Average, for diesel fuel and regular grade gasoline.
- C. This Contract is subject to Price Adjustments based on cost increases and cost decreases for liquid asphalt, per ton. **Price Adjustments** shall be based on monthly price listings as provided by Massachusetts Department of Transportation (MassDOT) Highway Division, <https://www.mass.gov/service-details/2019-massdot-contract-price-adjustments>, for liquid asphalt (Ton).
- D. This Contract is subject to Price Adjustments based on cost increases and cost decreases for Portland cement, per ton. **Price Adjustments** shall be based on monthly price listings as provided by ENR Engineering News Record, Construction Economics [http://enr.construction.com/economics/current\\_costs](http://enr.construction.com/economics/current_costs), Material Price Index, Boston for Portland cement.

##### 1.2 SPECIAL PROVISIONS

- A. **MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE:** This adjustment will provide for either additional compensation to the Contractor or repayment to the Owner, depending on an increase or decrease in the average price of diesel or gasoline. This adjustment will be based on actual on-site fuel utilized during the Contract.
1. Base Price: Base Price of diesel fuel is \$3.387 and regular unleaded gasoline is \$3.307 shall be utilizing the AAA Daily Fuel Gauge Report web site, which includes State Tax.
  2. Period Price: Period Price will be the prices listed on AAA website on the first business day of a given month.
  3. Total Gallons will be the actual substantiated monthly quantity of fuel used for on-site equipment during the work period from start through the extended time of completion date, reported on a monthly basis.
  4. The Price Adjustment will be determined by calculating the price difference between the Base Price (remains constant) and the Period Price (varies monthly), and if that increase or decrease is greater than 5% for that period, the gallons verified for on-site use that period multiplied by the cost difference between the Base Price and the Period Price for that period.
  5. It shall be the Contractor's responsibility to provide a summary with backup receipts at the end of each month, which are to include date of purchase, gallons of fuel, type of fuel and company from which the fuel was purchased.

Example Calculation – Diesel Fuel

| <u>Base Price</u><br><u>AAA</u> | <u>Period Price</u><br><u>AAA</u> | <u>Difference</u><br><u>Per Gallon</u> | <u>% Change</u><br><u>+ Or -</u> | <u>Change</u><br><u>&gt; 5%</u> |
|---------------------------------|-----------------------------------|--|----------------------------------|---------------------------------|
| \$3.50                          | \$3.75                            | + \$0.25                               | 7%                               | Yes                             |

Contractor's Substantiated Monthly Adjustment

| <u>Total</u><br><u>Gallons</u> | <u>Difference</u><br><u>Per Gallon</u> | <u>Price</u><br><u>Adjustment</u> |
|--------------------------------|--|-----------------------------------|
| 1000                           | + \$0.25                               | + \$250.00                        |

- B. **MONTHLY PRICE ADJUSTMENT FOR ASPHALT CEMENT:** The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the project.
1. Base Price: Base Price of liquid asphalt is \$665.00 per ton utilizing the MassDOT Material Price Index.
  2. Period Price: Period Price of liquid asphalt will be referenced to the month listed on the MassDOT website for a given month.
  3. Total Tons will be derived from the actual substantiated tonnage slips for the month(s) material is delivered.

4. The Price Adjustment will be determined by multiplying the price difference between the Base Price (remains constant) and the Period Price (varies monthly) times the number of tons of asphaltic paving placed during each monthly period times the percentage of liquid asphalt content. The calculations will use the midpoint of the specified content range for liquid asphalt (bitumen) content specified by the contract documents for the material delivered.
5. It shall be the Contractor's responsibility to provide a summary with backup tonnage slips at the end of each month, which are to include date of purchase, type of asphaltic paving and company from which the mixture was purchased.

Example Calculation – Asphalt Cement

| <u>Base Price</u><br><u>ENR</u> | <u>Period Price</u><br><u>ENR</u> | <u>Difference</u><br><u>Per Ton</u> | <u>% Change</u><br><u>+ Or -</u> | <u>Change</u><br><u>&gt; 5%</u> |
|---------------------------------|-----------------------------------|-------------------------------------|----------------------------------|---------------------------------|
| \$415.71                        | \$392.18                          | - \$23.53                           | 5.6%                             | Yes                             |

Contractor's Substantiated Monthly Adjustment

1000 tons of binder course mix at 4.5 to 5.5% liquid asphalt (bitumen) content

| <u>Total</u><br><u>Tons</u><br><u>Mix</u> | <u>Asphalt</u><br><u>Content</u><br><u>%</u> | <u>Total</u><br><u>Tons</u><br><u>Asphalt</u> | <u>Difference</u><br><u>Per Ton</u> | <u>Price</u><br><u>Adjustment</u> |
|---|--|---|-------------------------------------|-----------------------------------|
| 1000                                      | 5%   | 50  | - \$23.53                           | - \$1,176.50                      |

- C. MONTHLY PRICE ADJUSTMENT FOR PORTLAND CEMENT: The Price Adjustment applies only to the actual Portland cement content in the mixture placed on the project.
1. Base Price: Base Price of Portland cement is +\$181.15 per ton utilizing the ENR Material Price Index.
  2. Period Price: Period Price of Portland cement will be referenced to the first report of the month on the ENR website for a given month.
  3. Total Tons will be derived from the actual substantiated cubic yardage or tonnage slips for the month(s) material is delivered.
  4. The Price Adjustment will be a separate payment item and will be determined by multiplying the price difference between the Base Price (remains constant) and the Period Price (varies monthly) times the number of cubic yards of concrete mix delivered during each monthly period times the Portland cement content in tons per cubic yard. The calculations will use the minimum Portland cement content specified by the contract documents for the material delivered.
  5. It shall be the Contractor's responsibility to provide a summary with backup delivery slips at the end of each month, which are to include date of purchase, type of concrete mix and company from which the concrete was purchased. Site mixed concrete shall be based upon the weight of the dry product delivered and used, adjusted to Portland cement content if necessary.

Example Calculation – Portland Cement



| <u>Base Price</u><br><u>ENR</u> | <u>Period Price</u><br><u>ENR</u> | <u>Difference</u><br><u>Per Ton</u> | <u>% Change</u><br><u>+ Or -</u> | <u>Change</u><br><u>≥ 5%</u> |
|---------------------------------|-----------------------------------|-------------------------------------|----------------------------------|------------------------------|
| \$95.50                         | \$110.00                          | + \$14.50                           | 15.2%                            | Yes                          |

Contractor's Substantiated Monthly Adjustment

100 cubic yards of Class A concrete mix at 0.26 tons (520 pounds) of Portland cement per cubic yard

| <u>Total</u><br><u>Mix</u><br><u>CY</u> | <u>Cement</u><br><u>Content</u><br><u>tons/CY</u> | <u>Total</u><br><u>Tons</u><br><u>Cement</u> | <u>Difference</u><br><u>Per Ton</u> | <u>Price</u><br><u>Adjustment</u> |
|---|---|--|-------------------------------------|-----------------------------------|
| 100                                     | .26   | 26   | + \$14.50                           | + \$377                           |

END OF SECTION

## SECTION 01025

### MEASUREMENT AND PAYMENT

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. The Proposed Contract Price for the contract work in the Bid Form includes the furnishing of all labor, and furnishing and installation of materials, equipment and incidentals that are required by the Contractor to complete the chemical feed upgrades at the two water treatment facilities as specified in the Contract Specifications and/or shown on the Contract Drawings.
- B. Payment will be made by the Owner based upon the approved schedule of values.

END OF SECTION

## SECTION 01026

### SCHEDULE OF VALUES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide a detailed breakdown of the lump sum Contract items showing values allocated to each of the various parts of the Work, as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Schedule of values is required under Paragraph 2.6 and 14.1 of the General Conditions.
  - 3. Schedule of values is required to be compatible with the "continuation sheet" accompanying applications for payment, as described in Section 01027.

##### 1.2 QUALITY ASSURANCE

- A. Use required means to assure arithmetical accuracy of the sums described.
- B. When so requested by the Engineer, provide copies of the subcontracts or other data acceptable to the Engineer, substantiating the sums described.
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Prior to first application for payment, submit a proposed schedule of values to the Engineer.
  - 1. Meet with the Engineer and determine additional data, if any, required to be submitted.
  - 2. Secure the Engineer's approval of the schedule of values prior to submitting first application for payment.

END OF SECTION

## SECTION 01027

### APPLICATION FOR PAYMENT

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor shall comply with procedures described in this Section when applying for progress payment and final payment under the Contract.
- B. Related Work:
  - 1. Documents affecting Work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. The Contract Sum and the schedule for payments are described in the Form of Agreement.
  - 3. Payments upon Substantial Completion and Completion of the Work are described in the General Conditions.

##### 1.2 QUALITY ASSURANCE

- A. Prior to start of construction, Contractor shall secure Engineer's approval of the schedule of values required to be submitted under Paragraph 2.05.3 of the General Conditions, and further described in Section 01026 of these specifications.
- B. During progress of the Work, Contractor shall modify the schedule of values as approved by Engineer to reflect changes in the Contract Sum due to Change Orders or other modifications of the Contract.
- C. Contractor shall base requests for payment on the approved schedule of values.
- D. Contractor shall conduct all Work in a first-class, workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the Work under this section.

##### 1.3 SUBMITTALS

- A. Informal submittal: Unless otherwise directed by Engineer.
  - 1. Contractor shall make an informal submittal of request for payment by filling in, with erasable pencil, pertinent portions of AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
  - 2. Contractor shall make this preliminary submittal to Engineer at the end of each month.

3. Contractor shall revise the informal submittal of request for payment as agreed, between both parties, initialing all copies.
- B. Formal submittal: Unless otherwise directed by Engineer:
1. Contractor shall make formal submittal of request for payment by filling in the agreed data, by typewriter or neat lettering in ink, on AIA Document G702, "Application and Certificate for Payment," plus continuation sheet or sheets.
  2. Contractor shall sign and notarize the Application and Certificate for payment.
  3. Contractor shall submit the original of the Application and Certificate for Payment, plus eight (8) identical copies of the continuation sheet or sheets, to Engineer.
  4. Engineer shall compare the formal submittal with the approved informal submittal and, when approved, shall sign the Application and Certificate of Payment, shall make required copies, and shall distribute:
    - a. Two (2) copies to Contractor;
    - b. Three (3) copies to Owner; and
    - c. Two (2) copies to Engineer's file.

END OF SECTION

## SECTION 01036

### CHANGES IN CONTRACT WORK, COST OR TIME

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor shall make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as are described in a Written Amendment, Change Order or Work Change Directive, signed by Owner and issued after execution of the Contract, in accordance with the provisions of this Section, Articles 10, 11 and 12 of the General Conditions, and amendments contained in the Supplemental Conditions.
- B. Owner reserves the right to at any time order additions, deletions or revisions in the Work, which shall be authorized by Written Amendment, a Change Order, a Work Change Directive or a Field Order, and Contractor shall promptly proceed with the Work involved.
- C. If Owner or Contractor are unable to agree as to the extent, if any, of an adjustment in the Contract Price or an adjustment in the Contract Times that should be allowed as the result of a Work Change Directive, a claim may be made in accordance with the provisions of Article 10 of the General Conditions.
- D. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which is to be performed under the applicable conditions of the Contract Documents, unless otherwise specifically provided.
- E. See a full definition of the above in the General Conditions, Article 1, Definitions.

##### 1.2 QUALITY ASSURANCE

- A. Within Contractor's quality assurance program, Contractor shall include such measures as are needed to assure familiarity of Contractor's staff and employees with these procedures for processing Change Order data.
- B. Contractor shall conduct all Work in a first-class, workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the Work under this section.

### 1.3 CONTRACT PRICE

- A. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by Contractor shall be at Contractor's expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order or a Written Amendment.

### 1.4 PROCESS FOR INITIATING AND FINALIZING A CHANGE IN CONTRACT PRICE

- A. Any claim for an adjustment in the Contract Price by either party to the Contract shall be based upon written notice delivered by the party making the claim to the other party and Engineer promptly after the start of the occurrence or event giving rise to the claim, and stating the general nature of the claim.
- B. Notice shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event.
- C. Documentation of the costs for the Work shall be prepared and submitted in accordance with the provisions of Article 11 of the General Conditions and as amended in the Supplementary Conditions of this Contract.
- D. Once the extent of changed Work and compensation amount is finalized in accordance with the provisions of Article 11 of the General Conditions as amended in the Supplementary Conditions, a Change Order Form as included in Section 00810 with the documentation attached shall be prepared by Engineer and submitted to both parties for review and signing.
- E. Contractor's disagreement with the Change Order shall in no way relieve him/her from the responsibility to immediately proceed with the change as indicated in the Change Order, and to seek settlement of the dispute under the pertinent provisions of this Contract.
- F. Any delay in the completion of the Work associated with a disagreement in the amount of the Change Order shall not constitute a viable reason for granting an extension of time.
- G. No claim for an adjustment in the Contract Price shall be valid unless it is submitted in accordance with the provisions above and those of Article 11 of the General Conditions as amended in the Supplementary Conditions of this Contract.

## 1.5 PROCESS FOR INITIATING AND FINALIZING A CHANGE IN CONTRACT TIME

- A. Any claim for an adjustment in the Contract Time shall be made by a Change Order or Written Amendment, shall be based upon written notice delivered by the party making the claim to the other party and Engineer promptly after the start of the occurrence or event giving rise to the claim, and stating the general nature of the claim.
- B. Notice shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event.
- C. Once the extent of changed Contract Time, if any, is prepared in accordance with the provisions of Article 12 of the General Conditions, a Change Order shall be prepared for review and signing by both parties.
- D. Contractor's disagreement with the refusal to grant a requested extension in the Contract Time shall in no way relieve him/her from the responsibility to proceed immediately with the Work, and to seek settlement of the dispute under the pertinent provisions of this Contract. Any delay in the completion of the Work shall not constitute a viable reason for granting an extension of time.
- E. No claim for an adjustment in the Contract Time shall be valid if it is not submitted in accordance with the provisions above, as well as those of Article 12 of the General Conditions as supplemented in the Supplementary Conditions of this Contract.

END OF SECTION



## SECTION 01092

### ABBREVIATIONS

#### PART 1 - ABBREVIATIONS AND NAMES

##### 1.1 DESCRIPTION

- A. The following abbreviations may be in the Contract Documents and represent the organizations named. The names are believed to be correct as of the date of the Contract Documents.

|            |  |
|------------|--|
| AA         | - Aluminum Association   |
| AAN        | - American Association of Nurserymen   |
| AASHTO     | - American Association of State Highway and Transportation Officials         |
| ACI        | - American Concrete Institute  |
| AGA        | - American Gas Association   |
| AHDGA      | - American Hot Dip Galvanizers Association                                   |
| AISC       | - American Institute of Steel Construction                                   |
| AISI       | - American Iron and Steel Institute  |
| ANSI       | - American National Standards Institute                                      |
| APA        | - American Plywood Association   |
| API        | - American Petroleum Institute   |
| ASCE       | - American Society of Civil Engineers  |
| ASHRAE     | - American Society of Heating, Refrigerating, and Air Conditioning Engineers |
| ASME       | - American Society of Mechanical Engineers                                   |
| ASTM       | - American Society of Testing and Materials                                  |
| AWPA       | - American Wood Preservers Association                                       |
| AWS        | - American Welding Society   |
| AWWA       | - American Water Works Association   |
| CRSI       | - Concrete Reinforcing Steel Institute                                       |
| DEP        | - Massachusetts Department of Environmental Protection                       |
| DIPRA      | - Ductile Iron Pipe Research Association                                     |
| EPA        | - Federal Environmental Protection Agency                                    |
| FM         | - Factory Mutual System  |
| Fed. Spec. | - Federal Specification  |
| HI         | - Hydraulic Institute  |
| IEEE       | - Institute of Electrical and Electronics Engineers                          |
| MIA        | - Masonry Institute of America   |
| MMR        | - Massachusetts Military Reservation   |
| MSS        | - Manufacturers Standardization Society of the Valve and Fitting Industry    |
| NAAMM      | - National Association of Architectural Metal Manufacturers                  |

|        |  |
|--------|--|
| NAPF   | - National Association of Pipe Fabricators                             |
| NEC    | - National Electrical Code   |
| NEMA   | - National Electrical Manufacturers Association                        |
| NFPA   | - National Fire Protection Association                                 |
| NSF    | - National Sanitation Foundation                                       |
| OSHA   | - Occupational Safety and Health Administration                        |
| PCA    | - Portland Cement Association  |
| PCI    | - Prestressed Concrete Institute                                       |
| PI     | - Plastic Pipe Institute   |
| PS     | - Product Standard of the National Bureau of Standards                 |
| R&RC   | - Massachusetts National Guard      Environmental and Readiness Center |
| SMACNA | - Sheet Metal and Air Conditioning Contractors National Association    |
| SPI    | - Society of the Plastics Industry                                     |
| SSPC   | - Steel Structures Painting Council                                    |
| TCI    | - Tile Council of America  |
| TPI    | - Truss Plate Institute  |
| UL     | - Underwriters Laboratories  |

- B. Where reference is made to a standard issued by one of the above-mentioned organizations it is understood that the revisions thereof in effect at the time of bidding shall apply.

END OF SECTION

## SECTION 01200

### PROJECT MEETINGS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Engineer will conduct project meetings throughout the construction period.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of project meetings content.

##### 1.2 QUALITY ASSURANCE

- A. For those persons designated by Contractor to attend and participate in project meetings, Contractor shall provide required authority to commit Contractor to solutions agreed upon in the project meetings.
- B. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the Work under this section.

##### 1.3 SUBMITTALS

- A. Agenda items:
  - 1. Engineer shall prepare a general agenda for the meetings and shall submit the same to Contractor prior to or at the meeting.
  - 2. To the maximum extent practicable, Contractor shall advise Engineer at least twenty-four (24) hours in advance of project meetings regarding items to be added to the agenda.
- B. Minutes:
  - 1. Engineer will compile minutes of each project meeting, and will furnish three copies to Contractor and required copies to Owner.
  - 2. Recipients of copies may make and distribute such other copies as they wish.

#### PART 2 - PRODUCTS - No products are required in this Section.

## PART 3 - EXECUTION

### 3.1 MEETING SCHEDULE

- A. Except as noted below for Pre-construction Meeting, project meetings will be held bi-weekly.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

### 3.2 MEETING LOCATION

- A. Engineer shall establish meeting location. To the maximum extent practicable, meetings shall be held at job site.

### 3.3 PRE-CONSTRUCTION MEETING

- A. Pre-construction Meeting shall be scheduled to be held within fifteen (15) working days after the Owner has issued the Notice to Proceed.
  - 1. Provide attendance by authorized representatives of Contractor and major subcontractors.
  - 2. Engineer shall advise other interested parties, including Owner, and request their attendance.
- B. Minimum agenda: Data will be distributed and discussed on at least the following items:
  - 1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, and Engineer.
  - 2. Channels and procedures for communications.
  - 3. Construction schedule, including sequence of critical work.
  - 4. Contract Documents, including distribution of required copies of original Documents and revisions.
  - 5. Processing of Shop Drawings and other data submitted to the Engineer for review.
  - 6. Processing of Bulletins, field decisions, and Change Orders.
  - 7. Rules and regulations governing performance of the Work; and
  - 8. Procedures for security, quality control, housekeeping, and related matters.

### 3.4 PROJECT MEETINGS

- A. Attendance:
  - 1. To the maximum extent practicable, Contractor shall assign the same person or persons to represent Contractor at project meetings throughout progress of the Work.
  - 2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.
- B. Minimum agenda:

1. Review, revise as necessary, and approve minutes of previous meetings.
  2. Review progress of the Work since last meeting, including status of submittals for approval.
  3. Identify problems which impede planned progress.
  4. Develop corrective measures and procedures to regain planned schedule.
  5. Complete other current business.
- C. Revisions to minutes:
1. Unless published minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
  2. Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
  3. Challenge to minutes shall be settled as priority portions of "old business" at the next regularly scheduled meeting.

END OF SECTION

## SECTION 01310

### CONSTRUCTION SCHEDULES

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. To assure adequate planning and execution of the Work to insure it is completed within the number of calendar days allowed in the Contract, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.
- B. Comply with General Conditions Section 2.05 regarding Preliminary Schedules, General Conditions Section 6.04 regarding Progress Schedules, General Conditions Section 12.02 regarding adherence to schedules and General Conditions Section 15.02 regarding failure to adhere to schedules.
- C. The Construction period shall be that as indicated in the Agreement Section of this Contract.
- D. In calculating any period of time 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.
- E. For purposes of this Contract, a calendar day of twenty-four hours measured from midnight to the next midnight will constitute a day.

##### 1.2 QUALITY ASSURANCE

- A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, and in preparing and issuing periodic reports as required below.
- B. Perform data preparation, analysis, charting, and updating in accordance with standards approved by the Engineer.
- C. Reliance upon the approved schedule: The construction schedule as approved by the Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
- D. Should any activity not be completed within 10 days after the stated scheduled date, the Engineer may request the reason for the delay in schedule from the Contractor. The Contractor shall supply the requested information and the steps which he intends to take to get back on schedule.

- E. It is expressly understood and agreed that failure by the Engineer to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.
- F. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Preliminary analysis: Within ten calendar days after the Contractor has received the Owner's Notice to Proceed, submit one electronic file copy of a preliminary construction schedule prepared in accordance with Part 2 of this Section.
- C. Construction schedule: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit one electronic copy and four copies of a construction schedule prepared in accordance with Part 3 of this Section.
- D. Periodic reports: On the first working day of every month following the submittal described in Paragraph 1.3 C. above, submit an electronic copy and four prints of the updated construction schedule.

## PART 2 - PRODUCTS

### 2.1 CONSTRUCTION ANALYSIS

- A. Graphically show by bar-chart, or other means acceptable to the Engineer, the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.
- B. Include, but do not necessarily limit indicated activities to:
  - 1. Project mobilization;
  - 2. Submittal and approval of Shop Drawings and Sample;
  - 3. Procurement of equipment and critical materials;
  - 4. Fabrication of special material and equipment, and its installation and testing;
  - 5. Final cleanup;
  - 6. Final inspecting and testing; and
  - 7. All activities by the Engineer that effect progress, required dates for completion, or both, for all and each part of the Work.

## PART 3 - EXECUTION

### 3.1 PRELIMINARY ANALYSIS

- A. Contents: Show all activities of the Contractor under this Work for the period between receipt of Notice to Proceed and submittal of construction schedule.
- B. Show the Contractor's general approach to remainder of the Work.
- C. Show cost of all activities scheduled for performance before submittal and approval of the construction schedule.

### 3.2 CONSTRUCTION SCHEDULE

- A. Within 30 calendar days from receipt of Notice to Proceed, complete the construction analysis in preliminary form, meet with the Engineer, review contents of the proposed construction schedule, and make all revisions agreed upon.
- B. The construction shall be updated monthly by the Contractor to represent progress of each activity.

### 3.3 PERIODIC REPORTS

- A. As required under Paragraph 3.2 B. above, update the approved construction schedule.
- B. Indicate "actual" progress in percent completion for each activity;
- C. Provide written narrative summary of revisions causing delay in the program, and an explanation of corrective actions taken or proposed.

### 3.4 REVISIONS

- A. Make only those revisions to approved construction schedule as are approved in advance by the Engineer.

END OF SECTION



## SECTION 01340

### SUBMITTALS AND SUBSTITUTIONS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the Contract Document requirements.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions (Par. 6.24 thru 6.28), Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Individual requirements for submittals also may be described in pertinent Sections of these Specifications.
- C. Work not included:
  - 1. Unrequired submittals will not be reviewed by Engineer.
  - 2. Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between Contractor and his subcontractors and shall not be reviewed by Engineer unless specifically called for within the Contract Documents.

##### 1.2 QUALITY ASSURANCE

- A. Coordination of submittals:
  - 1. Prior to each submittal, Contractor shall carefully review and coordinate all aspects of each item being submitted.
  - 2. Contractor shall verify that each item and the submittal for its conformity in all respects with the specified requirements.
  - 3. By affixing its signature to each submittal, Contractor shall certify that this coordination has been performed.
- B. Substitutions:
  - 1. The Contract is based on the standards of quality established in the Contract Documents.
  - 2. Substitutions shall be considered only when they meet those standards of quality.
  - 3. Contractor shall not substitute materials, equipment, or methods unless such substitution has been specifically approved in writing for this Work by Engineer.
- C. "Or equal":
  - 1. Where the phrase "or equal," or "or equal as approved by the Engineer", occurs in the Contract Documents see Par. 6.7.1 of the General Conditions.
  - 2. The decision of Engineer shall be final.

- D. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

## PART 2 - SUBMITTALS

### 2.1 SHOP DRAWINGS

- A. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Types of prints required:
  - 1. Submit Shop Drawings in the form of six blackline prints of each sheet.
  - 2. Blueprints will not be acceptable.
- C. Review comments of the Engineer will be shown on the blackline print when it is returned to the Contractor. The Contractor may make and distribute such copies as are required for his purposes.

### 2.2 MANUFACTURERS' LITERATURE

- A. Where contents of submitted literature from manufacturers includes data not pertinent to the submittal, Contractor shall clearly indicate which portion of the contents is being submitted for review.
- B. Contractor shall submit required six (6) copies which are required to be returned of which two (2) copies will be retained by the engineer.

### 2.3 SAMPLES

- A. Contractor shall provide sample or samples identical to the precise article proposed to be provided. Contractor shall identify as described under "Identification of submittals" below.
- B. Number of Samples required:
  - 1. Unless otherwise specified, Contractor shall submit samples in the quantity which is required to be returned, plus one which will be retained by Engineer.
  - 2. By prearrangement in specific cases, a single sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by Engineer.

### 2.4 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit accurate color and pattern charts to Engineer for selection.

## PART 3 - EXECUTION

### 3.1 IDENTIFICATION OF SUBMITTALS

- A. Contractor shall consecutively number all submittals.
  - 1. When material is submitted for any reason, Contractor shall transmit under a new letter of transmittal and with a new transmittal number.
  - 2. On resubmittals, Contractor shall cite the original submittal number and date for reference.
- B. Contractor shall accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, Contractor shall show the submittal number in which the item was included.
- D. Contractor shall maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Contractor shall, upon the request of Engineer, make the submittal log available to Engineer for his review upon request.

### 3.2 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, Contractor shall make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
  - 1. Partial submittals may be rejected as not complying with the provisions of the Contract.
  - 2. The Contractor may be held liable for delays so occasioned.

### 3.3 TIMING OF SUBMITTALS

- A. Contractor shall make submittals far enough in advanced of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and resubmittals, and for placing orders and securing delivery.
- B. In scheduling, Contractor shall allow at least twenty (20) working days for review by Engineer following his receipt of the submittal.

### 3.4 ENGINEER'S REVIEW

- A. Review by Engineer does not relieve Contractor from responsibility for errors which may exist in the submitted data.
- B. REVISIONS:
  - 1. Contractor shall make revisions required by Engineer.
  - 2. If Contractor considers any required revision to be a change, he shall so notify Engineer as provided for in Paragraph 10.05 of the General Conditions.
  - 3. Contractor shall make only those revisions directed or approved by Engineer.

4. Contractor shall revise previous submittal drawings or data and resubmit them, as specified for the initial submittal.

END OF SECTION

## SECTION 01500

### TEMPORARY FACILITIES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor shall provide temporary facilities and controls needed for the Work including, but not necessarily limited to:
  - 1. Enclosures such as tarpaulins, barricades, and canopies;
  - 2. Temporary sanitary facilities at the Elm Bank site;
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Except that equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations, such equipment normally furnished by the individual trades in execution of their own portions of the Work are not part of this Section.
  - 3. Permanent installation and hookup of the various utility lines are described in other Sections.

##### 1.2 PRODUCT HANDLING

- A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

#### PART 2 - PRODUCTS

##### 2.1 WEATHER PROTECTION

- A. Shall mean the temporary protection of that work adversely affected by moisture, wind and cold by covering, enclosing and/or heating. This protection shall provide adequate working areas during the months of November through March and be consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install all "weather protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 40° F at the working surface. This provision does not supersede any specific requirements for methods of construction and/or curing of materials.

Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices.

The total cost of all weather protection inclusive of all materials, labor, equipment and incidentals required shall be included in the contract price. The cost shall include all work required to furnish, maintain and remove all temporary enclosures and temporary heating systems required for weather protection.

## 2.2 TEMPORARY SANITARY FACILITIES

- A. Shall mean temporary self contained sanitary facility.

## PART 3 - EXECUTION

### 3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.
- B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Engineer.

END OF SECTION

## SECTION 01505

### MOBILIZATION

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work Includes:
  - 1. Ordering and receipt of all materials, neat stockpiling of such materials, delivery and setup of all construction equipment, and cleanup of stockpile area upon completion of construction.
- B. Related Work
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 thru Divisions 16 of these Specifications.

##### 1.2 QUALITY ASSURANCE

- A. Contractor shall use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. None required under this Section.

##### 1.4 PRODUCT HANDLING

- A. Contractor shall comply with pertinent provisions of Section 01610

#### PART 2 - PRODUCTS -Not Used

#### PART 3 - EXECUTION

##### 3.1 STORAGE AREA

- A. The two water treatment plants have limited space for storage. Contractor to work with the Town to minimize the required space for storage to insure it does not impair the normal operation and maintenance of the water treatment facilities.

### 3.2 EQUIPMENT

- A. Contractor shall transport all equipment to the site and set up operations, to a condition satisfactory to proceed with the intended construction, and upon completion, remove same.

### 3.3 PROJECT MAINTENANCE

- A. Contractor shall properly maintain the project and storage area during the life of the Contract. Upon completion of Work, Contractor shall dismantle storage area and shall provide general cleanup along the project site.

END OF SECTION



## SECTION 01601

### CONTROL OF MATERIALS

#### PART 1 - GENERAL

##### 1.1 APPROVAL OF MATERIALS

- A. Unless otherwise specified, only new materials and equipment shall be incorporated in the work. All materials and equipment furnished by Contractor shall be subject to the inspection and approval of Engineer. No material shall be delivered to the work without prior approval of Engineer.
- B. As specified in Section 01340, Contractor shall submit to Engineer, data relating to materials and equipment he proposes to furnish for the work. Such data shall be in sufficient detail to enable Engineer to identify the particular product and to form an opinion as to its conformity to the Specifications.
- C. Facilities and labor for handling and inspection of all materials and equipment shall be furnished by Contractor. If Engineer requires, either prior to beginning or during the progress of the work, Contractor shall submit additional samples or materials for such special tests as may be necessary to demonstrate that they conform to the specifications. Such samples shall be furnished, stored, packed, and shipped as directed at the Contractor's expense. Except as otherwise noted, Owner will make arrangements for and pay for the tests.
- D. Any delay of approval resulting from Contractor's failure to submit samples or data promptly shall not be used as a basis of claim against Owner or Engineer.
- E. In order to demonstrate the proficiency of workmen or to facilitate the choice among several textures, types, finishes, and surfaces, Contractor shall provide such samples of workmanship or finish as may be required.
- F. The materials and equipment used on the work shall correspond to the approved samples or other data.

##### 1.2 HANDLING AND STORAGE OF MATERIALS

- A. All materials and equipment to be incorporated in the work shall be handled and stored by manufacturer, fabricator, supplier and Contractor before, during and after shipment in a manner to prevent warping, twisting, bending, breaking chipping, rusting, and any injury, theft or damage of any kind whatsoever to the material or equipment.

- B. Contractor shall store media shall be stored under a roof and off the ground and shall be kept completely dry at all times.
- C. All mechanical equipment subject to corrosive damage by the atmosphere if stored outdoors (even though covered by canvas) shall be stored in a building by Contractor to prevent injury. The building may be a temporary structure on the site or elsewhere, but it must be satisfactory to Engineer.
- D. All materials which, in the opinion of Engineer, have become so damaged as to be unfit for the use intended or specified shall be promptly removed from the site of the Work by Contractor, and Contractor shall receive no compensation for the damaged material or its removal.

END OF SECTION

## SECTION 01610

### PRODUCT HANDLING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor shall protect products scheduled for use in the Work by means including, but shall not necessarily be limited to, those described in this section.
- B. Related work:
  - 1. Documents affecting Work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Additional procedures also may be prescribed in other Sections of these Specifications.
- C. Only new materials and equipment shall be incorporated into the Work.

##### 1.2 QUALITY ASSURANCE

- A. Include within Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.
- B. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 MANUFACTURERS' RECOMMENDATIONS

- A. Except as otherwise approved by Engineer, determine and comply with manufacturers' recommendations on product handling, storage, and protection.

##### 1.4 PACKAGING

- A. Contractor shall deliver products to the job site in their manufacturer's original container, with labels intact and legible.
  - 1. Contractor shall maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Contractor shall promptly remove damaged material and unsuitable items from the job site, and promptly replace with material meeting the specified requirements, at no additional cost to Owner.

- B. Engineer may reject as non-complying such material and products that do not bear identification satisfactory to Engineer as to manufacturer, grade, quality, and other pertinent information.

#### 1.5 PROTECTION

- A. Contractor shall protect finished surfaces, including jambs and soffits of openings used as passageways, through which equipment and materials are handled.
- B. Contractor shall provide protection for finished floor surfaces in traffic areas prior to allowing equipment or materials to be moved over such surfaces.
- C. Mechanical equipment subject to damage by the atmosphere if stored outdoors, even though covered by canvass, shall be stored in a building with a controlled environment. The building may be a temporary structure on the site or a building off location.

#### 1.6 REPAIRS AND REPLACEMENTS

- A. In event of damage, Contractor shall promptly make replacements and repairs to the approval of Engineer and at no additional cost to Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by Engineer to justify an extension in the Contract Time of Completion.

END OF SECTION

## SECTION 01700

### CONTRACT CLOSEOUT

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor shall provide an orderly and efficient transfer of the completed Work to Owner.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. "Substantial Completion" is defined in Par. 1.38 of the General Conditions.

##### 1.2 QUALITY ASSURANCE

- A. Prior to requesting inspection by Engineer, Contractor shall use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested inspection.
- B. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 PROCEDURES

- A. Substantial Completion:
  - 1. Within a reasonable time after receipt of the request to inspect, Engineer will inspect to determine status of completion.
  - 2. Should Engineer determine that the work is not substantially complete:
    - a. Engineer promptly will so notify Contractor, in writing, giving the reasons therefore.
    - b. Remedy the deficiencies and notify Engineer when ready for reinspection.
    - c. Engineer will reinspect the Work.
  - 3. When Engineer concurs that the Work is substantially complete:
    - a. The Engineer will prepare a "Certificate of Substantial Completion", on AIA Form G704, accompanied by the Contractor's list of items to be completed, as verified by the Engineer.
    - b. Engineer will submit the Certificate to Owner and to Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

- B. Final Completion:
1. Contractor shall verify that the Work is complete.
  2. Contractor shall certify that:
    - a. Contract Documents have been reviewed
    - b. Work has been inspected for compliance with the Contract Documents;
    - c. Work has been completed in accordance with the Contract Documents;
    - d. Equipment and systems have been tested as required, and are operational;
    - e. Work is completed and ready for final inspection.
  3. Engineer shall make an inspection to verify status of completion.
  4. Should Engineer determine that the Work is incomplete or defective:
    - a. Engineer promptly will so notify Contractor, in writing, listing the incomplete or defective work.
    - b. Remedy the deficiencies promptly and notify Engineer when ready for reinspection.
  5. When Engineer determines that the Work is acceptable under the Contract Documents, he will request Contractor to make closeout submittals.
- C. Closeout submittals include, but are not necessarily limited to:
1. Operation and maintenance manuals for items so listed in pertinent other sections of these Specifications, and for other items when so directed by the Engineer;
  2. Warranties and bonds;
  3. Spare parts and materials extra stock;
  4. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
    - a. Certificates of Inspection;
    - b. Certificates of Occupancy;
  5. Certificates of Insurance for products and completed operations;
  6. Evidence of payment and release of liens;
  7. List of subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

#### 1.4 INSTRUCTION

- A. Instruct Owner's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work.

END OF SECTION

## SECTION 01710

### CLEANING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Throughout the construction period, Contractor shall maintain the buildings and site in a standard of cleanliness as described in this Section.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. In addition to standards described in this Section, comply with requirements for cleaning as described in pertinent other Sections of these Specifications.

##### 1.2 QUALITY ASSURANCE

- A. Contractor shall conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.
- B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

#### PART 2 - PRODUCTS

##### 2.1 CLEANING MATERIALS AND EQUIPMENT

- A. Contractor shall provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

##### 2.2 COMPATIBILITY

- A. Contractor shall use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

#### PART 3 - EXECUTION

##### 3.1 PROGRESS CLEANING

- A. General:

1. Contractor shall retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.
  2. Contractor shall not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
  3. Contractor shall at least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
  4. Contractor shall provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- B. Site:
1. Daily, and more often if necessary, Contractor shall inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
  2. Weekly, and more often if necessary, Contractor shall inspect all arrangements of materials stored on the site. Restack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.1-A-1 above.
  3. Contractor shall maintain the site in a neat and orderly condition at all times.
- C. Structures:
1. Weekly, and more often if necessary, Contractor shall inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
  2. Weekly, and more often if necessary, Contractor shall sweep interior spaces clean.
    - a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
  3. As required preparatory to installation of succeeding materials, Contractor shall clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.
  4. Following the installation of finish floor materials, Contractor shall clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials are installed.
    - a. "Clean," for the purpose of this subparagraph, shall be interpreted as meaning free from foreign material which, in the opinion of the Engineer, may be injurious to the finish floor material.

### 3.2 FINAL CLEANING

- A. "Clean," for the purpose of this Article, and except as may be specifically provided otherwise, shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work, Contractor shall remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Contractor shall conduct final progress cleaning as described in Article 3.1 above.



- C. Site:
  - 1. Unless otherwise specifically directed by Engineer, Contractor shall broom clean paved areas on the site and public paved areas adjacent to the site.
  - 2. Completely remove resultant debris.
- D. Structures:
  - 1. Exterior:
    - a. Contractor shall visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter caused during construction.
    - b. Contractor shall remove all traces of splashed materials from adjacent surfaces.
    - c. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.
    - d. In the event of stubborn stains not removable with water, Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.
  - 2. Interior:
    - a. Contractor shall visually inspect interior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter caused during construction.
    - b. Contractor shall remove all traces of splashed material from adjacent surfaces.
    - c. Contractor shall remove paint droppings, spots, stains, and dirt from finished surfaces.
- E. Contractor shall schedule final cleaning as approved by Engineer to enable Owner to accept a completely clean Work.

### 3.3 CLEANING DURING OWNER'S OCCUPANCY

- A. Should Owner occupy the Work or any portion thereof prior to its completion by Contractor and acceptance by Owner, responsibilities for interim and final cleaning shall be as determined by Engineer in accordance with the General Conditions of the Contract.

END OF SECTION

## SECTION 01730

### OPERATION AND MAINTENANCE DATA

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Work included: To aid the continued instruction of operating and maintenance personnel, and to provide a positive source of information regarding products incorporated into the Work, Contractor shall furnish and deliver the data described in this Section and in pertinent other Sections of these Specifications.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Required contents of submittals also may be amplified in pertinent other Sections of these Specifications.

##### 1.2 QUALITY ASSURANCE

- A. In preparing data required by this Section, Contractor shall use only personnel who are thoroughly trained and experienced in operation and maintenance of the described items, completely familiar with the requirements of this Section, and skilled in technical writing to the extent needed for communicating the essential data.
- B. Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Contractor shall comply with pertinent provisions of Section 01340.
- B. Contractor shall submit two copies of a preliminary draft of the proposed Manual or Manuals to the Engineer for review and comments.
- C. Unless otherwise directed in other Sections, or in writing by Engineer, Contractor shall submit three copies of the final Manual to Engineer prior to indoctrination of operation and maintenance personnel.

## PART 2 - PRODUCTS

### 2.1 INSTRUCTION MANUALS

- A. Where instruction Manuals are required to be submitted under other Sections of these Specifications, Contractor shall prepare in accordance with the provisions of this Section.
- B. Format:
1. Size: 8-1/2" x 11"
  2. Paper: White bond, at least 20 lb weight
  3. Text: Neatly typed
  4. Drawings: 11" in height preferable; bind in with text; foldout acceptable; larger drawings acceptable but fold to fit within the Manual and provide a drawing pocket inside rear cover or bind in with text.
  5. Flysheets: Separate each portion of the Manual with neatly prepared flysheets briefly describing contents of the ensuing portion; flysheets may be in color.
  6. Tabs: Provide tab sheets with section labels to identify contents of section. Tabs to be attached to heavy-duty paper designed with an attached label holder.
  7. Binding: Use heavy-duty plastic or fiberboard covers with binding mechanism concealed inside the Manual; 3-ring binders are required.
  8. Measurements: Provide all measurements in U.S. standard units such as feet-and-inches, lbs, and cfm; where items may be expected to be measured within ten years in accordance with metric formulae, provide additional measurements in the "International System of Units" (SI).
- C. Contractor shall provide front and back covers for each Manual, using durable material approved by Engineer, and clearly identified on or through the cover with at least the following information:

#### OPERATING AND MAINTENANCE INSTRUCTIONS

( name and address of Work )  
( name of Contractor )  
( general subject of this Manual )  
( space for signature of )  
( the Engineer, and approval date )

- D. Contents: Contractor shall include at least the following:
1. Neatly typewritten index near the front of the Manual, giving immediate information as to location within the Manual of all emergency information regarding the installation.

2. Complete instructions regarding operation and maintenance of all equipment involved including lubrication, disassembly, and reassembly.
  3. Complete nomenclature of all parts of the equipment.
  4. Complete nomenclature and part number of all replaceable parts, name and address of nearest vendor, and all other data pertinent to procurement procedures.
  5. Copy of all guarantees and warranties issued.
  6. Manufacturers' bulletins, cuts, and descriptive data, where pertinent, clearly indicating the precise items included in this installation and deleting, or otherwise clearly indicating, all manufacturers' data with which this installation is not concerned.
  7. Such other data as required in pertinent other Sections of these Specifications.
- E. Contractor to also provide the entire O&M manual in electronic format, PDF.

## PART 3 - EXECUTION

### 3.1 INSTRUCTION MANUALS

- A. Preliminary:
1. Contractor shall prepare a preliminary draft of each proposed Manual.
  2. Contractor shall show general arrangement, nature of contents in each portion, probable number of drawings and their size, and proposed method of binding and covering.
  3. Contractor shall secure Engineer's approval prior to proceeding.
- B. Final: Complete the Manuals in strict accordance with the approved preliminary drafts and the Engineer's review comments.
- C. Revisions:
1. Following the indoctrination and instruction of operation and maintenance personnel, Contractor shall review all proposed revisions of the Manual with Engineer.
  2. If Contractor is required by Engineer to revise previously approved Manuals, compensation will be made as provided for under "Changes" in the General Conditions.

END OF SECTION

## INDEX

### DIVISION 3 - CONCRETE

| <u>Section</u> | <u>Subject</u>         | <u>Page</u>           |
|----------------|------------------------|-----------------------|
| 03100          | Concrete Formwork      | 03100-1 thru 03100-5  |
| 03200          | Concrete Reinforcement | 03200-1 thru 03200-4  |
| 03202          | Wall Penetration       | 03202-1 thru 03202-4  |
| 03300          | Cast-In-Place Concrete | 03300-1 thru 03300-17 |
| 03345          | Concrete Finishing     | 03345-1 thru 03345-3  |

## SECTION 03100

### CONCRETE FORMWORK

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide formwork in accordance with provisions of this Section for cast-in-place concrete as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 03200 Concrete Reinforcement
  - 3. Section 03300 Cast-In-Place Concrete

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Design, construction and safety of formwork is the Contractor's responsibility.
- C. Standards: In addition to complying with pertinent regulations of governmental agencies having jurisdiction, comply with pertinent provisions of ACI 347.
- D. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

#### PART 2 - PRODUCTS

##### 2.1 FORM MATERIALS

- A. Except for metal forms, use new materials. Materials may be reused during progress of the Work, provided they are completely cleaned and reconditioned, recoated for each use, and capable of producing formwork of the required quality.

- B. For footing and foundations, use Douglas Fir boards or planks secured to wood or steel stakes, substantially constructed to shapes indicated and to support the required loads.
- C. For studs, wales, and supports, use Standard grade or better Douglas Fir, dimensions as required to support the loads but not less than 2" x 4".
- D. Forms:
  - 1. Exposed exterior and interior concrete surfaces:
    - a. Use 3/4" minimum thickness Douglas Fir plywood, grade B/B, class I, exterior, sanded both sides, complying with PS-1.
    - b. Seal edges and coat both faces with colorless coating which will not affect application of applied finishes.
  - 2. Unexposed concrete surfaces:
    - a. Use 1" x 6" shiplap Douglas Fir boards, surfaced one side and two edges, or 3/4-inch minimum thickness Douglas Fir plywood, grade B/B plyform class I or II, sanded both sides, mill-oiled.
- E. Column forms, if required:
  - 1. For square or rectangular columns, use 2-inch thick Douglas Fir planks or joists, surfaced one side and two edges, or use metal forms.
  - 2. For round columns, use metal forms or patented paper tube forms approved by the Engineer.
  - 3. Construct column forms with tight joints and securely clamped together with steel clamps.

## 2.2 FORM TIES

- A. The following types of form ties shall be used in the Work:
  - 1. Below grade: Snap-tie with water stop
  - 2. Above grade: Screw-tie with cones
  - 3. All concrete tanks and chambers shall have ties with water stops.

## 2.3 DESIGN OF FORMWORK

- A. General:
  - 1. Design, erect, support, brace, and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure.
  - 2. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.
  - 3. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position.
  - 4. Design forms and false work to include assumed values of live load, dead load, weight of moving equipment operated on the formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of the structure during construction.

5. Provide shores and struts with positive means of adjustment capable of taking up formwork settlement during concrete placing operations, using wedges or jacks or a combination thereof.
6. Provide trussed supports when adequate foundations for shores and struts cannot be secured.
7. Support form materials by structural members spaced sufficiently close to prevent objectionable deflection.
8. Fit forms placed in successive units for continuous surfaces to accurate alignment, free from irregularities, and within the allowable tolerances.
9. Provide formwork sufficiently tight to prevent leakage of cement paste during concrete placement. Solidly butt joints, and provide backup material at joints as required to prevent leakage and prevent fins.
10. Provide camber in formwork as required for anticipated deflections due to weight and pressures of fresh concrete and construction loads.

### PART 3 - EXECUTION

#### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

#### 3.2 FORM CONSTRUCTION

- A. General:
  1. Construct forms complying with the pertinent Sections of ACI 347 to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.
  2. Tolerances as stated in the pertinent Section of ACI 117.
  3. Provide for openings, offsets, keyways, recesses, sleeves, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features as required.
- B. Fabrication:
  1. Fabricate forms for easy removal without hammering or prying against concrete surfaces.
  2. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces.
  3. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and assure ease of removal.
  4. Provide top forms for inclined surfaces.
- C. Forms for exposed concrete:
  1. Drill forms to suit ties being used, and to prevent leakage of cement paste around tie holes. Do not splinter forms by driving ties through improperly prepared holes.



2. Provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back the joints with extra studs or girts to maintain true, square intersections.
  3. Use extra studs, wales, and bracing to prevent bowing of forms between studs, and to avoid bowed appearance in concrete. Do not use narrow strips of form material which will produce bow.
- D. Corner treatment:
1. Unless shown otherwise, form chamfers with 3/4" x 3/4" strips, accurately formed and surfaced to produce uniformly straight lines and tight edges.
  2. Extend terminal edges to required limit, and miter the chamfer strips at changes in direction.
- E. Provisions for other trades:
1. Provide openings in concrete formwork to accommodate work of other trades.
  2. Verify size and location of openings, recesses, and chases with the trade requiring such items.
  3. Accurately place and securely support items to be built into the concrete.

### 3.3 FORM COATINGS

- A. Coat form contact surfaces with form coating compound before reinforcement is placed.
1. Do not allow excess form coating material to accumulate in the forms or to come in contact with surfaces which will bond to fresh concrete.
  2. Apply the form coating material in strict accordance with its manufacturer's recommendations.
  3. Insure that no form coatings get on the reinforcement.

### 3.4 REMOVAL OF FORMS

- A. General:
1. Forms shall not be removed until the concrete has attained a strength of at least 30 percent of its ultimate strength, prescribed by the design and not before reaching the following number of day-degrees, whichever is longer:

| <u>FORMS</u>                | <u>DAY-DEGREE*</u> |
|-----------------------------|--------------------|
| Walls and Vertical Surfaces | 120                |
| Beams and Slabs             | 500                |

\* at Day-degree: The total number of days, times - their average daily air temperature the surface of the concrete.

Example: 4 days an average daily air temperature of 55°F equal 220 day-degrees. Temperatures below 50°F shall not be included.

- B. Finished surfaces:

1. Exercise care in removing forms from finished concrete surfaces so that surfaces are not marred or gouged.
2. Release sleeve nuts or clamps, and pull the form ties neatly.
3. Do not permit steel spreaders, form ties, or other metal to project from, or be visible on, any concrete surface.
4. Solidly pack form tie holes, rod holes, and similar holes in the concrete. For packing, use the cement grout specified in Section 03300 of these Specifications, flushing the holes with water before packing, screeding off flush, and finishing to match adjacent surfaces.

END OF SECTION

## SECTION 03200

### CONCRETE REINFORCEMENT

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide concrete reinforcement as required by the Contract Documents.
  - 1. Seismic reinforcing to be furnished under this Specification.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 03100 Concrete Formwork
  - 3. Section 03300 Cast-In-place concrete

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Comply with pertinent provisions of the following, except as may be modified herein:
  - 1. ACI 318 Details of Reinforcement
  - 2. CRSI "Manual of Standard Practice." (ACI-315)
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 14 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
  - 3. Shop Drawings showing details of bars, anchors, and other items, if any, provided under this Section.

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.
- B. Delivery and storage:
  - 1. Use necessary precautions to maintain identification after bundles are broken.
  - 2. Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond-breaking coatings.
  - 3. Bundles shall be stored off the ground and protected from injurious contaminants.

## PART 2 - PRODUCTS

### 2.1 REINFORCEMENT MATERIALS AND ACCESSORIES

- A. Bars:
  - 1. Provide deformed billet steel bars complying with ASTM A615, using grades shown on the Drawings.
  - 2. Where grades are not shown on the Drawings, use grade 60.
- B. Steel wire:
  - 1. For tie wire, comply with Fed Spec QQ-W-461, annealed steel, black, 16 gage minimum.
- C. Welded wire fabric:
  - 1. Provide welded steel, complying with ASTM A185.
- D. Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcement in place:
  - 1. Use wire bar type supports according to and complying with CRSI recommendations, unless otherwise shown on the Drawings.
  - 2. Do not use wood, brick, or other non-complying material.
  - 3. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
  - 4. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with plastic-protected legs.

### 2.2 FABRICATION

- A. General:
  - 1. Fabricate reinforcing bars to conform to the required shapes and dimensions, with fabrication tolerances complying with the CRSI Manual.
  - 2. In case of fabricating errors, do not straighten or rebend reinforcement in a manner that will weaken or injure the material.
  - 3. Reinforcement with any of the following defects will not be acceptable.
    - a. Bar lengths, depths, and/or bends exceeding the specified fabrication tolerances;
    - b. Bends or kinks not shown on the Drawings;
    - c. Bars with reduced cross-section due to excessive rusting or other causes.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 INSTALLATION

- A. General:
  - 1. Comply with the specified standards for detail and method of placing reinforcement and supports, except as may be modified herein.
  - 2. Clean reinforcement to remove loose rust and mill scale, earth, and other materials which reduce or destroy bond with concrete.
  - 3. Position, support, and secure reinforcement against displacement by formwork, construction, and concrete placing operations.
  - 4. Locate and support reinforcement by metal chairs, runners, bolsters, spacers, and hangers, as required.
  - 5. Place reinforcement to obtain minimum coverages for concrete protection.
  - 6. Arrange, space, and securely tie bars and bar supports together with the specified wire.
  - 7. Set tie wires so twisted ends are directed away from exposed concrete surfaces.
  - 8. Place additional reinforcement around all openings.
- B. Install welded wire fabric in as long lengths as practicable, lapping adjoining pieces at least eight (8) inches.
- C. Provide sufficient numbers of supports, and of strength to carry the reinforcement.
- D. Do not place reinforcing bars more than 2" beyond last leg of any continuous bar support.
- E. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
- F. Except as otherwise indicated on the Drawings, the minimum concrete cover of reinforcement shall be as follows:
  - 1. Concrete cast against and permanently exposed to earth; 3-in.
  - 2. Concrete surfaces in contact with soil, water, sewage, sludge or exposed to the weather; 2-in.
  - 3. Concrete surfaces not in contact with soil, water, sewage, sludge or exposed to the weather.
    - a. Beams, girders, columns: principal reinforcement, ties, stirrups or spirals; 1-1/2-inch
    - b. Walls and bottom steel of slabs; 3/4-inch
    - c. Shells and top steel of slabs; 3/4-inch

### 3.3 SPLICES

- A. Lap splices:
  - 1. Tie securely with the specified wire to prevent displacement of splices during placement of concrete.
  - 2. Except as otherwise indicated on the Drawings, compression embedment and lap splices shall be 36 diameters, but not less than 12-inches.
- B. Splice devices:
  - 1. Obtain the Engineer's approval prior to using splice devices.
  - 2. Install in accordance with manufacturer's written instructions.
  - 3. Splice in a manner developing at least 125% of the yielding strength of the bar.
- C. Welding: No reinforcing bars shall be welded either during fabrication or erection.
- D. Do not splice bars except at locations shown on the Approved Shop Drawings, except as otherwise specifically approved by the Engineer.

### 3.4 IN PLACE INSERTION

- A. Notify the Engineer at least 24 hours in advance of any concrete placement so that he may inspect the arrangement of reinforcing steel. Place no concrete until the inspection has been made or waived by the Engineer.

END OF SECTION

## SECTION 03202

### WALL PENETRATION/CONCRETE RESTORATION

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Item Includes
  - 1. Cutting required openings and installing conduit and providing a watertight seal for each conduit.

##### 1.2 RELATED SECTIONS

- A. Section 16110 Raceways and Fittings

##### 1.3 REFERENCES

- A. Structural Steel Painting Council (SSPC), 1991: Surface Preparation Specification. No. 6 – Commercial Blast Cleaning.
- B. ACI 301-89, Specification for Structural Concrete for Buildings.
- C. ACI 30-92, Standard Practice for Curing Concrete.

##### 1.4 SUBMITTALS

- A. Comply with requirements of Section 01340 – Submittals and Substitutions.
- B. Manufacturer's technical data on all manufactured products including preparation, installation, application, finishing and curing procedures, and temperature limitations. Submit detailed surface preparation method and procedure complying with manufacturer's recommendations.
- C. Type and sample of proposed anchors for replacement reinforcement.
- D. Design of watertight wall penetrations. Work to be completed by Approved Concrete Specialty Contractor.

##### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all materials in cool, dry conditions in the original unopened bags or cans, and in strict accordance with manufacturer's directions. Do not use materials that have been stored for periods longer than the manufacturer's recommended shelf life.

##### 1.6 QUALITY ASSURANCE

A. Qualifications & Experience

1. The Contractor or subcontractor who will be completing the wall penetration work under this section shall be an Approved Concrete Specialty Contractor as defined in Section 00100 and 01800 experienced in the rehabilitation of concrete water tanks.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Patching material: Thorite by Thoro System Products, Speedcrete Redline, Tamms Patch II, Tamms Spray Mortar by Euclid Chemical Company or other approved equal.
- B. Anti-corrosion Reinforcing Primer: ECB by Conproco, Dural Prep AC by Tamms, or other approved equal.
- C. Replacement Reinforcement: welded steel wire fabric conforming to ASTM A185, galvanized.
- D. Replacement Reinforcement Anchors: ¼ in. x 1 ½ in. stainless steel expansion anchors or stainless steel concrete anchor screws as manufactured by the Rawlplug Co., Inc., New Rochelle, NY 10802, WEJ-IT, Tulsa, OK 74152, Hilti, Tulsa, OK 74121, Tapcon, or other approved equal.
- E. All necessary materials including mechanical pipe seal, grout and other materials required to provide a long term watertight seal shall be submitted for approval.
- F. Pipe to be as specified under Section 02610.

PART 3 - EXECUTION

3.1 PROCEDURES

- A. Removal of Unsound Concrete
  1. Where required to create a watertight seal, remove loose and unsound concrete with appropriate chipping hammer to sound shotcrete with a minimum depth of 3/8 in. over the complete repair area, except do not cut any sound (substantially uncorroded) mesh reinforcing.
- B. Surface Preparation
  1. Where required to create a watertight seal, clean the surface by removing any dust, unsound or contaminated material, laitance, and corrosion deposits. Clean loose corrosion deposits from exposed reinforcing. Where chipping is not required to remove unsound material, roughen the surface and remove any laitance by light scrubbing. High-pressure wash with clean water, at a minimum pressure of 3,500 psi, prior to priming exposed reinforcing and substrate.



- C. If required, install replacement reinforcement wire mesh where existing reinforcing is no longer present.
1. Reinforcement shall consist of a single piece over the full extent of the patch.
  2. Reinforcement shall be lapped over and tied to existing reinforcement where it is practical to expose existing reinforcing without damaging it.
  3. When adjacent existing reinforcing cannot be exposed without damage, anchor new reinforcing to existing concrete with expansion anchors, spaced approximately 16 inches on center with a minimum of 4 anchors per patched area.
- D. If exposed during installation of wall penetrations, prime exposed existing reinforcing steel by applying one full coat of approved priming material. Allow to dry before applying patching. If any doubt exists about having achieved an unbroken coating, a second application shall be made and, again, allowed to dry before applying patching.
- E. Prime substrate after it is saturated surface dry (i.e.: thoroughly soaked with clean water and any excess water removed) with a slurry of the repair mortar in accordance with the manufacturer's directions. Using a stiff mason's brush, the slurry shall be scrubbed into the substrate where access is not impeded by new wire mesh reinforcing. The repair mortar shall be installed as soon as the slurry becomes tacky and before it dries.
- F. Mix patching mortar in strict accordance with manufacturer's directions. Use only material from original bags and containers.
- G. Application of patching mortar.
1. Exposed steel reinforcing bars and welded wire fabric shall be firmly secured to avoid movement during the application process, as this will affect mortar compaction, build and bond.
  2. Apply the patching mortar to the prepared substrate by gloved hand or trowel. First, work a thin layer of the mortar into the slurry and then build the mortar onto this layer. Thoroughly compact the mortar onto the primed substrate and around the exposed reinforcement.
  3. Apply the patching mortar in strict accordance with the manufacturer's directions.
  4. If sagging occurs during applications, the patching mortar shall be completely removed and reapplied at a reduced thickness onto the correctly re-primed substrate.
- H. Finish the patching mortar by striking off with a straight edge and closing with a steel float. The completed surface shall not be overworked.
- I. Low temperature conditions: In cold weather, normal precautions for winter when working with cementitious materials shall be adopted. The material shall not be applied when the substrate and/or air temperature is 45°F (7°C) and falling. At 45°F (7°C) static temperature or at 45°F (7°C) and rising, the application may proceed. Do not apply if the temperature is expected to fall below 45°F (7°C) within 24 hours of application. Comply with manufacturer's directions for cold weather applications.
- J. High temperature conditions at ambient temperatures about 80°F (26°C), the materials shall be stored in the shade. Comply with manufacturer's directions for hot weather applications.

- K. Water cure finished surfaces of patches using fine mist spray or wet burlap against surface for a minimum of seven (7) days after initial set of patch material.

END OF SECTION

## SECTION 03300

### CAST-IN-PLACE CONCRETE

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide cast-in-place concrete where shown on the Drawings, as specified in this section and as needed for a complete and proper installation.
- B. Related concreting and other appurtenant sections affecting the work of this Section include but are not limited to Division 1 and Division 2 Sections and Section 07200.
- C. Provide cure and finish of cast-in-place as, as specified in this section and applicable portions of Section 03345.
- D. Provide protection of cast-in-place concrete during subsequent construction operations.

##### 1.2 QUALITY ASSURANCE

- A. Comply with the pertinent sections of the following Codes, Standards and Specifications. These Codes, Standards and Specifications indicate the minimum standards required for the work of this contract:
  - 1. 780 CMR The Massachusetts State Building Code, 6<sup>th</sup> ed.
  - 2. AASHTO T26 Quality of Water to be Used in Concrete
  - 3. ACI 211.1-91 Standard Practice for Selecting Proportions of Normal, Heavy Weight and Mass Concrete
  - 4. ACI 228.1R-03 In-Place Methods to Estimate Concrete Strength
  - 5. ACI 301-99 Specifications for Structural Concrete
  - 6. ACI 302.1R-04 Guide for Concrete Floor and Slab Construction
  - 7. ACI 304R-00 Guide for Measuring, Mixing, Transporting and Placing Concrete
  - 8. ACI 304.2R-96 Placing Concrete by Pumping Methods
  - 9. ACI 305R-99 Hot Weather Concreting
  - 10. ACI 306R-88 Cold Weather Concreting
  - 11. ACI 308R-01 Standard Practice for Curing Concrete
  - 12. ACI 309R-05 Guide for Consolidation of Concrete
  - 13. ACI 311.4R-05 Guide for Concrete Inspection
  - 14. ACI 318-99 Building Code Requirements for Structural Concrete and Commentary
  - 15. ACI 347-04 Guide to Formwork for Concrete
  - 16. ACI SP-15(05) Field Reference Manual: Standard Specifications for Structural Concrete ACI 301-05 with Selected ACI Reference
  - 17. ASTM C31 Practice for Making and Curing Concrete Test Specimens in the Field
  - 18. ASTM C33 Specification for Concrete Aggregates

|     |            |  |
|-----|------------|--|
| 19. | ASTM C39   | Test Method for Compressive Strength of Cylindrical Concrete Specimens   |
| 20. | ASTM C40   | Test Method for Organic Impurities in Fine Aggregates for Concrete   |
| 21. | ASTM C42   | Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete  |
| 22. | ASTM C94   | Specification for Ready-Mixed Concrete   |
| 23. | ASTM C138  | Test Method for Unit Weight, Yield and Air Content (Gravimetric) of Concrete   |
| 24. | ASTM C143  | Test Method for Slump of Hydraulic Cement Concrete   |
| 25. | ASTM C150  | Specification for Portland Cement  |
| 26. | ASTM C171  | Specification for Sheet Materials for Curing Concrete  |
| 27. | ASTM C172  | Practice for Sampling Freshly Mixed Concrete   |
| 28. | ASTM C192  | Practice for Making and Curing Concrete Test Specimens in the Laboratory   |
| 29. | ASTM C213  | Test Method for Lightweight Pieces in Aggregate  |
| 30. | ASTM C231  | Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method   |
| 31. | ASTM C260  | Specification for Air-Entraining Admixtures for Concrete   |
| 32. | ASTM C289  | Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method)   |
| 33. | ASTM C309  | Specification for Liquid Membrane-Forming Compounds for Curing Concrete  |
| 34. | ASTM C311  | Test Method for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland Cement            |
| 35. | ASTM C494  | Specification for Chemical Admixtures for Concrete   |
| 36. | ASTM C618  | Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete |
| 37. | ASTM C900  | Test Method for Pullout Strength of Hardened Concrete  |
| 38. | ASTM C989  | Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars   |
| 39. | ASTM C1064 | Test Method for Temperature of Freshly Mixed Portland Cement Concrete  |
| 40. | ASTM C1074 | Practice for Estimating Concrete Strength by the Maturity Method   |
| 41. | ASTM C1107 | Specified for Packaged Dry, Hydraulic-Cement Grout (Non-shrink)  |
| 42. | ASTM C1240 | Standard Specification for Silica Fume for Use in Hydraulic-Cement Concrete and Mortar   |
| 43. | ASTM D41   | Primer for use with Asphalt in Damp proofing and Waterproofing   |
| 44. | ASTM D75   | Practice for Sampling Aggregates   |
| 45. | ASTM E154  | Test Method for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls or as Ground Cover             |

- 46. ASTM E329 Specification for Agencies Engaged in the Testing and/or Inspection of Material Used in Construction
- 47. Truck Mixer Manufacturer's Bureau – Truck Mixer and Agitating Standards
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.
- D. Perform concrete work in conformance with ACI 301-99 unless otherwise indicated or specified.
- E. The Contractor shall maintain a copy of ACI SP-15(05) *Field Reference Manual: Standard Specifications for Structural Concrete ACI 301-05 with Selected ACI Reference*, in their job site field office and be thoroughly familiar the content of this document.
- F. Contractor shall provide written protocol of test procedure to be employed in early age strength determinations, to be done in conformance to ACI 228.1R-03.
- G. The Contractor's independent laboratory shall provide standard slump, entrained air, mixing percentage and compression testing for all cast-in-place concrete pouring events.
- H. Concrete strength tests shall be taken in accordance with the latest revision of ACI 318-99.
- I. Produce new concrete design mixes at no additional cost to the Owner when job site concrete is not of required strength. Provide additional testing when original sample materials produce unsatisfactory results or new material sources are to be used. All additional testing shall be done by the same testing laboratory at no additional cost to the Owner.
- J. Concrete shall be cured in conformance with the latest revision of ACI 318-99. Curing methods shall be continued for three days or until the concrete has reached 70% of the specified compressive strength.
- K. Acceptance of Structure: Acceptance of complete concrete work requires conformance with dimensional tolerances, appearance and strength as indicated or specified.

### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. The items under this section that require submittals are listed as, but not limited to the following:

1. Name and address of proposed Contractor's testing laboratory firm and a brief description of prior work that is similar to that proposed for this project. Provide prior work owner's full name, address and telephone number. ASTM E329 will also be used as one of the basis for evaluating the testing laboratory firm.
  2. Concrete design mixes and results of strength tests from trial concrete mixes by the Contractor's testing laboratory firm (as per Paragraph 3.8.B of this Section).
  3. Material test results by the Contractor's testing laboratory.
    - a. Fineness modulus of fine aggregate
    - b. Fine aggregate organic impurities per ASTM C40
    - c. Fine aggregate mortar strength per ASTM C87
    - d. Fine aggregate soundness per ASTM C33
    - e. Course aggregate soundness per ASTM C88
    - f. Course aggregate chert per ASTM C33 and C123
  4. Proposed measures for complying with ACI Code 305R-99 Hot Weather Concreting, as applicable.
  5. Proposed measures for complying with ACI Code 306R-88 Cold Weather Concreting, as applicable
  6. Mill test reports for each shipment of cement, regardless of quantity, prior to incorporation into the work.
  7. Manufacturer's specifications and instructions for all admixtures, curing materials, adjustable inserts and non-shrink non-metallic grout.
  8. Owner may accept previously established design mixes if all test results have been completed within the previous 6-month period, are certified by a recognized testing laboratory and provide comprehensive and satisfactory evidence of full compliance with these specifications. Additional testing and documentation may be necessary if Owner determines the submitted test results are insufficient.
- C. Manufacturer's specifications and cut sheets shall be clearly marked with the specific product, size material and other defining characteristics denoted to provide compliance with specified requirements.
- D. The Contractor shall assemble and send six (6) copies of the items listed above to the Engineer in a timely fashion, but in no event later than the date that will ensure receipt by the Engineer within fourteen (14) days of the Contractor's receipt of the Notice to Proceed.

#### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610 – Product Handling.
- B. Order concrete from batching plant so that trucks arrive at discharge locations when concrete is required. Avoid over mixing concrete or delays in placing successive layers of concrete in forms.
- C. Deliver concrete to discharge locations in watertight agitator or mixed trucks without altering the specified properties of water-cement ratio, slump, air entrainment, temperature and homogeneity.

- D. Reject concrete not conforming to Specification, unsuitable for placement, exceeding the time or temperature limitations or not having a complete delivery batch ticket.

## PART 2 - PRODUCTS

### 2.1 CEMENT

- A. Provide a standard brand of Portland cement complying with ASTM C150, type II, low alkali. Use cement of uniform color. Do not change the brand of cement during progress of the Work.
- B. Type I, III and air entraining cement are not permitted without prior review and written approval by the Owner. It is the intent of this contract to air-entrain concrete mixtures through the addition of admixtures at the project site, under careful engineering supervision, to the percent ranges specified in Section 2.4.B of this section.
- C. Maintain minimum cementitious-materials content in conformance with the requirements of ACI 301-99.

### 2.2 AGGREGATES

- A. General:
1. Provide hardrock aggregate complying with ASTM C33-03, with additional attributes as specified herein.
- B. Fine aggregate:
1. Fine aggregate shall consist of washed inert natural sand conforming to the requirements of ASTM Specification C-33-03 or latest revision, and the following detailed requirements:

**TABLE 2.1**

| Sieve | Retained |
|-------|----------|
| ----  | -----    |
| No. 4 | 0-5%     |
| 16    | 25-40    |
| 50    | 70-87    |
| 100   | 93-97    |
| ----  | -----    |

2. Fineness modulus: 2.50 to 3.10
  - a. Organic impurities: Color intensity not darker than 2/3 standard color solutions, nor darker than Organic Plate No. 2, determine by ASTM C40.
  - b. Mortar strength: Determine the effect on mortar strength of the organic impurities in the fine aggregate. The average compression strength ratio shall be a minimum of 95 percent as determined by ASTM C87.

- c. Soundness: Maximum of 10 percent weighted average loss after 5 cycles of magnesium sulfate soundness test as determined by ASTM C33.
- C. Coarse aggregates:
  - 1. Provide coarse aggregate consisting of clean, hard, fine-grained, sound crushed rock or washed gravel, conforming to the requirements of ASTM Specification C-33-03 or latest revision.
  - 2. Use coarse aggregate of the largest practicable size for each condition of placement, subject to the following maximum size limitations:
    - a. 2-inches for plain concrete  
1-inch for reinforced sections 10-inches and over in thickness  
3/4-inch for reinforced sections less than 10-inch thickness
    - b. Soundness: Maximum of 14 percent weighted average loss after 5 cycles of magnesium sulfate soundness test as determined by ASTM C88.
- D. Grade combined aggregates within the limits of Table 2.2.

**TABLE 2.2**

| Sieve size<br>or size<br>in inches: | Percentage by weight passing sieve: |      |               |      |                 |      |
|-------------------------------------|-------------------------------------|------|---------------|------|-----------------|------|
|                                     | 1-1/2" aggregate:                   |      | 1" aggregate: |      | 3/4" aggregate: |      |
|                                     | Min:                                | Max: | Min:          | Max: | Min:            | Max: |
| 1-1/2"                              | 95                                  | ---  | ---           | ---  | --              | ---  |
| 1"                                  | 75                                  | 90   | 90            | 100  | ---             | ---  |
| 3/4"                                | 55                                  | 77   | 70            | 90   | 90              | 100  |
| 3/8"                                | 40                                  | 55   | 45            | 65   | 60              | 80   |
| No. 4                               | 30                                  | 40   | 31            | 47   | 40              | 60   |
| No. 8                               | 22                                  | 35   | 23            | 40   | 30              | 45   |
| No. 16                              | 16                                  | 30   | 17            | 35   | 20              | 35   |
| No. 30                              | 10                                  | 20   | 10            | 23   | 13              | 23   |
| No. 50                              | 2                                   | 8    | 2             | 10   | 5               | 15   |
| No. 100                             | 0                                   | 3    | 0             | 3    | 0               | 5    |

- E. Test aggregates for chart in conformance with ASTM C33 as determined by ASTM C123.
- F. Lightweight aggregate, coarse and fine: Provide rounded, sealed, expanded shale or clay conforming to ASTM C330.

## 2.3 WATER

- A. Use water for concrete, which is potable and free from injurious amounts of oil, acid, alkali, organic matter or other deleterious substances and conforms to the requirements for water in ASTM C94 and as specified.



- B. The maximum water-soluble chloride ion in the water shall not exceed 0.060 percent by weight of cement.
- C. Heat or cool water to obtain acceptable concrete temperatures as specified in Part 3 of this section, and in conformance with ACI 305R-99 and ACI 306R-88.
- D. Water of questionable quality shall be tested in accordance with AASHTO T26.

## 2.4 ADMIXTURES

- A. General Requirements: Chemical admixtures to act as water-reducing agents, retarders, or accelerators, when required or approved, shall conform to ASTM Standard C 494.C494M or latest revision. Admixtures containing chloride ions shall not be used as an admixture. Use only a standard brand of admixture for concrete, approved by the Owner.
  - 1. Maintain compressive strength and maximum water-cement ratios indicated in Table 2.3 when using admixtures. Include all admixtures in solution form in the water-cement ratio calculations.
  - 2. Do not use combinations of admixtures and cements producing erratic or otherwise undesirable results with aggregates.
  - 3. Reject admixtures that have been in storage for longer than six months or which have been subjected to freezing.
  - 4. Do not use admixtures in greater dosages than recommended by manufacturer.
  - 5. Insure that strength of concrete with proposed admixture after 48 hours is not less than strength of similar concrete without admixture.
  - 6. Insure that specified air content is not adversely affected by the admixture.
  - 7. All admixtures to be obtained from one manufacturer.
  - 8. When an air-entraining agent is used, run air content determinations periodically during the placement to make certain the volume of air entrained is not less than minimum requirements of ACI 301-99, for exposure rating and nominal aggregate size.
- B. Air-Entrainment:
  - 1. Air-entraining admixtures shall conform to ASTM Standard C 260-01 or latest revision. They shall be “Darex AEA”, “Vinsol NVX”, “Airecon, “Sika AER”, or approved equal.
  - 2. Total air content by volume in field mixtures of normal weight concrete (ACI 318R-99, Sect. 4.2):
    - a. 4% to 7 % for concrete using 1-1/2 inch maximum aggregate size.
    - b. 4.5 %to 7.5% for concrete using 3/4-inch maximum aggregate size.
  - 3. Measure air content by appropriate means and in conformance with ASTM C231.
- C. Mid-Range Water Reducer:
  - 1. Use admixture conforming to ASTM C494, Type A.
- D. Curing Compound:

1. Liquid compound shall form impervious membrane over exposed surface of concrete and shall be applied to fresh concrete by means of spray gun. Compound shall not prevent future bond of floor covering or concrete floor treatment. Use Type 1-D compound with red fugitive dye, Class B, having 18 percent minimum solids conforming to ASTM C309.
- E. Waterproof Curing Sheet: Waterproof paper or white opaque polyethylene film conforming to ASTM C171.
  1. Cloth, Burlap, Jute or Kenaf: Curing materials conforming to CCC-C-467C.

## 2.5 CONCRETE MIXES

- A. Provide mix designs based on strengths of the approved materials, and meeting the requirements stated on the Drawings and in this Specification Section, conforming to ASTM C94, capable of developing specified characteristics, and being placed without segregation.
  1. Secure the Engineer's approval of each mix design, including new mix designs required to be prepared should there occur a change in materials being used.
- B. Use concrete of strengths as indicated or specified. Use minimum 4,000 psi concrete for all concrete fills, toppings and general cast-in-place structures, unless otherwise indicated or specified. Use 3,500 psi concrete for concrete under foundations or whenever low strength concrete is indicated or specified.
- C. Secure, for every part of work, concrete of homogenous structure having required strength, watertightness and durability. Give careful attention to selection of materials, mixtures, transporting to discharge locations, placing spading vibrating and curing.
- D. Use the following aggregate size for concrete:
  1. 1 1/2-inch for footings, foundation mats and base slabs.
  2. 3/8-inch to fill cored holes or where congestion of reinforcing steel necessitates use of smaller stone to reduce the potential of honeycombing.
  3. 3/4-inch for all other concrete.
- E. Provide concrete meeting the requirements in Table 2.3.

**TABLE 2.3**

| Minimum Compressive Strength At 28 Days (PSI) | Maximum Water Cement Ratio* |
|---|-----------------------------|
| 3,500   | 0.50                        |
| 4,000   | 0.44                        |

\* Total water in mix at time of mixing, including free water in the aggregates and liquid admixtures.

- F. Consistency: Mix concrete to produce homogeneous consistency, capable of being worked into constricted areas of forms, corners and around embedded items, without segregation or bleeding of free water.

- G. Concrete Slump: Provide standard concrete mixtures with a maximum slump of 4-inches at point of delivery. When a high range water reducer (HRWR) is used; the maximum slump shall be 8-inches after the addition of the high range water reducer. Determine concrete slump in conformance with ASTM C143.
1. Unless use of HRWR has been is approved for use; provide concrete with the following slump ranges:

|    | <u>Compressive Strength (psi)</u> | <u>Slump (inches)</u> |
|----|-----------------------------------|-----------------------|
| a. | 3,500                             | 3-5                   |
| b. | 4,000                             | 3-5                   |

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected. Do not place concrete in water or upon frozen or disturbed ground.
- B. Inspect all formwork and verify that all forms and bracing are secure, properly aligned within the tolerances of the Contract Documents and ready for the placement of concrete.
- C. Inspect and verify that all reinforcing is set to proper spacing tolerances and secure and all embedments, anchors, sleeves and other through-wall penetrations are secure and at their required locations and elevations.
- D. Inspect and verify that all piping, conduits and other work to be installed within concrete or below slabs on grade have been installed in conformance to the Contract Documents and received and passed all required tests and inspections.

### 3.2 CONCRETE MIXING

- A. Provide ready-mixed, air-entrained Portland cement concrete secured from a batching or mixing plant conforming to ASTM C94, capable of developing specified characteristic and being placed without segregation. Batch all constituents in conformance with ACI 301 and as specified.
- B. Water used for mixing must be fresh, clean and potable. Water known to be of potable quality may be used without test results. Water of questionable quality shall be tested in accordance with AASHTO T26.
  1. Provide identification of source and certification that water used meets these requirements.
- C. Unless otherwise approved by the Owner, use ready mixed concrete complying with ASTM C94, except as may be modified by the following.

1. For materials for ready mixed concrete, and for methods of measuring materials, comply with applicable provisions of this Section.
2. All central plant and rolling stock equipment and methods shall conform to the latest Truck Mixer and Agitator Standards of the Truck Mixers Manufacturers' Bureau of the National Ready-Mixed Concrete Association, as well as ASTM Specification C94/C94M-03a or latest revision.
3. Mixing:
  - a. Mix each batch of concrete not less than 15 minutes, five minutes of which shall be at the site.
  - b. Rotate the drum at the rate specified by the manufacturer of the mixer as "mixing speed."
  - c. Whenever there is a delay in unloading, rotate the drum slowly at intervals to prevent incipient set of concrete.
4. Addition of water:
  - a. Normally, do not deliver concrete with total permissible amount of water incorporated therein.
  - b. Unless otherwise approved by the Owner, withhold at least 2-1/2 gallons per cubic yard and add before the concrete is discharged but only under observation of the Owner or designated inspector.
  - c. After water is added, at least five minutes of mixing time shall be provided immediately prior to discharge.
  - d. Concrete will be rejected if not placed in final position within 1-1/2 hours after water is first added to the batch.
5. Concrete at time of placing shall be in such condition that it can be placed properly.
6. Discharge all wash water from the mixing drum before the truck reloads at the batching plant.

D. Concrete consistency:

1. Mix concrete to produce a homogeneous consistency, capable of being worked into constricted areas of forms, corners and around embedded item, without segregation or bleeding of free water. Use the amount of water established by the approved mix design.
  - a. Do not exceed the maximum quantity specified for the grade of concrete.
  - b. Use the minimum amount of water necessary to produce concrete of the workability required by the design mix submittals.
  - c. Do not supplement the predetermined amount of water with additional water for any reason.
2. Measure concrete consistency by ASTM C143 method.
  - a. As part of the routine testing and inspecting, test twice each day or partial day's run of the mixer.
  - b. Maintain a complete and accurate record of tests.

E. Modified concrete mix:

1. Where modified concrete mix is directed, provide the same composition as regular concrete mix; except omit 50% of the coarse aggregate.
2. Do not exceed the water/cement ratio specified for the grade of concrete.

- F. Miscellaneous provisions:
  - 1. Provide strengths of concrete as indicated in the Contract Documents.
  - 2. Provide concrete dense and free from honeycomb and other defects.
  - 3. Place and finish members to conform to the shapes and dimensions indicated.

### 3.3 CONCRETE ACCEPTANCE

- A. Accept or reject each batch of concrete delivered to the point of agitator or mixer truck discharge. Concrete acceptance shall be indicated by the signature of a Contractor's authorized representative on the delivery batch ticket.
- B. Reject concrete delivered without a complete concrete delivery batch ticket as specified. Copies of the signed batch ticket will be furnished to the Owner.
- C. Field tests shall be performed by the Contractor's testing laboratory firm at the point of agitator or mixer truck discharge. Accept or reject concrete on the basis of conformity with slump, air content and temperature specified.
- D. Inspect concrete transit truck's barrel revolution counter and gauge for measuring water added to the concrete. Reject concrete with exceeds the maximum barrel revolution of 300 or which has water content exceeding the specified water-cement ratio.
- E. Reject concrete exceeding time limitations specified.
- F. Concrete not conforming to the Specification shall be rejected by the Contractor before discharging into the forms.
- G. Reject concrete delivered to job site that does not meet the temperature requirements for the ambient conditions, in conformance with ACI 305R-99 and ACI 306R-88.

### 3.4 CONVEYING CONCRETE

- A. General: Conform to concreting procedures set forth in ACI 304R-96 and as specified.
  - 1. Transport concrete to discharge locations without altering the specified properties of water-cement ratio, slump, air-entrainment, temperature and homogeneity.
  - 2. Discharge concrete into forms within 1 1/2-hours after cement has entered mixing drum or before the drum has revolved 300 revolutions after the addition of water, whichever occur first. Do not add re-tempering water at job site, nor exceed the maximum water content in the approved concrete design mix.
  - 3. During hot weather, or other conditions contributing to rapid setting of concrete, a shorter mixing time is necessary in conformance with the following:
    - a. Reduce mixing and placement time from 90 to 45 minutes maximum when concrete temperature at time of placement is at or above 85° Fahrenheit.
    - b. Do not place concrete when temperature of concrete is at or above 85° Fahrenheit, without written authorization of the Owner. Reject concrete with a temperature in excess of 90° Fahrenheit.

- B. Conveying: Convey concrete from agitator or mixer truck to place of final deposit in forms by one of the following methods:
1. Buckets or hoppers with discharge gates having a clear opening equal to not less than one-third the maximum interior horizontal area or five times the maximum aggregate sizes being used, whichever is greater, and side slopes of not less than 60 degrees to horizontal.
  2. Buggies or wheelbarrows equipped with pneumatic tires.
  3. Round bottom, metal or metal-lined chutes with inclined slope of between 2 to 3-feet horizontally to 1-foot vertically and sufficient capacity to avoid overflow.
  4. Circular drop pipes with a top diameter of at least eight times the maximum aggregate size, but not less than 4-inch, or tapered to not less than six times maximum aggregate size. Do not drop concrete more than 5-feet without drop pipes.
  5. Employ drop chutes for all wall concreting operations so that concrete can be placed directly between reinforcement to prevent aggregate segregation and form splatter, with resulting surface finish variations.

### 3.5 PLACING

- A. Deposit concrete into its final position in conformance with ACI 304R-96 and as specified. Place concrete in horizontal layers 1-1/2 to 2-feet thick maximum completely across forms. Avoid inclined layers and cold joints. Place concrete at lower portion of slope first on sloping surfaces.
1. Do not deposit partially hardened concrete in forms. Re-tempering of partially hardened concrete is not permitted. Remove all partially hardened concrete from site at no additional compensation.
  2. Do not allow concrete to fall freely in forms to cause segregation (separation of coarse aggregate from mortar). Do not move concrete horizontally more than 4-feet from point of discharge. Space points of deposit not more than 8-feet apart.
  3. Do not splash forms and reinforcing above level of concrete being placed. Regulate placing of concrete so that pressure caused by wet concrete will not distort or deflect forms beyond finish tolerances specified in Section 03100 – Concrete Formwork or leak concrete.
  4. Pump Concrete: Use equipment procedures with backup to maintain steady flow of concrete at discharge end of pipe. Maintain concrete properties of unit weight, slump, air content and temperature. Make adjustments in concrete proportions as necessary to provide concrete properties in accordance with the approved concrete design mix and as specified. Do not pump concrete through aluminum piping. Use pipe having at least three times the maximum coarse aggregate size. Take samples at the point of agitator or mixer truck discharge. Adjust slump and air content to maintain the specified requirements at the discharge end of the pipe. Furnish labor and assistance as required by the testing laboratory in obtaining and handling specimens.
- B. Consolidation:
1. Consolidate concrete using mechanical vibrators operated within the mass of concrete and/or on the forms conforming to procedures set forth in ACI 309R-05 and as specified.

2. Thoroughly work concrete around reinforcement and embedded fixtures, and into corners of forms, during placing operations.
3. Conduct vibration in a systematic manner with regularly maintained vibrators. Furnish sufficient backup units at job site. Use vibrators having minimum frequency of 8,000 vibrations per minute and of amplitude to consolidate concrete. Use not less than one vibrator with crew for each 35 to 40 cubic yards of concrete placed per hour.
4. Insert and withdraw vibrator vertically at a uniform spacing over the entire area of placement. Space distances between insertions such that spheres of influence of each insertion overlap.
5. Place concrete in horizontal lifts. Insert vibrator rapidly to bottom of layer, and at least 6-inches into underlying layer. Hold stationary for several seconds, then withdraw slowly at a rate of about 3-inches per second. Conduct vibration to produce concrete of uniform texture and appearance, free of honeycombing, streaking, cold joints or visible lift lines.
6. Use additional vibration with pencil vibrators on vertical surfaces and on all exposed concrete to bring full surface of mortar against the forms so as to eliminate air voids, bug holes and other surface defects. Employ the following additional procedures for vibrating concrete:
  - a. Reduce distance between internal vibration insertions and increase time for each insertion.
  - b. Insert vibrator as close to face of form as possible without contacting form or reinforcement.
  - c. Thoroughly vibrate area immediately adjacent to waterstops without damaging the waterstops.
  - d. Use spading as a supplement to vibration where particularly difficult conditions exist.
  - e. Do not over-vibrate concrete.
  - f. Do not move concrete by use of vibrator.
  - g. Exercise care to direct the quick handling of vibrators from one position to another.
7. Stoppages:
  - a. Maintain flow surface of freshly placed concrete as level whenever a pour is stopped, providing tight dams to accomplish this.
  - b. Make construction joints only where unavoidable, and then only at points acceptable to the Engineer.
  - c. Make horizontal construction joints only where shown on the Drawings or specifically approved by the Engineer.
  - d. Provide keys and dowels at construction joints where indicated on the Drawings, and where placement is interrupted.

### 3.6 PLACING AND FINISHING SLABS

#### A. Placing and finishing:

1. Consolidate the concrete in compliance with pertinent sections of ACI 309-96 or latest revision.

2. When concrete has hardened sufficiently, float to a compact and smooth surface.
  3. Provide the finish surfaces shown on the Drawings or otherwise directed by the Owner, in accordance with pertinent provisions of Section 03345 of these Specifications.
- B. Cure and protect concrete in accordance with pertinent provisions of Section 03345 of these Specifications.

### 3.7 TESTING

- A. General:
1. Essential preliminary testing of aggregates, proposed mix designs, and concrete, for compliance with the Specifications will be performed by the Contractor's testing laboratory. Contractor shall coordinate delivery of test samples to the Owner's testing laboratory if supplemental testing is requested.
  2. Additional tests required because of changes in materials or proportions, requested by the Contractor, will be performed by the Contractor's testing laboratory, or the Owner's designated testing laboratory all at the Contractor's expense.
- B. Advance Data:
1. The Contractor's testing laboratory shall furnish trial concrete design mixes having proportions, admixtures and slump proposed use, based upon ACI 211.1-91. Furnish at least three different water-cement ratios, which will produce a range of strengths encompassing those required for the work. Report design mixes for maximum permitted air, slump and temperature of concrete used in trial batches
  2. Acceptance Tests of Aggregates and Concrete; before any concrete is ordered, Contractor shall furnish the Engineer with the following information:
    - a. Name of proposed concrete supplier (ready-mixed).
    - b. Proposed type and brand of cement. (Use of more than one brand is not permissible for exposed concrete surfaces.)
    - c. Proposed source of fine and coarse aggregate. (Use of more than one source is not permissible without advanced approval.)
    - d. Proposed admixtures.
    - e. Proposed mix proportions for each class of concrete shown on the Drawings.
    - f. Previous test data for proposed fine and coarse aggregate and for concrete made from the same materials, if available.
    - g. Proposed measures for complying with the applicable ACI codes for Cold Weather Concreting or Hot Weather Concreting, as applicable.



3. Make at least two compression test cylinders for each test age of each water-cement ratio in conformance with ASTM C192. Compression test at 7 and 28 days in conformance with ASTM C39. Plot a curve of the test results showing the relationship between water-cement ratios and strength. Determine from these curves the maximum allowable water-cement ratio for each strength of concrete and aggregate size to produce an average compressive strength 15 percent greater than specified. Do not exceed the water-cement ratio shown in Table 2.3 of this section.
4. Measure all materials for concrete, including water, with equipment and facilities suitable for accurate measurement and capable of being adjusted in conformance with ASTM C94. Use scales certified by local Sealer of Weights and Measures within one year of use and accurate when static load tested to plus or minus 0.4 percent of total capacity of scale. Batch all materials by weight except admixtures, which may be batched by volume.
5. Acceptance test results: Upon completion of acceptance tests of aggregates and mixtures, the Contractor shall furnish the Engineer with copies of test results, approval or rejection of materials and mix proportions.

C. Testing Requirements To Be Fulfilled By The Contractor During Construction:

1. Notify the Engineer of concrete deliveries a minimum of 48 hours in advance of the scheduled placement. Include within this notification, the class and quantity of concrete, method and location of placement, frequency of trucks, ordered slump and time of initial delivery.
2. Place concrete during normal working hours whenever possible. Notify the Owner of special conditions at least 48 hours in advance of placement when concrete placement schedule requires concrete placement at times other than during normal working hours.
3. Furnish delivery batch ticket to the Engineer/Owner's Inspector with each batch delivered to the discharge locations in conformance with ASTM C94. Batch tickets shall be written in ink or computer printed and to include:
  - a. Load number, truck number and driver's name
  - b. Strength of concrete (compression strength)
  - c. Amount of concrete (cu. yds.)
  - d. Time truck is charged with cement
  - e. Revolution counter reading at first addition of water
  - f. Type, brand and amount of cement
  - g. Type, brand and amount of admixtures
  - h. Information necessary to calculate total mixing water
  - i. Maximum size of aggregate
  - j. Weights of fine and coarse aggregates
  - k. Signature of ready-mix representative
  - l. Concrete temperature at batching plant

4. The Contractor shall notify the testing laboratory of scheduled concrete deliveries a minimum of 48 hours in advance of the scheduled placement and shall coordinate with the inspector, providing cooperation and assistance where necessary for sampling and location of equipment and facilities for proper storage and initial curing of specimens.
- D. Testing Requirements To Be Fulfilled By Contractor's Testing Laboratory During Construction:
1. Methods of Sampling and Testing:
    - a. Fresh Concrete Sampling: ASTM C172
    - b. Specimen Preparation: ASTM C31
    - c. Compressive Strength: ASTM C39
    - d. Air Content: ASTM C231
    - e. Slump: ASTM C143
    - f. Temperature: ASTM C1064
    - g. Unit Weight: ASTM C138
  2. Test Measurements at Discharge:
    - a. Measure concrete slump, air content and temperature for each 50 cu. Yd of each class of concrete but not less than once a day. Conduct the slump, air content and temperature test measurements in conformance with ASTM C143, ASTM C231 and ASTM C1064 respectively.
  3. Control Test Specimens taken by the Contractor's independent laboratory:

Strength test samples shall be taken as the concrete is delivered from the truck. At least one set of strength test samples shall be taken for every day that concrete is placed (not including the erection of the concrete support structure, unless otherwise directed by the Owner). Additional sets of strength test samples shall be taken for every 50 yd<sup>3</sup> of concrete placed when the total daily pour is less than or equal to 150 yd<sup>3</sup> and for every 150 yd<sup>3</sup> of concrete placed when the total daily pour is greater than 150 yd<sup>3</sup>. A minimum of four field control test specimens taken in conformance with ASTM C31 for each set of samples. This process shall be repeated for each separate design mix of concrete placed, including foundation mats, base slabs, footings and slabs on grade.

    - a. Truck and load number from the delivery batch ticket, the concrete placement location of each specimen, the date, concrete strength, slump, air content, temperature, and truck driver's name shall be recorded.
    - b. Test specimens shall be placed in tightly constructed 6-inch diameter by 12-inch long nonabsorbent test cylinder molds.
    - c. Specimens shall be stored on site near the point of molding for the first 24-hour period, to attain comparable temperature history and moisture conditions during initial curing, until they are transported to the testing laboratory. Molds shall be left on cylinders until received in testing laboratory.

- d. Under standard operating procedures; a compression test shall be conducted on one of each set of four specimens at seven days and two at 28 days, with the fourth cylinder held as a spare in the event of damage any of the other cylinders. The compression test results of the control test specimens will be submitted to the Engineer. Evaluation and acceptance of concrete shall conform to ACI 301-99 and ACI 318-99.

### 3.8 DEFECTIVE CONCRETE

- A. The following concrete will be deemed to be defective, and shall require repair work or demolition.
  1. Concrete which is not formed as indicated, is not true to intended alignment, is not plumb or level where so intended, is not true to intended grades and levels.
  2. Does not conform fully to provisions of the Contract Documents.
  3. Has sawdust, shavings, wood, or any embedded foreign matter.
  4. Has voids or honeycomb that have been cut, resurfaced, or filled, without involvement and approval of the Engineer.
- B. Repairs and replacements:
  1. Where defective concrete is found after removal of the forms; promptly notify the Engineer and make preparations for the repair or removal of the defective concrete.
  2. Defective concrete may be cut out and repaired as per section 03345, or other approved methods, when and as approved by the Engineer.
  3. Work uneven surfaces and angles of concrete to a surface matching adjacent concrete surfaces.

END OF SECTION

## SECTION 03345

### CONCRETE FINISHING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor to provide finishes on cast-in-place concrete as required by these specifications and drawings.

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Except as may be modified herein or otherwise directed by the Engineer, comply with ACI 301, "Specifications for Structural Concrete for Buildings."
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Product data: submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements;
  - 3. Manufacturer's recommended installation procedures which, when approved by the Engineer, will become the basis for accepting or rejecting actual installation procedures used on the Work.

#### PART 2 - PRODUCTS

##### 2.1 MATERIALS

- A. General:
  - 1. Carefully review the Contract Documents, and determine the location, extent, and type of required concrete finishes.
  - 2. As required for the Work, provide the following materials, or equals approved in advance by the Engineer.
- B. Concrete materials: Comply with pertinent provisions of Section 03300 and 03305, except as may be modified herein.

- C. Liquid bonding agent: "Everbond," manufactured by L&M Construction Chemicals Inc.
- D. Liquid curing agents:
  - 1. Where application of specified finish materials will be inhibited by use of curing agents, cure the surface by water only; do not use chemical cure.
  - 2. For curing other areas, use "L & M Cure R" manufactured by L&M Construction Chemicals Inc.

## 2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 FINISHING OF FORMED SURFACES

- A. General:
  - 1. After removal of forms, give the concrete surface one or more of the finishes specified below.
- B. As-cast finish:
  - 1. Smooth form finish:
    - a. Coordinate as necessary to secure form construction using smooth, hard, uniform surfaces, with number of seams kept to a practical minimum and in a uniform and orderly pattern.
    - b. Patch tie holes and defects.
    - c. Remove fins completely.

### 3.3 FINISHING PADS

- A. Finishing tolerance:
  - 1. "Class B:" True plane within 1/4-inch in ten feet as determined by a ten foot straightedge placed anywhere on the slab in any direction.
- B. Floated finish:
  - 1. After the concrete has been placed, consolidated, struck off, and leveled, do not work the concrete further until ready for floating.

2. Begin floating when the water sheen has disappeared and when the surface has stiffened sufficiently to permit the operation.
  3. During or after the first floating, check the planeness of the surface with a ten foot straightedge applied at not less than two different angles.
  4. Cut down high spots and fill low spots, and produce a surface with a Class B tolerance throughout.
  5. Re-float the slab immediately to a uniform sandy texture.
- C. Troweled finish:
1. Provide hand troweling where necessary when a ringing sound is produced as the trowel is moved over the surface.
  2. Provide a finished surface free from trowel marks, uniform in texture and appearance, and in a plane of Class B tolerance.

### 3.4 CURING AND PROTECTION

- A. Beginning immediately after placement, protect concrete from premature drying, excessively hot and cold temperatures, and mechanical injury.
- B. Preservation of moisture:
1. Unless otherwise directed by the Engineer, apply one of the following procedures to concrete not in contact with forms, immediately after completion of placement and finishing:
    - a. Application of absorptive mats or fabric kept continuously wet;
    - b. Application of waterproof sheet materials specified in Part 2 of this Section;
    - c. Application of other moisture-retaining covering as approved by the Engineer;
    - d. Application of the curing agent specified in Part 2 of this Section or elsewhere in the Contract Documents.
  2. Where forms are exposed to the sun, minimize moisture loss by keeping the forms wet until they can be removed safely.
  3. Cure concrete by preserving moisture as specified above for at least seven days.

END OF SECTION

## INDEX

### DIVISION 9 - FINISHES

| <u>Section</u> | <u>Subject</u> | <u>Page</u>          |
|----------------|----------------|----------------------|
| 09900          | Painting       | 09900-1 thru 09900-7 |

## SECTION 09900

### PAINTING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Paint/coat surfaces listed in Part 3 of this Section, as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division I of these Specifications.
  - 2. Priming or priming and finishing of certain surfaces may be specified to be factory-performed or installer-performed under pertinent other Sections.
- C. Definitions:
  - 1. "Paint," as used herein, means coating systems materials including primers, emulsions, epoxy, enamels, stain, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

##### 1.2 QUALITY ASSURANCE

- A. Contractor shall utilize and experienced painting company regularly involved in painting water treatment and pump stations, including surface preparation activities.
  - 1. Painting contractor shall have a minimum of five (5) successful experience in surface preparation and secondary coating system application.
  - 2. Owner will review and approve the painting company based on successful experience.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- C. Paint coordination:
  - 1. Provide finish coats which are compatible with the prime coats actually used.
  - 2. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrata.
  - 3. Upon request, furnish information on the characteristics of the specific finish materials to assure that compatible prime coats are used.
  - 4. Provide barrier coats over non-compatible primers, or remove the primer and re-prime as required.
  - 5. Notify the Engineer in writing of anticipated problems in using the specified coating systems over prime-coatings supplied under other Sections.



6. Apply paint of specified Dry Film Thickness (DFT), which thickness shall be absolute minimum coverage at any point of measurement.
- D. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 14 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  1. Materials list of items proposed to be provided under this Section;
  2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
  3. Color cards.

### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

### 1.5 JOB CONDITIONS

- A. Do not apply solvent-thinned paints when the temperature of surfaces to be painted and the surrounding air temperatures are below 45°F, unless otherwise permitted by the manufacturers' printed instructions as approved by the Engineer.

### 1.6 QUALIFICATION OF APPLICATORS

- A. Floor surfacing shall be applied only by experienced and skilled applicators with minimum of 5 years experience and approved by the floor surfacing manufacturer.
  1. Proof of such approval shall be submitted prior to commencing the work.

## PART 2 - PRODUCTS

### 2.1 PAINT MATERIALS

- A. Acceptable materials:
  1. The Painting Schedule in Part 3 of this Section is based, in general, on products of Tnemec.
  2. Equal products of Sherwin Williams, Rust-Oleum, or other manufacturers approved in advance by the Engineer, may be substituted in accordance with provisions of the Contract.

3. Where products are proposed other than those specified by name and number in the Painting Schedule, provide under the product data submittal required by Article 1.4 of this Section a new painting schedule compiled in the same format used for the Painting Schedule included in this Section.
- B. Undercoats and thinners:
    1. Provide undercoat paint produced by the same manufacturer as the finish coat.
    2. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits.
    3. Insofar as practicable, use undercoat, finish coat, and thinner material as parts of a unified system of paint finish.
  - C. Secondary Containment Coating for Containment Area
    1. Coatings and linings:
      - a. All coatings and linings shall be suitable for the application intended. All materials used in the secondary containment area must meet the 72-hour exposure/immersion criteria for those chemicals as listed below:
      - b. 50% sodium hydroxide
  - D. All coatings and linings shall be VOC compliant.

## 2.2 COLOR SCHEDULES

- A. The Engineer will prepare a color schedule from the approved manufacturer's color cards.
- B. The Engineer may select, allocate, and vary colors on surfaces throughout the Work.

## 2.3 APPLICATION EQUIPMENT

- A. For application of the approved paint, use only such equipment and procedures as is recommended by the manufacturer of the particular paint, and as approved by the Engineer.
- B. Prior to use of application equipment, verify that the proposed equipment is actually compatible with the material to be applied, and that integrity of the finish will not be jeopardized by use of the proposed equipment.

## 2.4 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

# PART 3 - EXECUTION

## 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Prior to planning for painting, examine all surfaces to insure they are clean and dry, and in strict compliance with the paint manufacturer's surface preparation requirements.
- C. For masonry and concrete, a minimum of 28 days cure time is recommended prior to painting and testing such as taping polyethylene to surface to see if moisture accumulates shall be conducted.
- D. Ambient temperature shall be within the paint manufacturer's recommendations, prior to, during application and throughout curing period.
- E. On interior surfaces, relative humidity shall be controlled prior to, during application and throughout curing period.

### 3.2 MATERIALS PREPARATION

- A. General:
  - 1. Mix and prepare paint materials in strict accordance with the manufacturers' recommendations as approved by the Engineer.
  - 2. When materials are not in use, store in tightly covered containers.
  - 3. Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.
- B. Stirring:
  - 1. Stir materials before application, producing a mixture of uniform density.
  - 2. Do not stir into the material any film which may form on the surface, but remove the film and, if necessary, strain the material before using.
  - 3. Mix only portion of paint that can be easily applied within the pot life period as per manufacturer's recommendation.
  - 4. Thin only to manufacturer's recommendation.

### 3.3 SURFACE PREPARATION

- A. General:
  - 1. Perform preparation and cleaning procedures in strict accordance with the paint manufacturers' recommendations as approved by the Engineer.
  - 2. Remove removable items which are in place and are not scheduled to receive paint finish; or provide surface applied protection prior to surface preparation and painting operations.
  - 3. Following completion of painting in each space or area, reinstall the removed items by using workmen who are skilled in the necessary trades.
  - 4. Clean each surface to be painted prior to applying paint on surface treatment.
  - 5. Remove oil and grease with clean cloths and cleaning solvent of low toxicity and flash point in excess of 200 degrees F, prior to start of mechanical cleaning.

6. Schedule the cleaning and painting so that dust and other contaminants from the cleaning process will not fall onto wet newly painted surfaces.
- B. Preparation of New Concrete surfaces: Finish of concrete surface shall be as specified in Section 03345. Do not proceed with any paint preparation work till the specified finish is as specified.
1. Concrete shall have cured for a period 28 days prior to coating.
  1. Remove all chemical compounds, curing agents, surface hardeners, waxes, oils or other contaminants by sandblasting (SP-7). After sandblasting, remove all dust and grit and vacuum area.
  2. Measure substrate pH at surface using pH test paper and distilled water. Newly hydrated concrete has a pH of 12.0 - 12.5.
  2. Apply coating as soon as possible after preparation.
- B. Preparation of Containment Area – Secondary Containment Coating:
1. Perform preparation and cleaning procedures in strict accordance with the paint manufacturers' recommendations as approved by the Engineer.
  2. Concrete floors and containment walls shall be hand sanded to achieve a surface profile environment to 40-60 grit sand paper (25.0 mils). Acid etching will not be approved.
  3. Any loose coating to be removed.
  4. All areas not to receive surface treatment shall be protected with tarps to contain dust. The entire area shall be vacuumed clean upon completion of surface preparation.

## 1.2 PAINT APPLICATION

- A. General:
1. Touch-up bare concrete areas prior to start of finish coats application.
  2. Slightly vary the color of succeeding coats.
    - a. Do not apply additional coats until the completed coat has been inspected and approved.
    - b. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.
  3. Sand and dust between coats to remove defects visible to the unaided eye from a distance of five feet.
  4. On removable panels and hinged panels, paint the backsides to match the exposed sides.
- B. Drying:
1. Allow sufficient drying time between coats, modifying the period as recommended by the material manufacturer to suit adverse weather conditions.
  2. Consider oil-base and oleo-resinous solvent-type paint as dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and when the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

- C. Brush applications:
  - 1. Brush out and work the brush coats onto the surface in an even film.
  - 2. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, and other surface imperfections will not be acceptable.
- D. Spray application:
  - 1. Except as specifically otherwise approved by the Engineer, confine spray application to metal framework and similar surfaces where hand brush work would be inferior.
  - 2. Where spray application is used, apply each coat to provide the hiding equivalent of brush coats.
  - 3. Do not double back with spray equipment to build up film thickness of two coats in one pass.
- E. For completed work, match the approved samples as to texture, color, and coverage. Remove, refinish, or repaint work not in compliance with the specified requirements.

### 1.3 COATING APPLICATION – SECONDARY CONTAINMENT COATING

- A. Coating material shall be applied by roller method, in accordance with manufacturer's specifications.
- B. Surface temperature shall be within 50° to 135°F, surface shall be dry and at least 5°F above dew point.

### 1.4 ITEMS TO BE PAINTED OR COATED INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- A. Interior non-metal surfaces
  - 1. All new equipment pads
  - 2. Springvale and Elm Bank containment area floor and walls with secondary containment coating

### 1.5 COATING SCHEDULE – ELM BANK CONTAINMENT AREA

- A. Concrete containment floor and walls: Tnemec Series 201/Series 282 Tneme-Glaze.
  - 1. 1st coat: Tnemec Series 201 Epoxoprime primer at 6.0 - 12.0 mils DFT
  - 2. 2nd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT for horizontal surfaces (6.0-8.0 DFT for vertical walls)
  - 3. 3rd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT for horizontal surfaces (6.0-8.0 DFT for vertical walls)

### 1.6 COATING SCHEDULE – SPRINGVALE CONTAINMENT AREA

- A. New Concrete pads: Tnemec Series 201/Series 282 Tneme-Glaze.

1. 1st coat: Tnemec Series 201 Epoxoprime primer at 6.0 - 12.0 mils DFT
  2. 2nd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT
  3. 3rd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT
- B. Existing Concrete Floor from front of Bulk tank to knee wall including knee wall: Tnemec Series 201/Series 282 Tneme-Glaze.
1. 1st coat: Tnemec Series 201 Epoxoprime primer at 6.0 - 12.0 mils DFT
  2. 2nd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT
  3. 3rd coat: Tnemec Series 282 Tneme-Glaze 28RD (Monterey Tile) finish at 6.0-12.0 mils DFT
- C. Apply required fiberglass filler at floor to wall joint to bridge angle for coating system application.
1. Fiberglass filler to be as recommended by coating system manufacturer.

## 1.7 TOUCH-UP

- A. Prior to request for final payment, Contractor shall touch-up all areas painted which have been damaged or permanently soiled.
1. Contractor shall also touch-up paint on all equipment provided with finish coatings which may have been damaged in transport or installation.

END OF SECTION

## INDEX

### DIVISION 11- EQUIPMENT

| <u>Section</u> | <u>Subject</u>                          | <u>Page</u>          |
|----------------|---|----------------------|
| 11349          | Chemical Feed Systems and Appurtenances | 11349-1 thru 11349-4 |
| 11500          | Materials Handling                      | 11500-1 thru 11500-3 |

## SECTION 11349

### CHEMICAL FEED SYSTEMS AND APPURTENANCES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide chemical feed day tanks, day tank scales and transfer pumps and other associated appurtenances as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 15400 Plumbing

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the Engineer two copies of an operation and maintenance manual compiled in accordance with the provisions of Section 01730 of these Specifications.
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. A complete parts list for all equipment furnished under this Section.

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

##### 1.5 COORDINATES



- A. Coordinate the work of this Section with Division 16, and any other section which requires equipment or device locations which interface with the work of this Section.

## PART 2 - PRODUCTS

### 2.1 DAY TANK SCALE

- A. Chlorine and KOH day tank scales shall be equal to Model 4010 Digital Scale as manufactured by Scaletron. Provide three units that are designed for use in chemical day tank measurement and have a rugged steel frame that is zinc oxide primed and dry powder epoxy coated.
- |    |                   |   |
|----|-------------------|---|
| 1. | Decking           | Solid, ½ inch thick PVC                       |
| 2. | Platform size     | 36" x 36"                                     |
| 3. | Load cell         | NTEP stainless steel temperature compensation |
| 4. | Hardware          | Stainless steel                               |
| 5. | Platform height   | not exceed 3.5 inches                         |
| 6. | Platform leveling | Stainless steel leveling foot                 |
| 7. | Warranty          | Full 5-year                                   |
- B. Chlorine and KOH day tank level displays to be equal to the Model 4010-Digital Indicator furnished with the 4010 digital scale as manufactured by Scaletron. Unit must be designed for use in chemical day tank measurement. Indicator to be factory calibrated and programmed with associated scale.
- |     |                 |                                 |
|-----|-----------------|---------------------------------|
| 1.  | Output          | 4-20 mADC                       |
| 2.  | Accuracy        | 0.1% to 0.25% of full capacity  |
| 3.  | Display         | 4-1/2 digit                     |
| 4.  | Display readout | 0.1 lbs up to 9999.9            |
| 5.  | Resolution      | 0.1 up to 9999.99               |
| 6.  | Power           | 85 to 265 VAC                   |
| 7.  | Tare weight     | self locking adjusting knob     |
| 8.  | Relays          | 2 adjustable low level contacts |
| 9.  | Enclosure       | NEMA 4X, UL Approved Enclosure  |
| 10. | Warranty        | Full 5-year                     |

### 2.2 CHEMICAL TRANSFER PUMP

- A. Provide three (3) chemical transfer pumps: Pumps shall be a self-priming pump, Model RM-PVDF-vkkk-12/130-30, as manufactured by Renner to match existing pumps in operation at other sites in Natick. The pump shall be capable of pumping the intended chemical.
- |    |                   |                |
|----|-------------------|----------------|
| 1. | Characteristics:  |                |
| a. | Drive             | Magnetic drive |
| b. | Check valves      | None           |
| c. | Self priming      | Yes            |
| d. | External bearings |                |

|    |                         |                          |
|----|-------------------------|--------------------------|
| e. | Pump body and impeller: | PVDF                     |
| f. | Capacity:               | Maximum 34 GPM           |
| g. | Pipe connections        | Glued                    |
| h. | Motor:                  | 1                        |
| i. | Power                   | 1 phase, 60 hz, 115 VAC  |
| j. | Motor protection        | Therman protection       |
| k. | Motor speed             | 3450 rpm                 |
| l. | Electrical connection   | power cord, 3-prong plug |

## 2.3 CHEMICAL METERING PUMP MOTOR

- A. Provide six (6) chemical metering pump motors to replace six (6) existing direct current motors on existing Milton Roy pumps. Existing pumps are as follows.
  1. H&T Chlorine pump: Milton Roy Model RA1210151 5.5 gph
  2. Tonka Chlorine pump: Milton Roy Model RA 1210151 5.5 gph
  3. H&T Phosphate pump: Milton Roy Model RA1201 2 gph
  4. Tonka Phosphate pump: Milton Roy Model RA 1201 2 gph
  5. Elm Bank KOH pump 1: Milton Roy Model RA11 6.1 gph
  6. Elm Bank KOH pump 2: Milton Roy Model RA11 6.1 gph
- B. Existing Motors are Baldor Reliance Industrial, with the following typical characteristics.
  1. 0.25 hp,
  2. Frame 56C
  3. Type 3320P or PM33OP
  4. 1750 RPM
- C. Motors shall be 3 phase, 60 hertz, 480 volt ac motors that are designed to fit on the existing Milton Roy pumps as noted above.
  1. Motor to ½ hp unless otherwise required by Milton Roy and each pump receiving the motor.

## 2.4 DAY TANK AND ACCESSORIES

- A. Polyethylene day tank (3): Provide closed top batch tank equal to Model ASM TK 120VNT X 30 tank as manufactured by Snyder Industries designed to contain 15% solution of Sodium Hypochlorite and 45% solution of Potassium Hydroxide.
  1. Tanks shall be cylindrical with a flat bottom, molded in one-piece seamless construction by rotational molding. Shall meet the following standards ASTM: D618, D638, D790, D883, D1505, D1525, D1693, D1998, D2765, D2837, D3892, F412; FDA Regulation 177.152, NSF 61.
  2. Physical Specifications:
    - a. Capacity: 120 gallons
    - b. Material: High density polyethylene FDA approved
    - c. Color: Natural
    - d. Cover: sealed with vent pipe connection
    - e. Graduation: 1 gallon

- |    |                            |   |
|----|----------------------------|---|
| f. | Side wall pipe connections | Two 1-inch threaded PVC with<br>¼-inch Viton gasket |
| g. | Top pipe connections       | One 1-inch threaded PVC for vent<br>pipe connection |
| h. | Wall thickness:            | Not less than 0.187"                                |
| i. | Tank height and diameter   | 41.5" active H x 30" diameter                       |

## 2.5 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 COORDINATION

- A. Coordinate as required with other trades to assure proper and adequate provisions in the work of those trades for interface with the work of this Section.

### 3.3 INSTALLATION

- A. Installation shall be in accordance with the manufacturer's instructions and recommendations in the locations shown on the Drawings. Installation shall include furnishing the required oil and grease for initial operation. The grades of oil and grease shall be in accordance with the manufacturer's recommendations.

### 3.4 TESTING

- A. Each pump shall be tested after being installed. The Contractor shall perform all tests necessary to show that each pump is installed correctly and meets the discharge head, discharge flow rate and other requirements specified. The Contractor shall supply all materials, labor and equipment required to conduct the field tests.
  - 1. After start-up and initial operation, the manufacturer shall submit certification in writing to the Engineer that each piece of equipment has been installed in accordance with the manufacturer's instructions and that all of the equipment is functioning properly.

END OF SECTION

## SECTION 11500

### MATERIALS HANDLING

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide specialty items as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Section in Division 1 of these Specifications.

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 45 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

#### PART 2 - PRODUCTS

##### 2.1 HAND TRUCK (Provide one (1))

- A. The hand truck shall be stock no. 6W854 as provided by Langley, Medford, MA or an approved equal with the following attributes:
  - 1. Load capacity not less than 800 lbs.
  - 2. Pneumatic wheels (10" by 2-3/4") with roller bearings
  - 3. Specifically designed to handle drums

## 2.2 WASTE RECEPTACLE (3)

- A. The waste receptacles shall be as manufactured by Rubbermaid or equal and have the following attributes:
  - 1. Size: 30 gallon
  - 2. Heavy duty seamless construction with molded handles and reinforced, ribbed base.
  - 3. Have light fitting snap-on lid or dome top.
  - 4. Stand up to sub-zero temperatures.
  - 5. Color to be white.

## 2.3 PRODUCT PAINTING

- A. The prime and finish coats of paint shall be the standard paint of the manufacturer and shall be applied at the manufacturer's shop. Color selection from the manufacturer's standard colors shall be by the Engineer.
- B. Surfaces obviously not to be painted shall be given a heavy shop coat of grease or other suitable rust-resistant coating. This coating shall be maintained as necessary to prevent corrosion during periods of storage and shall be satisfactory to the Engineer up to the time of the final acceptance.

## 2.4 ROLLING LADDERS

- A. Provide two rolling ladders with the following characteristics:
  - 1. Meets OSHA and ANSI Standards
  - 2. 50 degree safety angle
  - 3. Large 36 inch x 49 inch platform
  - 4. 36-inch wide step
  - 5. ICC bar chain
  - 6. 500 lb capacity

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Installation shall be in accordance with the respective manufacturer's instructions and recommendations in the locations as directed by the Engineer. Installation shall include delivery and assembly of all items and where applicable, the furnishing of oil and grease required for initial operation. The grades of oil and grease shall be in accordance with the manufacturer's recommendations.

### 3.2 INSPECTION AND TESTING

- A. The contractor shall furnish the services of a manufacturer's representative who has complete knowledge of proper operation and maintenance to inspect the final installation and supervise a test run of the equipment, where applicable.

END OF SECTION

## INDEX

### DIVISION 13-SPECIAL CONSTRUCTION

| <u>Section</u> | <u>Subject</u>  | <u>Page</u>          |
|----------------|-----------------|----------------------|
| 13310          | Instrumentation | 13310-1 thru 13310-4 |

## SECTION 13310

### INSTRUMENTATION

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide all instrumentation, controls, wiring and cables as required by the Contract Documents.
- B. In general, the system shall monitor the following:
  - 1. Bulk tank level sensor
  - 2. Bulk tank level display
  - 3. Day Tank level sensor
- C. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Division 16                      Electrical
- D. Related work not included:
  - 1. Power wiring and all conduit runs shown on the Drawings shall be provided under Division 16 unless specified otherwise.

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications and other data needed to prove compliance with the specified requirements.
  - 3. Point to point wiring diagrams
  - 4. Input-output characteristics



5. Range, size and graduation
6. Physical size, dimensions and mounting details and requirements
7. Materials of construction
8. Certified calibration data on all flow metering devices
9. The name, address and phone number of the local authorized service facility for each piece of equipment shall be shown.

C. Comply with Section 01730 upon completion of the work and submit Operations and Maintenance Manuals.

#### 1.4 PRODUCT HANDLING

A. Comply with pertinent provisions of Section 01610.

#### 1.5 COORDINATION

A. Coordinate the Work of this Section with Division 16 and Section 15400 or any other Sections which require equipment or device locations or which interface with the work of this Section.

### PART 2 - PRODUCTS

#### 2.1 BULK TANK LEVEL SENSOR

A. Bulk tank level sensor to be equal to EchoPod Model UG06 as manufactured by Flowline. Provide four units that are designed for use with potassium hydroxide and sodium hypochlorite measurement in bulk tanks.

- |                          |   |
|--------------------------|---|
| 1. Output                | 4-20 mdc  |
| 2. Accuracy              | +/- 0.2% of range                                     |
| 3. Dead-band             | 8"  |
| 4. Display readout       | 0.1 gallon increments                                 |
| 5. Electrical connection | 1/2" NPT  |
| 6. Supply voltage        | 14-28 vdc   |
| 7. Configuration         | Push button or WebCal PC                              |
| 8. Display type          | LCD, 6 digit  |
| 9. Transducer type       | Reflective  |
| 10. Transducer material  | Polyvinylidene fluoride                               |
| 11. Enclosure material   | Polypropylene   |
| 12. Process mount        | 2" NPT  |
| 13. Bushing adaptor      | 4" x 2" (contractor to determine type of connections) |
| 14. USB Adaptor          | Provide 2   |

## 2.2 DAY TANK LEVEL SENSOR

- A. Phosphate day tank pressure sensors to be equal to EchoPod Model UG01 as manufactured by Flowline. Provide two units that are designed for use for polyphosphate measurement in day tanks.

|     |                       |                          |
|-----|-----------------------|--------------------------|
| 1.  | Output                | 4-20 madc                |
| 2.  | Accuracy              | +/- 0.2% of range        |
| 3.  | Dead-band             | 8"                       |
| 4.  | Display readout       | 0.1 gallon increments    |
| 5.  | Electrical connection | Furnished with 48" cable |
| 6.  | Supply voltage        | 14-28 vdc                |
| 7.  | Configuration         | Push button or WebCal PC |
| 8.  | Display type          | LCD, 6 digit             |
| 9.  | Transducer type       | Reflective               |
| 10. | Transducer material   | Polyvinylidene fluoride  |
| 11. | Enclosure material    | Polypropylene            |
| 12. | Process mount         | 2" NPT                   |
| 13. | Tank adaptor          | 2" NPT bulkhead          |
| 14. | USB Adaptor           | Provide 2                |

## 2.3 TANK LEVEL SENSOR INDICATOR

- A. Bulk and day tank level indicators shall be equal to Model PD600-6R as manufactured by Precision Digital. Provide six (6) units that are designed for use with 4-20 ma signal for two (2) phosphate day tanks, two (2) sodium hypochlorite bulk tanks, and two (2) potassium hydroxide bulk tanks.

|    |                   |  |
|----|-------------------|--|
| 1. | Output            | 4-20 madc                                    |
| 2. | Process indicator |  |
| 3. | Display           | 0.6" high Red LEDs                           |
| 4. | Relays            | 2 relays                                     |
| a. | Enclosure         | high impact plastic, UL 94V-0, Panel mounted |
| 5. | Power             | 85-265 VAC                                   |

- B. Provide display enclosures equal to Model PDA 3400 series as manufactured by Precision Digital. Enclosure shall include clear plastic cover to enclose displays.

|    |                     |  |
|----|---------------------|--|
| 1. | Chlorine Enclosure  | PDA 3411 Series to contain both displays |
| 2. | KOH Enclosure       | PDA 3411 Series to contain both displays |
| 3. | Phosphate Enclosure | PDA 3111 Series to contain both displays |

- C. Provide display enclosures equal to Model PDA 3400 series as manufactured by Precision Digital for the exterior of Springvale and Elm Bank buildings for monitoring bulk tank water level from the exterior of the buildings. The enclosures shall include clear plastic cover to enclose displays.

|    |                    |  |
|----|--------------------|--|
| 1. | Chlorine Enclosure | PDA 3411 Series to contain both displays |
| 2. | KOH Enclosure      | PDA 3411 Series to contain both displays |
| 3. | Light Horn         | MOD-LH, 2 red LED lights with horns      |
| 4. | Reset button       | 2 required                               |

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Instrumentation and accessory equipment shall be installed in accordance with the manufacturer's instructions.
- B. The installation and mounting of all components of the instrumentation system furnished under this Section, unless otherwise stated, shall be performed under the work of this Section.
  - 1. All mounting hardware, brackets, pipe supports and piping necessary for the installation of the components of this Section shall be provided by this Section.
  - 2. All necessary signal cable and terminations to provide an operational system.

### 3.2 TESTING

- A. Following installation and final adjustment of all instruments, a performance check shall be made on each.

END OF SECTION

## INDEX

### DIVISION 15 – MECHANICAL

| <u>Section</u> | <u>Subject</u>            | <u>Page</u>          |
|----------------|---------------------------|----------------------|
| 15064          | Plastic Pipe and Fittings | 15064-1 thru 15064-4 |
| 15100          | Valves and Appurtenances  | 15100-1 thru 15100-3 |
| 15190          | Mechanical Identification | 15190-1 thru 15190-2 |

## SECTION 15064

### PLASTIC PIPE AND FITTINGS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Contractor to provide all plastic piping, fittings and appurtenances as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 15094 Pipe Hangers and Supports
  - 3. Section 15100 Valves and Appurtenances

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Drawings are diagrammatic and indicate the general arrangement of systems and work included. Information and components shown on isometric but not shown in plan view or vice versa, shall apply or be provided as if shown on both. It is not intended to specify or to show every offset, fitting, or component; however, it is the intent of these Specifications and Drawings that all required components and materials, whether or not indicated or specified, shall be provided in such a manner as to make the entire piping installation fully complete and operational in all respects.
- C. Codes and regulations:
  - 1. In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies having jurisdiction.
  - 2. In the event of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern.
- D. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:

1. Materials list of items proposed to be provided under this Section;
2. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements;
3. Shop drawings showing piping layout, methods, and locations of supports and hangers and connections to equipment.

#### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

### PART 2 - PRODUCTS

#### 2.1 CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE

- A. Plastic pipe shall be manufactured from rigid unplasticized chlorinated polyvinyl chloride compounds that comply with the pertinent sections of ASTM-D1784 for Class 24448.
  1. Pipe shall be manufactured in accordance with ASTM-F441.
  2. Shall be of the sizes shown on the Drawings and shall be Schedule 80.
  3. Shall contain CPVC specified amounts of pigment, stabilizers and other additives approved by National Sanitation Foundation (NSF) for the conveyance of potable water.
  4. Pipe shall carry the National Sanitation Foundation (NSF) seal of approval for potable water applications.
  5. Pipe shall be manufactured in the USA using domestic materials.

#### 2.2 CHLORINATED POLYVINYL CHLORIDE (CPVC) FITTINGS

- A. Threaded
  1. Shall be threaded.
  2. Shall conform to ASTM-F437.
  3. Shall be Schedule 80.
  4. Fittings, specials, unions, and flanges shall be of the same schedule number as the pipe they are attached to.

#### 2.3 SOLVENT CEMENT

- A. Cement for CPVC pipe and fittings:
  1. Shall meet or exceed the requirements of ASTM-F493.

#### 2.4 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

### PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 PIPING SYSTEM LAYOUT

- A. Follow the general layout shown on the Drawings in all cases except where other work may interfere.

### 3.3 INSTALLATION

- A. Chlorinated Polyvinyl Chloride (CPVC) Piping Systems.
  - 1. The installation of plastic pipe shall be strictly in accordance with the manufacturer's technical data and printed instructions.
  - 2. Joints for plastic pipe shall be solvent welded except flanged or threaded where required. In making solvent welded connections, clean dirt and moisture from pipe and fittings, bevel pipe ends slightly with emery cloth, if necessary, and apply solvent cement of the proper grade. Solvent welded joints shall be made in accordance with ASTM-F493.
  - 3. Installation of valves and fittings shall be strictly in accordance with manufacturer's instructions. Particular care shall be taken not to over-stress threaded connections. In making solvent weld connections, the solvent shall not be spilled on valves or allowed to run from joints.
  - 4. All piping shall have a sufficient number of unions to allow convenient removal of piping and shall be as approved by the Engineer.
  - 5. Plastic pipe to metal pipe connections shall be made with flanged connections. Do not thread metal pipe into plastic fittings, valves or couplings nor shall plastic piping be threaded into metal fittings, valves or couplings. Use socket to thread adaptors for threaded connections.
- B. Pipe Hanger and Supports:
  - 1. Pipe hangers and supports are specified in Section 15094.
  - 2. Do not use supports that clamp in such a manner as to restrict the axial movement of the piping system, due to thermal expansion and contraction.

### 3.4 TESTING

- A. After a twenty-four (24) hour curing period, piping systems shall be subjected to a hydrostatic pressure test for six (6) hours at a test pressure twenty-five (25) psi above the anticipated maximum working pressure.
  - 1. All leaks shall be repaired and the piping system retested as approved by the Engineer.

### 3.5 DISINFECTING

- A. All piping and fittings installed under this Section shall be chlorinated before being placed into service.
  - 1. Lines shall be chlorinated in accordance with the applicable sections of ANSI/AWWA C651.
  - 2. Provide temporary piping, valving and pumping for blow-off if required.
  - 3. Approval of the disinfecting procedure by the Engineer shall be required before proceeding.

END OF SECTION



## SECTION 15100

### VALVES AND APPURTENANCES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Site contractor and building manufacturer to provide all valves and appurtenances as required by the Contract Documents.
- B. The items of this Section shall include but not be necessarily be limited to:
  - 1. Ball Valves
  - 2. Motor operated ball valve
- C. Work not included:
  - 1. Piping system as shown on the Plumbing Drawings and specified under Section 15064 – Plastic Pipe and Fittings.
- D. Related Work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
  - 2. Section 15064 Plastic Pipe and Fittings

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Codes and regulations:
  - 1. In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies having jurisdiction.
  - 2. In the event of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern.
- C. All of the types of valves and appurtenances shall be products of established firms who are experienced in the manufacture of the particular equipment to be furnished.
- D. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 30 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements;
  - 3. Shop Drawings and other data as required to indicate method of installing and attaching equipment, except where such details are fully shown on the Drawings.

#### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS AND EQUIPMENT

- A. General
  - 1. All valves and appurtenances shall be of the size shown on the Drawings and as far as possible all equipment of the same type shall be from one manufacturer.
  - 2. All valves and appurtenances shall have the name of the manufacturer, flow directional arrows, and the working pressure for which they are designed cast in raised letters upon some appropriate part of the body.
  - 3. All valves shall open clockwise. Operators shall have arrows cast thereon to indicate the direction of rotation to operate the valve.
- B. Ball Valves (PVC Piping)
  - 1. Shall be PVC type 1, grade 1 in compliance with ASTM D1784.
  - 2. Shall be double entry true union with Viton "O" rings with solvent welded socket ends as required.
  - 3. Shall be rated for a working pressure of 150 psi at 75 degrees F non-shock.
- C. Motor Operated Ball Valves: Shall be equal to Model EAU1 Series Automated Ball Valve by Hayward. meet or exceed the latest requirements of NSF/ANSI 61 and NSF/ANSI 372 and comply with the following:
  - 1. CPVC Dell Class 23447 per ASTM D1748
  - 2. EPDM Seals or FPM seals as recommended by Manufacturer for chemical application.
  - 3. Double O-ring stem seals
  - 4. Consistent operating torque with adjustment free design.
  - 5. End of travel dry contact limit switch
  - 6. 120 VAC powered
  - 7. 90 degree operation
  - 8. Socket ball valve connection
  - 9. True union connections each end
  - 10. Pressure rating of 250 psi @ 70 degrees F.
  - 11. Size to be 1" diameter

## 2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Engineer.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 VALVE INSTALLATION

- A. The valves and appurtenances shall be installed at the locations shown on the Drawings. Valve operators shall be easily accessible and rigidly supported.
  - 1. After installation check valve operation. Valve shall operate smoothly through its entire operating range.
  - 2. Coordinate the work of this Section with the work of other Sections.

END OF SECTION

## SECTION 15190

### MECHANICAL IDENTIFICATION

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide pipe markers on all interior piping installed under this contract, as required by the Contract Documents.
- B. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications .
  - 2. Section 15064 Plastic Pipe and Fittings

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Specifications are based on identification products manufactured by Seton Name Plate Co., Branford, CT. Identification products of equal quality may be considered.
- C. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section.
  - 2. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements.
  - 3. Manufacturer's recommended installation procedures which, when approved by the Engineer, will become the basis for accepting or rejecting actual installation procedures used on the Work.

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

## PART 2 - PRODUCTS

### 2.1 PIPE MARKERS

- A. Pipe markers shall be Seton Opti-Code Markers as manufactured by Seton, Branford, CT. or an approved equal.
  - 1. Shall meet ANSI A.13.1 standards for print size, color and background color.
- B. Arrow tape: Shall be Seton Arrows-On-A-Roll Tape as manufactured by Seton, Branford, CT., or an approved equal.
  - 1. For pipe up to three (3) inch, use two (2) inch width.
  - 2. For pipes four (4) inches and up, use four (4) inch width.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until satisfactory conditions are corrected.

### 3.2 INSTALLATION

- A. Install the work of this Section in strict accordance with the manufacturer's recommendations as approved by the Engineer, using only the approved mounting materials.
- B. Install pipe identification on all interior piping. Markers shall identify service and flow direction.
  - 1. Install in clear view and align with axis of piping.
  - 2. Locate identification at:
    - a. Every ten (1)) feet
    - b. All risers and drops
    - c. Each side of structure penetrations
    - d. Changes in direction

END OF SECTION

## INDEX

### DIVISION 16 - ELECTRICAL

| <u>Section</u> | <u>Subject</u>                  | <u>Page</u>          |
|----------------|---------------------------------|----------------------|
| 16000          | Electrical - General Provisions | 16000-1 thru 16000-5 |
| 16110          | Raceways and Fittings           | 16110-1 thru 16110-4 |
| 16120          | Wires and Cables                | 16120-1 thru 16120-4 |
| 16191          | Miscellaneous Equipment         | 16191-1 thru 16191-6 |
| 16483          | Variable Speed AC Drives        | 16483-1 thru 16483-2 |

## SECTION 16000

### ELECTRICAL – GENERAL PROVISIONS

#### PART 1 - GENERAL

##### 1.1 SUB-BID REQUIREMENTS

- A. In accordance with "Massachusetts General Laws, Chapter 149, Section 44A through 44L inclusive as amended", the Engineer declares that all of the work of this Division shall be estimated under the appropriate Item of Part II of the Form for General Bid, and that each sub-bidder on this work shall submit his bid and bid security as detailed in the Advertisement.
  - 1. Details for the procedure for filing sub-bids are contained in the Instructions to Bidders.
  - 2. The Work of this Division is shown on Drawings E1-E3, summarized in Section 01010, 02070 and Division 16 Specifications.

##### 1.2 DESCRIPTION

- A. Work included: The work to be done under this Division is included in the following Sections:
  - 1. Section 16000 Electrical – General Provisions
  - 2. Section 16110 Raceways and Fittings
  - 3. Section 16120 Wires and Cables
  - 4. Section 16191 Miscellaneous Equipment
  - 5. Section 16483 Variable Speed AC Drives
- B. Related Work:
  - 1. Documents affecting work of this Division include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
- C. Connections
  - 1. The electrical sub-contractor shall provide the necessary devices to make connections to equipment furnished by other Sections and not necessarily limited to the above-mentioned Sections.
  - 2. It is the intent of these Specifications that the electrical system shall be suitable in every way for the service required. All material and all work which may be reasonably implied as being incidental to the work of this Division shall be furnished at no extra cost.
- D. Scope of Work
  - 1. See Section 01010 for work.

2. Furnish all labor, materials, equipment and incidentals required to make ready for use a complete electrical system as required by the Contract Documents. All electrical work to be performed by a licensed electrician.
3. The work shall include furnishing, installing, and testing the equipment and materials specified in other sections of the Division 16 Specifications and shown on the Drawings.
4. Install six (6) variable frequency drives (VFD) and furnish and install six (6) control panels for six (6) chemical feed pumps and provide all other materials and equipment shown on the drawings.
5. Electrical sub-contractor to provide conduit and conductors for all equipment and instrumentation to power source and existing SCADA panel. Electrical sub-contractor to install level sensor cables. The Owner's SCADA integrator shall provide locations to connecting wires to the existing SCADA panel, which shall be completed by electrical sub-contractor. Electrical sub-contractor to work with Town's SCADA integrator to test each reconnected and new signals.
6. The electrical raceways and other wiring methods must be submitted after the Contract is awarded to incorporate supports as required.
7. Contact shall be made in advance with the electrical inspector and the utility company regarding any requirements for the Town.

### 1.3 QUALITY ASSURANCE

- A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Division.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this Section. All electrical work to be performed by a licensed electrician.

### 1.4 PRIMARY POWER

- A. Primary power from existing pole mounted utility transformer is 3 phase, 4-wire, 480 volts, Eversource is the electrical utility.

### 1.5 CODES, INSPECTION AND FEES

- A. All material and installation shall be in accordance with the latest edition of the National Electrical Code and the codes and ordinances of the Town of Natick.
- B. Pay all fees required for permits and inspections.
- C. All equipment, materials and systems shall be provided, designed, manufactured, finished, painted, tested, inspected, packaged, shipped, stored, installed, and connected, in accordance with the most stringent requirements of the National Electrical Code (NEC), the General Industry Standards of OSHA, and all local, county, state and federal laws; and in accordance with the published codes, standards and specifications of the following organizations:



- |     |      |  |
|-----|------|--|
| 1.  | ANSE | American National Standards Institute  |
| 2.  | ASTM | American Society for Testing and Materials                                       |
| 3.  | ICEA | Insulated Cable Engineers Association  |
| 4.  | IEEE | Institute of Electrical and Electronics Engineers                                |
| 5.  | ISA  | Instrument Society of America  |
| 6.  | NEC  | National Electrical Code   |
| 7.  | NEMA | National Electrical Manufacturers Association                                    |
| 8.  | NFPA | National Fire Protection Association   |
| 9.  | OSHA | Occupational Safety and Health Administration of the U.S.<br>Department of Labor |
| 10. | U.L. | Underwriters Laboratories, Inc.  |

## 1.6 TESTS

- A. Test all systems furnished and/or installed under Division 16. Repair or replace all defective work; make all necessary adjustments to the systems and instruct the Owners personnel in the proper operation of the systems.
- B. The following minimum tests and checks shall be made prior to the energizing of the electrical equipment. A certified test report shall be submitted stating that the equipment and systems are in accordance with these Specifications and the manufacturers' job specifications, and that the equipment, systems and installations conform to all applicable codes, standards and specifications.
  - 1. Over potential, high potential, insulation resistance, and conductor and shield continuity tests for wires and cables.
  - 2. Check all wire and cable terminations for tightness and torque values where specified.
  - 3. Check motor nameplates for correct phase and voltage.
  - 4. Check the ampere rating of all thermal overload elements for motors and submit a typed record to the Engineer of same, as well as location and designation, listing the nameplate service factor, horsepower and full load current. If inconsistencies are found, new thermal elements shall be supplied and installed by the Town's Electrical Contractor.
  - 5. Obtain permission from the General Contractor to start motors, and proceed to check for proper rotation. Correct incorrect rotation. Take all necessary precautions not to damage any equipment.
  - 6. A certified test report shall then be submitted stating that the equipment and systems are in accordance with these Specifications and the manufacturers job specifications, and that the equipment, systems and installations conform to all applicable codes, standards and specifications.

## 1.7 INTERPRETATION OF DRAWINGS

- A. The electrical Drawings are diagrammatic and do not show the exact location of conduit runs.

1. Each three phase circuit shall be run in a separate conduit unless otherwise shown on the Drawings.
  2. Any work installed contrary to or without approval by the Engineer shall be subject to change as directed by the Engineer, and no extra compensation will be allowed for making these changes.
  3. The locations of equipment and similar devices shown on the Drawings are approximate only. Exact locations shall be as approved by the Engineer during construction. Obtain in the field all information relevant to the placing of electrical work and in case of any interference with other work, proceed as directed by the Engineer and furnish all labor and materials necessary to complete the work in an approved manner.
  4. Surface mounted panel boxes, junction boxes, conduit, etc., shall be supported by spacers to provide a clearance between wall and equipment.
  5. All connections to equipment shall be made as required, and in accordance with the approved shop and setting drawings.
  6. Instrumentation, cables and wires shall be run in a separate conduit.
  7. The wiring system shall be of approved materials. These materials will include conduit, nipples, raceways, wireway, busway, cables, boxes, conductors and gutters as required. Wiring methods to be in accordance with the latest edition of the NEC. All wiring within cabinet shall be in non-metallic conduit - no wires shall be unenclosed.
  8. This project requires a comprehension of the system so that procurement and installation and all wiring of equipment, power, instruments etc., be complete.
  9. Furnish and install all component interconnections.
- B. Investigate each space in the structure through which equipment must pass to reach its final location. If necessary, the manufacturer shall be required to ship his material in sections sized to permit passing through such restricted areas in the structure.

## 1.8 MATERIALS

- A. Provide only materials that are new, of the type and quality specified. Where Underwriters' Laboratories, Inc. has established standards for such materials, provide only materials bearing the UL label.
- B. Electrical equipment shall at all times during construction be adequately protected against mechanical injury or damage by water. Electrical equipment shall not be stored outdoors. Electrical equipment shall be stored in dry permanent shelters. If any apparatus has been damaged, such damage shall be repaired at no additional cost. If any apparatus has been subject to possibly injury by water, it shall be thoroughly dried out and put through such special tests as directed by the Engineer, or shall be replaced at no additional cost to the Owner.
- C. Damage to factory applied paint finish shall be repaired using touch-up paint furnished by the equipment manufacturer. The entire damaged panel or section shall be repainted per the field painting specifications at no additional cost to the Owner.

## 1.9 EXECUTION

### A. Cooperation with other Trades

1. The Electrical Sub-Contractor, before beginning his work, shall confer with the General Contractor and Sub-Contractors for the other trades, and with the town's Electrical Contractor, relative to the location of pipes, ducts or any fixtures or apparatus to be installed, and is to select his locations so as not to conflict with the work and rights of other Sub-Contractors. In case of conflict between the work of this Sub-Contractor and the work of other trades, this Sub-Contractor shall before proceeding with his work, notify the Engineer immediately and request a decision so that there shall be no delay in the installation of the work. Any work done or materials placed in position in violation of this clause shall be readjusted at the expense of the Electrical Sub-Contractor.

## 1.10 EQUIPMENT IDENTIFICATION

### A. All electrical items shall be identified as outlined below, and as specified in the Sections of this Division of the Specifications. Such identification shall be in addition to the manufacturer's nameplates and shall serve to identify the items function.

1. All equipment shall be identified by means of laminated phenolic labels incised to show 1-inch high, white letters on a black background. Labels shall be fastened by means of 3/16 inch diameter, round head, stainless steel, self tapping screws. Equipment whose designation has been changed shall be labeled accordingly.
2. Wires and cables shall be color coded and identified by means of fiber tags, as specified.
3. Pull and junction boxes shall be identified by stenciling the names of the feeders or system wires and cables passing through them.

## 1.11 RECORD DRAWINGS

### A. As the work progresses, legibly record all field changes on a set of project Drawings. These drawings shall be given to the Engineer at the completion of the project.

## 1.12 CLEANING UP

- A. Contractor shall take care to avoid accumulation of debris, boxes, crates, etc., resulting from the installation of his work. Contractor shall remove from the premises each day all debris, boxes, etc., and keep the premises clean.
- B. Contractor shall clean up all fixtures and equipment at the completion of the project.

END OF SECTION

## SECTION 16110

### RACEWAYS AND FITTINGS

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide the complete raceway system as shown on the Drawings and as specified herein.
- B. Refer to Section 16000: General requirements for electrical work.
- C. Refer to Section 03202 Wall Penetration
- D. Furnish all labor, materials, services, equipment and appliances required in connection with providing complete conduit system for conductors.

##### 1.2 APPLICATIONS

- A. Except as otherwise noted on the Drawings, or hereinafter specified, the following shall apply:
  - 1. Non-metallic Schedule 80 conduit shall be used for all underground installations.
  - 2. Metallic conduit and boxes shall be utilized for exterior aboveground work, transitioning a minimum of 12" below ground.
  - 3. Non-metallic Schedule 40 conduit shall be used for all building interior installations.
  - 4. All conduit of a given type shall be the product of one manufacturer.
  - 5. Unless noted otherwise on the Drawings or specified herein, all boxes shall be non-metallic.
  - 6. Terminal boxes, junction boxes, pull boxes, etc. used in areas designed as UL (NEMA) type 4 shall be non-metallic.
  - 7. Conduit wall seals shall be used where conduits penetrate walls, floors and other locations as noted on the Drawings.

##### 1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

## 1.5 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. A complete parts list for all equipment furnished under this Section.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Non-Metallic Conduit (Interior)
  - 1. Shall be heavy wall, high impact strength rigid PVC conforming to the requirements of:
    - a. EPC-40 PVC conduit
    - b. NEMA TC-2
    - c. UL listed in accordance with Article 347 of the NEC for exposed use.
  - 2. Flammability rated as self-extinguishing and have the following minimum properties:
    - a. Tensile strength ASTM D 638 at 78 degrees F: 6,000 psi.
    - b. Flexural strength, ASTM-D 790: 11,000 psi
    - c. Compressive strength, ASTM D 2240
  - 3. Fittings for EPC-40-PVC conduit shall meet the requirement of NEMA TC 3.
  - 4. The conduit and fittings shall carry a UL label on each 10-foot length of conduit and stamped or molded on every fitting.
  - 5. Conduit, fittings and cement shall be produced by the same manufacturer to assure system integrity.
- B. Non-Metallic Conduit (Underground)
  - 1. Shall be heavy wall high impact strength rigid PVC conforming to the requirements of:
    - a. EPC - 80-PVC conduit
    - b. NEMA TC 2
    - c. UL listed in accordance with Article 347 of NEC for underground use
  - 2. Fittings for EPC-80-PVC conduit shall meet the requirements of NEMA TC 3.
  - 3. The conduit and fittings shall carry a UL label on each 10-foot length of conduit and stamped or molded on every fitting.
  - 4. Conduit, fittings and cement shall be produced by the same manufacturer to assure system integrity.
- C. Liquidtight, Flexible Metal Conduit, Fittings and Couplings

1. Liquidtight, flexible metal conduit shall be LA-LOR as manufactured by Electri-Flex Company or equal.
  2. Fittings used with the flexible metal conduit shall be screw-in type as manufactured by Crouse Hinds Co., Raco or equal.
- D. Boxes and Fittings
1. Shall be fiberglass reinforced.
  2. Terminal boxes, junction boxes, pull boxes, etc. shall be Schedule 40 fiberglass unless otherwise shown on the Drawings. Covers shall be gasketed and fastened with stainless steel screws.
  3. Conduit hubs shall be as manufactured by Appleton Electric Co., Rayco or equal.
- E. Conduit Mounting Equipment
1. All bolts, screws nuts, washers and etc. shall be stainless steel.
  2. All wall hangers, clamps and etc. shall be non metallic. If non-metallic is not available on certain items, PVC coated hardware will be acceptable field applied PVC coatings shall not be acceptable.
  3. All threaded rod shall be stainless steel and no smaller in diameter than 3/8 inch.
  4. Unistrut shall be 1 5/8 inch in width and be hot dipped galvanized.
- F. Conduit Seals
1. Conduit wall sleeve seals shall be Link-Seal as manufactured by Thunderline Corp.
  2. Bolts and nuts shall be stainless steel.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General
1. All non-metallic conduit and fittings shall be solvent cemented in accordance with the written manufacturer's instructions.
  2. Install in accordance with Article 352 of the NEC.
  3. No conduit smaller than 1/2-inch electrical trade size shall be used, nor shall any have more than three 90-degree bends in any one run. Pull boxes shall be provided as required or directed.
  4. No wire shall be pulled until the conduit system is complete in all details; in the case of concealed work, until all rough plastering or masonry has been completed; in the case of exposed work, until the conduit system has been completed in every detail.
  5. The ends of all conduits shall be tightly plugged to exclude dust and moisture until wire is pulled. Immediately after pulling any wire, the box and enclosure covers shall be installed.
  6. Conduit supports shall be spaced:
    - a. Rigid non-metallic in compliance with Article 352 of the NEC.
    - b. Rigid metal in compliance with Article 344 of the NEC.

7. Single conduits shall be supported by one-hole pipe clamps with back plates designed to raise the conduit from the surface. Multiple runs of conduits shall be supported on Unistrut members supported with threaded rod.
8. All conduits on exposed work shall be run at right angles to and parallel with the surrounding wall. No diagonal runs will be allowed. Bends in parallel conduit runs shall be concentric. All conduits shall be run perfectly straight and true.
9. Conduit terminating in pressed steel boxes shall have double locknuts and insulated bushings.
10. Conduit terminating in non-metallic boxes shall have terminal adapters (threaded ended by socket end).
11. Conduit terminating in gasketed enclosures shall be terminated with conduit hubs.
12. Conduits shall be installed using threaded fittings.
  - a. Wherever raw metal is exposed on the conduit (cutting of threads), the exposed metal shall be cleaned and given a coat of ZRC cold galvanizing compound.
13. Liquidtight flexible metal conduit shall be used for all motor terminations and other equipment where vibration is possible.
14. Signal Conduits
  - a. Signal conduits shall be separated from power conduits by a minimum of four (4) inches where possible runs shall cross each other at right angles.
  - b. Signal circuits shall not be contained in the same raceway of boxes with power, lighting or control circuits.
  - c. Signal circuits within equipment enclosures shall be separated from power, lighting or control circuits by containing the signal circuit in metal raceway.
15. Secure continuous grounding by bonding conductor throughout conduit systems.
16. Conduits shall be placed with minimum horizontal direction of travel. Vertical travel is the preferred direction. Conduit shall travel vertical through the ceiling and travel horizontal along the masonry wall in the ceiling. Plenum conduits shall not be run diagonally across the top of the ceiling.
17. Conduit travel is restricted in areas that will compromise the architecture structure of the building.
18. Provide touch-up compounds for coated raceways. In the event the PVC coated metal is damaged during raceways installation.

### 3.2 CLEANING

- A. Rod and swab embedded conduit after concreting and masonry work have been completed. If obstructions are encountered which cannot be removed, or if any condition exists which may result in damage to wires and cables pulled through the conduit, install a new conduit run at a location approved by the Engineer at no additional cost to the Owner.

END OF SECTION

## SECTION 16120

### WIRES AND CABLES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included: Provide all wire, cable and appurtenances as shown on the Drawings and as specified herein.
- B. Refer to Section 16000: General requirements for electrical work.
- C. Furnish all labor, materials, services and equipment required in connection with providing wire and cables for the proposed equipment.

##### 1.2 APPLICATIONS

- A. Except as otherwise noted on the drawings or hereinafter specified, the electrical conductors shall be copper, and conform to ASTM B-3 of soft annealed copper, the following shall apply:
  - 1. Building wire and cable shall be copper with 600 V insulation, THWN for branch circuitry and XHHW for feeders.
  - 2. Conductors shall be of soft drawn 98% minimum conductivity properly refined copper and stranded construction for all conductors.
  - 3. Exterior of wires shall bear repetitive markings along their entire length indicating conductor size, insulation type and voltage rating.
  - 4. Exterior of wires shall be color-coded, so as to indicate a clear differential between each phase and between each phase and neutral. In all cases, grounded neutral wires and cables shall be identified by the colors white or gray. In sizes and insulation types where factory applied colors are not available, wires and cables shall be color coded by the application of colored plastic tapes in overlapping turns at all terminal points, and in all boxes in which splices are made. Colored tape shall be applied for a distance of 6 inches along the wires and cables, or along their entire extensions beyond raceway ends, whichever is less.
  - 5. Final connections to motors shall be made with 18-inches of neoprene sheathed flexible conduit.
  - 6. Minimum branch circuit conductor size shall be No. 12 AWG installed in conduit. Motor control circuit wiring shall be minimum No. 14 AWG installed in conduit.



7. Other wires and cables required for the various systems described elsewhere in this Section of the Specifications shall be as specified herein, as shown on the Contract Drawings, or as recommended by the manufacturer of the specific equipment for which they are used all installed in conduit.

### 1.3 COLOR CODING OF CONDUCTORS

- A. Color code all supply cables and branch circuit conductors throughout the secondary alternating current wiring system as follows:

| 1. | <u>Conductor</u> | <u>480Y/277 Volts</u> | <u>120/208 Volts</u> | <u>120/240 Volts</u> |
|----|------------------|-----------------------|----------------------|----------------------|
|    |                  | Three Phase Y         | Three Phase Y        | Three Phase Delta    |
|    | Phase A          | Brown                 | Black                | Black                |
|    | Phase B          | Orange                | Red                  | Orange               |
|    | Phase C          | Yellow                | Blue                 | Blue                 |
|    | Neutral          | Gray or White         | White or Gray        | White or Gray        |
|    | Ground           | Green w/yellow strip  | Green                | Green                |

2. Color code 120/240 volt, single phase as follows:
  - a. Phase A - Black - - - Phase B - Blue or red.
3. Branch circuit phase conductors No. 10 and smaller and all neutral and equipment conductors: Solid color insulation or solid color coating.
4. Solid color coatings and tracers: A strongly adherent paint or dye not injurious to the insulation and which will not be obliterated by pulling into a conduit or raceway.
5. On-site coloring of ends of conductor may be permitted by the Engineer upon receipt of satisfactory evidence that the Contractor is unable to order color-coded wire and cable as specified. Provide certification from the cable manufacturer that the paint or dye proposed for field application is non-injurious to the insulation. Colored tape may be used to mark the ends of conductors in lieu of paint or dye.

### 1.4 CONDUCTOR MARKINGS

- A. All conductors shall bear the markings of the Underwriter's Laboratories, the AWG size, the type of insulation, maximum permissible voltage, the manufacturers name and trademark.

### 1.5 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

### 1.6 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. A complete parts list for all equipment furnished under this Section.

## 1.7 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

## PART 2 - PRODUCTS

### 2.1 MATERIAL

- A. Conductor Sizes: Standard American wire gauge sizes.
  - 1. All conductors shall be stranded copper.
  - 2. Copper shall be soft drawn copper.

### 2.2 600 VOLT WIRE

- A. Type XHHW shall be cross-linked polyethylene as manufactured by American Insulated Wire Corp., General Electric Co. or equal.
- B. Type THWN shall have PVC insulation with a nylon jacket as manufactured by American Insulated Wire Corp., General Electric Co., or equal.
- C. Type RHH shall be cross-linked polyethylene as manufactured by American Insulated Wire Corp., General Electric Co. or equal.

### 2.3 SIGNAL CABLE

- A. Signal cable shall be twisted pair construction, multiple pair series with individual and overall shield and PVC jacket. Minimum of 6 pairs AWG size 18 cable, UL listed. In the event the instrumentation provided will not accommodate AWG size, a smaller than a #18 AWG cable can be used.
- B. Signal leads, wires and cables furnished under Section 13310 and under other Divisions of these Specifications shall be installed under this Section.

### 2.4 BARE COPPER

- A. Bare copper wire shall be stranded, Class B manufactured from soft annealed copper.

### 2.5 CONNECTORS

- A. Compression connectors shall be rated for 600 volts and vinyl insulated as manufactured by Burndy or equal.

## 2.6 WIRE AND CABLE MARKERS

- A. Wire and cable markers shall be "Omni-Grip" as manufactured by W.H. Brady Co. or equal.
- B. Wire and cables with diameters exceeding the capacity of the "Omni-Grip" shall be marked with pre-printed, self-adhesive vinyl tapes as manufactured by W.H. Brady Co. or equal.

## 2.7 ELECTRICAL TAPE

- A. Specifically designed for use as insulating tape.
- B. Super 33+ Scotch vinyl electrical tape as manufactured by 3M.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Conductors shall be installed as follows:
  - 1. Handled carefully to avoid kinks or damage to the insulation.
  - 2. Lubricants used to facilitate wire pulling shall be UL approved for the specified insulation.
  - 3. All wire and cable shall be continuous and without splices between points of connection to equipment terminals.
  - 4. Shielded instrumentation wire shall be installed from terminal to terminal with no splicing at any intermediate point.
  - 5. Shielded instrumentation wire shall be installed in rigid conduit and pull boxes that contain only shielded instrumentation wire.
  - 6. Shielding of instrumentation wire shall be grounded at the transmitter end only.
  - 7. All wiring terminations shall be uniquely identified at each end with wire and cable markers.

## 3.2 TESTS

- A. All 600-volt wire insulation shall be tested with a megohm meter after installation. Tests shall be made at no less than 500 volts.
- B. When required by the Engineer, such tests shall be performed in his presence. Before conducting tests, a written outline of the methods and equipment to be used shall be submitted to the Engineer for approval. All test equipment shall be provided by the Sub-Contractor.

END OF SECTION

## SECTION 16191

### MISCELLANEOUS EQUIPMENT

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work items if not identified but shown on drawing shall be provided under this section.
- B. Furnish all labor, materials, services, equipment and appliances and test all miscellaneous equipment as shown on the Drawings and as specified herein.
  - 1. Disconnect switches and circuit breakers
  - 2. Day Tank fill pedal
  - 3. Chemical feed control panel
  - 4. Enclosures
  - 5. Panelboard

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Product data: Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Materials list of items proposed to be provided under this Section;
  - 2. A complete parts list for all equipment furnished under this Section.
  - 3. All manufacturers' catalog cuts and technical literature, which clearly show the proposed products are in conformance with these Specifications.

## 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

## 1.5 OPERATION AND MAINTENANCE MANUAL

- A. Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the Engineer three (3) copies of an operation and maintenance manual complied in accordance with the provisions of Section 01730 of these Specifications.

## PART 2 - EQUIPMENT

### 2.1 CHEMICAL FEED PUMP CONTROL PANEL

- A. Control Panel
  - 1. Provide chemical feed pump control panel in non-metallic enclosure including but not limited to the equipment identified on the Drawings and identified below:
    - a. Primary fusing
    - b. Remote Local 2-position selector switch with required contact blocks per drawing
    - c. Hand-Off-Auto 3-position selector switch with required contact blocks per drawing
    - d. Relays to be din rail mounted 15 amp rated, 240 VAC with indicating light and manual operator
    - e. Terminal blocks for incoming and outgoing signals
    - f. All pilot devices to be UL listed, water/oil tight suitable for 30.5 mm mounting.
    - g. Indicating lights shall have LED lamp and rated 120 volts with push-to-test feature.
    - h. Include legend plate for pilot devices
    - i. Include phenolic nameplate for control panel identification
    - j. Speed potentiometer to control VFD speed.

### 2.2 TRANSFER PUMP CONTROL PANEL

- A. Control Panel
  - 1. Provide chemical transfer control panel in non-metallic enclosure including but not limited to the equipment identified on the Drawings and identified below:
    - a. Primary breaker and fusing
    - b. Two position pump selector switch with required contact blocks per drawing
    - c. Relays to be din rail mounted 15 amp rated, 240 VAC with indicating light and manual operator
    - d. Terminal blocks for incoming and outgoing signals
    - e. All pilot devices to be UL listed, water/oil tight suitable for 30.5 mm mounting except push button.
    - f. Indicating lights shall have LED lamp and rated 120 volts with push-to-test feature.
    - g. Include legend plate for pilot devices
    - h. Include phenolic nameplate for control panel identification

### 2.3 CHLORINE TRANSFER PUMP FOOT PEDAL

- A. Foot pedal shall be floor mounted, heavy duty foot switch, SPDT Contact Form, 125/240 volts AC rating.
  - 1. Switch shall be equal to Model No. 531-SWH by Linemaster.

### 2.4 DISCONNECT SWITCHES

- A. Disconnect switches shall be of the fusible or non-fusible type as noted and equipped with an external lever or handle for manual operation. Each unit shall be enclosed in a code gauge, sheet steel cabinet with hinged door and catches and suitable for surface mounting as indicated on the Drawings. Fusible disconnect switches shall be provided with a rejection feature such that all fuse holders will accept only UL Class R or Class L fuses. Neutral conductors shall be solid throughout.
- B. Unless otherwise noted, switches shall be heavy-duty type in NEMA I enclosures of the size indicated on the Drawings or as required. NEMA Type 3R switches shall be provided where exposed to weather. (W.P.).
- C. A disconnect switch shall be furnished and installed for all power equipment as required by CMR 527, Massachusetts Electrical Code, whether or not shown on the Drawings.
- D. Disconnect switches shall be manufactured by General Electric, ITE Siemens, or Westinghouse.

### 2.5 CHEMICAL FEED PUMP VFD 3PHASE BREAKER

- A. Provide 3 phase breakers for existing panelboards to power the 2 Elm Bank new chemical feed VFDs.
- B. Automatic tripping shall be indicated by handle automatically assuming a position between the manual "OFF" and "ON" positions. The individual breakers shall be calibrated and sealed to eliminate tampering or unauthorized changes in calibration. Breakers shall be interchangeable and capable of being operated in any position. Two and three-pole breakers shall be common trip type so that an overload on open pole will trip all poles simultaneously. All circuit breakers with trip ratings larger than 100 amperes shall have interchangeable trips. No handle bar ties will be allowed on multi-pole circuit breakers to accomplish either manual or automatic tripping. All circuit breakers shall be the bolt-on type.
- C. The exact type of circuit breaker required for each power panelboard shall be determined from the information shown on the Electrical Drawings.
- D. The minimum interrupting ratings of molded case circuit breakers shall be as indicated on drawings.

## 2.6 PANELBOARD SPRINGVALE

- A. Panelboard shall be of the dead-front type manufactured in accordance with the Underwriters Laboratories, Inc. standard for panelboards and enclosing cabinets and so labeled.
- B. Interiors shall have copper bus bars with mains arranged for a grounded, solid neutral system with lugs only in the mains unless otherwise indicated. The number and size of single, double and three-pole circuit breakers indicated on the Drawings shall be provided. The design of the structure shall be such that the units may be removed without disturbing adjacent sections, bus structure, or insulation.
- C. Automatic tripping shall be indicated by handle automatically assuming a position between the manual "OFF" and "ON" positions. The individual breakers shall be calibrated and sealed to eliminate tampering or unauthorized changes in calibration. Breakers shall be interchangeable and capable of being operated in any position. Two and three-pole breakers shall be common trip type so that an overload on open pole will trip all poles simultaneously. All circuit breakers with trip ratings larger than 100 amperes shall have interchangeable trips. No handle bar ties will be allowed on multi-pole circuit breakers to accomplish either manual or automatic tripping. All circuit breakers shall be the bolt-on type.
- D. The exact type of circuit breaker required for the power panelboard shall be determined from the callouts included on the Electrical Drawings. Where indicated in the callouts, "SPACE" shall mean to include all necessary bus bars, device supports and connections.
- E. The minimum interrupting ratings of molded case circuit breakers shall be as indicated on drawings.
- F. Branch circuit numbering is for identification and convenience only and is not intended to designate connecting sequence. The Contractor is responsible for a proper load balance at each panel.
- G. Panelboard cabinets shall be fabricated from code gauge galvanized sheet steel and furnished with pre-punched conduit entrances for flush mounted panels only. Surface mounted cabinets shall be furnished without pre-punched conduit entrances. Trims shall be furnished in gray enamel paint over a rust inhibiting prime coat. A turned edge shall be provided around the front of the box for rigidity and attachment of the front. Wiring gutters shall be in accordance with the CMR 527, Massachusetts Electrical Code. Trims on cabinets shall be hinged in such a manner that the entire trim may be opened by qualified personnel for easy access to panel interiors. Separate standard panel doors shall be provided in the trim for access to circuit breaker operating handles only. Both doors shall have combination lock and latch, with all locks keyed alike. Operating handles and locks shall be flush in doors.

- H. A directory holder with clear plastic or glass plate and metal frame shall be mounted on the inside of each door. A neatly typed directory properly identifying each circuit shall be provided in the holder. Panelboards shall be so mounted that the distance from finish floor to the handle of the top most circuit breaker does not exceed 6 feet 6 inches.
- I. All panelboards shall be fully rated and labeled with a UL short circuit rating. Series rating is not allowed.
- J. Panelboards shall be manufactured by General Electric, Square D, or Eaton

## 2.7 SAFETY SWITCHES

- A. The Electrical Subcontractor shall furnish and install the low-voltage fusible and non-fusible switches as specified herein and as shown on the contract drawings.
- B. The safety switches and all components shall be designed, manufactured, and tested in accordance with the latest applicable standards NEMA and UL.
- C. For the equipment specified herein, the manufacturer shall be ISO 9000, 9001 or 9002 certified.
- D. Equipment shall be handled and stored in accordance with manufacturer's instructions. Once (1) copy of these instructions shall be included with the equipment at time of shipment.
- E. Manufacturers
  - 1. Cutler-Hammer
  - 2. Square D
  - 3. General Duty Safety Switches Ratings
    - a. 30 to 600 Amperes.
    - b. 240 Volts AC.
    - c. 2-, 3- and 4-Pole SN.
    - d. Fusible and Non-Fusible.
- F. Enclosures Types
  - 1. NEMA 1 General Purpose.
  - 2. NEMA 3R Raintight.
  - 3. NEMA 1 Plug Fuse Indoor.
  - 4. NEMA 3R Plug Fuse Rainproof.
- G. All switches shall have: NEMA 1 Heavy Duty enclosures unless otherwise noted.

## PART 3 - EXECUTION

### 3.1 SURFACE CONDITIONS



- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

### 3.2 COORDINATION

- A. Coordinate as required with other trades to assure proper and adequate provision in the work of those trades for interface with the work of this Section.

### 3.3 INSTALLATION

- A. Installation shall be in strict accordance with the best practice of the involved trades and with the respective manufacturer's instructions and recommendations.
- B. Electrical Connection
  - 1. Electrical connections shall be made under Division 16.
  - 2. Provide all necessary conductors, conduits, bushings, couplings, support cups, straps and hardware required by the National Electrical Code to provide complete electrical connection including all interconnections between the devices specified and their line, load and control function.

### 3.4 TESTING REQUIRED FOR ALL MISCELLANEOUS EQUIPMENT

- A. Each device shall be tested to verify all components function mechanically and electrically and perform function intended.
- B. All devices that have interwiring connectors shall be tested to verify external signals activate and deactivated as indicated on the Drawings.
- C. Provide all necessary and required assistance from manufacturer of equipment during start-up.

END OF SECTION

## SECTION 16483

### VARIABLE SPEED AC DRIVES

#### PART 1 - GENERAL

##### 1.1 DESCRIPTION

- A. Work included is installing owner furnished six (6) wall mounted variable speed drives at the Springvale WTP and Elm Bank WTP to power Milton Roy chemical feed pumps.
- B. Install the variable speed AC drives as shown on the Contract Drawings and as specified herein.
- C. Related work:
  - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections 1 in Division 1 of these Specifications.
  - 2. Section 11349 Chemical feed Equipment

##### 1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. The Contractor shall conduct all work in a first-class workmanlike manner, and he/she shall use reasonable and appropriate care and skill in the performance of the work under this section.

##### 1.3 SUBMITTALS None Required

##### 1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01610.

#### PART 2 - PRODUCTS

##### 2.1 APPROVED MANUFACTURERS

- A. The Owner furnished drives will be ABB variable frequency drives, model #ACQ580, 1 hp, 480 volts 3 phase in a NEMA 1 enclosure.

#### PART 3 - EXECUTION

### 3.1 VERIFICATION OF CONDITIONS

- A. Before the start of the work of this Section, verify that the project is ready for this work.
- B. Verify that field measurements are as shown on approved shop drawings and/or manufacturer's instructions.
- C. Verify that the equipment or material is in conformance with the approved shop drawings and specifications and solve any deviations.
- D. Notify subcontractors involved or affected by this work and coordinate the work with them.

### 3.2 INSTALLATION

- A. All materials and equipment shall be installed in a neat, workmanlike manner.
- B. Minimum requirements of all wiring of the equipment shall be as specified under Division 16, Electrical of these specifications.
- C. Installation of the equipment shall be in accordance with written instructions provided by the manufacturer and as approved.

### 3.3 CLEANUP

- A. Prior to start-up and field testing, all foreign matter shall be removed from the equipment. Spillage of liquids used in servicing the system shall be cleaned from all equipment and concrete surfaces.

### 3.4 MANUFACTURER'S FIELD SERVICES

- A. Manufacturer's Field Services, Owner furnished for drive startup, shall be coordinated by the contractor under this section.
- B. The start-up will be broken into 2 separate site visits by the field technician, one for Springvale drives and one for Elm Bank drives.

### 3.5 TRAINING

- A. Training will be provided by the Owner's field technician.

END OF SECTION

PRIME/GENERAL UPDATE STATEMENTS ARE NOT PUBLIC RECORDS AND  
ARE NOT OPEN TO PUBLIC INSPECTION (M.G.L. C.149, §44D)

**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](http://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 and Maintenance 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 AND MAINTENANCE. 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 &<br>LOCATION | WORK<br>CATEGORY | START AND<br>END DATES | ON<br>SCHEDULE<br>(yes / no) | CONTRACT<br>PRICE | % NOT<br>COMPLETE | \$ VALUE OF<br>WORK NOT<br>COMPLETE<br>(col. 5 X col.<br>6) | NO. OF YEARS<br>REMAINING<br>(see note<br>below) | ANNUALIZED<br>VALUE OF<br>INCOMPLETE<br>WORK<br>(col. 7 ÷ col. 8)<br>(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 |

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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has your firm failed or refused either to perform or complete any of its work under any contract prior to substantial completion?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Has your firm failed or refused to complete any punch list work under any contract?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Has your surety taken over or been asked to complete any of your work under any contract?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Has your surety made payment to a materials supplier or other party under your payment bond on any contract?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Has any subcontractor filed a demand for direct payment with an awarding authority for a public project on any of your contracts?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Have there been any deaths of an employee or others occurring in connection with any of your projects?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |

**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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |

**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? | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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 <a href="http://www.osha.gov">www.osha.gov</a>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?           | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are there any other issues that you are aware which may affect your firm's responsibility and integrity as a building contractor?   | <input type="checkbox"/> | <input type="checkbox"/> |

## **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 AND MAINTENANCE.**

**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 and Maintenance.**



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

## Sub-Bidder Update Statement

### TO ALL SUB-BIDDERS, TRADE CONTRACTORS AND AWARDING AUTHORITIES

A COMPLETED AND SIGNED SUB-BIDDER UPDATE STATEMENT MUST BE SUBMITTED WITH EVERY FILED SUB-BID PURSUANT TO M.G.L. c.149, §44F AND EVERY TRADE SUB-BID PURSUANT TO M.G.L. c. 149A. ANY FILED SUB-BID OR TRADE SUB-BID SUBMITTED WITHOUT AN APPROPRIATE SUB-BIDDER UPDATE STATEMENT IS INVALID AND MUST BE REJECTED.

*Caution: This form is to be used for submitting Filed Sub-Bids and Trade Sub-Bids Only*

### AWARDING AUTHORITIES

If the Awarding Authority determines that the Sub-Bidder is not competent to perform the work as specified on the project, it should reject the bid.

---

### SUB-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 Sub-Bidder Update Statement on behalf of the bidder named below, that I have read this Sub-Bidder Update Statement, and that all of the information provided by the bidder in this Sub-Bidder Update Statement is true, accurate, and complete as of the bid date.

---

Bid Date

---

Print Name of Sub-Bidder or Trade Contractor

---

Project Number  
(or name if no number)

---

Business Address

---

Awarding Authority

---

Telephone Number

**SIGNATURE⇒**

---

**Bidder's Authorized Representative**

## **INSTRUCTIONS**

### **INSTRUCTIONS TO SUB-BIDDERS**

- This form must be completed and submitted by all Filed Sub-Bidders bidding on projects and Trade Contractors bidding on projects.
- You must give complete and accurate answers to all questions and provide all of the information requested. MAKING A MATERIALLY FALSE STATEMENT IN THIS SUB-BIDDER UPDATE STATEMENT IS GROUNDS FOR REJECTING YOUR BID AND FOR DEBARRING YOU FROM ALL PUBLIC CONTRACTING.
- This Sub-Bidder Update Statement must include all requested information that was not previously reported on the application used for your company's most recently issued (not extended or amended) Sub-Bidder Certificate of Eligibility. **The Sub-Bidder Update Statement must cover the entire period since the date of that application, NOT since the date of your Certification.**
- You must use this official form of Sub-Bidder Update Statement. Copies of this form may be obtained from the awarding authority or from the DCAMM Web Site:  
[www.mass.gov/DCAMM/certification](http://www.mass.gov/DCAMM/certification).
- If additional space is needed, please copy the appropriate page of this Sub-Bidder Update Statement and attach it as an additional sheet.
- It is acceptable to attach your projects in progress and completed projects spreadsheet for Part 7.

### **INSTRUCTIONS TO AWARDING AUTHORITIES**

#### ***Determination of Sub-Bidder Qualifications***

- It is the awarding authority's responsibility to determine each responsible bidder. You must consider all of the information in the bidder's Sub-Bidder Update Statement in making this determination. **Remember: this information was not available to the Division of Capital Asset Management and Maintenance at the time of certification.**
- The Sub-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 BIDDERS CERTIFICATION FILE. WITH THE IMPLEMENTATION OF ELECTRONIC DOCUMENT MANAGEMENT FILE REVIEWS CAN BE PROVIDED ELECTRONICALLY. To discuss your request/options contact DCAMM's Contractor Certification (857) 204-1305 or via email at [certification.dcammm@mass.gov](mailto:certification.dcammm@mass.gov).

#### ***Correction of Errors and Omissions in Sub-Bidder Update Statements***

Matters of Form: An awarding authority shall not reject a Sub-Bidder's bid because there are mistakes or omissions of form in the Sub-Bidder Update Statement submitted with the bid provided the Sub-Bidder promptly corrects those mistakes or omissions upon request of the awarding authority.

Correction of Other Defects: An awarding authority may, in its discretion, give a Sub-Bidder notice of minor defects and omissions as to form in the Sub-Bidder's Update Statement and provide an opportunity to correct its Sub-Bidder Update Statement. However, the Sub-Bidder shall not be allowed to make corrections to a Sub-Bidder Update Statement if material information about the Sub-Bidder was omitted from the Sub-Bidder Update Statement filed with the Sub-Bidder's bid. The Awarding Authority shall advise DCAMM of any material omissions in a Sub-Bidder's Update Statement.



### **PART 1 - COMPLETED PROJECTS**

List All Public And Private Projects Of \$20,000 or more your company has completed since the date of application for your most recently issued (not extended or amended) Sub-Bidder Certificate Of Eligibility\*.

| PROJECT TITLE & LOCATION | WORK<br>CATEGORY | CONTRACT PRICE | START DATE | DATE<br>COMPLETED |
|--------------------------|------------------|----------------|------------|-------------------|
|                          |                  |                |            |                   |
|                          |                  |                |            |                   |
|                          |                  |                |            |                   |
|                          |                  |                |            |                   |
|                          |                  |                |            |                   |
|                          |                  |                |            |                   |

Attach additional sheets if necessary

\* If your company 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 Sub-Bidder Update Statement.

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

| PROJECT TITLE |          | COMPANY NAME | CONTACT PERSON | TELEPHONE | EMAIL ADDRESS |
|---------------|----------|--------------|----------------|-----------|---------------|
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |

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 – PROJECTS IN PROGRESS CONTRACTS**

List all public and private projects of \$20,000 or more your company has under contract on this date regardless of when or whether the work commenced.

| 1                           | 2                | 3                                   | 4                            | 5                 | 6                 | 7  |
|-----------------------------|------------------|-------------------------------------|------------------------------|-------------------|-------------------|--|
| PROJECT TITLE &<br>LOCATION | WORK<br>CATEGORY | START AND<br>END DATES<br>(MM/YYYY) | ON<br>SCHEDULE<br>(yes / no) | CONTRACT<br>PRICE | % NOT<br>COMPLETE | \$ VALUE OF<br>WORK NOT<br>COMPLETE<br>(col. 5 X col. 6) |
|                             |                  |                                     |                              |                   |                   |  |
|                             |                  |                                     |                              |                   |                   |  |
|                             |                  |                                     |                              |                   |                   |  |
|                             |                  |                                     |                              |                   |                   |  |
|                             |                  |                                     |                              |                   |                   |  |

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

| PROJECT TITLE |          | COMPANY NAME | CONTACT PERSON | TELEPHONE | EMAIL ADDRESS |
|---------------|----------|--------------|----------------|-----------|---------------|
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |
|               | OWNER:   |              |                |           |               |
|               | DESIGNER |              |                |           |               |
|               | GC:      |              |                |           |               |

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 - GENERAL PERFORMANCE (in the prime update it's called Project Performance – can we change it?)**

**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) DCAMM Sub-Bidder Certificate of Eligibility. You must report all requested information not previously reported on that application. Include all details [project name(s) and location(s), names of all parties involved, relevant dates, etc.].**

|   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| 1. Has your company been terminated on any contract prior to completing a project or has any officer, partner or principal of your company been an officer, partner or principal of another company that was terminated or failed to complete a project?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has your company failed or refused either to perform or complete any of its work under any contract prior to substantial completion?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Has your company failed or refused to complete any punch list work under any contract?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Has your company filed for bankruptcy, or has any officer, principal or individual with a financial interest in your current company been an officer, principal or individual with a financial interest in another company that filed for bankruptcy?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Has your surety taken over or been asked to complete any of your work under any contract?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has a payment or performance bond been invoked against your current company, or has any officer, principal or individual with a financial interest in your current company been an officer, principal or individual with a financial interest in another company that had a payment or performance bond invoked? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Has your surety made payment to a materials supplier or other party under your payment bond on any contract?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Has any subcontractor filed a demand for direct payment with an awarding authority for a public project on any of your contracts?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Have there been any deaths of an employee or others occurring in connection with any of your projects?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 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?  | <input type="checkbox"/> | <input type="checkbox"/> |

#### 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 company, which were instituted or concluded (adversely or otherwise) since your company's Application for your most recently issued (not extended or amended) Sub-Bidder Certificate of Eligibility. You must report all requested information not previously reported on that DCAMM Application.

The term "administrative proceeding" as used in this Sub-Bidder 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 company" as used in this Section "I", shall mean any person and/or entity with a 5% or greater ownership interest in the applicant's company.

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 company or a principal or officer or anyone with a financial interest in your company 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Have any criminal proceedings involving your company or a principal or officer or anyone with a financial interest in your company 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? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company 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?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company been brought, concluded, or settled relating to a violation of M.G.L. Chapter 268A, the State Ethics Law?   | <input type="checkbox"/> | <input type="checkbox"/> |

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

|   | YES                      | NO                       |
|---|--------------------------|--------------------------|
| 5. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company 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? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company been brought, concluded, or settled relating to a violation of any state or federal law prohibiting discrimination in employment?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company been brought, concluded, or settled relating to a claim of repeated or aggravated violation of any state or federal law regulating labor relations?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Have any proceedings by a municipal, state, or federal agency been brought, concluded, or settled relating to decertification, debarment, or suspension of your company or any principal or officer or anyone with a financial interest in your company from public contracting?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Have any judicial or administrative proceedings involving your company or a principal or officer or anyone with a financial interest in your company been brought, concluded, or settled relating to a violation of state or federal law regulating the environment?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Has your company 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 <a href="http://www.osha.gov">www.osha.gov</a>  | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Has your company been sanctioned for failure to achieve DBE/MBE/WBE goals, workforce goals, or failure to file certified payrolls on any public projects?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Other than previously reported in the above paragraphs of this Section I, have any administrative proceedings or investigations involving your company or a principal or officer or anyone with a financial interest in your company been brought, concluded, or settled by any local, state or federal agency relating to the procurement or performance of any construction contract?           | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are there any other issues that you are aware which may affect your company's responsibility and integrity as a building contractor?  | <input type="checkbox"/> | <input type="checkbox"/> |

**PART 5 - SUPERVISORY PERSONNEL**

List all supervisory personnel who will be assigned to the project if your company 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 company's business organization, financial condition or bonding capacity since the date your current Contractor 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 AND MAINTENANCE ALONG WITH CERTIFICATION SIGNATURE PAGE.**

Attach here a copy of the list of completed construction projects which was submitted with your company's application for your most recently issued (not extended or amended) Sub-Bidder Certificate of Eligibility. The Attachment must include a complete copy of the entire Completed Projects spreadsheet and the final page Certification Page of the online application, containing the signature and date the completed projects list was submitted to the Division of Capital Asset Management and Maintenance.



**TOWN OF NATICK MASSACHUSETTS  
SELECT BOARD  
CHEMICAL FEED UPGRADES  
W-165**

**SELECT BOARD**

PAUL JOSEPH, CHAIRMAN  
MICHAEL J. HICKEY JR., VICE CHAIRMAN  
BRUCE T. EVANS., CLERK  
KATHRYN M. COUGHLIN  
RICHARD SIDNEY

**TOWN ADMINISTRATOR**

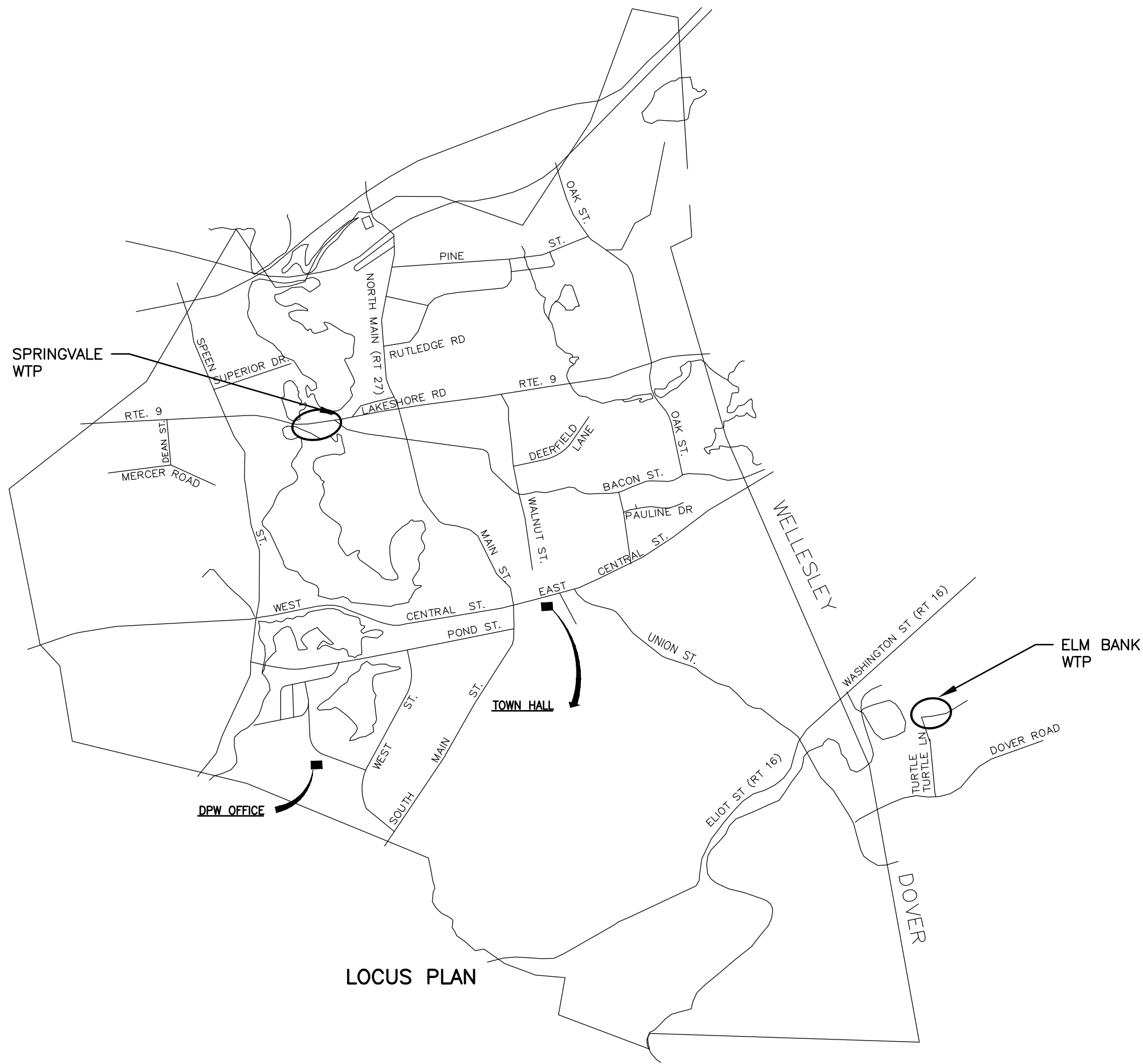
JAMES ERRICKSON

**ACTING DIRECTOR OF PUBLIC WORKS**

WILLIAM SPRATT

**WATER AND SEWER SUPERINTENDENT**

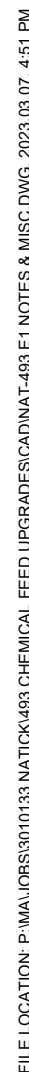
ANTHONY COMEAU



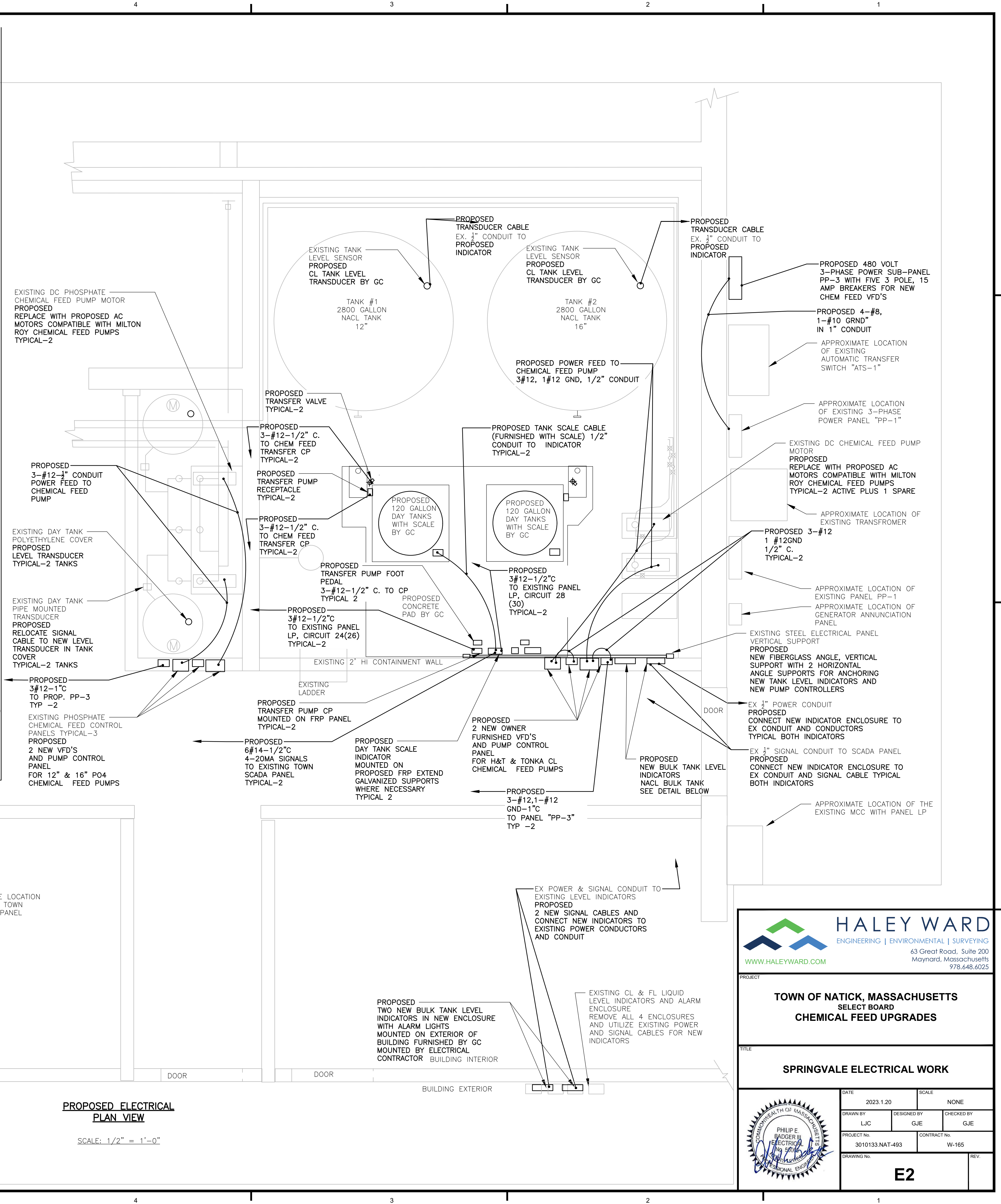
**INDEX OF DRAWINGS**

| CVR | CVR SHEET  |
|-----|--|
| E1  | ELECTRICAL NOTES, SYMBOLS AND INSTRUMENTATION      |
| E2  | SPRINGVALE ELECTRICAL WORK                         |
| E3  | ELM BANK ELECTRICAL WORK                           |
| I1  | INSTRUMENTATION                                    |
| M1  | EXISTING SPRINGVALE CHEMICAL FEED PUMPS AND PIPING |
| M2  | PROPOSED SPRINGVALE DAY TANKS AND PIPING           |
| M3  | ELM BANK DEMOLITION                                |
| M4  | PROPOSED ELM BANK DAY TANKS AND PIPING             |

MARCH, 2023

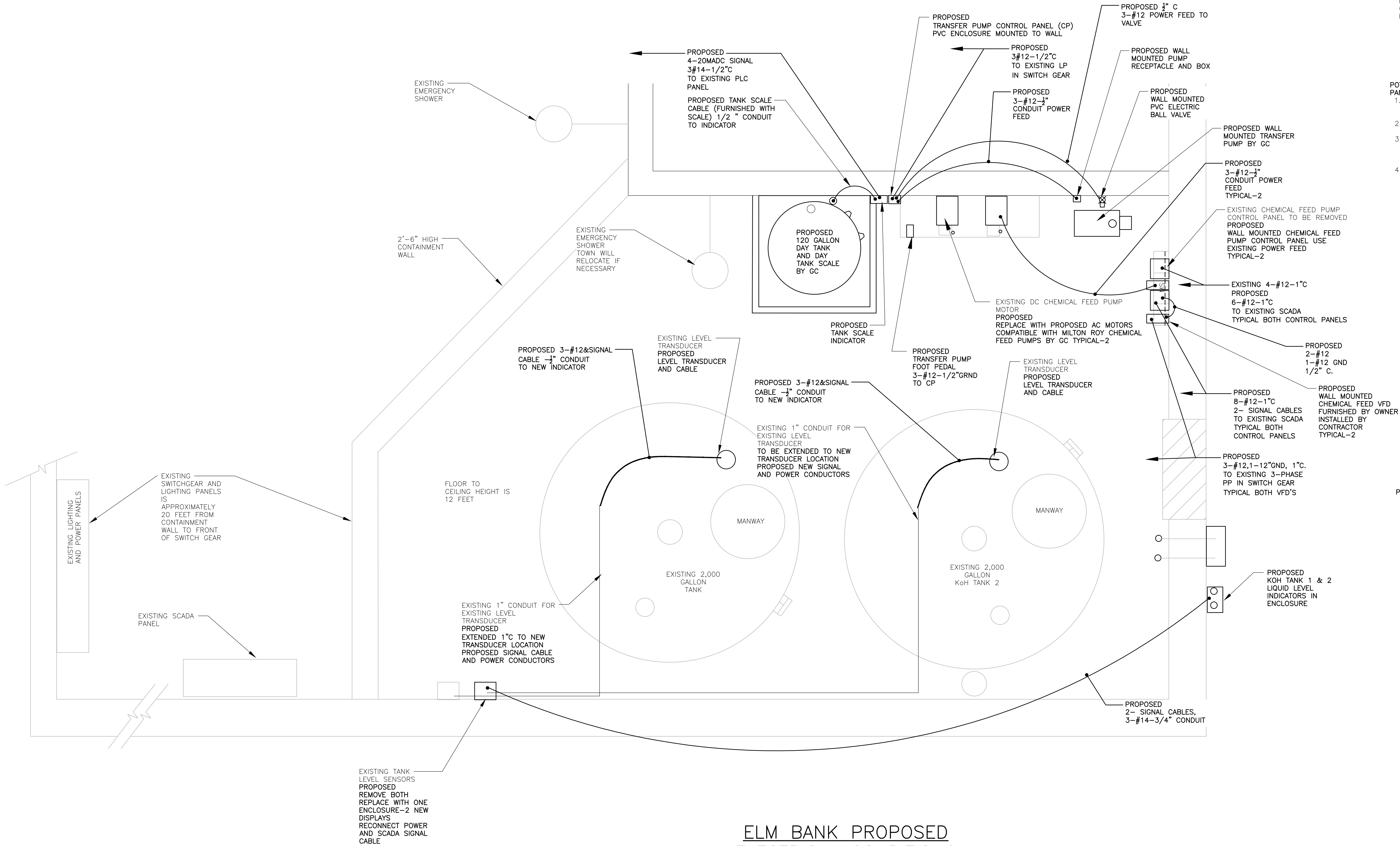








FILE LOCATION: P:\ALU085810133\NATICK480 CHEMICAL FEED UPGRADES\CAD\NAT-480-ELM BANK SHEETS\004-005.DWG, 2023.03.07, 4:00 PM



ELM BANK PROPOSED  
ELECTRICAL CONDITIONS  
PLAN VIEW

SCALE: 3/4" = 1'-0"

VFD NOTES

1. OWNER WILL FURNISH SIX (6) VFDs FOR THE CONTRACTOR TO INSTALL AT EACH REQUIRED LOCATION.
2. OWNER WILL FURNISH A SERVICE TECHNICIAN TO PERFORM THE START-UP AND OPERATOR TRAINING DUTIES FOR EACH DRIVE.
3. OWNER SERVICE TECHNICIAN WILL BE AVAILABLE FOR 2 SEPARATE DAY VISITS FOR START-UP, ONE FOR SPRINGVALE VFD START-UP AND ONE FOR ELM BANK VFD STARTUP.

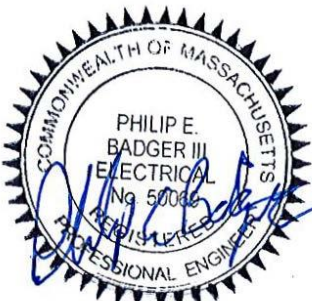
POTASSIUM HYDROXIDE CHEMICAL FEED CONTROL PANEL NOTES

1. THERE IS 1 EXISTING CHEMICAL FEED CONTROL PANEL THAT POWERS BOTH KOH PUMPS, ACTIVE AND SPARE.
2. THE PANEL RECEIVES A 4-20 MADC SPEED SIGNAL FROM THE LOCAL PLC PANEL.
3. WORK UNDER THIS CONTRACT IS TO INSTALL A 3-PHASE POWER DISCONNECT IN THE EXISTING SWITCH GEAR FOR BOTH PROPOSED VARIABLE FREQUENCY DRIVE.
4. WORK UNDER THIS CONTRACT IS TO FURNISH AND INSTALL A CHEMICAL FEED PUMP CONTROL PANEL FOR EACH PROPOSED CHEMICAL FEED VARIABLE FREQUENCY DRIVE.
  - 4.1. EACH PANEL TO INCLUDE AN AUTO-OFF SELECTOR SWITCH FOR EACH PUMP, AND A SPEED POTENTIOMETER WITH ASSOCIATED LABELS.
  - 4.2. PANEL TO RECEIVE THE EXISTING 4-20MADC SIGNAL CONDUCTORS TO PROPOSED TERMINALS. THE CONTRACTOR SHALL FURNISH AND INSTALL SIGNAL CONDUCTORS FROM TERMINALS TO EACH PROPOSED VFD INPUT TERMINALS, INCLUDING REQUIRED CONDUITS.
  - 4.3. PANEL SHALL ALSO INCLUDE TERMINALS FOR CONNECTION OF EACH EXISTING PUMP RUN SIGNAL CONDUCTORS FROM LOCAL PLC PANEL. WORK INCLUDES FURNISHING AND INSTALLING CONDUIT AND CONDUCTORS FROM CONTROL PANEL TO EACH VFD OUTPUT FOR RUN STATUS.
  - 4.4. AUTO-POSITION OF SWITCH TO BE CONTROLLED BY EXISTING START SIGNAL FROM PROGRAMMABLE LOGIC CONTROLLER AND CONNECTED TO PROPOSED VFD INPUT TERMINAL.

POTASSIUM HYDROXIDE DAY TANK SCALE NOTES

1. THE PROPOSED DAY TANK SCALE SHALL BE CONNECTED TO THE EXISTING PLC IN THE LOCAL SCADA PANEL INCLUDING NEW CONDUCTORS AND CONDUITS.
2. PROGRAM CHANGES IN THE SCADA PANEL TO BE COMPLETED BY OTHERS.

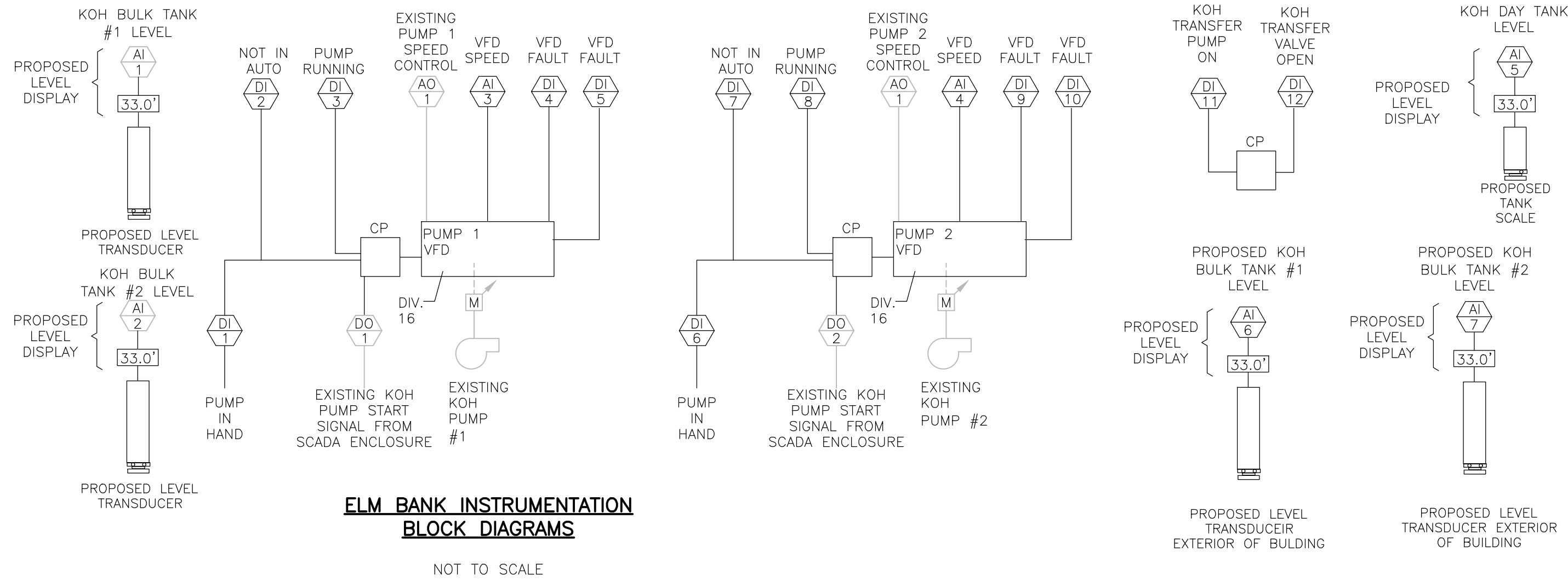
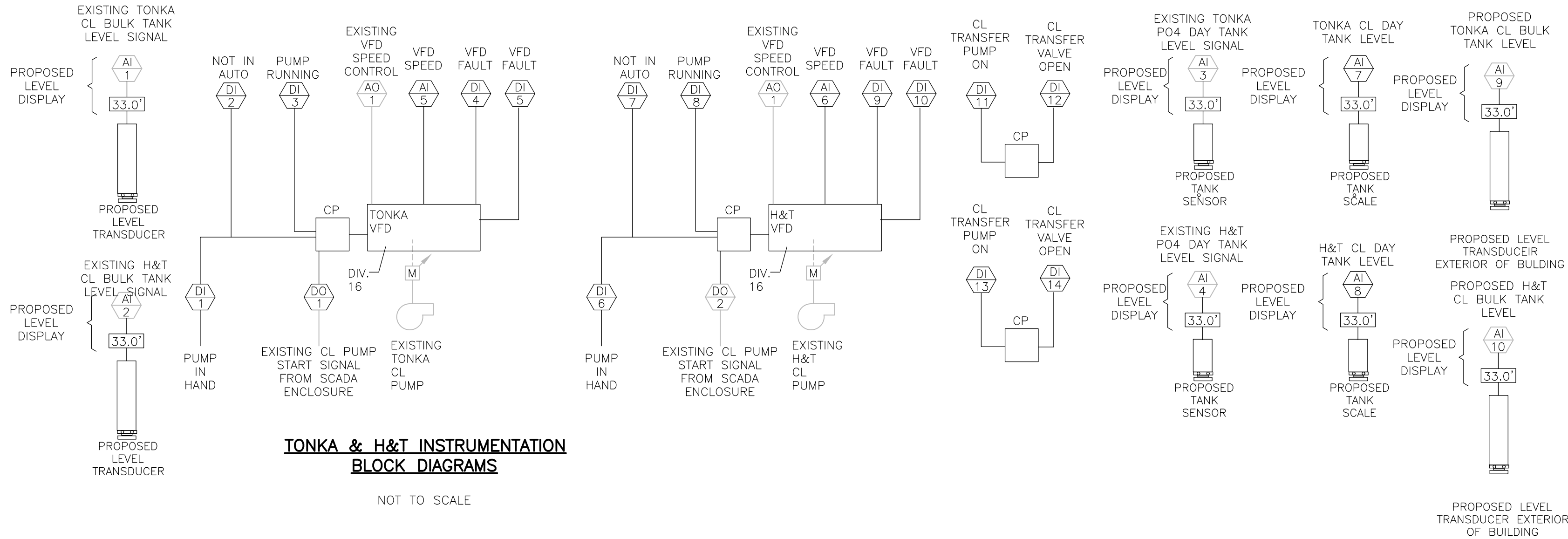




|   |                 |              |            |
|---|-----------------|--------------|------------|
| PROJECT   |                 |              |            |
| TOWN OF NATICK, MASSACHUSETTS<br>SELECT BOARD<br>CHEMICAL FEED UPGRADES               |                 |              |            |
| TITLE   |                 |              |            |
| ELM BANK ELECTRICAL WORK  |                 |              |            |
|  | DATE            | 2023.1.20    | SCALE      |
|   |                 |              | NONE       |
|   | DRAWN BY        | DESIGNED BY  | CHECKED BY |
|   | LJC             | GJE          | GJE        |
|   | PROJECT No.     | CONTRACT No. |            |
|   | 3010133.NAT-493 | W-165        |            |
| DRAWING No.   |                 | REV          |            |
| E3  |                 |              |            |

FILE LOCATION: P:\MAJOR\085810133 NATICK\480 CHEMICAL FEED UPGRADES\04\NAT-493 E1 NOTES & MISC.DWG, 2023.09.07, 4:55 PM

**INSTRUMENTATION AND SCADA NOTES:**

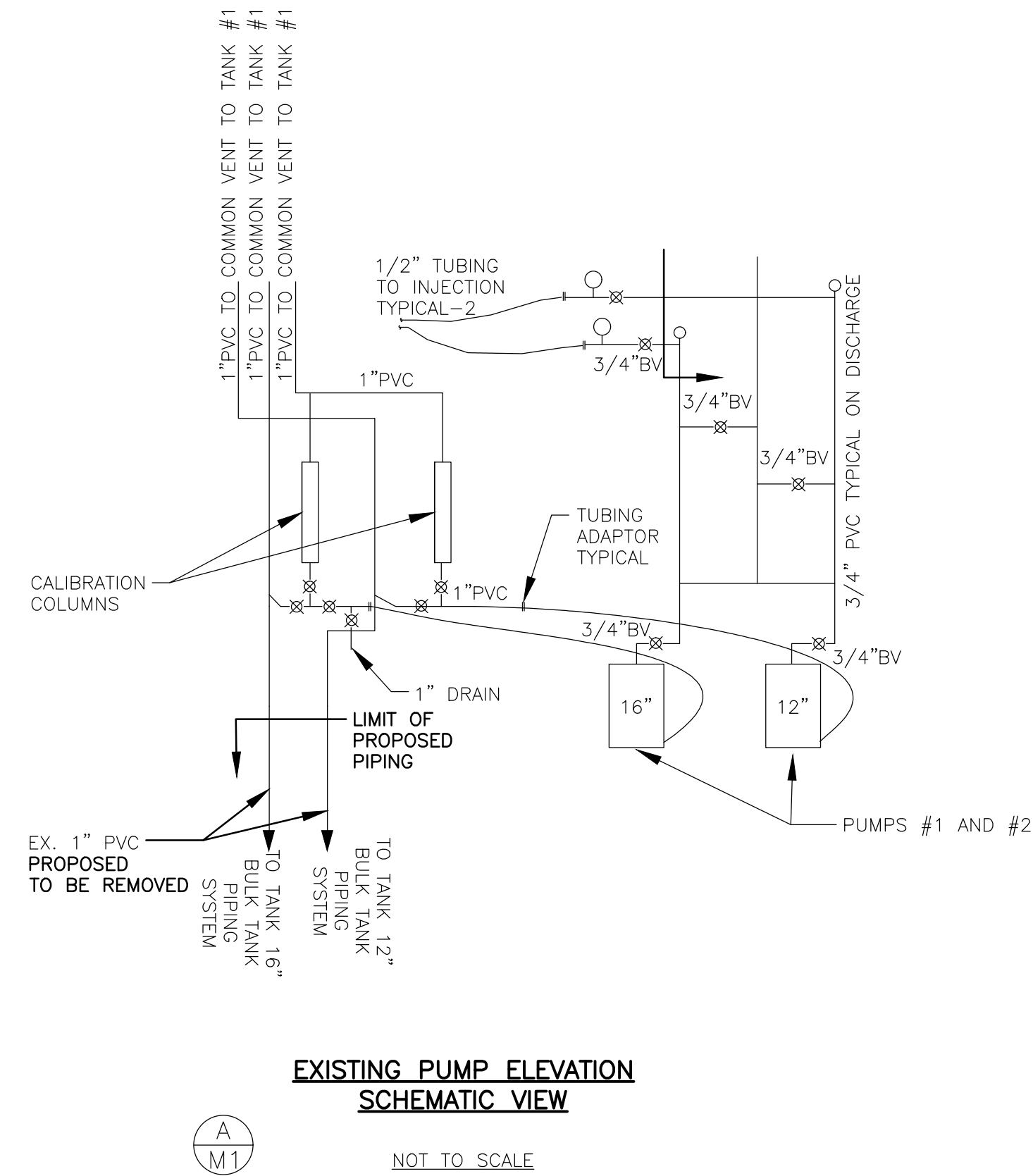
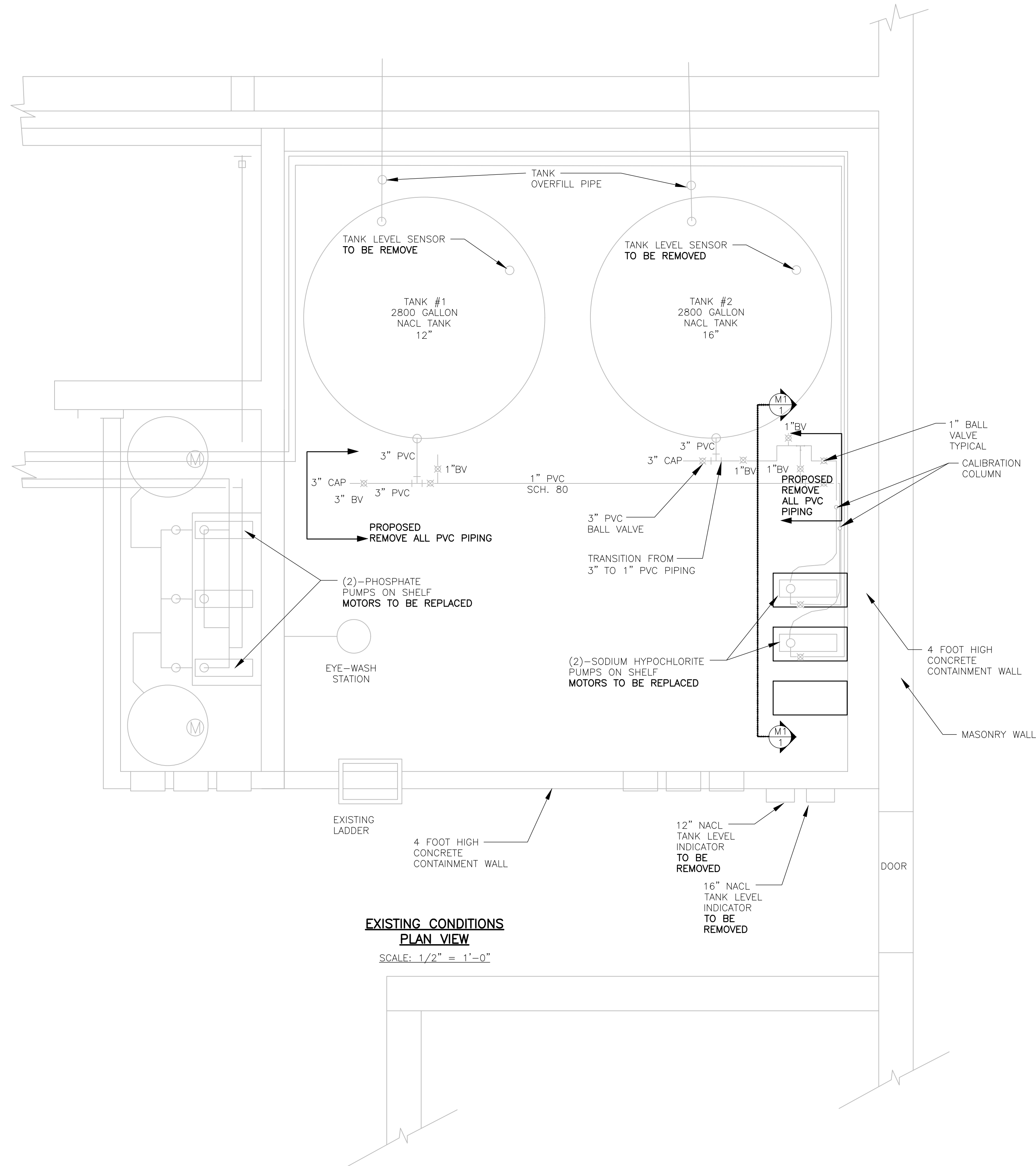
1. ELECTRICAL FSB CONTRACTOR SHALL PROVIDE ALL INSTRUMENTATION WIRES, CONDUITS, AND HARDWARE AND RUN INPUT/OUTPUTS TO SCADA PANEL/PLC WHERE CONTRACTOR SHALL TERMINATE AND LABEL WIRES. INTEGRATION BY OTHERS. CONTRACTOR SHALL PROVIDE LABOR FOR (2)–4 HOUR PERIODS FOR TESTING AND TROUBLE SHOOTING COORDINATED WITH INTEGRATOR.
2. ELECTRICAL FSB CONTRACTOR SHALL MAKE CONDUCTOR CONNECTIONS TO ALL INSTRUMENTS, LABEL, AND RUN THEM TO TERMINAL STRIP IN PANEL. CONNECTION TO TERMINAL STRIP SHALL BE COORDINATED WITH INTEGRATOR (OTHERS). FURTHERMORE, AFTER INSTALLATION IS COMPLETE CONTRACTOR SHALL PLAN FOR 8 HOURS OF WORKING ON SITE AND IN CONJUNCTION WITH INTEGRATOR TO BRING INSTRUMENTATION AND CONTROLS ONLINE, AND TROUBLESHOOT.
3. ELECTRICAL FSB CONTRACTOR SHALL INSTALL ALL NEW CONDUCTORS AND CONDUITS BETWEEN SCADA PANEL AND NEW PERIPHERAL EQUIPMENT, EXCEPT WHERE EXISTING CONDUITS AND CONDUCTORS CAN BE RE–USED.
4. ELECTRICAL FSB CONTRACTOR SHALL LABEL EACH WIRE ON EACH END.
5. ALL INPUTS AND OUTPUTS TO AND FROM SCADA PANEL TO BE CONNECTED AT INPUT TERMINALS, INCLUDING ALL ANALOG SIGNALS.
6. INSTRUMENTATION AND SCADA WIRE SIZES:  
LINE: 12G BLACK THHN  
NEUTRAL: 12G WHITE THHN  
GROUND: 12G GREEN THHN  
+24: 16G BLUE THHN  
–24: 16G BLUE/BLACK THHN



|  |      |                       |    |                   |
|--|------|-----------------------|----|-------------------|
| REV.   | DATE | DESCRIPTION           | BY | CHK.              |
| DRAWING ISSUE STATUS   |      |                       |    |                   |
|  <b>HALEY WARD</b><br>ENGINEERING   ENVIRONMENTAL   SURVEYING<br>63 Great Road, Suite 200<br>Maynard, Massachusetts 01754<br>978.648.6025 |      |                       |    |                   |
| PROJECT  |      |                       |    |                   |
| <b>TOWN OF NATICK, MASSACHUSETTS<br/>SELECT BOARD<br/>CHEMICAL FEED UPGRADES</b>   |      |                       |    |                   |
| TITLE  |      |                       |    |                   |
| <b>INSTRUMENTATION</b>   |      |                       |    |                   |
| DATE<br>2022.12.19   |      | SCALE<br>NONE         |    |                   |
| DRAWN BY<br>GJE  |      | DESIGNED BY<br>MBK    |    | CHECKED BY<br>GJE |
| PROJECT No.<br>3010133.NAT-493   |      | CONTRACT No.<br>W-165 |    |                   |
| DRAWING No.  |      | REV.                  |    |                   |
|   |      | <b>11</b>             |    |                   |



FILE LOCATION: P:\MAJOR\5810133 NATICK\480 CHEMICAL FEED UPGRADES\CAD\NAT-480-SPRINGVALE SHEETS\0203.DWG, 2023.03.07, 4:17 PM






**HALEY WARD**  
ENGINEERING | ENVIRONMENTAL | SURVEYING  
63 Great Road, Suite 200  
Maynard, Massachusetts  
978.648.6025

PROJECT

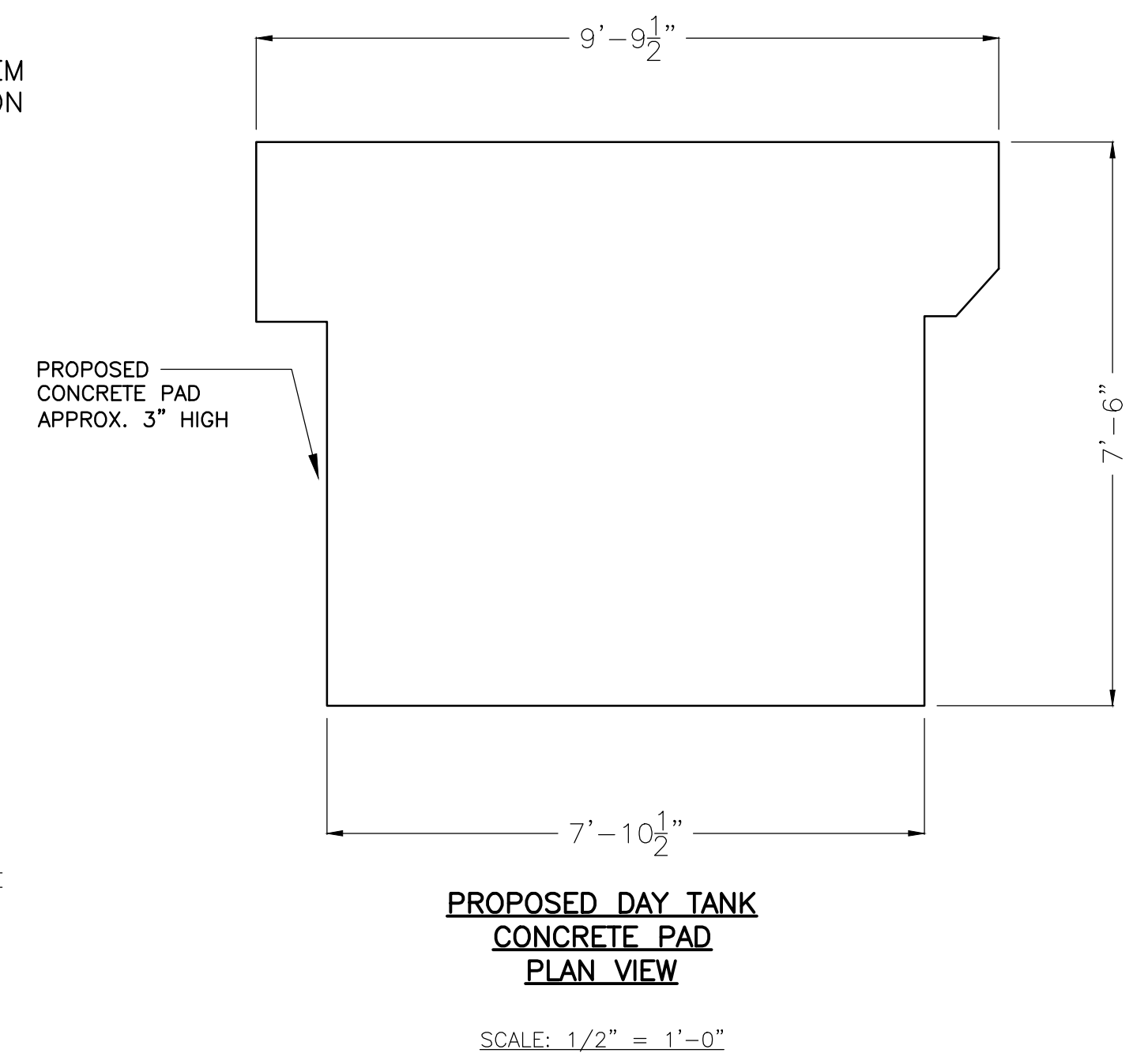
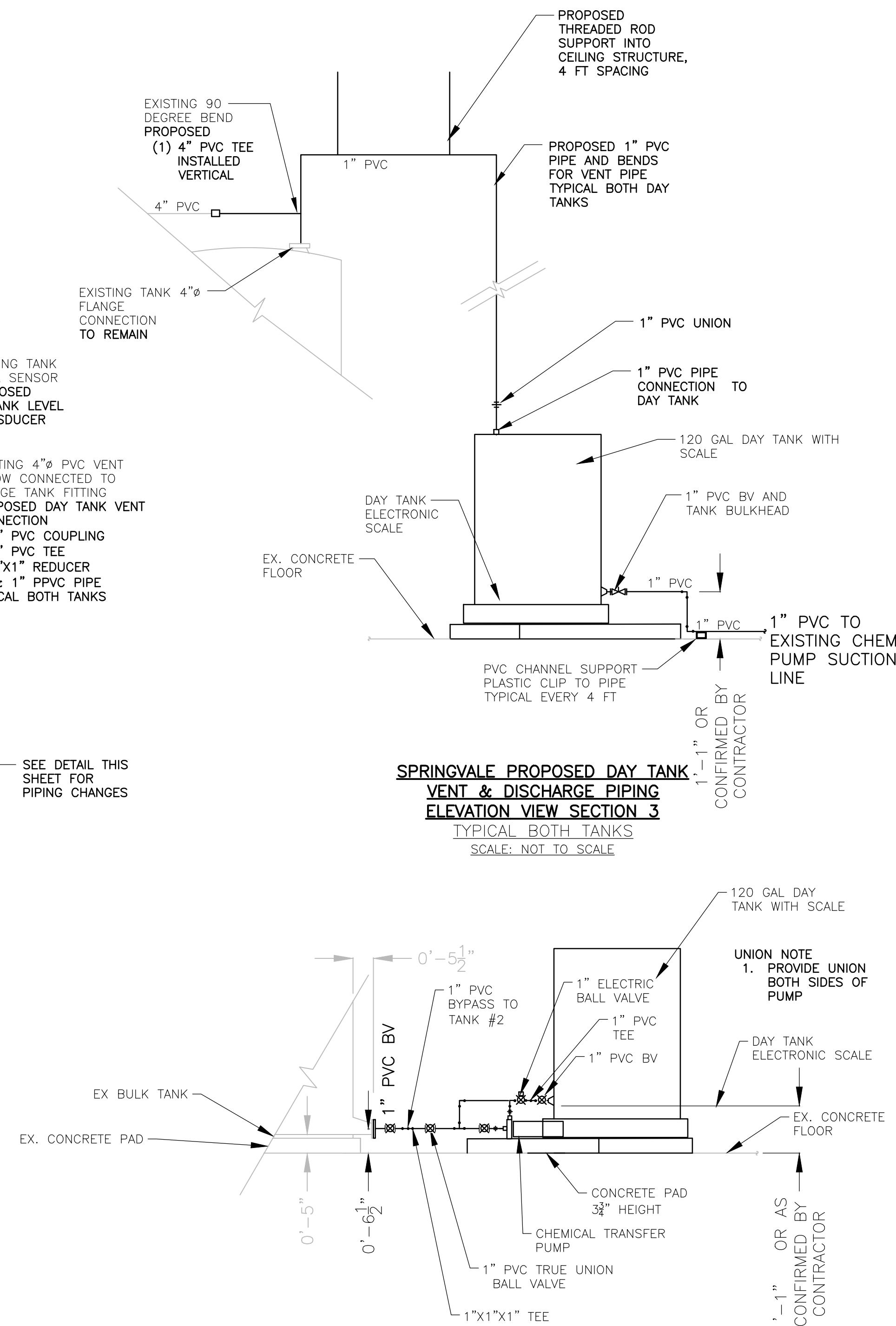
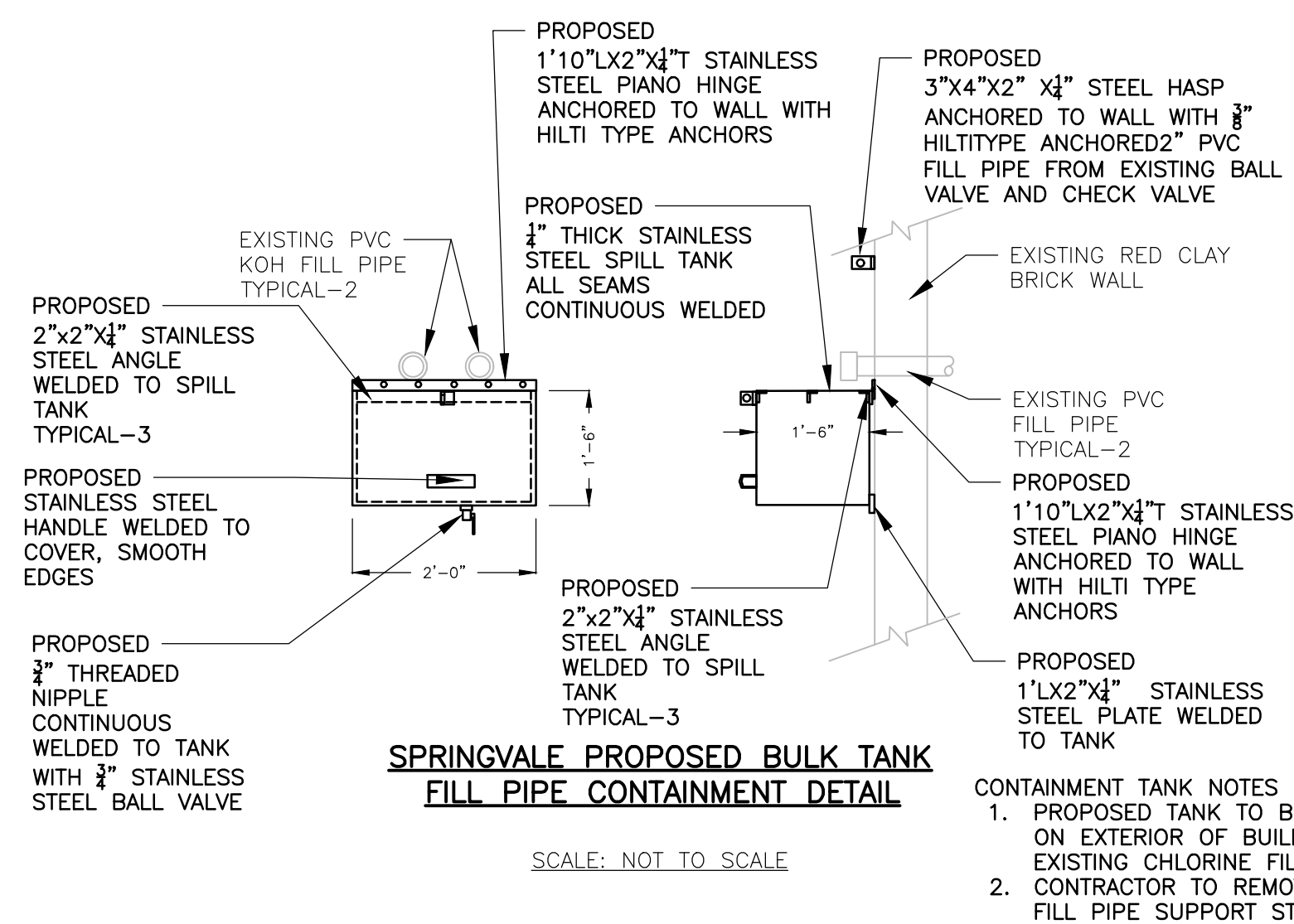
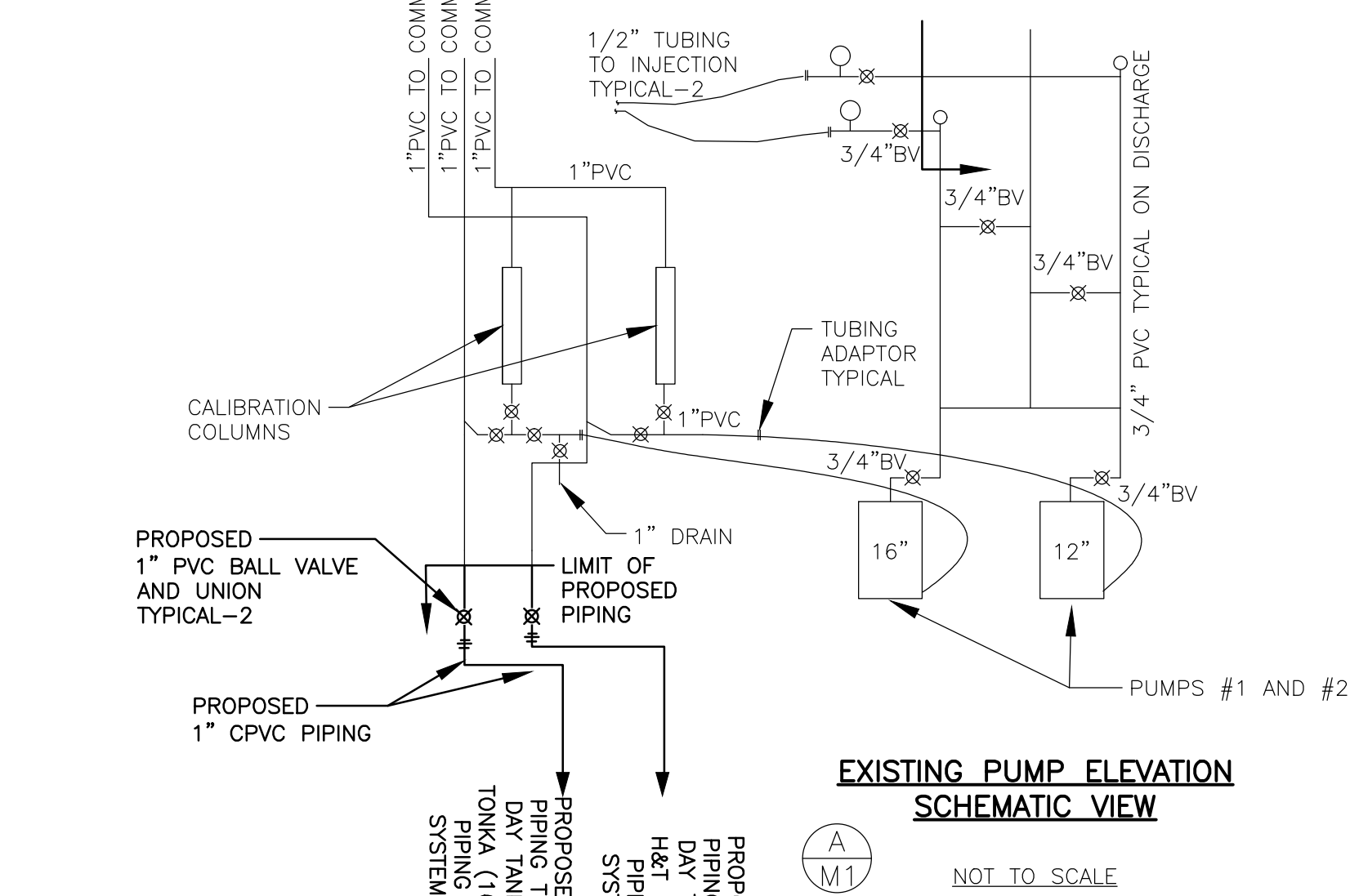
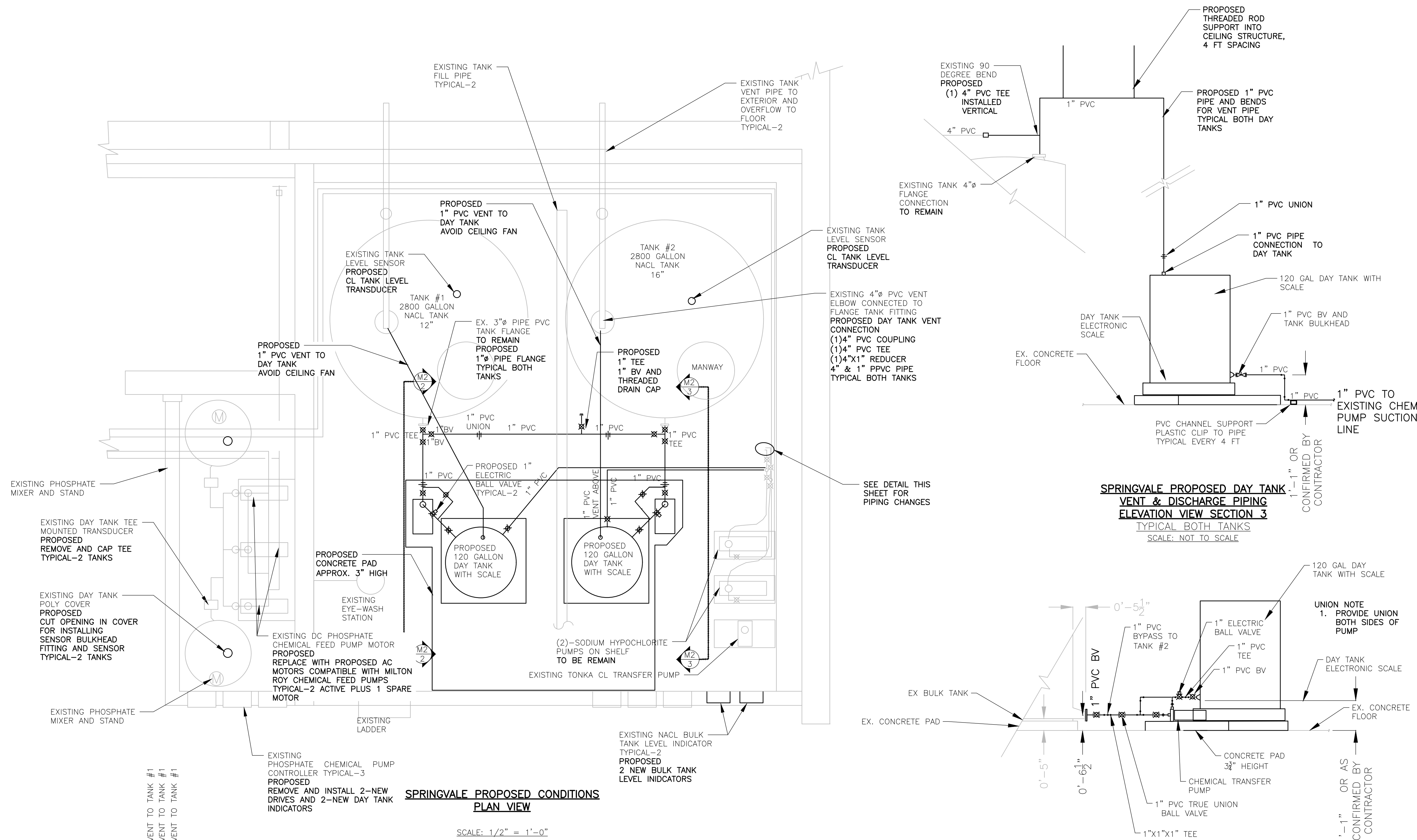
TOWN OF NATICK, MASSACHUSETTS  
SELECT BOARD  
CHEMICAL FEED UPGRADES



TITLE

EXISTING SPRINGVALE CHEMICAL  
FEED PUMPS AND PIPING



|              |           |             |                 |
|--------------|-----------|-------------|-----------------|
| DATE         | 2023.1.20 | SCALE       | NONE            |
| DRAWN BY     | LJC       | DESIGNED BY | GJE             |
| CHECKED BY   | GJE       | PROJECT No. | 3010133.NAT-493 |
| CONTRACT No. | W-165     | DRAWING No. | REV.            |
| M1           |           |             |                 |



|  |   |      |             |                 |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
|--|---|------|-------------|-----------------|-------|------|--|----------|-----|--|-------------|-----|--|------------|-----|--|-------------|-----------------|--|--------------|-------|--|-------------|----|--|
|  <p><b>HALEY WARD</b><br/>ENGINEERING   ENVIRONMENTAL   SURVEYING</p> <p>63 Great Road, Suite 200<br/>Maynard, Massachusetts 01754<br/>978.648.6025</p> <p><a href="http://WWW.HALEYWARD.COM">WWW.HALEYWARD.COM</a></p> |   |      |             |                 |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
| <p>PROJECT</p> <p><b>TOWN OF NATICK, MASSACHUSETTS<br/>SELECT BOARD<br/>CHEMICAL FEED UPGRADES</b></p>   |   |      |             |                 |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
| <p>TITLE</p> <p><b>PROPOSED SPRINGVALE<br/>DAY TANKS, PIPING &amp;<br/>APPURTENANCES</b></p>   |   |      |             |                 |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
|   | <table border="1"> <tr> <td>DATE</td> <td colspan="2">2023.1.20</td> <td>SCALE</td> <td colspan="2">NONE</td> </tr> <tr> <td>DRAWN BY</td> <td colspan="2">LJC</td> <td>DESIGNED BY</td> <td colspan="2">GJE</td> </tr> <tr> <td>CHECKED BY</td> <td colspan="2">GJE</td> <td>PROJECT No.</td> <td colspan="2">3010133.NAT-493</td> </tr> <tr> <td>CONTRACT No.</td> <td colspan="2">W-165</td> <td>DRAWING No.</td> <td colspan="2">M2</td> </tr> </table> | DATE | 2023.1.20   |                 | SCALE | NONE |  | DRAWN BY | LJC |  | DESIGNED BY | GJE |  | CHECKED BY | GJE |  | PROJECT No. | 3010133.NAT-493 |  | CONTRACT No. | W-165 |  | DRAWING No. | M2 |  |
| DATE   | 2023.1.20   |      | SCALE       | NONE            |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
| DRAWN BY   | LJC   |      | DESIGNED BY | GJE             |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
| CHECKED BY   | GJE   |      | PROJECT No. | 3010133.NAT-493 |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |
| CONTRACT No.   | W-165   |      | DRAWING No. | M2              |       |      |  |          |     |  |             |     |  |            |     |  |             |                 |  |              |       |  |             |    |  |





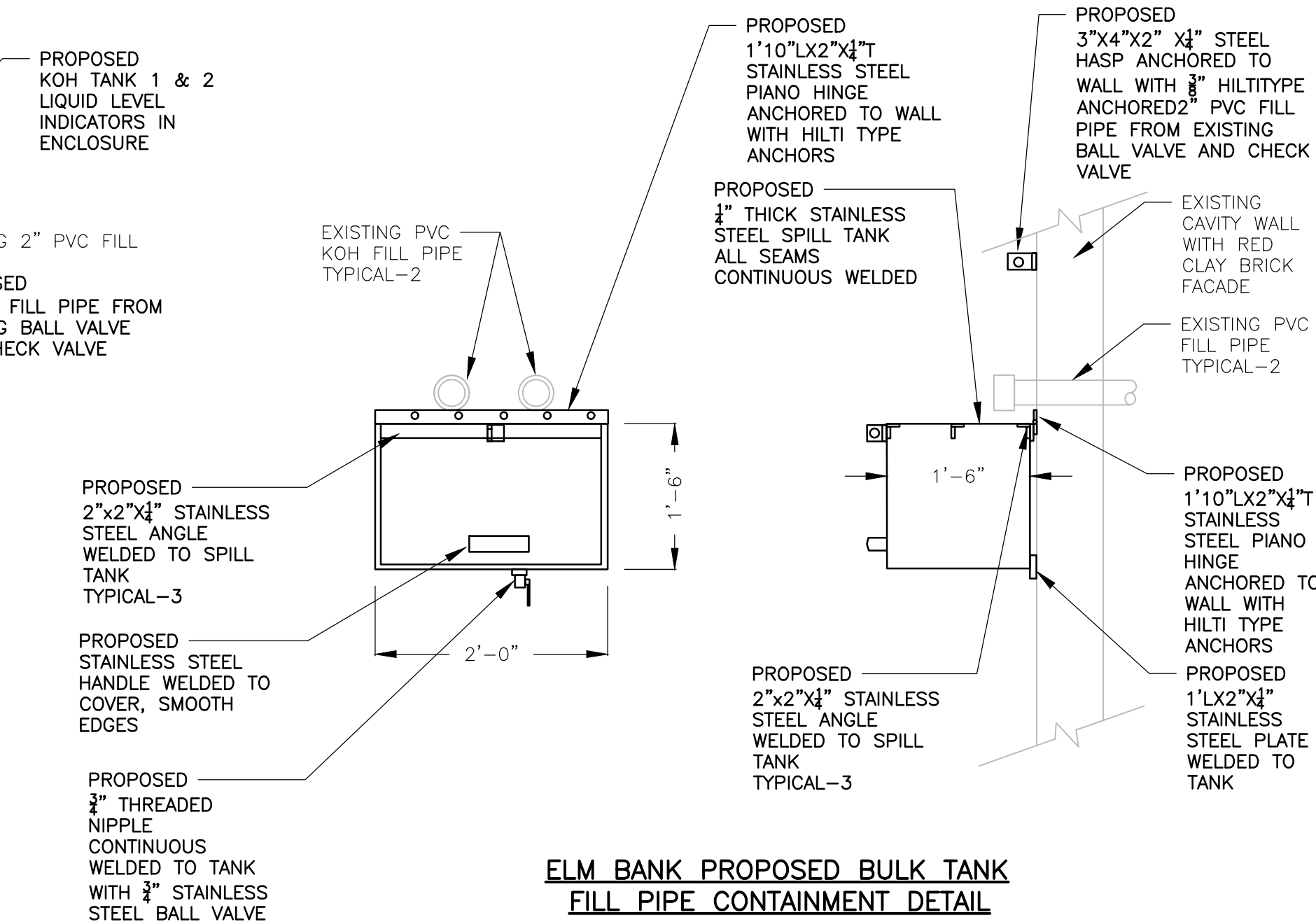
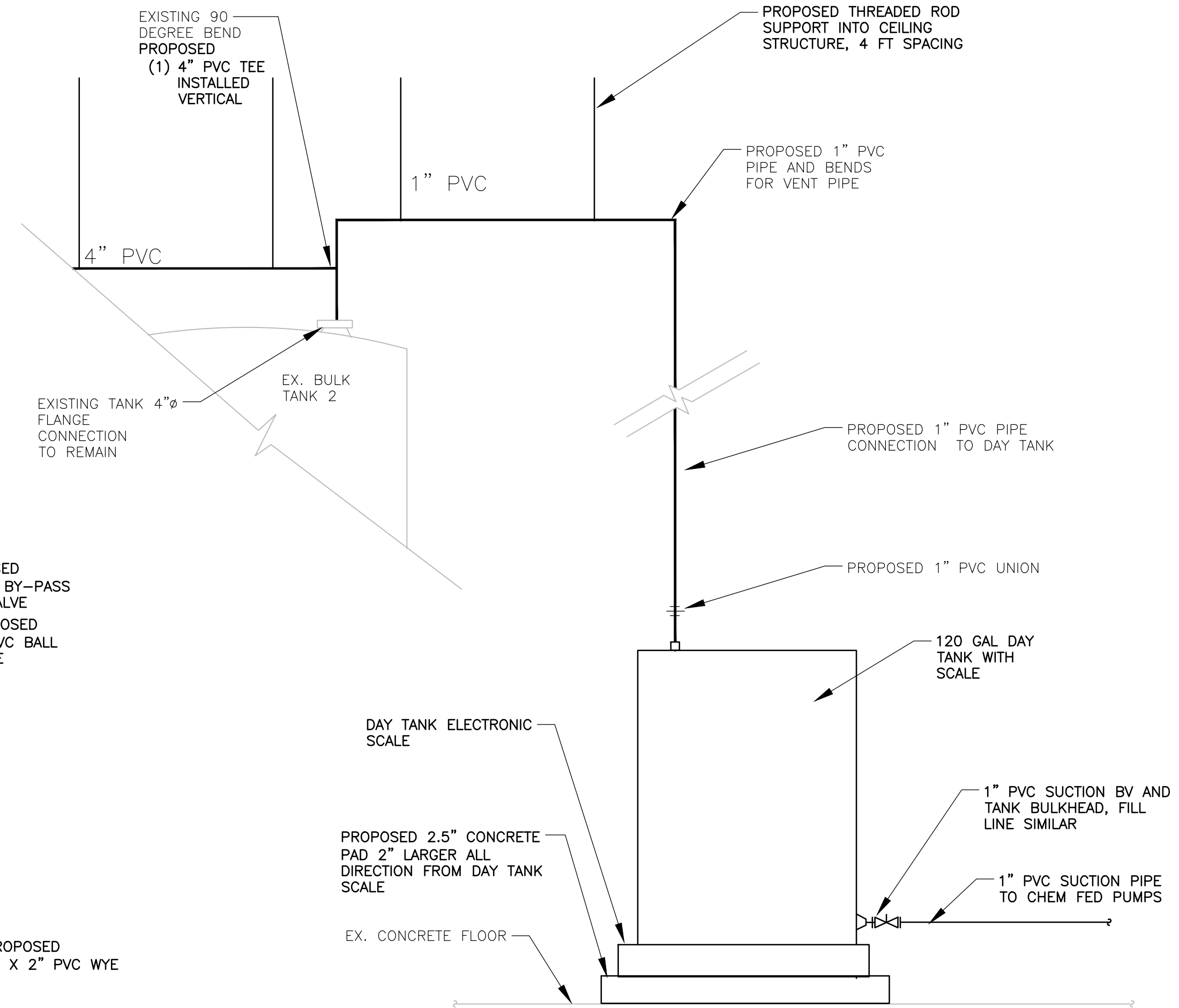
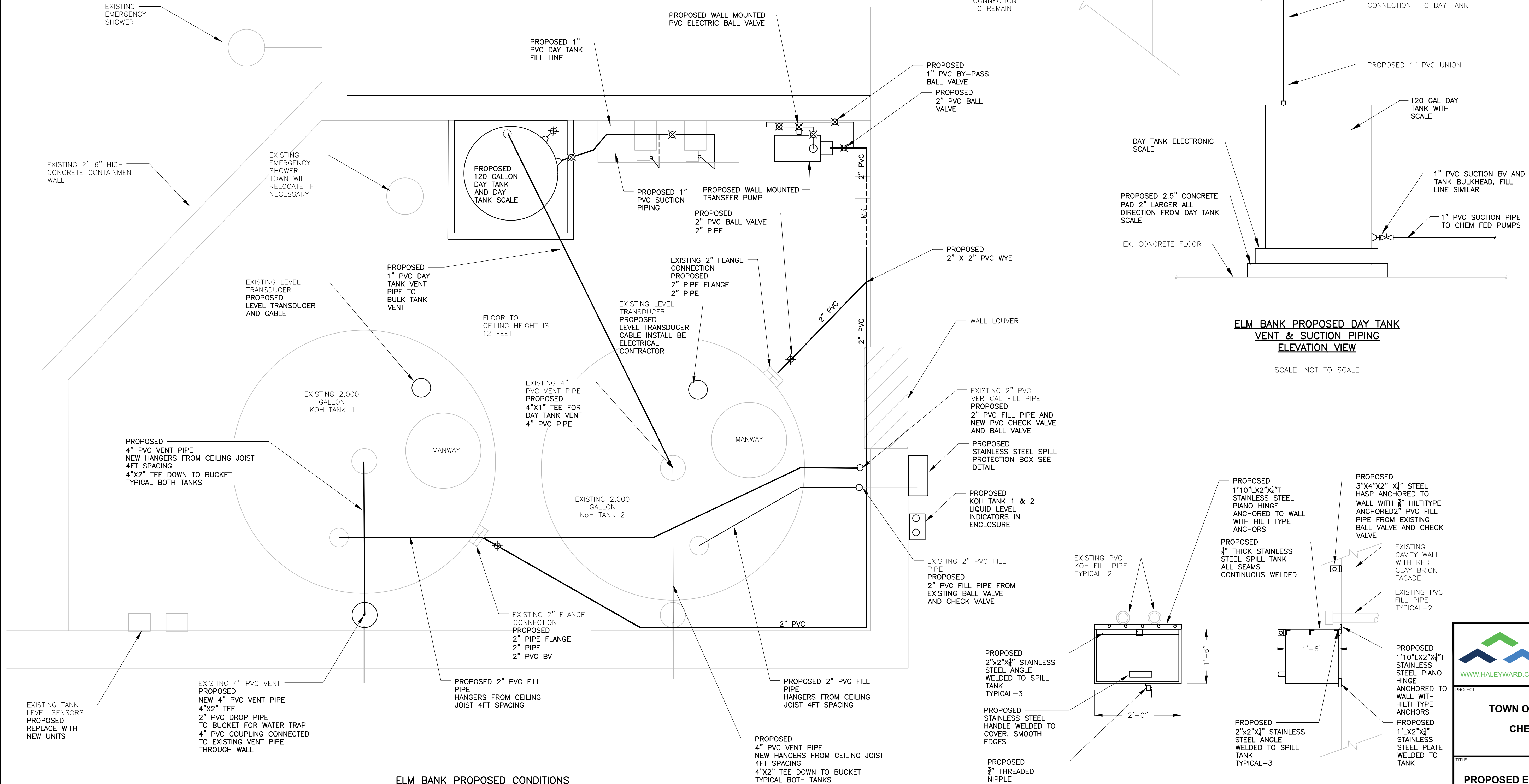


**BULK TANK WORK**

- BOTH KOH BULK TANKS ARE TO BE REMOVED FOR SECONDARY COATING SYSTEM REPLACEMENT.
- CONTRACTOR TO REMOVE BOTH TANKS FROM THE CONTAINMENT AREA TO ALLOW COATING SYSTEM REPLACEMENT. SEE M3 FOR CONTAINMENT COATING DETAILS.
  - THE TOWN WILL ENDEAVOR TO USE AS MUCH KOH AS POSSIBLE PRIOR TO SHUTTING DOWN THE PLANT FOR THE WORK.
  - CONTRACTOR TO ASSUME THERE WILL BE APPROXIMATELY 700 GALLONS OF KOH REMAINING IN EACH TANK.
  - KOH CAN BE TRANSFERRED BETWEEN TANKS AND WILL BE REUSED WHEN THE PLANT IS PLACED BACK ONLINE, PROVIDED IT IS NOT CONTAMINATED DURING THE CONSTRUCTION WORK.
- ONCE CONTAINMENT COATINGS HAVE CURED CONTRACTOR TO MOVE TANKS INTO FINAL LOCATIONS. TANK ORIENTATIONS SHALL BE AS SHOWN ON THE PROPOSED LAYOUT.

**PIPE SUPPORT NOTES**

- CONTRACTOR TO AVOID DRILLING THROUGH NEW SECONDARY CONTAINMENT COATING ON FLOOR OR WALLS WHEN REINSTALLING NEW PIPING SYSTEM.
- WHERE POSSIBLE CONTRACTOR TO INSTALL FRP PLATES OR CHANNELS ON FLOOR TO CONNECT PIPE SUPPORT CLIPS OR ANCHORS WITHOUT DRILLING THROUGH FLOOR COATINGS.
- IF CONTRACTOR MUST DRILL THROUGH FLOOR OR WALL SECONDARY COATING SYSTEM THEN AN EPOXY ANCHOR MUST BE UTILIZED WITH A BASE PLATE THAT COVERS THE FLOOR OPENING AND CONTRACTOR TO INSTALL POLYSULFIDE SEALANT AROUND BASE PLATE TO CREATE A SECONDARY COATING SEAL.



|   |                    |                       |  |
|---|--------------------|-----------------------|--|
| <br>63 Great Road, Suite 200<br>Maynard, Massachusetts 01754<br>978.648.6025<br>WWW.HALEYWARD.COM |                    |                       |  |
| PROJECT<br><b>TOWN OF NATICK, MASSACHUSETTS<br/>SELECT BOARD<br/>CHEMICAL FEED UPGRADES</b>       |                    |                       |  |
| TITLE<br><b>PROPOSED ELM BANK DAY TANKS AND PIPING</b>  |                    |                       |  |
| DATE<br>2023.1.20   |                    | SCALE<br>NONE         |  |
| DRAWN BY<br>LJC   | DESIGNED BY<br>GJE | CHECKED BY<br>GJE     |  |
| PROJECT No.<br>3010133.NAT-493  |                    | CONTRACT No.<br>W-165 |  |
| DRAWING No.   |                    | REV.                  |  |
| <b>M4</b>   |                    |                       |  |