NEW BEDFORD CABLE ACCESS BUILDING
ROOF REPLACEMENT
918 S. Rodney French Blvd., New Bedford, MA 02744

PROJECT MANUAL

BID SET
JUNE 5, 2019

ARCHITECT
MOUNT VERNON GROUP ARCHITECTS, INC.
47 North 2nd Street
New Bedford, MA 02740
(508) 991-7500

ROOF CONSULTANT
EWING ASSOCIATES
515 Converse St.
Longmeadow, MA 01106
(413) 567-9544
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CITY OF NEW BEDFORD
DEPT OF FACILITIES AND FLEET MANAGEMENT
New Bedford, Massachusetts
CABLE ACCESS BUILDING ROOF REPLACEMENT

IFB # 19192049

June 5, 2019

Jonathan F. Mitchell
Mayor

New Bedford Public Schools
455 County Street
New Bedford, MA 02740
The City of New Bedford, Massachusetts, Department of Facilities and Fleet Management in conjunction with the Purchasing Department (Awarding Authority) invites sealed bids for the Cable Access Building Roof Replacement, in accordance with the drawings and specifications prepared by Mount Vernon Group Architects, Inc.

The work of this contract is predominately ROOFING. A DCAMM Certified ROOFING Contractor is to be this project’s Contractor. Contract Documents, including Drawings, Bidding Requirements, General Conditions, Specifications, and Addenda may be seen or examined and are available to download at www.newbedford-ma.gov/purchasing or via email Jorge Figueiredo at jfigueiredo@mvgarchitects.com during normal business hours, on Wednesday, June 5, 2019.

Sealed Bids for the Contract will be received by the New Bedford Purchasing Department, 133 William Street, New Bedford, Massachusetts, 02740 until time, on Wednesday, June 19, 2019 at 1:00 pm at which time all bids will be publicly opened and read aloud. Included with General Bid shall be an Update Statement, DCAMM Certification and 5% bid deposit.

A Pre-Conference/Site Inspection will be conducted for the benefit of all potential bidders on Friday, June 14, 2019 at 1:00 pm. Questions regarding the site inspection and Bid Documents may be forwarded to the Architect, Jorge Figueiredo at jfigueiredo@mvgarchitects.com.

TERMINATION FOR NON-APPROPRIATION OF FUNDS Notwithstanding any other provision of this Contract, the City shall not be obligated for the Contractor’s performance hereunder or by any provision of this Contract until the City appropriates funds for this Contract in the City’s Budget. In the event that funds are not appropriated for this Contract, then this Contract shall terminate. The City shall notify the Contractor in writing of any such non-allocation of funds at the earliest possible.

Attention is directed to the minimum wage rates to be paid on the work as determined by the Commissioner of Labor and Industries under the provisions of M.G.L. Chapter 149, Sections 26 and 27D inclusive. The successful general contractor will be required to submit a certified payroll and a statement of compliance on a weekly basis for review by the party designated by the Awarding Authority.

The Awarding Authority reserves the right to waive any and/or all informalities in the bidding. The Awarding Authority also reserves the right to reject any or all bids, or to accept any other than the lowest bidder should it be deemed to be in the best interest of the City of New Bedford, Massachusetts, to do so.

Awarding Authority
City of New Bedford
Susan Bruce, Director of Purchasing
INVITATION FOR BID

The City of New Bedford, the Awarding Authority, invites sealed bids for the Cable Access Building Roof Replacement, IFB #19192049, in accordance with Drawings and Specifications prepared by Mount Vernon Group Architects, Inc. Bidding procedures shall be in accordance with all applicable portions of Massachusetts General Laws, Chapter 149 – Sections 44A to 44J, inclusive, Section 26 to 29 inclusive, and Chapter 30, Section 39F to 39M inclusive, and 39R of the General Laws of the Commonwealth of Massachusetts, as amended to date.

Project Value is estimated to be $220,000.00

TERMINATION FOR NON-APPROPRIATION OF FUNDS Notwithstanding any other provision of this Contract, the City shall not be obligated for the Contractor’s performance hereunder or by any provision of this Contract until the City appropriates funds for this Contract in the City’s Budget. In the event that funds are not appropriated for this Contract, then this Contract shall terminate. The City shall notify the Contractor in writing of any such non-allocation of funds at the earliest possible.

The Work of this Contract is scheduled to be substantially completed no later than Monday, September 30, 2019, following receipt of the Owner’s Notice to Proceed.

The Work of this Project shall request Minority/Women Owned Business participation pursuant to Chapter 193 of the Acts of 2004, and MGL Chapter 23A, Section 44 and MGL Chapter 7, Section 40N, as amended, and established as a policy by the City of New Bedford.

Sealed Bids for the General Contract will be received by the New Bedford Purchasing Department, 133 William Street, New Bedford, Massachusetts, 02740 until 11:00 am, on Wednesday, June 19, 2019 at which time all bids will be publicly opened and read aloud. Included with General Bid shall be an Update Statement, DCAMM Certification and 5% bid deposit.

General Bids must be submitted on the Form for General Bid included herein. The General Bids shall be completely filled in, signed, enclosed in an envelope, sealed and plainly marked with the project name. The General Bids shall be filed with the Owner at the location designated above accompanied by a bid deposit 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 City of New Bedford in the amount of 5% of the bid.

The rate per hour of the wages to be paid to mechanics, teamsters, chauffeurs and laborers in the Work to be performed shall not be less than the rate of wages determined for this Work by the Commissioner of Labor and Industries of the Commonwealth of Massachusetts under the provisions of General Laws, Chapter 149, Section 28, as amended, a schedule of which appears in the Specifications.

A Performance Bond and also a Labor and Materials Payment Bond, each of a surety company qualified to do business under the laws of the Commonwealth of Massachusetts, satisfactory to the Owner, and each in the sum of 100% of the Contract Price will be required of the successful general bidder.

The successful bidder will be required to provide insurance for the payment of compensation and the furnishing of other benefits under the Workmen's Compensation Law, General Laws, Chapter 152, to all persons to be employed under the Contract, and sufficient proof of compliance with the forgoing stipulation will be required before commencing performance of this Contract.
All bids shall remain in effect for thirty (30) days, Saturdays, Sundays and legal holidays excluded, after the opening of General Bids.

Pre-Bid Conference/Site Inspection:  Friday, June 14, 2019 at 1:00 pm at 918 So. Rodney French Blvd., New Bedford, MA.

The Owner reserves the right to waive any informalities and to reject any or all general bids if it be in the public interest to do so.

END OF INVITATION TO BID
INSTRUCTIONS TO BIDDERS

A. **FOREWORD:** The attention of all bidders is called to all applicable provisions of Massachusetts General Laws, Chapter 149 – Sections 44A to 44J, inclusive, Section 26 to 29 inclusive, and Chapter 30, Section 39F to 39M inclusive, and 39R of the General Laws of the Commonwealth of Massachusetts, as amended to date.

B. **GENERAL:** The Awarding Authority invites proposals for the Work described in the Contract Documents attached hereto. Before submitting his/her proposal each bidder shall visit the site, examine its conditions, thoroughly acquaint himself/herself with its obstacles and advantages for performing the Work, and compare the Contract Documents with the conditions found. All proposals submitted shall be subject to all applicable provisions of law, including, without limiting the generality of the foregoing, Chapter 30, Section 39F to 39M inclusive, and 39R, and Chapter 193 of the Acts of 2004, as amended to date.

C. **QUESTIONS:** All questions as to the interpretation of the Contract Documents shall be submitted in writing and emailed to: Jorge Figueiredo, Architect, at jfigueiredo@mvgarchitects.com and answers to such questions will be sent in the form of an Addendum, to every individual or firm on record as having taken a set of Contract Documents. No questions will be answered unless received at least seven days, Saturdays, Sundays and legal holidays.

D. **BID FORMS:** The Awarding Authority will furnish to every person applying therefore a Form for General Bid.

E. **CONTRACT DOCUMENTS:** The Awarding Authority will, upon deposit of the amount per set as designated in the Invitation to Bid for the return of same in good condition, furnish one (1) complete set of Contract Documents to each Bidder requesting same. No partial sets of Contract Documents will be issued.

F. **REJECTION OF CERTAIN GENERAL BIDS REQUIRED BY LAW:** The law requires that every general bid, which is not accompanied by the prescribed bid deposit or which is not on a form furnished by the Architect or Awarding Authority or otherwise does not conform with Chapter 30, Section 39F to 39M inclusive, and 39R, and Chapter 193 of the Acts of 2004, as amended to date, 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 rejected by the Awarding Authority.

G. **FURTHER RIGHT TO REJECT GENERAL BIDS:** The Awarding Authority further reserves the right to reject any or all general bids if it be in the public interest.

H. **GENERAL BIDS:** General Bids must be submitted on the FORM FOR GENERAL BID, a sample of which is bound into the Contract Documents and may be removed and used for additional copies. The General Bid shall be completely filled in, signed, enclosed in an envelope, sealed and plainly marked with the Project Name. The bid accompanied by a bid deposit in the amount of five percent (5%) of the bid price shall be filed with the Awarding Authority at the place designated in the Invitation to Bid. The bid shall be filed before the time designated in the Invitation to Bid for the opening of General Bids.

I. 1. General Bids shall be for the complete Work as specified, and the General Contractor shall be selected on the basis of such General Bids.

   2. If the bid is mailed, the General Bidders shall enclose their sealed bid in an outer envelope and address as follows: FROM: General Bidder's Name and Business Address

      TO: City of New Bedford
          Purchasing Department
          133 William Street
          New Bedford, MA 02740

   3. No telegraphic or facsimile transmission of bid or telegraphic or facsimile transmission modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.

I. **REQUIREMENTS FOR FOREIGN CORPORATIONS:** The attention of all bidders is called to the provisions of General Laws Chapter 30, Section 39L, which provides that the Awarding Authority may not enter into a contract for construction Work and may not approve as a sub-contractor furnishing labor and materials for a part of any such Work a foreign corporation which has not complied with the requirements of Chapter 156d Section 151 of the General Laws. The term "foreign corporation" means a corporation not incorporated under the laws of the Commonwealth of Massachusetts.
J. **SALES TAX**: Purchases of building materials and supplies to be used on this project are entitled to exemption from the Sales and Use Tax if the conditions imposed by Paragraph 6 (f) of Section I of Chapter 14 of the Acts of 1966 are otherwise satisfied. Bidders are instructed to submit proposals on the basis that no Massachusetts Sales and Use Tax will be imposed on purchases of building materials and supplies used in connection with this Project.

K. **CONSTRUCTION TIME**: The Agreement will include a stipulation that the Work be substantially completed no later than September 30, 2019 following receipt of the Owner’s Notice to Proceed. If the Contractor fails to meet the construction deadline, the Contractor is responsible for all Owner and Architect costs associated with the deadline not being met. The Architect is to perform two on-site punch lists. If additional punch lists are needed, the Contractor shall be responsible for all Owner and Architect costs associated with the additional punch list visits.

L. **WITHDRAWAL OF BIDS**: A bidder may withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening bids. No bidder may withdraw his bid for a period of thirty calendar days after the date set for the opening thereof, and bids shall be subject to acceptance by the Owner during this period. Failure to submit a completed copy of the required Statement of Bidder Qualifications shall be cause for rejection of a General Bid by the Owner.

M. **EXECUTION OF AGREEMENT**: The form of Agreement which the successful bidder will be required to execute is included in the Project Manual. The bidder to whom the Contract is awarded shall, within fifteen calendar days after notice of award and receipt of Agreement forms from the Owner, sign and deliver required copies to the Owner. At or prior to delivery of the signed Agreement, the bidder to whom the Contract is awarded shall deliver to the Owner those Certificates of Insurance required by the Contract Documents and such Labor and Materials Payment Bonds and Performance Bond as are required by the Owner.

Bonds and Certificates of Insurance shall be approved by the Owner before the successful bidder may proceed with the Work. Failure or refusal to provide Bonds or Certificates of Insurance in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required material.

N. **METHOD OF AWARD**: The contract will be awarded to the lowest responsible and eligible general bidder on the basis of the proposed contract price if such exists, and if the Awarding Authority, in its sole discretion, decides to award on the basis of such alternate. Special attention is called to the provisions of the General Laws, Chapter 149, Sections 44A to 44H defining the term “lowest responsible and eligible bidder” and giving the Awarding Authority the right to require essential information in regard to qualifications.

O. **TAX CERTIFICATION**: The successful Bidder will be required to submit a tax certificate as required by chapter 62C, Section 49A of the Massachusetts General Laws, as follows:

**CERTIFICATE UNDER M.G.L. c.62C, S49A**

I certify under the pains and penalties of perjury that __________________________________________
has/have complied with all laws of the Commonwealth of Massachusetts relating to taxes.

______________________________
Employer Identification Number

______________________________
Name

______________________________
Date

______________________________
Title of Business Officer (if Applicable)

**END OF INSTRUCTIONS TO BIDDERS**
STATEMENT OF BIDDER'S QUALIFICATIONS

This Statement shall be completed and a copy attached to the Form For General Bid. All questions must be answered. Additional sheets required for answers shall be included with Statement.

1. Name of Company__________________________________________________________
   Address____________________________________________________________________
   Tel. No._____________________FAX No.____________________Email ______________________

2. Type Company: ___Partnership ___Corporation___ Other_________Date Formed:___________

3. List the like projects your company has performed, giving the information indicated below:

   Name/Address of Owner   |   Scope of Work   |   Contract Amount   |   Completion Date   
   _____________________________ | _____________________________ | _____________________________ | _____________________________ 
   _____________________________ | _____________________________ | _____________________________ | _____________________________ 

4. Identify the subcontractors for this proposed project:

   Name/Address of Subcontractor | Scope of Work
   _____________________________ | _____________________________ 
   _____________________________ | _____________________________ 

5. Has your present company ever failed to complete any work awarded to it and if so state where, when and why:

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

1. Address of bank which has information that would enable them with your approval to advise regarding the financial stability of your company:

   ____________________________________________________________
   ____________________________________________________________

Signed_________________  Print Name:______________________________________
Officer_________________  Date:_____________________________________________

END OF SECTION
FORM FOR GENERAL BID

FROM:

______________________
______________________
______________________

TO: City of New Bedford
Purchasing Department
133 William Street
Room 208
New Bedford, MA 02740-5194

A. The undersigned proposes to furnish all labor and materials required for implementation of ___________________________________,
in accordance with the accompanying Plans and Specifications prepared by _______________________________________________ for the
Contract Price specified below, subject to additions and deductions in accordance with terms of the Specifications.

B. This bid includes addenda numbered ____________________________.

C. The Proposed Contract Price is ____________________________

(Dollars)$__________________________

D. The subdivision of the proposed Contract Price is as follows:

Item 1: The work of the General Contractor, being all work other than that covered by Item 2,

__________________________ Dollars ($__________________________)

E. 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.

F. The undersigned agrees that, if he is selected as general contractor, he will within five days, Saturdays, Sundays, and legal
holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this
bid and furnish a performance bond and also a labor and materials 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 surety company, the surety companies shall be jointly and severally liable.

G. The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor
employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed
a course in construction safety and health approved by the United States Occupational Safety and Health Administration that
is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful
completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws
and regulations applicable to awards made subject to section 44A.
Date:______________________________________________

Name of General Bidder:____________________________________

By ________________________________
(Name of Person Signing Bid and Title)

___________________________________
(Business Address)

____________________________________
(City and State)

END OF GENERAL BID FORM
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ARTICLE I: DEFINITION OF TERMS

The following words shall have the following meanings as used in this Contract:

Advertisement: The Advertisement or Invitation for Bids or Proposals for the Work identified in Article 6 of the Owner - Contractor Agreement.
Approval: (or Approved): An approval in writing signed by the authorized signatory of the Awarding Authority.
Architect: The architect identified as the Designer in Article 1 of the Owner - Contractor Agreement.
As directed (As permitted, as required, as determined or words of like effect): The direction, permission, requirement or determination of the Designer or the Awarding Authority. Similarly, approved, acceptable, satisfactory or words of like import shall mean approved by or acceptable or satisfactory to the Designer, except as may be otherwise determined by the Awarding Authority.
**Awarding Authority:** The public agency awarding and administering this Contract identified as the Awarding Authority in the Owner - Contractor Agreement.

**Building Code:** All applicable rules and regulations to which the Awarding Authority is subject and which are contained or referenced in the code authorized by M.G.L. c. 143, s. 93 et seq., including all amendments thereto.

**Certificate of Occupancy:** A certificate signed by the Designer and the Awarding Authority pursuant to the requirements of Article VI of these General Conditions of the Contract, indicating that the Awarding Authority has determined that (1) the Work has been completed in accordance with the Contract Documents, except for Punch List items, (2) certificates of inspection, testing and/or approval (including a certificate of occupancy under the Building Code), operating permits for any mechanical apparatus which may be required to permit full use and occupancy of the Work by its intended users (which in a Subcontractor's case may include the Contractor) have been delivered to the Awarding Authority, (3) any applicable written warranties, operating instructions and related materials have been delivered to the Awarding Authority, and (4) the Work may be used for its intended purpose without substantial inconvenience or interference.

**Change Order:** (1) A written order not requiring the consent of the Contractor, signed by the Owner’s Project Manager and designated as a Change Order, directing the Contractor to make changes in the Work within the general scope of the Contract, or (2) any written or oral order from the Project Manager that causes any change in the Work, provided that the Contractor has given the Awarding Authority written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a Change Order.

**Contract:** The Contract formed by the Contract Documents as defined in Article 6 of the Owner - Contractor Agreement.

**Contract Documents:** The documents listed in Article 6 of the Owner - Contractor Agreement.

**Contract Modification:** Any alteration of the Contract Documents accomplished by a written agreement properly executed by the parties to this Contract.

**Contract Price:** The Contract Price stated in Article 3 of the Owner - Contractor Agreement which is the total sum owed to the Contractor for all of the Work.

**Designer:** The architect or engineer identified as the Designer in Article 1 of the Owner - Contractor Agreement, subject to the provisions of Article III, Section 1 of these General Conditions of the Contract.

**Engineer:** The Designer.

**Drawings:** The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including Plans, elevations, sections, details, schedules, and diagrams.

**Final Acceptance:** The written determination by the Designer and by the Awarding Authority that the Work has been 100% completed, except for the Contractor's indemnification obligations, warranty obligations, obligations to continue to maintain insurance coverage for the time periods provided in the Contract Documents, and any other obligations which are intended to survive Final Acceptance and/or the termination of the Contract.

**General Bid:** The completed bid form submitted by the Contractor in accordance with the requirements of M.G.L. c. 149.

**Laws:** All applicable statutes, regulations, ordinances, codes, laws, orders, decrees, approvals, certificates and requirements of governmental and quasi-governmental authorities.

**Neutral:** An impartial third party not having an interest in the Owner, the Designer, the Contractor or the Project.

**Notice to Proceed:** The written notice provided by the Awarding Authority to the Contractor which authorizes the Contractor to commence the Work as of a date specified therein, from which date the time of completion specified in Article 2 of the Owner - Contractor Agreement is measured.

**Or equal (or words of like import):** Equal in the opinion of the Awarding Authority determined pursuant to the provisions of M.G.L. c.30, s. 39M and the provisions of these General Conditions of the Contract.

**Owner:** The city of New Bedford, Massachusetts.

**Plan(s):** Drawing(s).

**Product Data:** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor or its Subcontractors and suppliers to illustrate materials or equipment for some portion of the Work. Product data also include any such information or instructions produced by the manufacturer or distributor of such materials or equipment and made readily available by said manufacturer or distributor.
Progress Schedule: The progress schedule Approved by the Designer and the Awarding Authority in accordance with Article VI of these General Conditions of the Contract.

Project: The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

Owner's Project Manager (OPM): The Awarding Authority's representative assigned to the Project.

Punch List: A list of items determined by the Awarding Authority to be minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work for its intended purpose.

Samples: Samples are physical examples that illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.

Schedule of Values: The schedule Approved by the Awarding Authority pursuant to Article VIII of these General Conditions of the Contract which allocates the Contract Price to the various portions of the Work and is used as a basis for payments to the Contractor.

Shop Drawings: Drawings, diagrams, details, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate a portion of the Work.

Site: The land and, if any, building(s) or space within any such building(s) on which or in which the Contractor is to perform the Work.

Specifications: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, and workmanship for the Work and performance of related services.

Subcontractor: Person or entity with whom the Contractor contracts in order to perform the Work, except as otherwise specifically provided or required herein or by Law.

Substantial Completion: For work subject to M.G.L. c. 30 s. 39K, "substantial completion" shall occur when (1) the Contractor fully completes the Work or substantially completes the Work so that the value of the Work remaining to be done is, in the estimate of the Awarding Authority, less than one percent of the original contract price, or (2) the Contractor substantially completes the work and the Awarding Authority takes possession for occupancy, whichever occurs first. For work subject to M.G.L. c. 30 s. 39G "substantial completion" shall mean either that the work required by the Contract has been fully completed, completed except for work having a Contract Price of less than one percent of the then adjusted total Contract Price, or substantially all of the Work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work.

Superintendent: The licensed construction supervisor who is an employee of the Contractor designated to be in full-time attendance at the Site throughout the prosecution and progress of the Work and who shall have complete authority to act for the Contractor.

Work: The Work defined in Article 1 of the Owner - Contractor Agreement, Article II, Section 2 of these General Conditions of the Contract and otherwise in the Contract Documents.

Working Hours: 7:00 a.m. to 5:00 p.m., but not more than eight hours per day, Monday through Friday, unless otherwise specified by applicable Laws.

All terms that this Contract defines may be used with or without initial capital letters. Other terms, abbreviations and references are defined as they appear herein. Words and abbreviations that are not defined in the Contract Documents but which have recognized technical or trade meanings are used in accordance with those meanings. For additional definitions of terms, abbreviations and references refer to the Supplementary General Conditions, or Specifications.
2. **Scope of Work.**
The Work consists of the Work identified in the Contract Documents. The Work comprises the completed construction required by the Contract Documents and includes all labor, tools, materials, supplies, equipment, permits, approvals, paperwork, calculations, submittals, and certificates necessary to develop, construct and complete the Work in accordance with all Laws, and all construction and other services required to be supervised, overseen, performed or furnished by Contractor or that the Contract Documents require the Contractor to cause to be supervised, overseen, performed or furnished. The Contractor shall provide and perform for the Contract Price all of the duties and obligations set forth in the Contract Documents.

3. **Interpretation.**

   A. The Plans and Specifications and other Contract Documents are to be considered together and are intended to be mutually complementary, so that any work shown on the Plans though not specified in the Specifications, and any work specified in the Specifications though not shown on the Plans, is to be executed by the Contractor as a part of this Contract.

   B. All things that in the opinion of the Designer may be reasonably inferred from the Plans, Specifications and other Contract Documents are to be executed by the Contractor. The Designer shall determine whether the detail Plans conform to the general Plans and Contract Documents, except as may be otherwise determined by the Awarding Authority.

   C. The tables of contents, titles, headings and marginal notes or sub-scripts contained herein are solely to facilitate references, are not intended to be construed as provisions of the Contract, and in no way affect the interpretation of the provisions to which they refer.

   D. Where reference is made in the Contract Documents to publications, standards, or codes issued by associations or societies, such reference shall be interpreted to mean the current edition of such publications, standards, or codes, including revisions in effect on the date of the Advertisement, notwithstanding any reference to a particular date. The foregoing sentence shall not apply to the dates, if any, specified with respect to insurance policy endorsement forms.

   E. In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:

       First Priority:   Contract Modifications
       Second Priority: Owner - Contractor Agreement
       Third Priority:  General Conditions of the Contract
       Fourth Priority: Drawings -- Schedules take precedence over enlarged
detail Drawings, and enlarged Detail Drawings take
precedence over reduced scale Drawings; figured dimensions
shall prevail over scale.
       Fifth Priority:  Specifications

4. **Distribution of Work.**
The distribution of the Work is intended to be described under the appropriate trades and may be redistributed, except as directed herein, provided that such redistribution shall cause no controversy among the trades and no delay in the progress of the Work.

5. **Contract Price.**
The Contract Price constitutes full compensation to the Contractor for everything to be performed and furnished in connection with the Work and for all damages arising out of the performance of the Work and/or the action of the elements and constitutes the maximum compensation regardless of any difficulty incurred by the Contractor in connection with the Work or in consequence of any suspension or discontinuance of the Work.

**ARTICLE III: CONTROL OF WORK / ADMINISTRATION OF THE CONTRACT**

1. **Designer.**
Notwithstanding anything to the contrary expressed or implied in this Contract, any of the powers, rights, and duties of the Designer may be exercised by the Awarding Authority, provided that the Awarding Authority shall be under no obligation to do so. The Awarding Authority may rely on the Designer for the performance and exercise of its rights and obligations hereunder and shall be presumed to so rely on the Designer in the absence of an explicit written assumption by the
Awarding Authority of any such rights and obligations, except that any Approval required to be obtained from the Awarding Authority hereunder shall not be valid without the signature of the Awarding Authority. The Awarding Authority may explicitly overrule in writing any action, determination or decision of the Designer should the Awarding Authority choose to do so, except to the extent that the same would violate applicable law. Subject to the foregoing, the Designer shall be responsible for the general administration of the Contract and shall perform the duties and exercise the rights herein conferred on the Designer. Except as otherwise specifically provided herein, the Designer shall decide all questions which may arise as to the conduct, quantity, quality, equality, acceptability, fitness, and rate of progress of the several kinds of work and materials to be performed and furnished under this Contract, and shall decide all questions which may arise as to the interpretation of the Plans and Specifications and as to the fulfillment of this Contract on the part of the Contractor. In the case of the death, resignation, inability or refusal of the Designer to act, or the termination of his or her or its employment, the Awarding Authority may appoint another person to act as Designer for the purposes of this Contract. The Awarding Authority shall give written notice to the Contractor of any such appointment.

2. Right of Access to Work.
The Awarding Authority and the Designer (and persons designated by them) may for any purpose enter upon the Work, the Site, and premises used by the Contractor, and the Contractor shall provide safe facilities therefore. Other contractors of the Awarding Authority may also enter upon the same for the purposes which may be required by their contracts or work. Any differences or conflicts which may arise between the Contractor and other contractors of the Awarding Authority with respect to their work shall be initially resolved by the Designer.

3. Inspection No Waiver.
No inspection by the Awarding Authority or the Designer or employees or agents of either of them, and no order, measurement, certificate, approval, payment order, payment, acceptance or any other action or inaction of any of them, shall operate as a waiver by the Awarding Authority of any provision of this Contract.

ARTICLE IV: GENERAL PERFORMANCE OBLIGATIONS OF THE CONTRACTOR

The Contractor shall complete for the Contract Price all of the Work in a proper, thorough, and workmanlike manner in accordance with the Contract Documents. Without limiting the foregoing and without limiting the Contractor's obligations under any other provision of the Contract Documents, the Contractor shall for the Contract Price perform the following general obligations:

A. Before commencing the Work, the Contractor shall carefully study the Contract Documents and carefully compare all Specifications, Plans, Drawings, figures, dimensions, lines, marks, scales, directions of the Designer, and any other information provided by the Awarding Authority and shall at once report to the Designer any questions, errors, inconsistencies, or omissions.
B. Before commencing the Work, the Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents and shall at once report to the Designer any questions, errors, inconsistencies, or omissions.

2. Supervision and Construction Procedures; Coordination; Cutting, and Patching.
A. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and shall have control over, construction means, methods, techniques, sequences and procedures, and shall be responsible for coordinating all portions of the Work under the Contract.
B. The Contractor shall be responsible for the proper fitting of all Work and the coordination of the operations of all trades, Subcontractors, and materialmen engaged upon the Work. The Contractor shall guarantee to each of its Subcontractors all dimensions which they may require for the fitting of their work to all surrounding work.
C. All necessary cutting, coring, drilling, grouting, and patching required to fit together the several parts of the Work shall be done by the Contractor.
D. The Contractor shall be responsible to the Awarding Authority for the acts and omissions of
the Contractor's employees, agents and Subcontractors, and their agents and respective contractors’
employees, and other persons performing portions of the Work or supplying materials therefore.
E. The Contractor shall be responsible for the inspection of portions of the Work already
performed under this Contract to determine that such portions are in proper condition to receive
subsequent Work.
F. The Contractor shall employ a registered land surveyor to perform any engineering required
for establishing grades, lines, levels, dimensions, layouts, and reference points for the trades. The
Contractor shall be responsible for maintaining benchmarks and other survey marks and shall replace
any benchmarks or survey marks that may have become disturbed or destroyed. The Contractor
shall verify the materials shown on the Drawings before laying out the Work and shall be
responsible for any error resulting from its failure to exercise this precaution.
G. Unless otherwise required by the Supplementary General Conditions or the Plans and
Specifications, or directed in writing by the Awarding Authority, Work shall be performed during
regular Working Hours. However, if the Contractor desires to carry on the Work outside of regular
Working Hours or on Saturdays, Sundays, or Massachusetts or federal holidays then the Contractor
shall allow ample time to allow satisfactory arrangements to be made for inspecting Work in progress
and shall bear the costs of such inspection. The Awarding Authority shall bill the Contractor directly
for such costs.
H. Work performed outside of regular Working Hours without the consent or knowledge of the
Awarding Authority shall be subject to additional inspection and testing as directed by the Awarding
Authority. The cost of this inspection and testing shall be borne by the Contractor whether the Work
is found to be acceptable or not. The Awarding Authority at its election shall be entitled either to
issue a credit Change Order to cover such cost or to withhold such cost from any further payments
due the Contractor and/or to receive a payment from the Contractor of the amount of such cost.

3. Superintendent.
   A. The Contractor shall employ a Superintendent whose appointment shall be subject to the
      Approval of the Awarding Authority. The Superintendent shall be in attendance at the Site full-time
during the performance of the Work. The Superintendent shall represent the Contractor.
      Communications given to and from the Superintendent shall be deemed given to and from the
      Contractor. Important communications shall be confirmed in writing. Other communications shall be
      similarly confirmed upon written request in each case. The Superintendent shall attend each job
      meeting. The Superintendent shall be responsible for coordinating all of the Work of the Contractor
      and the Subcontractors.
   B. The Superintendent shall be a competent employee regularly employed by the Contractor. The
      Superintendent shall be licensed in accordance with the Building Code and shall have satisfactorily
      performed similar duties on previous construction projects similar in type, complexity and scale to the
      Project. The Superintendent's resume shall be submitted to the Awarding Authority prior to
      commencement of construction together with such other information as the Awarding Authority may
      reasonably require in order to determine whether or not to approve of his or her appointment. Any
      change in the Superintendent shall require the prior consent of the Awarding Authority. The
      Contractor shall establish an emergency telephone line by which the Awarding Authority, the
      Designer, or their respective agents may contact the Superintendent during non-working hours.

4. Labor.
   A. The Contractor shall employ only competent workers. The Contractor shall enforce strict
discipline and good order among the Contractor's employees and other persons carrying out the
Work. The Contractor shall certify and insure 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 the Contractor and each of its subcontractors and others working on the
Project shall furnish documentation of successful completion of said course by employees working
with the first certified payroll report for each employee. The Contractor shall not permit employment
of unfit persons or persons not skilled in tasks assigned to them. Whenever the Awarding Authority
shall notify the Contractor in writing that any worker is, in the Designer's opinion, incompetent,
unfaithful, disorderly, or otherwise unsatisfactory, such employee shall be discharged from the Work
and shall not again be employed on the Project except with the consent of the Awarding Authority.
   B. The Contractor shall employ a sufficient number of workers to carry on the Work with all
proper speed in accordance with Laws, the requirements of the Contract Documents, and the
Progress Schedule.
C. The Contractor shall procure materials from such sources and shall manage its own forces and the forces of its Subcontractors and any sub-subcontractors in such a manner as will result in harmonious labor relations on the Project Site. The Contractor shall cause persons to be employed in the Work who will work in harmony with others so employed. Should the Work be stopped or materially delayed in the Awarding Authority's reasonable judgment due to a labor dispute, the Awarding Authority shall have the right to require the Contractor to employ substitutes acceptable to the Awarding Authority.

   A. The Contractor at its sole cost shall take out and pay for all approvals, permits, certificates and licenses required by Laws, pay all charges and fees, and pay for (or cause the appropriate Subcontractor to pay for) all utilities required for the proper execution of the Work.
   B. The Contractor shall comply with all Laws and shall give all notices required thereby.
   C. Except as otherwise specified in this Contract, it is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable Laws. However, if the Contractor observes that portions of the Contract Documents are at variance with the requirements of Laws, the Contractor shall promptly notify the Designer and Awarding Authority in writing, and necessary changes shall be accomplished by an appropriate Contract Modification.
   D. If the Contractor performs Work knowing it to be contrary to Laws without giving such notice to the Designer and Awarding Authority, the Contractor shall bear full responsibility for such Work and all costs attributable thereto, including, without limitation, corrections to the Work.

6. Lines, Marks etc.
The Contractor shall furnish batter boards and stakes and shall cause to be placed and maintained thereon so as to be easily read, such lines, marks and directions relating to the Work as the Designer shall from time to time direct. The Designer shall establish base lines and benchmarks on the Drawings for the locations of the Work but all other lines and grades shall be determined by the Contractor.

7. Excavation.
The Contractor shall prevent by sheeting and shoring or bracing, if necessary, any caving or bulging of the sides of any excavation made by the Contractor, leaving sheeting and shoring in place, or if any is removed, filling solid the spaces left thereby.

The Contractor shall provide pumping, drainage, and disposal of all water and other flows so that no puddle, nuisance, or damage will be caused by water or flooding. The Contractor shall provide all hoisting equipment and machinery required for the proper execution of the Work. The Contractor shall provide all exterior and interior staging required to be over eight feet in height, except as may be otherwise provided in the Contract Documents.

9. Corrections to the Work; Inspection No Bar to Subsequent Corrections.
The Designer's inspection of the Work shall not relieve the Contractor of its responsibilities to fulfill the Contract obligations. Defective work may be rejected by the Designer or Awarding Authority whether or not such work and/or materials have been previously overlooked or misjudged by the Designer and accepted for payment. If the Work or any part thereof shall be found defective at any time before the Final Acceptance of the whole Work, the Contractor shall forthwith cease the performance of any defective work in progress and, whether or not such work is still in progress, shall forthwith correct such defect in a manner satisfactory to the Designer and Awarding Authority. If any material brought upon the Site for use in the Work, or selected for the same, shall be rejected by the Designer as unsuitable or not in conformity with the Contract Documents, or as damaged by casualty or deteriorated due to improper storage at the Site or to any other factor, the Contractor shall forthwith remove such materials from the Site. The Contractor shall pay for the cost of making good all work or property of other contractors or of the Awarding Authority destroyed or damaged by such removal or replacement; repair any injury, defect, omission or mistake in the Work as soon as it is discovered; finish and immediately make good any defect, omission or mistake in the Work; and complete and leave the Work in perfect condition.
10. **Sanitary Facilities.**
The Contractor shall provide and maintain sanitary facilities for all persons employed on the Work, beginning with the first worker at the Site. Said facilities shall meet the following requirements unless otherwise specified in the Supplementary General Conditions or Specifications.

A. There shall be no fewer facilities than the number required by applicable Laws;

B. Facilities shall be kept in a clean sanitary condition at all times and shall be adequately screened to be inaccessible to flies.

(Note: If existing sanitary facilities at the Site are to be used by the Contractor, this requirement will be modified accordingly in the Supplementary General Conditions or Specifications.)

11. **Temporary Offices.**
A. Except as otherwise specified in the Supplementary General Conditions or Specifications, the Contractor shall erect the following temporary offices near the Site as directed by the Awarding Authority and adequately furnish and maintain them in a clean, orderly condition:

   (1) A Contractor's field office at which Contractor's authorized representative shall be present at all times while work is in progress. Instructions, notices, and other communications delivered there by the Designer or the Awarding Authority shall be deemed delivered to the Contractor. The Contractor shall provide a separate conference room space with a conference table and chairs sufficient to accommodate 12 persons at one time.

   (2) Office for the OPM, either a separate building or trailer. Such office shall be in close proximity to the Contractor's field office, shall be at least 475 square feet in area, and shall be equipped with partitions to separate it from public access, electric lights, heat, air conditioning, window screens, secure locking devices, and a toilet room with a working chemical toilet. Such office shall be equipped with the following furniture and equipment in good condition: 2 lockable steel desks, word processor, 2 swivel chairs, two stools, 2 metal plan racks, plan table at least 32 by 84 inches, 2 metal filing cabinets with locks, 12 feet of 10 inch deep shelving, one accurate Fahrenheit thermometer, one electric water cooler with disposable cups and water supply service, one hard hat for each project representative and 6 visitor hard hats, one dry plain paper copy machine with a legal and standard paper tray, and one calculator with paper print out, all of which shall become the property of the Contractor at the conclusion of the Work. (Note: If office space can be assigned in existing buildings at the Project Site, this requirement will be modified accordingly in the Supplementary General Conditions or Specifications.)

B. The Contractor shall relocate the OPM’s trailer at no additional cost to the Owner if the need for relocation arises as determined by the Awarding Authority.

12. **Contract Documents and Samples at the Site.**
A reasonable number of sets of Contract Documents will be furnished to the Contractor by the Awarding Authority immediately after signing of the Contract, one of which shall be maintained at the Site for reference by authorized representatives of the Awarding Authority. The Contractor shall maintain at the Site for the use and information of the Awarding Authority one record copy of the Drawings, Specifications, Addenda, Change Orders, Approved Shop Drawings, Product Data, Samples, updated Progress Schedule, and all other submittals, all in good order and marked currently to record changes and selections made during construction. These shall be available to the Designer and the Awarding Authority and shall be delivered to the Designer for submittal to the Awarding Authority upon completion of the Work.

13. **Telephones.**
The Contractor shall provide and maintain separate individual telephone service and pay for all calls relating to the Work. Service and equipment shall meet the requirements, if any, of the Supplementary General Conditions and Specifications and shall include provisions for incoming and outgoing calls: (1) in the Contractor's field office for the use of its authorized agents and (2) in the OPM’s office for the use of the Designer and authorized agents of the Owner.

14. **Health, Safety, and Accident Prevention**
A. In performing the Work, the Contractor shall:

   (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his/her health and/or safety as determined under construction safety and health standards promulgated by the U.S. Secretary of Labor by regulation;

   (2) Protect the lives, health, and safety of other persons; and
(3) Prevent damage to property, materials, supplies, and equipment.

B. For these purposes, the Contractor shall:

(1) Comply with 84 Stat. 1590, the "Occupational Safety and Health Act of 1970" (OSHA) and with regulations and standards issued by the U.S. Secretary of Labor at 29 CFR Part 1926; and

(2) Include the terms of this Section 14 in every subcontract so that such terms will be binding on each subcontractor.

(3) Designate by notice to the Awarding Authority a responsible member of its organization at the Site whose duties shall include ensuring safety, implementation of Contractor’s Safety Plan referenced below and preventing accidents

C. The Contractor shall maintain an accurate record of exposure data on all accidents incident to the Work resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 CFR Part 1904. Without limiting the foregoing, the Contractor shall submit to the Awarding Authority without delay verbal and written reports of all accidents involving bodily injury or property damage arising in connection with the Work.

D. In any emergency affecting the safety of persons or property the Contractor shall immediately act in the exercise of reasonable judgment to prevent threatened damage, injury, or loss. The Contractor shall immediately notify the Awarding Authority of such emergency.

E. The Contractor shall be responsible for its Subcontractors’ compliance with the provisions of this Section 14.

F. Before commencing any portion of the Work the Contractor shall submit a written Project-specific plan for implementing this Section 14. The plan shall include an analysis of the significant hazards to life, limb and property inherent in the performance of the Work and a plan for controlling these hazards.

G. Without limiting the foregoing provisions of this Section 14, the Contractor shall comply with all health and safety Laws applicable to the Work. Without limitation,

(1) If the Contractor uses, stores or encounters toxic or hazardous substances it shall comply with M.G.L. c. 111F, s. 2, the "Right to Know" law and regulations promulgated by the Department of Public Health, 105 CMR 670, the Department of Environmental Protection, 310 CMR 33, and the Department of Labor and Workforce Development, 441 CMR 21; and shall post a Workplace Notice obtainable from the Department of Labor and Workforce Development.

(2) The Contractor shall comply with the Federal Resource Conservation and Recovery Act, the Federal Comprehensive Environmental Response, Compensation and Liability Act, M.G.L. c. 21C, M. G. L. c. 21E, and any other Laws affecting toxic or hazardous materials, solid, special or hazardous waste (collectively "Hazardous Materials Laws). Should the Contractor discover unforeseen materials subject to Hazardous Materials Laws at the Site, the Contractor shall immediately comply with any and all requirements for dealing with such materials and notify all required governmental authorities and the Awarding Authority of such discovery.

(3) The Contractor shall be responsible for the location of all utilities in connection with the Work. Without limiting the foregoing, the Contractor shall comply with Dig-Safe Laws. Dig-Safe is the Utility Underground Plant Damage Prevention System, 331 Montvale Road, Woburn, MA, 01801, 1-888-344-7233. The Contractor shall notify Dig-Safe of contemplated excavation, demolition, or explosive work in public or private ways, and in any utility company right of way or easement, by certified mail, with a copy to Department of Environmental Protection (DEP). This notice shall be given at least 72 hours prior to the work, but not more than sixty days before the work is to be done. Such notice shall state the name of the street or the route number of the way and shall include an accurate description of the location and nature of the proposed work. Dig-Safe is required to respond to the notice within 72 hours of receipt by designating the location of pipes, mains, wires or conduits at the Site. The Contractor shall not commence work until Dig-Safe has responded. The work shall be performed in such manner and with reasonable precautions taken to avoid damage to utilities under the surface at the work location. The Contractor shall provide the Superintendent with current Dig-Safe regulations, and a copy of M.G.L. c. 82, s. 40. Any costs related to the services performed by Dig-Safe shall be borne by the Contractor.

(4) The Contractor shall comply with M.G.L. c. 149, s. 129A, relative to shoring and bracing of trenches.
H. Without limiting the Contractor's responsibilities described above, the Contractor shall take all reasonable precautions for the safety of, and the prevention of injury or damage to (1) all agents and employees and contractors on the Work and all other persons who may be affected thereby including the general public, (2) all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the Site, under the care custody or control of the Contractor or any of its Subcontractors or any contractors directly or indirectly contracting through any of them, and (3) other property at the Site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of the Work. The Contractor shall promptly remedy all damage or loss to any such property caused in whole or in part by the Contractor, any Subcontractor, or anyone directly or indirectly contracted or employed by any of them or by anyone for whose acts any of them may be liable. Without limiting the foregoing, the Contractor shall:

(1) post and maintain adequate danger signs and other warnings against hazards;
(2) promulgate safety regulations and give appropriate notices to the Awarding Authority and users of adjacent utilities and property;
(3) insure the adequate strength and safety of all scaffolding, staging and hoisting equipment, temporary shoring, bracing and tying;
(4) protect adjoining private or public property;
(5) provide barricades, temporary fences, and covered walkways required by prudent construction practices, Laws and/or the Contract Documents;
(6) furnish approved hard hats and other personal protective equipment, furnish approved first aid supplies, furnish the name of the first aid attendant, and maintain a posted list of emergency facilities;
(7) provide proper means of access to property where the existing access is cut off by the Contractor;
(8) maintain from the beginning of any darkness or twilight through the whole of every night sufficient lights on or near any obstruction so as to guard and protect travelers from injury from such obstruction;
(9) maintain adequate security at the Site so as not to expose the Work and surrounding property to vandalism or malicious mischief;
(10) provide adequate fire protection procedures during the use of cutting torches, welding equipment, plumbers' torches and other flame and spark producing apparatus;
(11) take prompt action to correct any dangerous or hazardous conditions.

I. The Contractor shall not use or store explosives in the performance of the Work unless the Contractor first obtains the Awarding Authority's prior written specific Approval. If the Awarding Authority Approves the use or storage of explosives during the performance of the Work, the Contractor shall first comply with all Laws and obtain all permits, approvals, and certificates required in connection with the same and shall exercise best efforts, including but not limited to the employment and supervision of properly qualified personnel, to prevent damage, injuries, and accidents involving said explosives.

J. The Contractor shall not permit cutting or welding in or immediately adjacent to existing property of the Owner, Awarding Authority or of anyone else without the Awarding Authority's prior Approval in each instance.

15. Debris and Chemical Waste.
   A. The Contractor shall not permit the accumulation of interior or exterior debris. The Contractor shall keep the Work area clean at all times. Without limitation, garbage shall be removed daily.
   B. The Contractor shall properly classify and remove debris and waste from the Site and transport and dispose of it, all in accordance with Laws, employing a qualified and properly licensed transporter, at any landfill, disposal or recycling facility licensed under applicable Laws, including without limitation, hazardous materials laws. The Contractor shall make all arrangements and give and obtain all notices, communications, documentation, permits, certificates, and approvals necessary for said disposal from the owner or officials in charge of such landfills, disposal or recycling facilities. The Contractor shall bear all fees and costs in connection with such classification, removal, transportation, disposal and storage. The Contractor shall not permit any storage of debris or waste except in accordance with Laws.
   C. The Contractor shall not permit any open fire on the Site.
D. Chemical Waste: Chemical waste shall be stored in corrosion resistant containers, removed from the Site, and disposed of not less frequently than monthly unless more frequently required by Laws, including without limitation hazardous materials laws, or by the Supplementary General Conditions or Specifications. Disposal of chemical waste shall be performed 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 shall be disposed of in accordance with procedures meeting all applicable Laws. The Contractor shall immediately notify the Designer of any hazardous materials release large enough to require reporting under applicable Laws. The Contractor shall be responsible for immediately cleaning up in accordance with Laws any oil or hazardous materials releases resulting from its operations. Any costs incurred in cleaning up any such releases shall be borne by the Contractor.

16. **Weather Protection (M.G.L. c. 149, s. 44G. and 44F (1)).**

The Contractor shall furnish and install "weather protection," which means temporary protection of that Work adversely affected by moisture, wind and cold. Weather protection shall be achieved by covering, enclosing and/or heating working areas such that a minimum temperature of 40 degrees Fahrenheit is maintained at the working surface during the months of November through March in order to permit construction to be carried on during such period in accordance with the Progress Schedule. After the building or portion thereof is completely enclosed by either permanent construction or substantial temporary materials having a resistance comparable to the specified permanent construction, the Contractor shall provide heat therein of not less than 55 degrees F. nor more than 75 degrees F. The foregoing provisions do not supersede any specific requirements for methods of construction, curing of materials and the like. Such weather protection shall be consistent with the Progress Schedule, shall permit the continuous progress of the Work necessary to maintain an orderly and efficient sequence of construction operations, shall include one thermometer for every 2,000 square feet of floor space or fraction thereof, shall be subject to the Approval of the Awarding Authority, and shall meet such additional requirements as may be specified by the Supplementary General Conditions or the Specifications.

17. **Furnishings and Equipment.**

When, in the opinion of the Designer, any portion of the Work is in a reasonable condition to receive fittings, furniture, or other property of the Owner not covered by this Contract, the Contractor shall allow the Awarding Authority to bring such fittings, furniture, and/or other property into such portions of the Work and shall provide all reasonable facilities and protection thereof. No such occupancy shall be construed as interfering with the provisions relating to time of completion, or as constituting an acceptance of the whole or any part of the Work. Any furniture or fittings so installed shall be placed in the Work at the risk of the Awarding Authority except that the Contractor shall be liable for damages or losses to such furniture or fittings to the extent such damages or losses arise in whole or in part from the negligence or intentional misconduct of Contractor, Subcontractors, their agents and/or employees, or anyone for whose acts Contractor is responsible.

18. **Form for Subcontract. NOT USED**

19. **Sales Tax Exemption and Other Taxes.**

All building materials and supplies as well as the rental charges for construction vehicles, equipment and machinery rented exclusively for use on the Site, or while being used exclusively for the transportation of materials for the Work are entitled to an exemption from sales taxes under M.G.L. c. 64H, s. 6(f). The Contractor shall take all action required to obtain the benefit of such sales tax exemption. The Contractor shall bear the cost of any sales taxes that Contractor incurs in connection with the Work and the Awarding Authority shall not reimburse the Contractor for any such taxes. The exemption number assigned to the Contractor as an exempt purchaser shall be provided to the Contractor by the Awarding Authority upon the written request of the Contractor.
20. Final Cleaning.
At the completion of the Work, the Contractor shall remove all waste materials, rubbish, tools, equipment, machinery and surplus materials, and professionally clean all sight-exposed surfaces so that the Work is clean and ready for occupancy. Subsequent to installation of furniture, telephones, and equipment, the Contractor shall provide such additional cleaning as may be necessary to remove any soil resulting from installation of such furniture, telephones and equipment.

Subject to such additional requirements as may be provided in the Supplementary General Conditions or Specifications, the Contractor shall compile 3 complete and identical binders of operating and maintenance data for the entire Work. The Contractor shall submit record maintenance data to the Designer for approval, shall submit approved maintenance data to the Awarding Authority, and shall instruct and train the Awarding Authority's personnel in proper inspection and maintenance procedures.

22. Closeout Procedures.
The Contractor shall take all actions and submit all items required for the issuance of the Certificate of Use and Occupancy and Final Acceptance as specified in the Contract Documents.

23. Risk of Loss.
The Contractor shall bear all risk of loss to the Work during the term of the Contract except for any portion of the Work as to which the Certificate of Occupancy has been issued pursuant to Article VI of these General Conditions of the Contract. Nothing herein shall limit the Contractor's responsibilities under Article IX or XV of these General Conditions of the Contract.

ARTICLE V: MATERIALS AND EQUIPMENT

1. Materials Generally.
   A. Unless otherwise specifically provided in the Contract Documents, the Contractor shall provide and pay for materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

   B. Materials and equipment to be installed as part of the Work (both or either of which are hereinafter referred to as "materials") shall be new, unused, of recent manufacture, assembled, and used in accordance with the best construction practices. The Contractor shall give a preference in the purchase of supplies and materials, other considerations being equal, in favor, first, of supplies and materials manufactured and sold within the Commonwealth, and, second, of supplies and materials manufactured and sold elsewhere within the United States.

2. Shop Drawings, Product Data, and Samples.
   A. The Contractor shall furnish to the Designer all samples of the materials to be used in the execution of the Work as required by the Contract Documents. The Contractor shall furnish to the Designer in a timely manner all coordination Drawings, shop details, Shop Drawings, and setting diagrams which may be necessary for acquiring and installing materials. These shall be reviewed as required by the Designer. A minimum of four (4) copies shall be submitted for final approval, one of which shall be returned to the Contractor, one to the OPM, one to the Awarding Authority and one filed with the Designer. The inspection and approval by the Designer of Shop Drawings, etc. shall be general and shall in no way relieve the Contractor from responsibility for proper fitting, coordinating, construction, and construction sequencing. The Contractor shall furnish to the Designer such information and vouchers relative to the Work, the materials therefore, and the persons employed thereon, as the Designer shall from time to time request.

   B. Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. The purpose of their submission is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.
C. The Contractor shall review, approve, and submit to the Designer, Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Awarding Authority or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents or which do not comply with the Contract Documents may be returned without action. The Contractor's attention is directed to the provisions of Section 4 of this Article V and to the Specifications.

D. The Contractor shall prepare and keep current for the Designer's approval a schedule of submittals which is coordinated with the Progress Schedule and allows the Designer reasonable time to review submittals.

E. The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Designer. Such Work shall be in accordance with Approved submittals.

F. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements, and field construction criteria related thereto and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

G. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Designer's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Designer in writing of such deviation at the time of submittal and the Awarding Authority has given explicit written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by the Designer's or the Awarding Authority's actions.

H. The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Designer on previous submittals.

I. Informational submittals upon which the Designer is not expected to take responsive action may be so identified in the Contract Documents.

J. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, such certification must be stamped by a registered Massachusetts professional in the discipline required. The Designer shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

K. Materials furnished or used or employed under the Contract must be equal in quality to the samples furnished and be satisfactory to the Designer.

3. Tests.

A. Any material to be used in the Work may be tested or inspected at any time by the Designer with the prior Approval of the Awarding Authority and may be rejected if it fails to comply with specified tests. The Awarding Authority shall pay for all testing of specified material. If the Contractor requests permission to use a material that was not specified, then the Contractor shall pay for such testing. The cost of testing of materials that fail the testing criteria shall be borne by the Contractor.

B. The Contractor shall notify the Designer and the Awarding Authority of the proposed sources of materials in time to permit all required testing and inspection before the material is needed for incorporation into the Work. The Contractor shall have no claim arising from Contractor's failure to designate the proposed source or to order the material in time for adequate testing and inspection. Necessary arrangements shall be made to permit the Designer to make factory, shop or other inspection of materials or equipment ordered for the Work in process of manufacture or fabrication, or in storage elsewhere than the Site.

4. "Or Equal" Submissions.

A. Where products or materials are prescribed by manufacturer name, trade name, or catalog reference, the words "or Approved equal" shall be understood to follow. An item shall be considered equal to the item so named or described if in the opinion of the Awarding Authority (a) it is at least equal in quality, durability, appearance, strength and design, (b) it performs at least equally the function imposed in the general design for the Work, and (c) it conforms substantially, even with deviations, to the detailed requirements for the items as indicated by the Specifications. Any structural or mechanical changes made necessary to accommodate products or materials substituted as an "or equal" shall be at the expense of the Contractor. "Approved equal" shall mean an item with respect to which the Awarding Authority shall have issued a written statement to the
Contractor to the effect that the item is, in the Awarding Authority's opinion, equal within the meaning of this paragraph to that prescribed in the Contract Documents.

B. The Contractor shall be responsible for providing the Designer with any information and test results that the Designer reasonably requires to determine whether or not a material is equal to a material named or described in the Contract Documents.  

C. Whenever the Contractor submits a material for approval as a substitute for a material named or described in the Contract Documents, such submission shall be made at least sixty (60) days prior to the date the materials will be used in the Work. In no event shall the Contractor maintain a claim for delays based upon the Designer's review of such substituted materials if the Contractor has failed to comply with the sixty (60) day submission requirement.

D. The Contractor shall save the written calculations, pricing information, and other data that the Contractor used to calculate the General Bid (the "Bid Pricing Materials") for at least six years after the Awarding Authority makes Final Payment under this Contract. No increase in the Contract Price shall be allowed for any material later found to have been improperly rejected as not being equal unless the Contractor can show persuasive evidence that the rejection increased the Contractor's costs over those provided for in the Bid Pricing Materials, net of all savings the Contractor obtained by substituting other "or-equal" items. Without limiting the foregoing, if the Awarding Authority rejects a proposed substitution on the basis that the item is not equal and if the appropriate authority finds that the proposed substitution was equal, the Contract Price may be increased only to the extent that (1) the item that the Contract Documents specifically require costs more than the item later approved as equal, (2) the Bid Pricing Materials prove that the Contractor calculated its bid using the cost of the item later found as equal, (3) any increase is reduced by any cost that the Contractor would have incurred for structural or mechanical changes necessary to accommodate the substitute item, (4) the Contractor shall not be entitled to any adjustment for overhead and profit, (5) any increase must exceed the aggregate amount that the Contractor saved using products or materials that the Awarding Authority approved as equal under this Contract. In calculating the Contractor's aggregate saving under the preceding clause (5), the Contractor shall provide the Awarding Authority with the Bid Pricing Materials and a calculation based on the Bid Pricing Materials that compare the price (stated in the Bid Pricing Materials) of each item replaced with an "or equal" item, with the cost of the approved equal item, specifically describes all costs that Contractor would have incurred making structural or mechanical changes to include within the Work the item later found to have been improperly rejected and copies of all plans, specifications, shop Drawings, and other design documents that the Awarding Authority deems necessary or desirable.

5. **Delivery and Storage of Materials: Inspection.**

   A. Materials and equipment shall be progressively delivered to the Site so that there will be neither delay in the progress of the Work nor an undue accumulation of materials that are not to be used within a reasonable time and so that their security, quality, and fitness of the materials for the Work is preserved.

   B. Materials stored off Site shall be insured and stored at the expense of the Contractor so as to guarantee the preservation of their security, quality and fitness for the Work. Without derogating from the Contractor's responsibilities in the previous sentence, when necessary to avoid deterioration or damage, material (on or off Site) shall be placed on wooden platforms or other hard clean surfaces and not on the ground and shall be properly protected.

   C. Expenses for inspection of material by the Designer and/or the Awarding Authority personnel including travel, quarters, and subsistence shall be borne by the Contractor requesting the inspection of material stored outside the Commonwealth of Massachusetts as part of the Contract Price. The policy of the Awarding Authority precludes the payment for material stored outside the boundaries of Massachusetts except in extremely limited circumstances with the express written consent of the Awarding Authority. If the Contractor requests an inspection of material stored outside the Commonwealth of Massachusetts, the Awarding Authority will initially pay for all expenses of inspecting the material incurred by the Designer and/or Awarding Authority’s personnel including travel, quarters, and subsistence. The Awarding Authority will then give Contractor an invoice for those costs and the Contractor shall submit a credit Change Order for the amount of those expenses.

   D. Stored materials either at the Site or at some other location agreed upon in writing shall be so located as to facilitate prompt inspection and even though approved before storage, may again be inspected prior to their use in the Work.

   E. All storage sites shall be restored to their original condition by the Contractor at the Contractor’s expense.
F. The Contractor shall take charge of and be liable for any loss of or injury to the materials for his use delivered to or in the vicinity of the place where the Work is being done, whether furnished by the Owner or otherwise; the Contractor shall notify the Designer as soon as any such materials are so delivered, allow them to be examined by the Designer, and furnish workers to assist therewith.

6. Defective, Damaged, or Deteriorated Materials and Rejection Thereof.
The Designer or Awarding Authority may reject materials if either reasonably determines that such materials do not conform to the Contract Documents in any manner, including but not limited to materials that have become damaged or deteriorated from improper storage whether or not such materials have previously been accepted. The Contractor at its own expense shall remove rejected materials from the Work. No rejected material, the defects of which have been subsequently corrected, shall be used except with the written permission of the Designer. Should the Contractor fail to remove rejected material within a reasonable time, the Designer and/or Awarding Authority may, in addition to any other available remedies, remove and/or replace the rejected material, and to deduct the cost of such removal and/or replacement from any moneys due or to become due the Contractor. No extra time shall be allowed for completion of Work by reason of such rejection. The inspection of the Work shall not relieve the Contractor of any of its obligations herein prescribed, and any defective Work shall be corrected. Work not conforming to the Contract Documents may be rejected notwithstanding that such Work and materials have been previously overlooked or misjudged by the Designer and accepted for payment. If the Work or any part thereof shall be found defective at any time before Final Acceptance of the whole Work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Designer. Nothing in the Contract shall be construed as vesting in the Contractor any property rights in the materials used after they have been attached or affixed to the Work or the Site; but all such materials shall upon being so attached or affixed become a property of the Owner.

ARTICLE VI: PROSECUTION AND PROGRESS

1. Beginning, Progress Schedule, and Completion of Work.

A. The Contract time shall commence upon the date specified in the Notice to Proceed. The Contractor shall begin Work at the Site within ten days of said date unless otherwise ordered in writing by the Awarding Authority.

B. Within ten days after the Work has commenced, the Contractor shall submit to the Designer and to the Awarding Authority, a progress schedule for the term of the Contract as required by the Contract Documents, showing in detail his proposed progress for the construction of the various parts of the Work and the proposed times for receiving required materials. Upon Approval by the Awarding Authority, said schedule shall constitute the Progress Schedule. The Contractor shall at the end of each month, or more often if required, furnish to the Designer and to the Awarding Authority a schedule meeting the requirements of the Specifications showing the actual progress of the parts of the Work in comparison with the Progress Schedule.

C. Time is of the essence of this Contract. The Work shall be completed within the time specified in Article 2 of the Owner - Contractor Agreement. Should the Contractor require additional time to complete the Work, the Contractor shall document the reasons therefore and submit a written request for an extension of time within 20 days of the occurrence of the event alleged to be the cause of the delay, as provided in this Article and in Article VII of these General Conditions of the Contract. Failure to submit said written request within the time required by the preceding sentence shall preclude the Contractor from subsequently claiming any time extension due to said delay.

D. If, in the opinion of the Designer or the Awarding Authority, the Contractor fails to comply with the Progress Schedule, the Awarding Authority may give the Contractor a notice specifying the time limits and performance standards that the Contractor is failing to meet whereupon (1) the Contractor shall, if the notice requires, discontinue all or any portion of the Work (which discontinuance shall neither terminate the Contract nor give the Contractor any claim for an increase in the Contract Price, damages, or an extension of any completion deadlines); or (2) at Contractor's sole cost increase the work force, equipment and plant, or any of them, employed on the whole or any part of the Work, to the extent required by such notice, and employ the same from day to day until the completion of the Work or such part thereof, or until the failure regarding the rate of progress, in the opinion of the Designer or the Awarding Authority, shall have been sufficiently corrected.
E. If, in the opinion of the Awarding Authority, the Contractor fails to comply with the Progress Schedule, and whether or not the Awarding Authority shall have given the Contractor a notice described in D above, the Awarding Authority may (but shall not be required to) give the Contractor notice of such failure and five days to cure the same. Unless the Contractor shall within that five days take all necessary steps to do so (including, if the Awarding Authority requires, increasing its forces, equipment and plant) and continue to do so until in the opinion of the Awarding Authority the failure is corrected, the Awarding Authority may at the Contractor's expense and without terminating this Contract take exclusive or joint possession of all or a portion of the Site and employ and direct the labors of existing or such additional forces, equipment and plant as may in the Designer's or Awarding Authority's opinion be necessary to insure the completion of the Work or such part thereof within the time specified in the Contract Documents or at the earliest possible date thereafter. The Awarding Authority may exercise its rights under this Article at any time and from time to time without waiving any of its rights under this Contract, at law or in equity, including, without limitation, the right to deem this Contract terminated or to order the Contractor to discontinue the Work at any time thereafter. The Contractor shall continue to perform the remaining Work under this Contract even if the Awarding Authority elects to have another contractor perform a portion of the Work under this Article.

F. The Awarding Authority shall deduct the cost of any actions the Awarding Authority takes under this Article from any amount then due or which might have become due to the Contractor under this Contract had the Contractor performed as required. On demand, the Contractor shall pay the Awarding Authority any amount by which the cost of completing all or any portion of the Work exceeds the amount attributable to that Work under the Contract Documents. The Awarding Authority's sole goal will be to complete the Work that it elects to complete within the time limits stated in the Contract or at the earliest possible date thereafter. Consequently, the Awarding Authority shall have no obligation to obtain competitive bids or the lowest cost for completing the Work or any part thereof. The Awarding Authority's election to complete all or part of the Work shall not release the Contractor from any liability to obtain competitive bids or the lowest cost for completing the Work or any part thereof. The Awarding Authority may recover such liquidated damages by deducting the amount thereof from any moneys due or that might become due the Contractor, and if such moneys shall be insufficient to cover the liquidated damages, then the Contractor or the Surety shall pay to the Awarding Authority the amount due.

2. Failure to Complete Work on Time - Liquidated Damages.
   A. If liquidated damages are specified in the Owner - Contractor Agreement, the Awarding Authority has determined that its damages as a result of Contractor's failure to complete the Work to the point at which it qualifies for the issuance of a Certificate of Use and Occupancy will be difficult or impracticable to ascertain. Accordingly, if the Work is not completed to such point by the date specified in this Contract, the Contractor shall pay to the Awarding Authority the sum designated as liquidated damages in the Contract for each and every calendar day that the Contractor is in default in completing the Work to such point. Such monies shall be paid as liquidated damages, not as a penalty, to cover losses and expenses to the Awarding Authority and/or the User Agency resulting solely from the fact that the Work is not completed on time.
   B. Similarly, if the Contract states that by a specified date a designated portion of the Work shall be prosecuted to the point at which it qualifies for the issuance of a Certificate of Agency Use and Occupancy, and if such portion has not been prosecuted to such point by said date, the Contractor shall pay to the Awarding Authority the sum designated in the Contract for each calendar day that the Contractor is in default in completing such portion of the Work to such point. Such monies shall also be paid as liquidated damages not as a penalty, to cover losses and expenses to the Owner resulting solely from the fact that the Work is not completed on time.
   C. The Awarding Authority may recover such liquidated damages by deducting the amount thereof from any moneys due or that might become due the Contractor, and if such moneys shall be insufficient to cover the liquidated damages, then the Contractor or the Surety shall pay to the Awarding Authority the amount due.
   D. Permitting the Contractor to continue and finish the Work or any portion of it after the time fixed in the Contract for its completion shall not be deemed as a waiver of any of the Owner's rights hereunder, at law or in equity.
E. Liquidated damages or a portion thereof may be waived by the Awarding Authority if the Contractor submits evidence satisfactory to the Awarding Authority that the delay was caused solely by conditions beyond the control of the Contractor and that the Awarding Authority has not suffered any damages as a result of said delay.

F. Failure by the Awarding Authority to specify a sum as liquidated damages in the Owner - Contractor Agreement, or the insertion of "N/A" or "none" in the space provided therein for liquidated damages, shall not be deemed a waiver of the Awarding Authority's right to recover actual damages arising from the Contractor’s failure to complete the Work on time.


A. Notwithstanding any provision of this Contract to the contrary, except as otherwise provided by law as set forth in paragraph B below, the Contractor shall not be entitled to increase the Contract Price or to receive damages on account of any hindrances or delays, avoidable or unavoidable; but if any delay is caused in the opinion of the Designer by the Awarding Authority, the Contractor shall be entitled to an extension of time. The length of the extension shall be sufficient in the opinion of the Designer for the Contractor to complete the Work. Although no delay shall increase the Contract Price, the Awarding Authority may require that any change in the date by which the Contractor must complete all or any part of the Work be processed on a standard Change Order form.

B. If 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 with respect to such increase as the Contractor shall have against the Awarding Authority by virtue of (a) and (b) of M.G.L. c. 30, s. 39O set forth below, but nothing in provisions (a) and (b) shall alter any other rights which the Contractor or the subcontractor may have against each other. As used in the statutory language of (a) and (b) below, "contract" means this Contract, "general contractor" means the Contractor and "awarding authority" means the Awarding Authority:

"(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."

4. Use and Occupancy Prior to Final Acceptance.

A. The Contractor agrees to the use and occupancy of the Project or any portion thereof before Final Acceptance of the Work by the Awarding Authority.

B. The Awarding Authority will cooperate with the Contractor with respect to the completion of the Work by taking such reasonable steps as may be possible to avoid interference with the Contractor’s Work provided that they do not interfere with the proper functioning of the facility.

C. The Contractor shall not be responsible for wear and tear or damage resulting solely from temporary occupancy.

D. Use and occupancy of any part of the Work prior to Final Acceptance by the Awarding Authority shall not relieve the Contractor from maintaining the required payment and performance bonds and insurance (to the extent that insurance is required to be maintained after Substantial Completion) required by this Contract.

A. When the Work, or portion thereof which the Awarding Authority agrees to accept separately has reached the state of Substantial Completion as shown on Approved payment request, the Contractor shall develop, with the participation of the Designer and the Awarding Authority, the Punch List identifying those items of unfinished or unacceptable Work that remain to be performed or corrected under the Contract.

B. Before the Work shall be deemed completed to the point where it is ready for the issuance of a Certificate of Occupancy, the Contractor shall:

1. Provide Contractor's proposed Punch List containing a statement of the reason for each item listed thereon;
2. Advise the Awarding Authority of proposed changes in insurance in accordance with the provisions of this Contract, and provide to the Awarding Authority evidence of Contractor's Completed Operations insurance coverage to the extent required by the Contract Documents;
3. Execute and submit a notarized warranty on a form provided by the Awarding Authority meeting the requirements of Article IX of these General Conditions of the Contract, to commence upon the date of the issuance of the Certificate of Occupancy for the Work or the designated portion thereof, unless otherwise provided in the Certificate of Occupancy;
4. Submit signed special warranties and warranties of longer than one year as required by the Contract Documents;
5. Submit signed maintenance agreements for all portions of the Work specified to receive maintenance after the issuance of the Certificate of Occupancy;
6. Submit all preliminary record Drawings and documents and framed data in the forms required by the Contract Documents to the Awarding Authority and Designer;
7. Complete all items required to be completed by the New Bedford Department of Inspectional Services and obtain a Certificate of Occupancy from the Department of Inspectional Services and similar releases which permit the Awarding Authority full and unrestricted use of the areas claimed to be ready for occupancy;
8. Deliver specified maintenance stocks of materials, required spare parts, and all special tools furnished by manufacturers to persons designated by the Awarding Authority and obtain written receipts for same;
9. Make final changes of lock cylinders or cores and advise the Awarding Authority of the change of project security responsibility;
10. Complete start-up of systems and instruct Awarding Authority personnel on proper operation and routine maintenance of all systems and equipment and notify the Awarding Authority that start-up and instruction have been completed;
11. Remove all remaining temporary facilities that are no longer needed, surplus materials, and debris; (the Contractor shall not remove construction offices and trailers without the prior Approval of the Awarding Authority);
12. Submit final utility meter readings and similar information and advise the Awarding Authority of the change of responsibility for utility charges and payments upon the issuance of the Certificate of Occupancy;
13. Complete final clean-up of all Work, restoration of damaged finishes, and replacement of all damaged and broken glass not listed on the Contractor's Punch List.
14. Complete such other items as may be called for in the Supplementary General Conditions, if any, or in the Specifications.

C. After completing the items specified in subsection A above, the Contractor shall make a written request for the Designer's inspection for a Certificate of Occupancy in accordance with the Contract Documents. The Designer shall review the submittals and the Work and shall either 1) sign a Certificate of Occupancy or 2) notify the Contractor of incomplete and/or incorrect Work that must be completed and corrected prior to the issuance of the Certificate of Occupancy. The Designer shall notify the Contractor of any additions to the Punch List. In connection with the execution of the Certificate of Occupancy the Designer shall assign dollar values to each item on the Punch List. Failure to include any incomplete or defective item on the Punch List shall not relieve the Contractor of the obligation to complete all Work in accordance with the Contract Documents.

A. Prerequisites for Final Acceptance. After the issuance of a Certificate of Occupancy for the entire Work, and after the Contractor has completed all of the Work required by this Contract, including Change Orders and Punch List Items, the Contractor shall submit the following completed items to the Awarding Authority together with such additional items as may be specified in the Contract Documents:

1. A completed Final Application for Payment showing a final accounting of all changes in the Work, on the form provided by the Awarding Authority.
2. Certification and satisfactory evidence that all taxes, fees, and similar obligations have been paid.
3. Consent of the Surety to Final Payment executed by applicable bonding companies.
4. Certified copy of the Punch List stating that the Contractor has completed or corrected every item listed.
5. Evidence of Contractor's continuing Completed Operations Insurance coverage to the extent required by the Contract Documents.
6. All final record Drawings and documents in the forms specified by the Contract Documents.
7. A notarized certification that all purchases made under the tax exemption certificate were legitimate and entitled to exemption.
8. Written certifications from the Department of Inspectional Services and the Designer to the effect that: a) the Work has been inspected for compliance with the Contract Documents and has satisfied the Department of Inspectional Services; b) all equipment and systems included in the Work have been tested in the presence of the Designer and are operational and satisfactory; c) the Work is completed and ready for final inspection.
9. Such other items as may be required by the Contract Documents.

B. Re-inspection; Final Acceptance. After notification from the Contractor that all remaining contract exceptions, omissions and incomplete items have been completed (with the exception of Contractor's continuing warranty, insurance, indemnification, and such other obligations as are intended by the terms of the Contract Documents to extend beyond the date of Final Acceptance), the Awarding Authority and the Designer shall inspect the Work to verify the completion of the same. If the Work is satisfactory, the Awarding Authority shall prepare a Certificate of Final Acceptance or shall notify Contractor of items which remain to be completed prior to Final Acceptance.

7. One-Year Warranty Repair List and Inspection.

Approximately 30 days prior to the expiration of the comprehensive one-year warranty period, the Contractor shall schedule an appointment with the Awarding Authority for a re-inspection of the Work with the Awarding Authority and shall thereafter inspect the work at the time scheduled. Based on this inspection and on prior inspections, the Awarding Authority shall issue a "Warranty Repair List" of items to be corrected by the Contractor. The Contractor shall make the repairs and/or replacements listed within 30 days of the issuance of the Warranty Repair List unless otherwise agreed by the Awarding Authority in writing.

ARTICLE VII: CHANGES IN THE WORK


A. No changes in the Work shall be made in absence of a Change Order (sometimes called a "Notice to Proceed") defined in Article I of these General Conditions of the Contract, directing the Contractor to perform such changes. A request for a change in the provisions of this Contract may be submitted to the Awarding Authority by the Contractor, Designer, or OPM. The request must be made in writing and in accordance with the provisions of this Contract, Laws, and the procedures of the Awarding Authority.

B. A Change Order may be issued by the Awarding Authority for changes in the Work within the scope of the Contract, including but not limited to, changes in: (1) the Plans and Specifications; (2) the method or manner of performance of the Work; (3) the Owner-furnished facilities, equipment, materials, services or Site; (4) the schedule for performance of the Work.

C. The Contractor shall immediately perform any Change Order work that is ordered by the Awarding Authority.
D. Whenever a Change Order is issued and said Change Order will cause a change in the Contractor’s cost, the Contractor or the Awarding Authority may request an equitable adjustment in the Contract Price. A request for such an adjustment shall be in writing and shall be submitted by the party making such claim to the other party before commencement of the pertinent work or as soon thereafter as possible.

E. The Awarding Authority and the Contractor shall negotiate in good faith an agreement on an equitable adjustment in the Contract Price, and/or time if appropriate, before commencement of the pertinent work or as soon thereafter as is possible. In the absence of an agreement for an equitable adjustment, the Awarding Authority shall unilaterally determine the costs attributable to the change and provide the Contractor with a written notice to that effect. The Contractor may appeal the decision of the Awarding Authority within thirty days of receipt of said notice, to the chief executive official of the Awarding Authority or his designee. However, if the Contractor shall exercise its rights to appeal the decision of the Awarding Authority as aforesaid, the Contractor shall be required to engage in the mandatory mediation procedures set forth in Section 5 of this Article VII.

F. During the negotiation of an equitable adjustment in the Contract Price, the Contractor shall, if requested, provide the Awarding Authority with all cost and pricing data used by him in computing the amount of the equitable adjustment, and the Contractor shall certify that the pricing data used was accurate, complete and current. If the Awarding Authority subsequently determines that the data submitted by the Contractor was incomplete, incorrect or not current, the Awarding Authority may exclude such data from consideration under the equitable adjustment request.


A. Equitable adjustments in the Contract Price shall be determined according to one of the following methods, or a combination thereof, as determined by the Awarding Authority: (1) fixed price basis, provided that the fixed price shall be inclusive of items (a) through (e) below and shall be computed in accordance with those provisions; (2) 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; (3) time and materials basis to be subsequently adjusted on the basis of actual costs (but subject to a predetermined "not to exceed limit") calculated as follows:

(a) the direct cost (or credit) for labor at the minimum wage rates established for this Contract pursuant to M.G.L. c. 149, s 26-27H, and the direct cost for material and use of equipment;
(b) plus (or minus) the cost of Workmen’s Compensation Insurance, Liability Insurance, Federal Social Security and Massachusetts Unemployment Compensation, or as an alternative the Contractor may elect to use a flat 30% of the total labor rate computed in accordance with subparagraph (a) above;
(c) plus an allowance equal to 20% of the amount of (a) above for overhead, superintendence and profit;
(d) plus, for work performed by a Subcontractor filed pursuant to M.G.L. c. 149, s. 44F, an additional allowance equal to 7% of the sum of (a) through (c) above as full compensation to the Contractor for processing forms and assuming full responsibility for the faithful performance of such work by said filed Subcontractor(s);
(e) plus (or minus) the actual direct premium cost of payment and performance bonds required of Contractor and filed Subcontractors for this Contract.

B. If the net change is an addition to the Contract Price, it shall include the Contractor’s overhead, superintendence and profit. On any change that involves a net credit, no allowance for overhead, superintendence and profits shall be included. For any change that does not include labor performed or materials installed in the project, there will be no markup for the Contractor’s overhead, superintendence, and profit, even though there may be a net increase in the Contract Price. Charges for small tools known as “tools of the trade” are not to be computed in the amount of any change in the Contract Price.

C. Statutory Contract adjustments made under the provisions of M.G.L. c. 149, s.44F shall not be considered Change Orders and shall not entitle the Contractor to any adjustments for overhead, profit, and superintendence, although the Awarding Authority may require that such Contract adjustments be processed on standard Change Order and equitable adjustment forms.
The Contractor agrees to perform all Work as directed by the Awarding Authority, and if the OPM determines that certain Work that the Contractor believes to be or to warrant a Change Order under this Article does not represent a change in the Work, the Contractor shall perform said Work. The Contractor shall be deemed to have concurred with the OPM's determination as aforesaid unless the Contractor shall perform Work under protest in compliance with the following sub-paragraphs (1) and (2) below:

(1) If the Contractor claims compensation for a change in the Work that is not deemed by the OPM to be a change or to warrant additional compensation as claimed by the Contractor, the Contractor shall on or before the first working day following the commencement of any such work or the sustaining of any such damage submit to the Designer, OPM and the Awarding Authority a written statement of the nature of such work or claim. The Contractor shall not be entitled to additional compensation for any work performed or damage sustained for which written notice is not given within the time limit specified in the preceding sentence, even though similar in character to work or damage with respect to which notice is timely given.

(2) On or before the second working day after the commencement of such work or the sustaining of such damage, and daily thereafter, the Contractor shall file to the extent possible with the OPM, the Designer, and the Awarding Authority, itemized statements of the details and costs of such work performed or damage sustained.

   A. Criminal Penalties: The Contractor’s attention is directed to M.G.L. c. 30, s. 39I, which provides criminal penalties for unauthorized deviations from the Plans and Specifications, and to M.G.L. c. 30, s. 39J. The Contractor’s attention is also directed to M.G.L. 266, s. 67B which provides criminal penalties for false claims by Contractor under this Contract:
   "Whoever makes or presents to any employee, department, agency or public instrumentality of the commonwealth, or of any political subdivision thereof, any claim upon or against any department, agency, or public instrumentality of the commonwealth, or any political subdivision thereof, knowing such claim to be false, fictitious, or fraudulent, shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than five years, or in the house of correction for not more than two and one-half years, or both."

   B. Differing Site Conditions (M.G.L. c. 30, s. 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 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."

   C. Timely Decision By Awarding Authority(M.G.L. c. 30, s. 39P): "Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within
thirty days after the receipt of the submission, give the party making the submission written notice
of the reasons why the decision cannot be made within the thirty day period and the date by which
the decision will be made."

5. Mandatory Mediation.
In the case of every dispute where the dollar amount in dispute (or the estimated dollar value of
the extension of time in dispute) is $50,000 or more and the Contractor appeals the decision of the
chief executive officer of the Awarding Authority or his designee described in Section 4.B above,
the Awarding Authority and the Contractor shall engage in good faith in a non-binding mediation
process, which process shall be concluded within sixty days from the date that the Contractor files
an appeal from said decision as provided in Section 4.B above. In the case of such disputes where
the dollar amount in dispute (or the estimated dollar value of the extension of time in dispute) is
$500,000 or more, the parties shall, if the mediation process fails, submit the dispute to a third-
party Neutral which shall within sixty days render a non-binding advisory opinion. Unless the
parties have previously agreed in writing to a process for submitting disputes to mediation, the
Awarding Authority shall determine in its reasonable discretion the procedures to be followed and
shall give the Contractor notice of the same in writing within 7 days of the date that the Awarding
Authority receives notice of the Contractor's appeal from the decision of the chief executive officer
of the Awarding Authority or his designee. The mediator shall be selected jointly by the parties
to this Contract. The cost of the services of any mediator selected jointly by the parties to this
Contract or jointly by mediators selected by the parties to this Contract shall be borne equally by
the Contractor and the Awarding Authority.

ARTICLE VIII: PAYMENT PROVISIONS

1. Schedule of Values.
Before the first application for payment the Contractor shall submit to the Designer and the Awarding Authority
a schedule of values allocated to various portions of the Work in sufficient detail to reflect the various major
components of each trade (with filed Subcontractors as well as MBE/WBE noted), including quantities when
requested, aggregating the total Contract Price and divided so as to facilitate payments for work under each
section of the Specifications. The schedule shall be prepared in such form and supported by such data to
substantiate its accuracy as the Designer or the Awarding Authority may require. Each item in the schedule
shall include its proper share of overhead and profit. When Approved by the Designer and the Awarding
Authority, it shall constitute the Schedule of Values and shall be used only as a basis for the Contractor's
requests for payments.

2. Payment Liabilities of Contractor.
   A. The Contractor shall pay to the Owner all expenses, losses and damages, as determined by
      the Awarding Authority or the Designer, incurred in consequence of any default, defect, omission
      or mistake of the Contractor or his employees or Subcontractors or the making good thereof.
   B. If the Work (or a portion thereof) is not completed to Substantial Completion and the
      Contractor has not satisfied the requirements for the issuance of a Certificate of Occupancy by the
date specified in Article 2 of the Owner - Contractor Agreement, the Contractor shall pay to the
      Owner liquidated damages as provided in Article VI, Section 2 of these General Conditions of the
      Contract.

3. Retention of Moneys by Awarding Authority.
   A. The Awarding Authority may keep any moneys which would otherwise be payable at any
time hereunder, and apply the same, or so much as may be necessary therefore, to (1) the Owner
    's expenditures for the Contractor's account, (2) to secure the Awarding Authority's remedies
    against the Contractor for the Contractor's breach of its obligations under this Contract or the
    breach of any person performing any part of the Work and (3) the payment of any expenses, losses
    or damages incurred by the Awarding Authority or any agency of the Commonwealth as a result
    of the failure of the Contractor to perform its obligations hereunder. The Awarding Authority may
    retain, until all claims are settled, such moneys as the Awarding Authority estimates to be the fair
    value of the Awarding Authority's claims against the Contractor, and of all claims for labor
    performed or furnished and for materials used or employed in or in connection with the Work and
    for the rental of vehicles, appliances and equipment employed and for the employment of substitute
    contractors and labor in connection with the Work filed in accordance with M.G.L. c. 30, s. 39A
the site (or at some location agreed to in writing) only upon delivery to the Awarding Authority. If the moneys retained under this Contract are insufficient to pay the sums found by the Awarding Authority to be due under the claims for labor and materials filed as aforesaid, the Awarding Authority may, at its discretion, pay the same, and the Contractor shall repay to the Awarding Authority all sums paid out. The Awarding Authority may also at its discretion use any moneys retained, due or to become due under this Contract, for the purpose of paying for both labor and materials used or employed in the Work for which claims have not been filed with the Awarding Authority.

C. No moneys retained under the provisions of this Article shall be held to be statutory security for the payment of claims filed in accordance with the provisions of M.G.L. c. 149, s. 29, as amended, for which security is provided by bond.

4. Applications for Payment.

A. The Contractor shall, once in each month on the day of the month corresponding to the day of the month specified in the Notice to Proceed referenced in Article 2 of the Owner - Contractor Agreement, on forms provided and in the manner prescribed by the Awarding Authority, submit to the Awarding Authority a statement showing the total amount of Work done to the time of such estimate and the value thereof as approved by the OPM and the Designer. It shall be the sole responsibility of the Contractor to deliver or cause to be delivered to the OPM (the "designee" as provided by M.G.L. c. 30, s. 39K) said periodic estimate in proper form, approved as provided above and arithmetically correct. All periodic estimates shall contain such certifications and other evidence supporting the Contractor's right to payment as the Awarding Authority may require, including without limitation, lien waivers and other evidence, on such forms as the Awarding Authority may require, establishing that title to the equipment or materials is unencumbered and has been transferred to the Owner. If there is no OPM assigned to the Contract, the Designer shall be the designee. If there is neither an OPM nor a Designer the designee shall be a person designated by the Awarding Authority at the project field office or alternatively the home office of the Awarding Authority. The Contractor shall include in such periodic estimate only such materials as are incorporated in the Work, except as provided in paragraph C below. The Awarding Authority shall retain five percent of such estimated value as part security for the completion of the Work and shall pay to the Contractor while carrying on the Work the balance not retained as aforesaid, subject to the Approval of the Awarding Authority after deducting therefrom all previous payments and all sums to be kept under the provisions of this Contract.

B. Each periodic estimate shall constitute the Contractor's representation that (1) the payment then requested to be disbursed has been incurred by the Contractor on account of the Work and is justly due to Subcontractors or, to the Contractor in the case of other Work performed by the Contractor on account thereof, (2) the materials, supplies and equipment for which Application for Payment is being submitted have been installed or incorporated into the Work or have been stored at the Site or at such off Site storage locations as the Awarding Authority shall have Approved, (3) the materials, supplies and equipment are insured in accordance with the provisions of this Contract, (4) the materials, supplies and equipment are owned by the Owner and are not subject to any liens or encumbrances, (5) the Work which is the subject of such periodic estimate has been performed in accordance with the Contract Documents and (6) that all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of such periodic estimate. The Contractor's attention is directed to the criminal penalties for false claims referenced in paragraph A above.

C. The Contractor may include in a periodic estimate the value of materials or equipment delivered at the Site (or at some location agreed to in writing) only upon delivery to the Awarding Authority of: (1) an acceptable transfer of title on the form provided by the Awarding Authority; (2) written certification by the Contractor (or applicable subcontractor) on the form provided by the Awarding Authority that the Contractor (or the Subcontractor which executed the transfer of title) is the lawful
owner and that the materials or equipment are free from all encumbrances, accompanied by receipted invoices or other acceptable proof of prior payment for such materials; (3) a stored materials insurance binder that covers the materials for which payment is requested, that names the Owner as an insured party should the stored materials be subjected to any casualty, loss, or theft prior to their inclusion in the Work. The material(s) or equipment must, in the judgment of the Designer (1) meet the requirements of the Contract, including prior shop drawing, product data, and sample approval, (2) be ready for use, and (3) be properly stored by the Contractor and be adequately protected until incorporated into the Work. See also Article V.5.C of these General Conditions of the Contract concerning the cost of inspections.

D. The Awarding Authority may make changes in any periodic estimate submitted by the Contractor in accordance with M.G.L. c.30, s. 39K (see below) and the payment due shall be computed in accordance with the changes so made. The provisions of said section 39K shall govern payments on which the Awarding Authority has made changes.

E. No certificate for payment and no progress payment shall constitute acceptance of Work that is not in accordance with the Contract Documents.

F. The Contractor and all Subcontractors furnishing labor on this Contract agree to furnish certified payroll reports if requested to do so, at no additional expense to the Awarding Authority. The Awarding Authority may at all reasonable times audit such reports.

5. Periodic Payments (M.G.L. c. 30, s. 39K).
The Awarding Authority shall make payment to the Contractor in accordance with M.G.L. c. 30, s. 39K.

6. Payment of Subcontractors (M.G.L. c. 30, s. 39F).
The Contractor shall make payments to Subcontractors in accordance with M.G.L c.30, s. 39F which is quoted in this section below. For the purposes of this Contract, the word "forthwith" appearing in paragraph (1) (a) of c. 30, § 39F shall be deemed to mean "within five (5) business days."

7. Final Payment; Release of Claims by Contractor.
Upon Final Acceptance of the Work the Contractor shall be entitled to payment of the balance of the Contract Price. Final payment shall be as provided in this Article above and in accordance with any process set forth in the Supplementary General Conditions. The Contractor agrees to execute a Certificate of Final Inspection, Release (with Contractor’s own exceptions listed thereon) and Acceptance as a condition precedent to Final Payment. The acceptance by the Contractor of the Final Payment made as aforesaid, or the execution of the Certificate of Final Acceptance by the Contractor, shall constitute a release of the Owner, the Awarding Authority, the Designer, and every member and agent of any of them, from all claims of and liability to the Contractor for anything done or furnished for or relating to the Work, or for any act or neglect of the Owner, the Designer, or of any person relating to or affecting the Work, except the claim against the Owner or the Designer for the remainder, if any there be, of the amounts set forth by the Contractor in the Certificate of Final Inspection, Release and Acceptance. Final Acceptance shall not relieve Contractor of the requirements of Articles IX, XIV, and XV of these General Conditions of the Contract, or of other provisions of this Contract, to the extent that the same are intended to survive Final Acceptance.

ARTICLE IX. GUARANTEES AND WARRANTIES

1. General Warranty.
If at any time during the period of one (1) year from the date of the issuance of the Certificate of Occupancy by the Awarding Authority or the date of Final Acceptance, whichever occurs first, any part of such Work shall in the reasonable opinion of the Awarding Authority be defective or require replacing or repairing, or damage to other property of the Owner is caused by any defect in the Work, the Awarding Authority shall notify the Contractor in writing to make the required repairs or replacements and repair such damage. If the Contractor shall neglect to commence such repairs or replacements to the satisfaction to the Awarding Authority within ten (10) days from the date of the giving of such notice, then the Awarding Authority may employ other persons to make the same. The Contractor agrees, upon demand, to pay to the Awarding Authority all amounts which it expends for such repairs, replacements, and/or damages. During this one-year guarantee period any corrective work shall be performed under all the applicable terms of this Contract, and if Change Orders are issued in accordance with the terms of this Contract, the Contractor shall be
entitled to compensation for special insurance, as required. This one-year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

2. Special Guarantees and Warrantees.
   A. The Contractor's obligation to correct Work as set forth in paragraph 1 above is in addition to, and not in substitution of, such guarantees or warranties as may be required in the various sections of the Specifications.
   B. Guarantees and warranties required in the various sections of the Specifications must be delivered to the Owner before final payment to the Contractor may be made, or in the case of guarantees and warranties which originate with a subcontractor's section of the Work, before final payment for the amount of that subtrade or for the phase of Work to which the guarantee or warranty relates.
   C. The failure to deliver a required guarantee or warranty shall constitute a failure to fully complete the Work in accordance with the Contract Documents and a breach of the Owner-Contractor General Contract.

ARTICLE X: MISCELLANEOUS LEGAL REQUIREMENTS.

1. Contractor to be Informed.
   The Contractor shall inform itself of all existing and future Laws in any manner affecting those engaged or employed in the Work, or the materials used or employed in the Work, or in any way affecting the conduct of the Work, and of all orders and decrees of bodies or tribunals having any applicable jurisdiction or authority over the Work.

2. Compliance with all Laws.
   The Contractor shall cause all persons employed in the performance of the Work to comply with all existing and future Laws, including but not limited to those set forth below:
   A. Corporate Disclosures. The Contractor, if a foreign corporation, shall comply with M.G.L. c. 181, s.3 and s. 5, and M.G.L. c. 30, s.39L.

   A½. Employment Eligibility Verification
   The Contractor shall comply with Federal Department of Homeland Security Requirements in hiring any and all “Employees” to be employed in the Project who are required to be listed in the certified payroll reports for the Project. Such compliance shall include, but not be limited to the faithful completion of the Federal Department of Homeland Security Form I-9 process by the Contractor for each of its Employees. The Contractor shall execute a Certificate of Compliance with Employment Eligibility Verification Requirements (I-9 Certificate) with the execution of its Contract. The Contractor shall require each of its subcontractors and sub subcontractors to execute and provide to Contractor an I-9 Certificate with the execution of each subcontract, and Contractor shall immediately provide a copy to the Awarding Authority. Contractor acknowledges that the weekly workforce report form contained in the contract documents, which must be submitted by the Contractor on a weekly basis, contains a statement that the Form I-9 process was faithfully completed for all employees listed on the weekly certified payroll report. By the signature of the Contractor’s Authorized Signatory on the I-9 Certificate, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of this contract; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to the contract without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker. The Contractor understands and agrees that breach of any of these terms during the period of a contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

   B. Veterans Preference. In the employment of mechanics and apprentices, teamsters, chauffeurs, and laborers in the performance of Work in the Commonwealth, 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 and who are veterans as defined M.G.L. c.4, s.7 (34), and who are qualified to perform the work to which the employment relates; 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.

C. Prevailing Wages. The Contractor shall comply with M.G.L. c. 149, s. 26-27H. The prevailing wage schedule is found in Exhibit A to the Instructions to Bidders, listing the prevailing minimum wage rates that must be paid to all workers employed in the Work. The Awarding Authority is not responsible for any errors, omissions, or misprints in the said schedule. Such Schedule shall continue to be the minimum rate wages payable to workers employed in the Work throughout the term of this Contract, subject to the exceptions provided in M.G.L. c.149, s. 26-27H. The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to workers employed in the Work exceeds the rates listed on the schedule or as otherwise provided by law. The Contractor shall cause a copy of said Schedule to be kept in a conspicuous place at the Site during the term of the Contract. If reserve police officers are employed by the Contractor, they shall be paid the prevailing wage of regular police officers. (See M.G.L. c.149, s.34B).

D. Payroll Records and Statement of Compliance. The Contractor shall comply and shall cause its Subcontractors to comply with Massachusetts General Law c. 149, s. 27B, which requires that a true and accurate record be kept of all persons employed on the a project for which the prevailing wage rates have been provided. The Contractor and all Subcontractors shall keep these records and preserve them for a period of three years from the date of completion of the Contract. Such records shall be open to inspection by any authorized representative of the Owner at any reasonable time, and as often as may be necessary. The Contractor shall, and shall cause its subcontractors to, submit weekly copies of their weekly payroll records to the Awarding Authority. In addition, the Contractor and each Subcontractor shall furnish to the Awarding Authority within fifteen days after completion of its portion of the Work a signed Statement of Compliance in the form required by c. 149, § 27B.

E. Vehicle operators. If the Director of the Department of Labor and Workforce Development has established a Schedule of wage rates to be paid to the operators of trucks, vehicles or equipment for the Work, the Contractor shall be obligated to pay such operators at least the minimum wage rate contained on such Schedule. (See M.G.L. c.149, s.26-27H).

F. Eight Hour Day. The Contractor shall comply with M.G.L. c. 149, s. 30, 34 and 34A which provide that no laborer, workman, mechanic, foreman or inspector working within the Commonwealth in the employ of the Contractor, subcontractor or other person doing or contracting to do the whole or part of the Work 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 extraordinary emergency.

G. Timely Payment of Wages. The Contractor shall comply with, and shall cause its Subcontractors to comply with M.G.L. c. 149, s. 148 which requires the weekly or biweekly payment of employees within six days of the end of the pay period during which wages were earned if employed for five or six days of a calendar week, and within other periods of time under certain circumstances as set forth therein.

H. Lodging, etc. The Contractor shall comply with, and shall cause its Subcontractors to comply with, M.G.L. c. 149, s. 25 which provides that 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.

I. Truck Rates. The use by the Contractor of trucks or other motor vehicles hired from either common or contract motor carriers in the course of performance of this Contract is subject to such minimum rates and charges, and rules and regulations as may from time to time be promulgated by the Department of Public Utilities of the Commonwealth of Massachusetts or other agency of the State of Federal government which may be authorized by law to set rates or otherwise regulate the use of such vehicles. The Contractor expressly assumes the risk of any additional expense that may arise by reason of any change in such minimum rates and charges, and rules and regulations, and shall be entitled to no additional compensation or reimbursement by reason thereof.
ARTICLE XI: CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS (M.G.L. c. 30, s. 39R)

1. Definitions.

The words defined herein shall have the meaning stated below whenever they appear in this Article XI:

-- "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a Contract pursuant to M.G.L. c. 30, s. 39M, M.G.L. c. 149, s. 44A-J, and M.G.L. c. 7, s. 30B-P.

-- "Contract" means any Contract awarded or executed pursuant to M.G.L. c. 30, s. 39M, M.G.L. c. 149, s.44A-J, and M.G.L. c. 7, s. 30B-P, which is for an amount or estimated amount greater than one hundred thousand dollars.

-- "Independent Certified Public Account" 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 aspect 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.

-- "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.

-- "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, or other person or persons primarily responsible for the financial and operational policies and practices of the Contractor.

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

2. Record Keeping.

A. The Contractor shall make, and keep for at least six years after final payment, books, records, and accounts that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor.

B. Until the expiration of six years after final payment, the Inspector General, DCAM, and the Awarding Authority shall have the right to examine any books, documents, papers or records of the Contractor and Subcontractors that directly pertain to, and involve transactions relating to the Contractor and Subcontractors.

C. The Contractor shall describe any change in the method of maintaining records or recording transactions which materially affects any statements filed with the Awarding Authority including the date of the change and reasons therefore, and shall accompany said description with a letter from the Contractor's independent certified public accountant approving or otherwise commenting on the changes.

D. The Contractor represents that it has, prior to the execution of the Contract, filed a statement of management on internal accounting controls as set forth in Section 3 below.

E. The Contractor represents that it has, prior to the execution of the Contract, filed an audited financial statement for the most recent completed fiscal year as set forth in Section 4 below and will continue to file such statement annually during the term of the Contract.


A. The Contractor 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;
transactions are recorded as necessary to: (a) to permit preparation of financial
statements in conformity with generally accepted accounting principles, and (b) 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.

B. The Contractor shall file with the Awarding Authority a statement prepared and signed by an
independent certified public accountant, stating that the accountant 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 subparagraph 3 above are
consistent with the results of management's evaluation of the system of internal accounting
controls; and
(2) whether such representations of management are reasonable with respect to
transactions and assets in amounts which would be material when measured in relation to the
applicant's financial statement.

4. **Annual Financial Statement.**
   A. Every Contractor awarded a contract shall annually file with DCAM 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.
   B. The office of Inspector General and DCAM shall have the right to enforce the
   provisions of this Article. A Contractor's failure to satisfy any of the requirements of this section
   may be grounds for debarment pursuant to M.G.L. c. 149, s. 44C.

5. **Bid Pricing Materials.**
The Contractor shall save the written calculations, pricing information, and other data that the
Contractor used to calculate the bid that induced the Awarding Authority to enter into this Contract
(the "Bid Pricing Materials") for at least six years after the Awarding Authority makes final
payment under this Contract.

**ARTICLE XII: INSURANCE REQUIREMENTS**

1. **Insurance Generally.**
   A. The Contractor shall take out and maintain the insurance coverages listed in this Article with
   respect to the operations as well as the completed operations of this Contract. This insurance shall
   be provided at the Contractor's expense and shall be in full force and effect for the full term of the
   Contract or for such longer period as this Article requires.
   B. All policies shall be written on an occurrence basis and be issued by companies authorized to
   write that type of insurance under the laws of the Commonwealth and rated in Best's Insurance Guide
   (or any successor thereto or replacement thereof) as having a general policy holder rating of "A" or
   better and a financial rating of at least "9" or otherwise acceptable to the
   Awarding Authority.
   C. Contractor shall submit three originals of each certificate of insurance, acceptable to the
   Awarding Authority, simultaneously with the execution of this Contract. Certificates shall show the
   Awarding Authority and the Owner as an additional insured as to all policies of liability insurance
   and shall state that Contractor has paid all premiums and that none of the coverages shall be
   cancelled, terminated, or materially modified unless and until 30 days prior notice is given in writing
to the Awarding Authority. Contractor shall submit updated certificates prior to the expiration of
any of the policies referenced in the certificates so that the Awarding Authority shall at all times
possess certificates indicating current coverage. Certificates shall indicate that the contractual
liability coverage, and Contractor's Protective Liability coverage is in force. Certificates shall
include specific acknowledgment that the following coverages are included in the policies:
-Contractual liability
-Contractor's protective liability
-Owner as additional insured by form CG2010 (11/85 ed.) to the general liability
-Owner as additional insured to automobile liability, umbrella liability, and pollution liability
-General Liability is endorsed with CG2404, Waiver of Subrogation, in favor of the Owner
-Builder’s Risk or Installation Floater includes Owner, Contractor and subcontractors of any tier as named insureds. Builder’s Risk or Installation floater is on an All Risk basis including earthquake and flood.

D. The Contractor shall file one certified copy of all policies with the Awarding Authority within sixty days after Contract award. If the Awarding Authority or the Owner is damaged by the Contractor’s failure to maintain such insurance and to comply with the terms of this Article, then the Contractor shall be responsible for all costs and damages to the Owner attributable thereto.

E. Termination, cancellation, or material modification of any insurance required by this Contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given to the Awarding Authority at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

2. Contractor's Commercial General Liability.
   A. The Contractor shall provide the following minimum general liability coverage with respect to the operations performed by Contractor and any employee, subcontractor, or supplier, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:
      - Bodily Injury & Property Damage $1,000,000 each occurrence
      - Products & Completed Operations $2,000,000 general aggregate, per project
      - Personal & Advertising Injury $1,000,000 annual aggregate
      - Medical Expenses $10,000
   B. This policy shall include coverage relating to explosion, collapse, and underground property damage.
   C. This policy shall include contractual liability coverage.
   D. The completed operations coverage shall be maintained for a period of three (3) years after Substantial Completion.
   E. If the Work includes work to be performed within 50 feet of a railroad, any exclusion for liability assumed under contract for work within 50 feet of a railroad shall be deleted.
   F. This policy shall include endorsement CG2010 (10/85 edition), Owner as Additional Insured and CG2404 (11/85 edition) Waiver of Subrogation in Favor of Owner.

   A. The Contractor shall provide the following minimum coverage with respect to the operations of any employee, including coverage for owned, non-owned, and hired vehicles, unless a higher coverage is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage:
      - Combined Single Limit $1,000,000
   B. The policy shall include a CA9948 Pollution Endorsement and shall name the Owner as an Additional Insured.

4. Pollution Liability.
The Contractor shall provide coverage for bodily injury and property damage resulting from liability arising out of pollution related exposures such as asbestos abatement, lead paint abatement, tank removal, removal of contaminated soil, etc. The Awarding Authority and the Owner shall be named as an additional insured and coverage must be on an occurrence basis. The amount of coverage shall be $1,000,000 per occurrence and $3,000,000 in the aggregate unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the additional coverage.

5. Worker's Compensation.
   A. The Contractor shall provide the following coverage in accordance with M.G.L. c.149 §34A and c.152 as amended, unless a higher coverage is specified in Exhibit B to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher coverage:
      - Worker's Compensation Provide Statutory Minimum
      - Employer's Liability $ 500,000 each accident
      - Part Two $ 500,000 disease per employee
      - $ 500,000 disease policy aggregate
B. If specified in Exhibit A to the Owner - Contractor Agreement the policy must be endorsed to cover United States Longshoremen & Harborworkers Act (USLHW), Maritime Liability for $1,000,000/$1,000,000, or Federal Employer's Liability Act liability.

6. **Builder's Risk/ Installation Floater/Stored Materials.**
   A. The Contractor shall provide coverage against loss or damage on all Work included in this Contract in an amount equal to the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood (if the project is not in an "A" or a "V" flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. This policy and/or installation floater shall indicate if Stored Materials coverage is provided as required below.

   B. When Work will be completed on existing buildings owned by the Owner, the Contractor shall provide an installation floater, in the full amount of the Contract Price. Such coverage shall be written on an all risks basis or equivalent form and shall include, without limitation, insurance against perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood (if the project is not in an "A" or a "V" flood Zone), windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss. This policy and/or installation floater shall indicate if Stored Materials coverage is provided as required below.

   C. The Contractor shall maintain insurance on delivered and/or stored material designated to be incorporated in the Work against fire, theft or other hazards. Any loss or damage of whatever nature to such material while stored at some approved off Site location shall be forthwith replaced by the Contractor at no expense to the Awarding Authority.

   D. The policy or policies shall specifically state that they are for the benefit of and payable to the Awarding Authority, Owner, the Contractor, and all persons furnishing labor or labor and materials for the Contract Work, as their interests may appear. The policy or policies shall list the Awarding Authority, Owner, the Contractor, and Subcontractors of any tier as named insureds.

   E. Coverage shall include any costs for work performed by the Designer or any consultant as the result of a loss experienced during the term of this Contract.

   F. Coverage shall include temporary occupancy and waiver of subrogation.

7. **Umbrella Coverage.**
The Contractor shall provide Umbrella Coverage in form at least as broad as primary coverages required by Sections 2, 3 and 5 of this Article in the following amount unless a higher amount is specified in Exhibit A to the Owner - Contractor Agreement, in which case the Contractor shall provide the higher amount.

<table>
<thead>
<tr>
<th>Contract Price:</th>
<th>Umbrella Coverage:</th>
</tr>
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<tbody>
<tr>
<td>Under $1,000,000</td>
<td>$2,000,000</td>
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<tr>
<td>$1,000,000 -- $5,000,000</td>
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<td>$5,000,001 -- $10,000,000</td>
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<tr>
<td>$10,000,001 and over</td>
<td>$25,000,000</td>
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8. **Additional types of Insurance.**
The Contractor shall provide such other types of insurance as may be required by Exhibit A to the Owner - Contractor Agreement.
ARTICLE XIII: INDEMNIFICATION

1. **Generally.**
To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Owner, Awarding Authority and Designer and their officers, agents, divisions, agencies, employees, representatives, successors and assigns from and against all claims, damages, losses and expenses, including but not limited to court costs and attorneys’ fees, arising out of or resulting from the performance of the Work, including but not limited to those arising or resulting from:
- labor performed or furnished and/or materials used or employed in the performance of the Work;
- violations by Contractor, any Subcontractor, or by any person directly or indirectly employed or used by any of them in the performance of the Work or anyone for whose acts any of them may be liable (Contractor, subcontractor and all such persons herein collectively called "Contractor's Personnel") of any Laws;
- injuries to any persons or damage to any property in connection with the Work;
- any act, omission, or neglect of Contractor's Personnel.

The Contractor shall be obligated as provided above, regardless of whether or not such claims, damages, losses and/or expenses, are caused in whole or in part by the actions or inactions of a party indemnified hereunder. In any and all claims by Contractor's Personnel against parties indemnified hereunder, the Contractor's indemnification obligation set forth above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Article XV.

2. **Designer’s Actions.**
The obligations of the Contractor under Section 1 above shall not extend to the liability of the Designer, its agents or employees, arising out of (i) the preparation or approval of maps, Drawings, opinions, reports, surveys Change Orders, designs or specifications, or (ii) the giving of or the failure to give directions or instructions by the Designer, its agents to employees provided such giving or failure to give is the primary cause of the injury or damage.

3. **Survival.**
The provisions of this Article XV are intended to survive Final Acceptance and/or any termination of this Contract.

ARTICLE XIV: PERFORMANCE AND PAYMENT BONDS

1. **Contractor Bonds.**
   A. The Contractor shall provide performance and payment (labor and materials) bonds in the form provided by the Awarding Authority, executed by a surety licensed by the Commonwealth of Massachusetts Division of Insurance. Each such bond shall be in the amount of the Contract Price.
   B. If at any time prior to final payment to the Contractor, the Surety:
      - is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
      - has liquidated all assets and/or has made a general assignment for the benefit of its creditors;
      - is placed in receivership;
      - otherwise petitions a state or federal court for protection from its creditors; or
      - allows its license to do business in Massachusetts to lapse or be revoked;
      then the Contractor shall, within 21 days of any such action listed above, provide the Awarding Authority with new performance and payment bonds as described in Paragraph A above. Such bonds shall be provided solely at the Contractor's expense.

2. **Subcontractor Bonds.**
   A. If the Contractor provided in its General Bid that any or all filed subcontractors shall provide the Contractor with payment and performance bonds for the full amount of their respective Subcontracts, then the costs for said bonds shall be the responsibility of the Contractor.
B. If the Contractor provided in its General Bid that filed Subcontractors shall provide bonds, and subsequently waives the requirement, the Contractor shall give the Awarding Authority a written certification that the Contractor understands that if the filed Subcontractor defaults or is terminated, the Contractor shall have full responsibility for all costs and expenses related to said default or termination but shall be entitled to a credit adjustment to the Contract Price in an amount equal to the bond premium Contractor would have paid had Contractor required the filed Subcontractor to provide such bonds.

ARTICLE XV: TERMINATION OF CONTRACT

1. Termination for Cause.
   A. The Awarding Authority may without prejudice to any other right or remedy deem this Contract terminated for cause if any of the following defaults shall occur and not be cured within three (3) days after the giving of notice thereof by the Awarding Authority to the Contractor and any surety that has given bonds in connection with this Contract:
      (1) The Contractor has filed a petition, or a petition has been filed against the Contractor with its consent, under any federal or state law concerning bankruptcy, reorganization, insolvency or relief from creditors, or if such a petition is filed against the Contractor without its consent and is not dismissed within sixty (60) days; or if the Contractor is generally not paying its debts as they become due; or if the Contractor becomes insolvent; or if the Contractor consents to the appointment of a receiver, trustee, liquidate, custodian or the like of the Contractor or of all or any substantial portion of its assets and such appointment or possession is not terminated within sixty (60) days; or if the Contractor makes an assignment for the benefit of creditors;
      (2) The Contractor refuses or fails, except in cases for which extension of time is provided under this Contract's express terms, to supply enough properly skilled workers or proper materials to perform its obligations under this Contract, or the Designer has determined that the rate of progress required for the timely completion of the Work is not being met;
      (3) The Contractor fails to make prompt payment to Subcontractors or for materials, equipment, or labor;
      (4) All or a part of the Work has been abandoned;
      (5) The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as expressly permitted in this Contract;
      (6) The Contractor has failed to comply with Laws;
      (7) The Contractor fails to maintain, or provide to the Awarding Authority evidence of the insurance or bonds required by this Contract, or
      (8) The Contractor has failed to prosecute the Work or any portion thereof to the standards required under this Contract or has otherwise breached any material provision of this Contract.
   B. The Awarding Authority shall give the Contractor and any surety notice of such termination for cause, but the giving of notice of such termination shall not be a condition precedent or subsequent to the termination's effectiveness. In the event of such termination, and without limiting any other available remedies, the Awarding Authority may, at its option:
      (1) hold the Contractor and its sureties liable in damages for a breach of Contract;
      (2) notify the Contractor to discontinue all work, or any part thereof, and the Contractor shall discontinue all work, or any part thereof, as the Owner may designate;
      (3) complete the Work, or any part thereof, and charge the expense of completing the Work or part thereof to the Contractor;
      (4) require the surety or sureties to complete the Work and perform all of the Contractor's obligations under this Contract.

If the Awarding Authority elects to complete all or any portion of the Work as specified in (3) above, it may take possession of all materials, equipment, tools, machinery, implements at or near the Site owned by the Contractor and finish the Work at the Contractor's expense by whatever means means the Awarding Authority may deem expedient; and the Contractor shall cooperate at its expense in the orderly transfer of the same to a new contractor or to the Awarding Authority as directed by the Awarding Authority. In such case the Awarding Authority shall not make any further payments to the Contractor until the Work is completely finished. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Site after the Owner has no further use for them. Unless so removed within fifteen days after notice to the Contractor to do so, they may be sold at public auction, after publication of notice thereof at least twice in any
newspaper published in the county where the Work is being performed, and the proceeds credited
to the Contractor’s account; or they may, at the option of the Awarding Authority, be stored at the
Contractor’s expense subject to a lien for the storage charges.

C. Damages and expenses incurred under paragraph B above shall include, but not be limited to,
costs for the Designer's extra services and OPM services required, in the opinion of the Awarding
Authority, to successfully inspect and administer the construction contract through final completion
of the Work.

D. Expenses charged under paragraph B above may be deducted and paid by the Awarding Authority
out of any moneys then due or to become due the Contractor under this Contract.

E. All sums damages, and expenses incurred by the Owner to complete the Work shall be charged
to the Contractor. In case the damages and expenses charged are less than the sum that would have
been payable under this Contract if the same had been completed by the Contractor, the Contractor
shall be entitled to receive the difference. In case such expenses shall exceed the said sum, the
Contractor shall pay the amount of the excess to the Owner.

2. Termination For Convenience.

A. The Awarding Authority may terminate this Contract for convenience even though the
Contractor is not in default by giving notice to the Contractor specifying in said notice the date of
termination.

B. In case of such termination without cause, the Contractor shall be paid:
(1) all sums due and owing under this Contract through the date of termination, including any
retainage withheld to the date of termination, less any amount which the Awarding Authority
determines is necessary to correct or complete the Work performed to the date of termination; plus
(2) a reasonable sum to cover the expenses which Contractor would not have incurred but for the
early termination of the Contract, such as demobilization of the work force, restocking charges,
termination fees payable to Subcontractors.

C. The payment provided in paragraph B above shall be considered to fully compensate the
Contractor for all claims and expenses and those of any consultants, Subcontractors, and suppliers,
directly or indirectly attributable to the termination, including any claims for lost profits.

3. Contractor's Duties upon Termination for Convenience.

Upon termination of this Contract for convenience as provided in Section 2 of this Article, the
Contractor shall: (1) stop the Work; (2) stop placing orders and Subcontracts in connection with
this Contract; (3) cancel all existing orders and Subcontracts; (4) surrender the Site to the Awarding
Authority in a safe condition; (5) transfer to the Awarding Authority all materials, supplies, work
in process, appliances, facilities, equipment and machinery of this Contract, and all plans,
Drawings, specifications and other information and documents used in connection with this
Contract.

ARTICLE XVI: MISCELLANEOUS PROVISIONS

1. No Assignment by Contractor.
The Contractor shall not assign by power of attorney or otherwise, or sublet or subcontract, the
Work or any part thereof, without the previous written consent of the Awarding Authority and
shall not, either legally or equitably, assign any of the moneys payable under this Contract, or
Contractor's claims hereunder, unless with the like consent of the Awarding Authority, whether
said assignment is made before, at the time of, or after the execution of the Contract. The
Contractor shall remain responsible for satisfactory performance of all Work sublet or assigned.
Consent of the Awarding Authority shall not be deemed to constitute a representation or waiver of
any right hereunder by the Awarding Authority as to the qualifications or the responsibility of the
Contractor or Subcontractor(s).

2. Non-Appropriation.
If the Awarding Authority is unable to obtain an appropriation of funds sufficient to discharge its
obligations under this Agreement for any fiscal year during the term of this Agreement, it shall not
be obligated to make any further payments, and this Agreement may be terminated immediately
by either the Awarding Authority or the Contractor, provided that the Awarding Authority shall
make payment to the Contractor for obligations incurred during the period for which funding was
included in an annual or supplemental appropriation.
3. **Claims by Others Not Valid.**
No person other than the Contractor shall acquire any interest in this Contract or claim against the Awarding Authority or Owner hereunder, and no claim by any other person shall be valid except as provided in M.G.L. c. 30, s. 39F of the General Laws.

4. **No Personal Liability of Public Officials.**
No public official, employee, or agent of the Awarding Authority or Owner shall have any personal liability for the obligations of the Awarding Authority or Owner set forth in this Contract.

5. **Severability.**
The provisions of this Contract are severable, and if any of these provisions shall be held unconstitutional or unenforceable by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the other provisions of this Contract.

6. **Choice of Laws.**
This Contract shall be governed by the laws of the Commonwealth of Massachusetts for all purposes, without regard to its laws on choice of law. All proceedings under this Contract or related to the Project shall be brought in the courts of the Commonwealth of Massachusetts.

7. **Standard Forms.** NOT APPLICABLE

8. **No Waiver of Subsequent Breach.**
No waiver of any breach or obligation of this Contract shall constitute a waiver of any other or subsequent breach or obligation.

9. **Remedies Cumulative.**
All remedies of the Awarding Authority provided in this Contract shall be construed as cumulative and may be exercised simultaneously or in any order as determined by the Awarding Authority in its sole discretion. The Awarding Authority shall also be entitled as of right to specific performance and equitable relief including the right to an injunction against any breach of any of the provisions of this Contract.

10. **Notices.**
Notices to the Contractor shall be deemed given when hand delivered to the Contractor's temporary field office at or near the Site, or when deposited in the U.S. mail addressed to the Contractor at the Contractor's address specified in the Owner - Contractor Agreement, or when delivered by courier to either location. Unless otherwise specified in writing by the Awarding Authority, notices and deliveries to the Awarding Authority shall be effective only when delivered to the Awarding Authority at the address specified in the Owner - Contractor Agreement and date-stamped at the reception desk or for which a receipt has been signed by the agent or employee designated by the Awarding Authority to receive official notices.

**ARTICLE XVII: EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM.**

This Contract includes the provisions of the Awarding Authority's "Equal Employment Opportunity, Non-Discrimination, and Affirmative Action Program" attached as Appendix A to these General Conditions of the Contract and incorporated herein by reference.

**ARTICLE XVIII: GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES AND WOMEN BUSINESS ENTERPRISES**

This Contract includes the provisions of the Awarding Authority's program relating to Goals for Participation by Minority Business Enterprises and Women Business Enterprises attached as Appendix B to these General Conditions of the Contract and incorporated herein by reference.
CITY OF NEW BEDFORD  
MASSACHUSETTS  

VOTE OF CORPORATION AUTHORIZING  
EXECUTION OF CORPORATE AGREEMENTS  

At a meeting of the Board of Directors of _______________ duly called and held on ________________, 20______ at which a quorum was present and acting throughout, the following vote was duly adopted.

VOTED: That ____________________________, the_________________________ of the corporation, be and hereby is authorized to affix the Corporate Seal, sign and deliver in the name and behalf of the corporation contract documents with the City of New Bedford, the above mentioned documents to include but not be limited to Bids, Proposals, Deeds, Purchase and Sales Agreements, Agreements, Contracts, Leases, Licenses, Releases and Indemnifications; and also to seal and execute, as above, surety company bonds to secure bids and proposals and the performance of said contract and payment for labor and materials, all in such form and on such terms and conditions as he/she, by the execution thereof, shall deem proper. A true copy

ATTEST:

______________________________
Name (printed)

______________________________ (Affix Corporate Seal)
Signature

______________________________ Date
Title
CONTRACTOR CERTIFICATION

As evidenced by the signature of the Contractor’s Authorized signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of any City contract; that pursuant to federal and state requirements, the Contractor shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

____________________________________
Contractor Authorized Signature

____________________________________
Printed Name

____________________________________
Date

Title_______________________Telephone:____________________

Fax:_______________________Email:____________________
OSHA CERTIFICATION REQUIREMENT

Effective **July 1, 2006**, all employees of a contractor to be employed on public building and public works worksites must have successfully completed at least a 10 hour course in construction safety and health approved by OSHA at the time the employee begins work.

I, ___________________________, as ______________________________, of the
(Print Name) (Position with the entity submitting bid)

joint venture/corporation/partnership or other legal entity submitting this bid for a public works project falling under §39M of Chapter 30 of the Massachusetts General Laws and Chapter 149 of the same, do hereby certify that any and all employees found on my worksite for this project have, or will have by the start of their work on the project, successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that was at least 10 hours in duration.

A copy of the OSHA completion cards for each employee must be submitted to the City of New Bedford before work on this project is to begin and must be supplemented as new employees are hired or contracted to work on this project.

_______________________________________, as Signature

________________________________________, of Position

________________________________________, on Company/Corporation/Joint Venture/Partnership/Etc.

________________________ Date
CITY OF NEW BEDFORD
STANDARD VERTICAL CONSTRUCTION CONTRACT
For Projects Over $100,000 Subject to M.G.L. c149, §44A - F

OWNER - CONTRACTOR AGREEMENT

This agreement (“Contract”) is made as of the _____ day of __________________, 20____, by and between the City of New Bedford acting by and through its _________________(Department)_____________ with a principal place of business at133 William Street, New Bedford, MA 02740 and ______________________________, a ______________________________ with a principal place of business at __ ______________________________, hereinafter called the “Contractor.”

Terms used in this Owner - Contractor Agreement which are defined in the General Conditions of the Contract shall have the meanings designated therein.

The Awarding Authority and the Contractor agree as follows:

Article 1. Scope of Work. The Work under this Contract is defined as all work required by the Contract Documents for the construction of ______________________________, City of New Bedford Contract No. ______________________________, in accordance with and as described in the Plans and Specifications dated ______, 20________, prepared by __________________________________________________________________ (“Designer”), as modified by Addenda Nos. _____, dated ___ 20__. 

Article 2. Time for Completion. The Contractor shall commence the Work under this Contract on the date specified in the written “Notice to Proceed,” and shall, within ____ days after such date, bring the Work to Substantial Completion and to the point at which a Certificate of Agency Use and Occupancy may be issued, and shall bring the Work to Final Acceptance within 45 days after the date specified for Substantial Completion.

Article 3. Contract Price. The Awarding Authority shall pay the Contractor, in current funds, for the performance of the Work, subject to additions and deductions by Approved Change Order(s), the Contract Price of ______________________________ Dollars ($ _________________). The Unit Prices, if any, approved by the Awarding Authority are those included in the Contractor’s General Bid. The following Alternates have been accepted and their costs are included in the Contract Price:

Alternate No(s): 

Article 4. Approved Subcontractors. The filed Subcontractors listed in the Contractor’s General Bid submitted by the Contractor have been approved for the performance of the specified portions of the Work. No other filed Subcontractors and no non-filed Subcontractors shall be used for these or any other portions of the Work without the prior written approval of the Awarding Authority.

Article 5. Certifications. Pursuant to M.G.L. c. 62(c), s.49 (a), the individual signing this Contract on behalf of the Contractor hereby certifies, under the penalties of perjury, that to the best of his or her knowledge and belief the Contractor has complied with any and all applicable state and federal tax laws. The individual signing this Contract on behalf of the Contractor
further certifies under penalties of perjury that the Contractor is not presently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. c. 29, s. 29F, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder and is not presently debarred from doing public construction work by any agency of the United States.

**Article 6. The Contract Documents:** The following documents form the Contract, are incorporated by reference herein, and are referred to as the “Contract Documents:”
- The Instructions to Bidders
- The General Bid submitted by the Contractor
- This Owner — Contractor Agreement
- The General Conditions of the Contract
- The Supplementary General Conditions
- The Plans and Specifications, including Addenda identified in Article 1 above
- All Approved Change Orders issued after execution of this Owner - Contractor Agreement

**Article 7. Minority Business Enterprise and Women Business Enterprise Participation Goals and Minority/Women Workforce Utilization Percentages:** The applicable goals, if any, for minority business enterprise and woman business enterprise participation established for this Contract are as follows:

**MBE:** ___% of the Contract Price. **WBE:** ___% of the Contract Price.

The applicable minority workforce utilization percentage, if any, is ____________.

The applicable women workforce utilization percentage, if any, is ____________.

**Article 8. Liquidated Damages.** For the purposes of Article VI of the General Conditions of the Contract, liquidated damages for delay shall be as follows:

$ One Thousand ($1,000.00) dollars per day

In witness whereof, the parties hereto have caused this instrument to be executed under seal as of the date of _______________20__

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<th>Contractor:</th>
<th>City Of New Bedford,</th>
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<tr>
<td>By:</td>
<td>By: Jonathan F. Mitchell</td>
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<td>Title:</td>
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<td><strong>CERTIFIED that funds are available</strong></td>
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<tr>
<td>By: Robert Ekstrom</td>
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<td>Title: Acting City Auditor</td>
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<td><strong>APPROVED as to Form and Legality</strong></td>
<td>Chief Financial Office</td>
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<td>By: Eric Cohen</td>
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<td>Title: Assistant City Solicitor</td>
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<td><strong>Purchasing Department</strong></td>
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<tr>
<td>By: Susan Bruce</td>
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<td>Title: Director of Purchasing</td>
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NEW BEDFORD CABLE ACCESS BUILDING - ROOF REPLACEMENT
918 S. RODNEY FRENCH BLVD., NEW BEDFORD, MA 02744
Mount Vernon Group Architects, Inc., Project No. 02014.71

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INSTRUCTIONS TO BIDDERS
For
AFFIRMATIVE ACTION ISSUES
for Public Works and Construction Projects

Office of Equal Opportunity & Contract Compliance
133 William Street, Room 208
New Bedford, Massachusetts 02740
ph: 508-979-1446 / fax: 508-991-6148
Revised May 2018
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**AA.01: Definitions**

*Relevant to the requirements set forth in this bidding document*

**Construction Bidding Statutes***

**Public Works Projects**
Governed under Massachusetts General Laws, ch. 30, sec. 39M.
Includes all municipal contracts for construction, reconstruction, alteration, remodeling, and/or repair/s estimated to cost more than $10,000 which does not include work on a building. Includes the construction and repair of roads, bridges, water mains, sewers, and the like, as well as improvement to public land (i.e.: operation of a municipal landfill, removal of waste materials, grading, erosion control, and other forms of improvement and maintenance.

Also governs contracts of $50,000-150,000 for construction, reconstruction, installation, demolition, maintenance, or repair work on a building.

**Building Projects**
Governed under Massachusetts General Laws, Ch. 149, sec. 44.
Includes all contracts for the construction, reconstruction, installation, demolition, maintenance, or repair of a building at an estimated cost of more than $25,000.

**Lowest Eligible & Responsible Bidder***
Massachusetts G.L. c. 30, sec. 39M; c. 149, sec. 44A state that the contract be awarded to the lowest eligible and responsible bidder.

*Eligible* means the bidder meets all of the requirements set forth in the bidding documents.

*Responsible* means the bidder possesses the skill, ability, and integrity to complete the job.

**Reasonable Accommodations**
Any change in work environment or the way job duties are customarily performed that enables individuals with disabilities to perform the essential functions of the job in issue, or that ensures equal opportunity for individuals with disabilities with respect to the application process or the enjoyment of benefits and privileges of employment.

**Administering Agency**
The agency that administers the city, state, state-assisted, or federally assisted contract awarded by the contracting agency

**Contracting Agency**
The agency that directly awards the contract

**Contractor**
Any general contractor and all subcontractors

---

4 This information is taken directly from "Designing and Constructing Municipal Facilities: Legal Requirements; Recommended Practices; Sources of Assistance" Published by, William Francis Galvin, Secretary of the Commonwealth, Office of the Inspector General, Oct. 1989.
Minority / Women Business Enterprise
As defined by the Massachusetts SDO (State Diversity Office) (formerly known as SOMWBA). In summary, an MBE/WBE is a business at least fifty-one percent (51%) owned or controlled by minority/women group members, or an individual contractor or professional who is a minority/women group member (as defined by SDO).

Minority refers to:

Native American
A person having origin in any of the original people of North America, who is recognized as American Indian by a tribe or tribal organization or is recognized as such within his/her community

Asian
A person having origin in any of the original people of the Far East, Southeast Asia, Indian Subcontinent, Korea, Philippines, and Samoa

Black
A person having origin in any of the black racial groups of Africa

Cape Verdean
A person having origin in any of the original people of the Cape Verde Islands

Eskimo / Aleut
A person having origin in any of the original people of Northern Canada, Greenland, Alaska, and East Siberia

Hispanic
A person of Spanish descent and culture having origin in Mexico, the Island of the Caribbean, Central America or South America
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City of New Bedford

133 William Street

New Bedford, MA 02740

EEO/AA POLICY STATEMENT

City of New Bedford has a statutory mandate under law to guarantee equal treatment for all who seek access to its services or opportunities for employment and advancement. No discrimination will be tolerated on the basis of race, creed, political affiliation, color, sex, national origin, age, or handicap. The ultimate goal is for personnel of this organization to reflect the proportions of minority, female, and handicapped persons in the populations they serve.

City of New Bedford will meet its legal, moral, social, and economic responsibilities for Equal Employment Opportunity/Affirmative Action as authorized and required by all pertinent state and federal legislation, executive orders and rules and regulations, including the following:

1. Title II of the Civil Rights Act of 1964 (42 USC s2000e et seq.), which prohibits discrimination in employment on the basis of race, color, religion, sex, or national origin; and

2. The Age Discrimination in Employment Act of 1967 (29 USC s621 et seq.), which prohibits discrimination in employment on the basis of age with regard to those individuals who are at least 40 years of age, but less than 65 years of age; and

3. Section 504 of the Rehabilitation Act of 1973 (29 USC s794), and the regulations promulgated pursuant thereto (45 CFR Part 84), which prohibit discrimination against qualified handicapped individuals on the basis of handicap and requires employers to make reasonable accommodations to known physical or mental limitations of otherwise qualified handicapped applications and employees; and

4. M.G.L. c. 151B s4 (1), as amended by Chapter 533, 1983, which prohibits discrimination in employment on the basis of race, color, sex, religious creed, national origin, ancestry, age or handicap.

In addition, the Provider agrees to be familiar with and abide by:

* Massachusetts Executive Order 524
* Massachusetts Executive Order 526
* Equal Pay Act of 1963
* Massachusetts Architectural Barriers Board Act
* Federal Executive Orders 11246 and 11375 as amended.
All employees, unions, sub contractors and vendors must make genuine and consistent efforts:

1. To ensure equal employment opportunities for present and future employees, and

2. To implement affirmative action, as legally required, to remedy the effects of past employment discrimination and social inequalities.

The responsibility for implementing and monitoring this policy has been delegated to:

__________________________
EEO Contract Compliance Officer
Name and Title of Employee

Furthermore, __City of New Bedford__

prohibits that any employee, or applicant, be subjected to coercion, intimidation, interference or discrimination for filing a complaint or assisting in an investigation under this program. No portion of this Equal Employment Opportunity/Affirmative Action Policy shall be construed as conflicting with any existing or future judicial or legislative mandate where a constriction consistent with that mandate is reasonable.

__________________________
Signature of Chief Executive

__________________________
Mayor

__________________________
Title of Chief Executive

__________________________
Date

III-9
AA.02: Statement of Policy

MINORITY/WOMAN BUSINESS ENTERPRISE PROGRAM

It is the policy of the government of the United States of America, the Commonwealth of Massachusetts and the City of New Bedford, that no person shall be discriminated against in any manner whatsoever, on the grounds of race, color, age, national origin, disability, religion, or sex.

Under this policy, the minority and woman business enterprises shall have the maximum practicable opportunity to participate in federally assisted projects, and shall not be excluded from such participation, nor denied the benefits of or be subjected to discrimination under any program or activity receiving federal assistance.

The City of New Bedford unequivocally ascribes to said policies as the recipient of Federal and state financial assistance, in connection with its activities, and may receive further Federal and State financial assistance in the future.

The City of New Bedford strongly affirms that it will not discriminate in any contractual procedure against any person because of race, color, age, national origin, disability, religion, or sex, or any other condition that is a bona fide qualification. This policy shall be administered at all levels with a positive, aggressive and supportive attitude by all department heads.

It is the responsibility of all department heads and employees to take affirmative steps to implement this policy to ensure equality of opportunity in conducting the affairs of the City of New Bedford, including notifying those persons and businesses doing business with the City of New Bedford, that contracts for goods and services and construction, shall be made without, reference to race, color, age, national origin, disability, religion or sex.

This Minority/Woman Business Enterprise Program sets forth the administrative standards for the further implementation of the City of New Bedford’s policy for the utilization of minority and female contractor, subcontractors, and suppliers.

Each department shall ensure that all solicitation in advertisements includes a statement of the City’s affirmation action policy, in an approved format.

The city’s Equal Opportunity Officer shall be responsible for ensuring that all aspects of the MBE/WBE program are initiated and undertaken. By virtue of the delegation of this responsibility and authority to direct the program, the Contract Compliance Officer will report directly to the Mayor on equal opportunity matters. The Equal Opportunity Officer shall be responsible for the development, administration, and monitoring of all activities necessary to ensure the accomplishment and success of this program.

NOW, THEREFORE IT IS HEREBY RESOLVED that the following Minority/Woman Business Enterprise Program is instituted for and in behalf of the City of New Bedford.

[Signature]

Mayor Jonathan P. Mitchell

Date 2/15/12

Revised 2007

III-10
See Appendix A for complete City Ordinances relevant to this bid document

(1) Residency Requirements for Certain City-Supported Construction Projects, Chap. 10, Article II.

(a) Shall apply to all general and subcontractors of public works projects which have a projected cost of more than $100,000.00

(b) Fifty (50) percent of the total employee man-hours in each trade must be performed by residents of the City of New Bedford (excluding the employer’s foreman or supervisor and two other key employees.)

* Contact the N.B. EEO Dept. for further assistance in this matter.

(c) resident is defined as someone having his/her true, fixed, and permanent home and principal establishment in the City of New Bedford, for a minimum of six (6) months prior to the contract bid opening date.


(a) Shall apply to all bidders and subcontractors for projects subject to MGL c. 149

(b) Not applicable to construction projects where the low general bid was less than $100,000; to subcontracts bid for less than $25,000; or to re-bids for which the City receives fewer than three (3) qualified bidders in the original bid

(c) Must pay appropriate lawful prevailing wage rates to employees

(d) Must maintain or participate in a bona fide apprentice training program for each apprenticeable trade represented in the workforce

(e) Must furnish hospitalization and medical benefits and maintain appropriate accident insurance coverage

(f) Must classify all employees as employees rather than independent contractors, and treat accordingly regarding workers compensation, unemployment taxes, social security taxes and income tax withholding.

AA.04: Contractors Agreements under Executive Order 11246, as Amended by Executive Order 11375

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment of compensation; and selection of training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

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

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

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of Sept. 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order, unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of Sept. 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

AA.05: Dept. of Labor, 41 Code of Federal Regulations Parts 60-1, 60-6 - Government Contractors, Affirmative Action Requirements, Executive Order 11246

(1) Segregated Facilities. The contractor hereby certifies that it does not and will not maintain or provide any facilities for its employees in a segregated manner, or permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. Further, the contractor shall obtain a similar certification of non-segregated facilities prior to the award of any contract or subcontract, which is subject to Executive Order 11246, and shall provide a copy thereof to the Association.

This clause prohibits segregation on the basis of race, color, religion, national origin, or sex, and applies to all contracts regardless of the amount thereof. The term facilities includes, but is not limited to, waiting rooms, work areas, restaurants and other eating areas, time clock, parking
lots, drinking fountains, recreation or entertainment areas, transportation, employer-provided housing, washrooms, locker rooms or other storage or dressing areas.

(2) **Affirmative Action Compliance Program.** The contractor certifies that it has developed a written affirmative action compliance program for each of its establishments consistent with the rules and regulations published by the Department of Labor in 41 CFR Chapter 60, and agrees to require a similar certification from each of its nonexempt subcontractors. Such an affirmative action program shall contain a set of specific and result-oriented procedures, the objective of which shall be the achievement of equal employment opportunity. An acceptable affirmative action program must include an analysis of areas within which the contractor is deficient in the utilization of minority groups and women and further, goals and timetables to which the contractor's good faith efforts must be directed to correct any deficiencies and, thus, to achieve prompt and full utilization of minorities and women, at all levels and in all segments of his work force where deficiencies exist.

The contractor’s affirmative action plan shall be summarized and updated annually and the program summary shall be submitted to the Office of Federal Contract Compliance Programs (OFCCP) on the anniversary date of the contractor’s affirmative action program.

(3) **Contractor’s Compliance with Exec. Order and 41 CFR Par 60-4.** The contractor’s compliance with E.O. 11246 and 41 C.F.R. Part 60-4, shall be based on its implementation of the Equal Opportunity clause, specific affirmative action obligations required by the specifications set forth in 41 C.F.R. 60-4.3, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed.

**AA.06: Section 503 of the Rehabilitation Act of 1973**

*Dept. of Labor, 41 Code of Federal Regulations, Parts 60-250 and 60-741, Affirmative Action & Nondiscrimination Obligations of Contractors and Subcontractors Regarding Individuals with Disabilities, Disabled Veterans, and Veterans of Vietnam Era)*

Parties holding a Government contract or subcontract in excess of $10,000 must take affirmative action to employ and advance in employment-qualified individuals with disabilities. Contractors are required to use effective practices to recruit qualified individuals with disabilities,

Applicants with disabilities must be provided a reasonable accommodation if they are qualified with respect to the application process (e.g.: if they present themselves at the correct location and time to fill out an application).

**AA.07: MBE / WBE Policy (for the life of the project)**

(1) **Eleven (11) percent** of the work on this project shall be performed by Minority Business Enterprises (MBEs) and **five (5) percent** of the work shall be performed by Women Business Enterprises (WBEs) for a total of 16% overall. **Four and one-third (4.33%) percent of all Airport projects shall be performed by Disadvantaged Business Enterprises (DBE).** Proven documentation of non-availability and the filing of a MBE/WBE/DBE Request for Waiver will be required to be submitted by the general contractor in circumstances where the EEO goals are not met.

(2) If it is determined that one or more of the MBE/WBE or DBE contractors, as submitted by the Contractor on the EEO forms, is not SDO (State Diversity Office) (formerly known as SOMWBA)
certified or certified by the Local Government Unit, in accordance with the provision of Executive Order 237, the bidder shall have five (5) working days following notification to either find a certified MBE/WBE/DBE contractor to perform work equal to or greater than that of the uncertified contractor, or to submit a waiver request.

(3) The contractor shall not enter into any subcontract with any person or firm debarred from government contracts, pursuant to Executive Order 11246.

**AA.08: Workforce Utilization (for the life of the project)**

(1) Minimum percentages for employment (workforce utilization) on the project are at 18% minority and 6.9% female participation. The employment percentages shall apply to the contractor and to all subcontractors, regardless of tier, for all on-site work.

A single goal for minorities and a separate goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally, the contractor may be in violation of the Exec. Order if a specific minority group of women is under-utilized.)

(3) The contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

**AA.09: Contractor’s EEO / Records Monitor**

The contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof, as may be required by the Government, and to keep records which shall at least include, for each employee, the name, address, telephone numbers, social security number, race, sex, status, (e.g.: mechanic, apprentice, trainee, helper, or laborer) dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents.

**AA.10: Bidder’s Eligibility**

The lowest responsible and eligible bidder shall mean the General Bidder whose bid is the lowest of those bidders demonstrating possession of the skill, ability and integrity necessary for the faithful performance of the work, and

(a) who shall certify that he/she is able to furnish labor that can work in harmony with other labor employed on the work;

(b) who shall certify that he/she will demonstrate good faith efforts to obtain the minority workforce goal (18%) the woman workforce goal (6.9%) and, for projects $100,000+, NB residency goal of 50%; the insurance that all subcontractors and/or sub-subcontractors are
also in compliance with workforce utilization goals; including compliance with the minority business goal (11%) and woman business goal (5%), for a total of 16% (or 4.33% for Airport projects) of the total dollar amount of the contract, and will certify that it will meet all applicable City Ordinances in accordance with this contract provision.

**AA.11: Bid Submission Requirements**

(1) Required bid forms that must be completed, signed, and submitted with the bid at the time of the bid opening, are as follows:

(a) Certificate of Understanding: Certification of Compliance w/ Exec. Order 11246

(b) Schedule of Participation for MBE/WBE or DBE as required

(c) Letter of Intent (for each MBE/WBE/DBE participation)

(d) MBE/WBE/DBE Contractor Identification Statement (for each MBE/WBE/DBE)

(e) Bidder’s Certification (to be completed by both the General Contractor and each MBE/WBE/DBE)

(f) If applicable, a completed and signed MBE/WBE/DBE Unavailability Certification in the event that the work listed on the Schedule is not sufficient to fulfill the requirement for MBE/WBE/DBE Participation. This certification must include a statement by the bidder of the reasons why it believes it is in compliance with this provision, and a list of the names, addresses, telephone numbers and reason given for unavailability of the Minority/Women Contractor contacted by the bidder with respect to the performance of work under the contract.

(g) If applicable, a completed and signed Minority / Women / Disadvantaged Business Enterprises Request for Waiver.

(2) The successful bidder will also be required to submit, prior to award, its estimates of labor (permanent and trainee) and material required to carry out its work under the contract, for review by the City, so as to establish maximum feasible goals for the utilization of City residents and business concerns. These goals, and the basis for monitoring and reporting progress toward meeting them, will be established by mutual agreement, with the assistance of the City’s Contract Compliance Officer, and discussed in the Pre-Construction and/or Pre-Award Conference.

**AA.12: Bid Approval or Disapproval**

(1) At the time of the bid opening, the bidder will have five (5) days, from the date of the bid opening, to comply with the MBE/WBE/DBE requirements. Failure to meet these requirements within the five days will have the Bid/Proposal disapproved by the Office of Equal Opportunity.

(2) Each bidder, as part of its bid submission, must agree to make good faith efforts to contract with minority and woman owned businesses (and disadvantaged business when applicable), as defined by the State Diversity Office (SDO) (formerly known as Office of Minority and Women Business Assistance (SOMWBA)) and the City of New Bedford’s affirmative action policies. The
amount of participation reserved for such enterprises shall not be less than 16% of the total bid amount, of which at least 11% of the total bid amount applies to minority businesses. The balance 5% is applied to women-owned businesses. Proven documentation of non-availability of either one of these entities provides that the available business may be awarded no less than 16% of the total contract dollar value.

(3) If the general bidder is either an MBE or WBE and is responsible for 100% of the project work, the 16% is fulfilled. If said MBE/WBE contractor is a joint venture, the MBE/WBE must be responsible for at least 51% of the project.

(4) The general contractor must submit, as part of its bid and as a condition of contract approval, signed Letters of Intent with all subcontractors and material suppliers listed on the participation schedule. Sub-bidders must submit the participation schedule with their bid and a participation schedule if they intend to sub-sub work.

**AA.13: Steps to Ensure a Responsive Bid**

The total price for work to be performed by Minority/Woman or Disadvantaged Contractors, as indicated in each bidder’s bid submission, is required to be sufficient to fulfill the MBE/WBE/DBE requirements, unless the bidder shall demonstrate to the satisfaction of the Awarding Authority that:

(1) it has made every possible effort to contact and negotiate with Minority/Women or Disadvantaged Contractors in an attempt to subcontract work, including every possible effort to select the portions of the work proposed to be subcontracted in order to meet the requirements;

(2) it was unable, notwithstanding such efforts, to achieve the stated requirement because Minority/Woman or Disadvantaged Contractors were not qualified or were unavailable (any proven non-availability of MBE/WBE/DBE must make up the difference to still fulfill the 16% goals with the available MBE or WBE or 6.0% DBE. If neither category is available to fulfill the goal, it must have a SDO statement as to no business listed);

(3) it included in its Schedule of Participation such proposed agreements as could be made with such efforts;

(4) the general contractor is a MBE or WBE and said contractor is performing 16% of work or the general contractor is a DBE and is performing 6.0% of the work and therefore, will be deemed as fulfilling the affirmative action bidding requirements;

(5) for contractors performing work under $50,000 that can demonstrate all work will be completed under the contractor’s own workforce, the contractor must be able to demonstrate how this will be accomplished and submit, at the time of the bid a statement requesting a waiver of the 16% MBE/WBE or 6.0% DBE participation goal. Said contractors will still be required to demonstrate good faith efforts regarding the prescribed employment workforce percentage goals.

**AA.14: Bid Award or Rejection**

(1) The Awarding Authority will responsible for awarding or rejecting any bid, with the
approval/disapproval of the Office of Equal Opportunity & Contract Compliance in its decision. The Awarding Authority also reserves the right to reject any or all bids, or to accept any other than the lowest bidder, should it be deemed to be in the best interest of the City of New Bedford, Massachusetts, to do so.

(2) The Awarding Authority may reject, as non-responsive, any bid, which it determines, fails to comply with the applicable requirements of this contract provision. Nothing, herein, shall relieve any bidder or any contractor performing any work under the contract, from any of the terms, conditions, or requirements of the contract.

**AA.15: Awarded Contractor’s Obligations**

(1) The Contractor shall specifically ensure that the City’s EEO policy and affirmative action obligations under this contract provision, is reviewed with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decision, including specific review of these terms with on-site supervisory personnel, prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

(2) Minority/Woman Work Hours must be maintained for the life of this project (at a minimum ratio of 18% minority work hours and 6.9% woman work hours to total work hours in each job category, including, but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those classes of work identified in Section 44C of M.G.L. ch. 149). (Please note the City of New Bedford’s Residency Ordinance requiring 50% City of New Bedford residents on projects of $100,000+)

(3) Apprentices and Trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability, in order for the apprentices and trainees to be counted toward the minority/woman work hour percentage goals.

(4) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the contractor has a collective bargaining agreement to refer either minorities or women, shall excuse the contractor’s obligation under these specifications, Exec. Order 11246 or the regulations promulgated pursuant thereto.

(5) In the employment of journeymen, apprentices, teamsters and laborers, the Contractor shall give preference first, to citizens of the Commonwealth who have served in the armed forces of the United States in time of war and have been honorably discharged therefrom or released from active duty therein, and who are qualified to perform the work which the employment relates, and secondly, to citizens of the City of New Bedford, and if such cannot be obtained in sufficient numbers, the Commonwealth generally, then to citizens of the United States.

(6) Reports to Be Submitted to the Office of Equal Opportunity & Contract Compliance include:

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(a) **Licensing Statutes:** Every contractor and subcontractor must submit, before starting work, a plan by which he/she will satisfy the requirements of licensing statutes, including the following, where applicable: MGL Ch. 149, Sec. 6 (painters); Ch. 146, Sec. 53 (hoisting engineers); Ch. 149, Sections 6B-6F (asbestos abatement workers, supervisors & contractors); Ch. 146, Sec. 3 & 3B (plumbers & gas fitters); Ch. 141, Sec. 1
(electricians); Ch. 14, Sec. 84 (pipefitters & sprinkler fitters); and Ch. 143, Sec. 94 (construction supervisor).

(b) **Work Hour Reports:** The contractor and each subcontractor shall prepare weekly reports in an approved form, of the hours worked in each trade by each employee, identified as minority or non-minority, and/or female, and/or resident. Copies of these shall be provided at the end of each such week to the City's Office of Equal Opportunity & Contract Compliance.

(c) **Projected Manning Tables:** The contractor shall prepare projected manning tables on a quarterly basis. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also when updated, to the City. A copy of the certified payroll will be submitted with these reports.

(d) **Billing Reports:** The contractor shall prepare and submit monthly billing reports of amounts paid to MBEs, WBEs and/or DBEs each monthly billing period, as well as the record of final payment accompanied by canceled checks.

(e) **Payroll Reports:** Every contractor and subcontractor shall submit weekly payroll reports to the City, indicating the following information for each employee and/or independent contractor employed on the project; name, address, hours worked, occupational classification, wages, and fringe benefit payments, if any. Said reports shall be signed by the employer or his authorized agent under the penalties of perjury (see MGL Ch. 149, Section 27B).

**AA.16 Recruitment/Referral Responsibilities**

1. In the hiring of minority/woman journeymen, apprentices, teamsters, and laborers, the contractor shall rely on referrals from a multi-employer affirmative action program approved by the City, traditional referral method utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the City's Equal Opportunity Officer.

2. Records of employment referral orders, prepared by the contractor, shall be made available to the awarding authority.

3. The contractor will maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source, or community organization, and of what action was taken with respect to each such individual.

4. If such individual was sent to the union hiring hall for referral, and was not referred back to the contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the contractor may have taken.

5. The contractor will document and maintain a record of all solicitations of offers for subcontractors from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractors' associations and groups.

6. The contractor will, in all solicitations or advertisements for employees placed by or on
behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin, and maintain a record thereof.

**AA.17: Subcontracts**

(1) The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors (filed or non-filed) and submit to the Authority prior to the performance of any work under said subcontract, a certification by said subcontractor, regardless of tier, that it will comply with the minority and women work hours/employee ratio and specific affirmative action steps, and to submit this information to the Office of Equal Opportunity, prior to the subcontractor’s performance on the project.

(2) In order to ensure that the said subcontractor’s certification becomes a part of all subcontracts under the prime contract, no subcontract shall be executed until an authorized representative of the Authority 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.

(3) Whenever the contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000, the contract provisions listed in this Instructions to Bidders for Affirmative Action Issues®, and the applicable goals for minority and female participation and which is set forth in the solicitation form which the contract resulted.

(4) Noncompliance of a subcontractor in compliance with these provisions, will result in the contractor taking such action, with respect to any subcontract or purchase order, as the administering agency may direct, as a means of enforcing such equal opportunity provisions; provided that, in the event a contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor, as a result of such direction, the contractor may request the United States, the State of Massachusetts or the City of New Bedford, to enter into such litigation to protect the interests of the U.S., the State or the City.

**AA.18: Wage Rates**

(1) Attention is called to Labor Standards provisions regarding conditions of employment, including State and Federal Wage Rates, the Davis-Bacon Act, the Copeland Anti-Kickback Act, and the Contract Work Hours and Safety Standards Act. Where Federal and State wage rates differ, the higher rates shall be used as a minimum.

(2) The rate per hour of the wages to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the work shall be not less than the rate of wages in Minimum Wage Rates as determined by the Commissioner of Labor and Industries, as required by M.G.L. Chapter 149, Sections 26 & 27-27h. This schedule shall be in place for said employees during the life of this contract.

(3) Contractor shall keep posted on the site, a legible copy of said schedule. The Contractor shall keep on file wage rates and classifications of labor employed on this work, in order that they may be available for inspection by the Administrator, the Office of Equal Opportunity, or the Architect.

(4) Apprentices employed pursuant to this determination of wage rates must be registered and
approved by the State Apprenticeship Council, wherever rates for journeymen or apprentices are not listed.

(5) Pay reserve police officers employed on this work the prevailing rate of wages paid to regular police officers, as required by M.G.L. Chap. 149, Sec. 34B, as amended. Such police officers shall be covered by Workmen’s Compensation Insurance and Employer’s Liability Insurance by the Contractor.

(6) Noncompliance by the contractor or any subcontractor will result in the City’s Contract Compliance Office and/or Legal Office, to consult with the Department of Labor and Industries, and will result in the contractor or subcontractor receiving notification of such, and subsequently must respond to the City of New Bedford within five (5) business days.

AA.19: Access to Compliance Information & Reports

(1) The contractor will provide all information and reports, required by the administering agency or the City of instructions issued by either of them, and will permit access to its facilities and any books, records, accounts, and other sources of information pertinent to the City’s affirmative action contract requirements.

(2) Where the information required is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the administering agency or the City, and shall set forth what efforts he/she has made to obtain the information.

AA.20: Noncompliance

(1) Investigation
Whenever the administering agency or the City believe the general contractor or any subcontract may not be operating in compliance with the terms of this provision, the City directly or through it designated agent, shall conduct an appropriate investigation, and may confer with the parties, to determine if such contractor is operating in compliance with the terms of this contract provision. If noncompliance is found, then a preliminary report on noncompliance will be made, and the City or its agent will notify such contractor, in writing, of such steps as will, in the judgment of the city or its agent, bring such contractor into compliance.

(2) Report of Noncompliance
In the event that such contractor fails or refuses to fully perform such affirmative action steps, the City shall make a final report of non-compliance, and recommend to the administering agency, the imposition of one or more of the sanctions identified in these provisions. Within fourteen (14) days of the receipt of the recommendations of the City, the administering agency shall move to impose one or more of the following sanctions as it may deem appropriate to attain full and effective enforcement.

(3) Any disagreement between the City and a contractor or subcontractor shall be submitted for a hearing pursuant to the provisions of Chapter 30A. The City shall impose one or more of the following sanctions, as it may deem appropriate, to attain full and effective enforcement.

AA.21: Sanctions

(1) The recovery by the administering agency from the general contractor of 1/100 of 1% of the
contract award price, or $1,000.00, whichever sum is greater, in the nature of liquidated damages, or if a subcontractor is in non-compliance, the recovery by the administering agency from the general contractor, a back charge against the subcontractor, of 1/10 of 1% of the subcontract price or $400.00, whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply.

(2) The suspension of any payment or part thereof, due under the contract, until such as the general contractor or any subcontractor is able to demonstrate his/her compliance with the terms of the preceding sections of the contract.

(3) The termination of employment of the contractor and taking possession of the site and finishing the work by whatever method he/she may deem expedient, upon giving the contractor and his/her surety, if any, written notice.

(4) The termination or cancellation of the contract, in whole or in part.

(5) The denial to the general contractor and any subcontractor of the right to participate in any future contract awarded by the administering agency for a period of up to three years.

(6) Other sanctions to be applied, as stipulated in the City of New Bedford Ordinances (Residency and Responsible Employer Plan ordinances) and other local, state, and federal laws and regulations, as applicable.

**AA.22: Appeal of Sanctions**

If, at any time after imposition of one or more of the sanctions listed in these provisions, the contractor or subcontractor is able to demonstrate that it is in compliance with the EEO/AA program, the contractor or subcontractor may request the administering or contracting agency, in consultation with the City’s Equal Employment Opportunity compliance officer, to conditionally suspend the sanction, pending final determination by the investigating officer, whether the contractor is in compliance. Upon final determination by the investigating office, the administering or contracting agency, based on the investigating officer’s recommendation, shall either lift the sanctions or impose them.

Sanctions shall not be imposed by the contracting agency or administering agency except after an adjudicatory proceeding, as defined by M.G.L. Chapter 30A, has been conducted. No investigation by the Office of Equal Opportunity shall be initiated without prior notice to the contractor or the subcontractor.

**AA.23: Severability**

The provisions of this section are severable, and if any of these provisions shall be held Unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.
APPENDIX A

BID SUBMISSION DOCUMENTS
Bid Submission Checklist

THE GENERAL BIDDER SHALL SUBMIT ALL THE FOLLOWING FORMS AS A PART OF ITS BID SUBMISSION, AND SHALL SUBMIT A COPY OF SUCH TO:

The City of New Bedford
Office of Equal Opportunity
133 William Street Room 208
New Bedford, MA 02740
ph: 979-1446 / fax: 508-991-6148

(1) Certificate of Understanding: Certification of Compliance with Executive Order 11246"

(2) Schedule of Participation for Minority, Woman & Disadvantaged Business Enterprises

(3) Letter of Intent - for each MBE/WBE/DBE Participation

(4) MBE/WBE Contractor Identification Statement - for each MBE/WBE/DBE

(5) Bidder’s Certification - must be completed and signed by the General Contractor and all Subcontractors who will work on the project (to include MBE/WBE/DBE and non-MBE/WBE/DBEs)

(6) If applicable, a completed and signed MBE/WBE/DBE Unavailability Certification in the event that the work listed on the Schedule is not sufficient to fulfill the Requirement for MBE/WBE/DBE Participation. This certification must include a statement by the bidder of the reasons why it believes it is in compliance with this Provision, and a list of the names, addresses, telephone numbers and reason given for unavailability of the Minority /Woman/ Disadvantaged Contractor who was contacted by the Bidder with respect to the performance of work under the contract.
BIDDERS CERTIFICATE OF UNDERSTANDING


Contractor ___________________________ Project ___________________________

Address ___________________________ Tel. # ___________________________ Project # ______

Fax # ___________________________

I, the undersigned, understand that:

A. Minority Business Enterprises are to be awarded at least 11% of the total contract amount for construction/public works projects.
B. Woman Business Enterprises are to be awarded at least 5% of the total contract amount for construction/public works projects.
C. Disadvantaged Business Enterprises are to be awarded at least 4.33% of the total contract amount for airport projects.
D. All required MBE/WBE/DBE forms included in Instructions to Bidders are to be completed and submitted with the bid.
E. Prior to award of the contract, a pre-construction conference must be held (to be attended by the general contractor and all subcontractors, regardless of tier) at which time the following requirements will be discussed:
   1. Weekly Workforce Utilization Reports (Form CAD85) are to be submitted weekly with payroll reports within five (5) days of last payroll;
   2. Quarterly Manpower Projection Tables (Form CAD85-1) are to be submitted with the Start Construction notification;
   3. Any project in the amount of $100,000+ is subject to the New Bedford Resident Hiring and Responsible Employer Plan ordinances;
   4. A minimum goal of 18% minority manpower utilization, in terms of total work hours in the aggregate workforce, in each trade or craft, on each project, will be maintained. The goal for female manpower utilization will be maintained at 6.9% according to regulations;
   5. Minority and female work hours are to be uniform in each trade, and minorities and females are to be employed evenly on each project;
   6. Minority or female employees are not be transferred from project to project for the purpose of meeting goals;
   7. A roster of all minority and/or female applicants for employment must be maintained at each project site (Federal & Non-Federal) in the New Bedford Hometown Plan Area.
F. The submission of the above reports and adherence to hiring practices and equal opportunity performance of subcontractors is the responsibility of the prime contractor.

The bidder hereby certifies that he/she shall comply with the minority manpower ratio and specific affirmative action steps contained in the EEO above, including compliance with the minority contractor compliance specifications. The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors, and submit to the contracting or administering agency prior to the performance of any work under said contract, a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in this appendix.

Authorized Signature ___________________________ Date __________

Name (Please Print or Type) ___________________________ Title __________
SCHEDULE OF PARTICIPATION
DISADVANTAGED/MINORITY/ WOMAN BUSINESS ENTERPRISES
to be completed by the Bidder

Item I - Minority Or Disadvantaged Business Enterprise Participation
1. Name: __________________________________________

   Address: _______________________________________

   Nature of Participation: ___________________________

   Dollar Value / % of Bid: ___________________________

2. Name: __________________________________________

   Address: _______________________________________

   Nature of Participation: ___________________________

   Dollar Value / % of Bid: ___________________________

   TOTAL BID PRICE $ __________________  TOTAL DBE or MBE COMMITMENT $ __________________ %

Item II – Woman Or Disadvantaged Business Enterprise Participation
1. Name: __________________________________________

   Address: _______________________________________

   Nature of Participation: ___________________________

   Dollar Value / % of Bid: ___________________________

2. Name: __________________________________________

   Address: _______________________________________

   Nature of Participation: ___________________________

   Dollar Value / % of Bid: ___________________________

   TOTAL BID PRICE $ __________________  TOTAL WBE or DBE COMMITMENT $ __________________ %

The bidder agrees to furnish implementation reports, as required by the awarding authority, to indicate the MBE/WBE/DBE which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

General Bidder: ______________________________________

Signature: __________________________________________  Date: ___________________
LETTER OF INTENT  
_to be completed by the DBE/MBE/WBE_

This form is to be completed by the DBE or MBE and WBE and must be submitted by the General Bidder as part of the Bid Proposal. A separate form must be completed for each MBE, WBE or DBE involved in the project.

Project Title: ____________________________________________ Project Location: _______________

To: ____________________________________________________  
(Name of Bidder)

From: __________________________________________________  
(Name of DBE/MBE/WBE)  
Indicate DBE/MBE/WBE status

I / we intend to perform work in connection with the above project as (Check One)

{ } an individual  { } a partnership
{ } a corporation  { } a joint venture with: ________________________________
{ } other (explain): ____________________________________________________

It is understood that if you are awarded the contract, you intend to enter into an agreement to perform the activity described below for the prices indicated.

<table>
<thead>
<tr>
<th>DBE/MBE/WBE PARTICIPATION:</th>
<th>Project Start Date</th>
<th>$ Amount</th>
<th>% of Bid Price</th>
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</thead>
<tbody>
<tr>
<td>Description of Activity</td>
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<td>__________________________</td>
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</tbody>
</table>

The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above-referenced Project

BIDDER

Authorized Signature ___________________________ Date ________________

Address ____________________________________________

Telephone / Fax __________________________________________________________________________

DBE/MBE / WBE

Authorized Signature ___________________________ Date ________________

Address ____________________________________________

Telephone / Fax __________________________________________________________________________
MINORITY / WOMAN BUSINESS ENTERPRISE PROGRAM

CONTRACTOR IDENTIFICATION STATEMENT

Project Name: ___________________________________________ Project #: ____________

Total Bid Price: $_________________________ Bid Date: ________________

In accordance with the New Bedford Minority Business Enterprise Program, the undersigned bidder certifies that he/she:

1. is a bona fide Minority/Woman/Disadvantaged Business Enterprise currently certified by the State Office of Minority/Woman Business Assistance (SOMWBA); and such SOMWBA certification has not changed; and in the event of said status changing, it will immediately forward written notification to the City of New Bedford and SOMWBA; and

2. intends to perform certain work (specified by formal bid proposal) under a contract in connection with the above-named project, and that work will not be sublet to any company at any tier; and

3. will comply with the minority/woman workforce ratio and specific affirmative action steps contained in the EEO/AA Contract Provisions and shall obtain from each of its subcontractors a copy of the bidder’s certification and submit to the administering agency, prior to the award of such subcontract, regardless of tier, that he/she will comply with the minority/woman workforce ratio and specific affirmative action steps contained in these and the EEO/AA Contract Provisions.

SOMWBA CERTIFICATION CATEGORY: ________________________________

CONTRACTORS NAME: ____________________________________________
{ } MBE { } WBE { } DBE

ADDRESS: ______________________________________________________

TELEPHONE #: __________________________ FAX #: __________________________

REPRESENTATIVE NAME & TITLE: _________________________________

AUTHORIZED SIGNATURE: _________________________________________

GENERAL BIDDERS NAME: _________________________________________
BIDDERS CERTIFICATION

To be completed by General Contractor & each of its Subcontractors (MBE/WBE/DBE and non-MBE/WBE/DBE)

The undersigned bidder hereby certifies that he/she will comply with the Minority/Woman Workforce Ratio and Specific Affirmative Action Steps contained in the EEO/AA Provisions of this contract, including compliance with the Minority/Woman/Disadvantaged Business Enterprise as required under these contract provisions.

The contractor receiving the award of the contract shall be required to obtain, from each of its subcontractors, regardless of tier, a copy of this Bidder's Certification indicating that it will comply with the Minority/Woman 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 contract and subcontract.

Name of General Contractor

Name of Subcontractor
{ } MBE { } WBE { } DBE { } Non-MBE/WBE

Signature of Authorized Representative

Signature of Authorized Representative

Name & Title (Printed or Typed)

Name & Title (Printed or Typed)

Date

Date
MINORITY / WOMAN BUSINESS ENTERPRISES
UNAVAILABILITY CERTIFICATIONS
to be completed by General Contractor

(The Bidder shall prepare additional copies of this information form
in the quantity necessary to comply with the bidding requirements)

I, ____________________________________________, __________________________
Name Title

of __________________________________________
Contractor Name

certify that on ____________________________, I contacted the below listed MBE/WBE/DBE
Date of Contact
requesting a bid for
Project __________________________________________ as an { } MBE, { } WBE or { } DBE for the provision of
{ } Goods & Services or { } Labor to accomplish __________________________
Subcontract Work Offered to this MBE/WBE/DBE Company

________________________________________
Name of Prospective Sub-Contractor

________________________________________
Address City and State Telephone #

Contact was made by { } Telephone { } In Person

Said sub-contractor was unavailable for work on this project or unable to prepare a bid for the following reason(s):
(check appropriate answer):

{ } MBE/WBE/DBE Firm Declined Job

{ } MBE/WBE/DBE Firm offered to do a job at the price of $__________________________, which was not
acceptable because: __________________________

{ } Other __________________________

The above information is accurate and complete, to the best of my knowledge and belief. Signed under the
pains and penalties of perjury.

________________________________________
Signature of Authorized Representative, General Contractor

Date

III-31
MINORITY / WOMAN/DISADVANTAGED BUSINESS ENTERPRISES

REQUEST FOR WAIVER

Upon exhausting all known sources and making every possible effort to meet the minimum requirements for MBE/WBE/DBE participation, the Contractor may seek relief from these requirements by filing this form (completed) NO LATER THAN FIVE (5) working days following the bid opening. Failure to comply with this process shall cause the bidder to be rejected, thereby rendering the contractor not eligible for award of the contract.

General Information

Project Title: ___________________________________ Location: ___________________________________

Bid Opening (time/date): ___________________________ Location: ___________________________________

Bidder: _________________________________________

Mailing Address: __________________________________

Contact Person: __________________________________

Telephone No.: (____ ) ___________________________ Ext.

Minimum Requirements

The contractor must show that good faith efforts were undertaken to comply with the percentage goals, as specified. The bidder seeking relief must show that such efforts were taken appropriately, in advance of the time set for opening bid proposals, to allow adequate time for response(s) by submitting the following: (please check all that apply and attach applicable documentation)

A. A detailed record of the effort made to contact and negotiate with minority, woman or disadvantaged business enterprises, to include:

( ) 1. Names, addresses and telephone numbers of all such companies contacted;

( ) 2. Copies of written notice(s) which were sent to MBE/WBE/DBE potential subcontractors prior to bid opening;

( ) 3. Copies of advertisements prior to bid opening, as appearing in general publications, trade-oriented publications, and applicable minority/women focused media detailing the opportunities for participation;

( ) 4. A detailed statement as to why each subcontractor contacted (a) was not willing to do the job or (b) was not qualified to perform the work as solicited; and

( ) 5. In the case(s) where a negotiated price could not be reached, the bidder should detail what efforts were made to reach an agreement on a competitive price

( ) 6. Contractor certifies that 100% of the project is to be carried out with his/her own workforce. No subcontractors are to be utilized.
B. The Agency may require the contractor to produce such additional information, as it deems appropriate and may obtain whatever other information it deems necessary to reach a conclusion from any source.

C. No later than fifteen (15) days after receipt of all necessary information and documentation, a decision will be made in writing to the bidder. If the waiver request is denied, the facts upon which a denial is based will be set forth. A contractor who is dissatisfied with the decision may then appeal that decision to the Equal Opportunity Employment Agency.

Certification

The undersigned herewith certified that the above information and appropriate attachments are true and accurate to the best of my ability, and that I have been authorized to act on behalf of the bidder in this matter.

__________________________________________________________________________
(Authorized original signature) Date

Submit to: Equal Employment Opportunity
Compliance Officer
133 William Street, Room 208
New Bedford, MA 02740

To be completed by the City of New Bedford’s EEO

Bid Date

Date Received by EEO Initials
KNOW ALL MEN BY THESE PRESENTS:

That we, ____________________________ , as Principal, and ____________________________ , as Surety, are held and firmly bound unto the City of New Bedford, Massachusetts, as Obligee, in the sum of ____________________________ dollars ($____________) to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has made a contract with the Obligee, bearing the date of ______  ____ 20____ for the ____________________________ in _____________, Massachusetts.

NOW the conditions of this obligation are such that if the Principal and all subcontractors under said contract shall pay for all labor performed or furnished and for all materials used or employed in said contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said contract that may hereafter be made, notice to the Surety of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, provisions of M.G.L. c.30 §39A, and M.G.L. c.149 §29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals this: _______ Day of _____________20____

PRINCIPAL ____________________________  SURETY ____________________________

By: ____________________________  By: ____________________________

SEAL  ATTORNEY-IN FACT

Attest: ____________________________  Attest: ____________________________

The rate for this bond is _____% for the first $____________ and _____% for the next $____________

The total premium for this bond is $____________
BOND NO. __________

PERFORMANCE BOND

CITY OF NEW BEDFORD
MASSACHUSETTS

KNOW ALL MEN BY THESE PRESENTS:

That we, ________________________________________________________, as Principal, and ________________________________________________________, as Surety, are held and firmly bound unto the City of New Bedford, Massachusetts, as Obligee, in the sum of ________________________________________________________ dollars ($_____________) to be paid to the Obligee, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has made a contract with the Obligee, bearing the date of ________ , 20__, for the ___________________________________________________ in ____________, Massachusetts.

NOW, the condition of this obligation is such that if the Principal and all Subcontractors under said contract shall well and truly keep and perform all the undertakings, covenants, agreement, terms and conditions of said contract on its part to be kept and performed during the original term of said contract and any extensions thereof that may be granted by the Obligee, with or without notice to the Surety, and during the life and any guarantee required under the contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations, changes or additions to said contract that may hereafter be made, notice to the Surety of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become null and void; otherwise, it shall remain in full force and virtue.

IN THE EVENT, that the contract is abandoned by the Principal, or in the event that the Obligee, under the provisions of Article 19 of the General Conditions of said contract terminates the employment of the Principal or the authority of the Principal to continue the work, said Surety hereby further agrees that said Surety shall, if requested in writing by the Obligee, take such action as is necessary to complete said contract.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals this: ________Day of ______________, 20__

PRINCIPAL ____________________________ SURETY ____________________________

By: ____________________________ By: ____________________________

SEAL ____________________________ ATTORNEY-IN-FACT ____________________________

Attest: ____________________________ Attest: ____________________________

The rate for this bond is _____% for the first $________________ and _____% for the next $________________

The total premium for this bond is $________________
SECTION 00 90 00
LABOR STANDARDS OF THE COMMONWEALTH

ARTICLE 1 - EMPLOYMENT, HOURS AND WAGES

1.1. The Contractor and any Subcontractor shall conform to any Labor Laws of the Commonwealth, and, without limiting the generality of the foregoing, shall conform to the provisions of Sections 25, 26, 27B, 30, 34, 34A and 34B of Chapter 149 of the General Laws, as amended, which Sections are incorporated herein by reference and made a part hereof.

1.2. Every employee in the work to be performed under this Contract shall lodge, board and trade where and with whom he elects, and the Contractor and any Subcontractor shall not directly or indirectly require, as a condition of employment in said work, that an employee shall lodge, board or trade at a particular place or with a particular person.

1.3. The Contractor and any Subcontractor shall give preference in the employment of mechanics, teamsters, chauffeurs and laborers first 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-three of Section Seven of Chapter Four, and who are qualified to perform the work to which the employment relates; 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.

1.4. No laborer, workman, mechanic, foreman, or inspector working in the employment of the Contractor, Subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by this Contract, shall be required or permitted to work any more than eight hours in any one day, or more than forty-eight hours in any one week, except in cases of emergency.

1.5. The rate per hour of the wages to be paid to mechanics, teamsters, chauffeurs, and laborers in the work to be performed under this Contract shall not be less than the rate of wages in the schedule annexed hereto and made a part hereof as determined by the Commissioner of Labor and Industries of the Commonwealth. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract.

1.6. The Contractor shall pay to any reserve police officer employed by him in any City or Town the prevailing rate of wages paid to regular police officers in such City or Town as required by General Laws, Chapter 149, Section 24B, as amended.

1.7. Claims and disputes pertaining to the classification of labor or wage determinations made by the Commission of Labor and Industries must be presented by appeal filed with the Department of Labor and Industries within three days from the date of the first advertisement of call for bids; in one manner provided by General Laws, Chapter 14, Section 27A.

1.8. The Contractor shall include with the Form For General Bid, signed and certified copies of Owner’s Instructions To Bidders For Affirmative Action Issues, Non-Collusion and State Tax Compliance Certificate, OSHA Training Certificate, and Undocumented Worker Certificate, included at the end of this Section, as set forth in the contract, Article XII, and hereby made a part of the Contract Documents.

ARTICLE 2 - MINIMUM WAGE RATES

2.1. The Contractor shall keep posted on the site of the Work a legible copy of the schedule of "Minimum Wage Rates and Health and Welfare Fund Contributions" attached thereto.

2.2. The rates listed are straight hourly rates. Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council. Wherever rates for journeymen or apprentices are not listed, and if any other labor is not included in this list, the Contractor shall insert the rates of all those employed on the work.

2.3. The Contractor must keep on file the wage rates and qualifications of all labor employed on this Project in order that they may be available for inspection by the Awarding Authority or the Architect.
ARTICLE 3 – CITY OF NEW BEDFORD REQUIREMENTS

3.1 The Contractor shall complete and include with Section 00 30 00 – Form For General Bid the following documents included as part of Division 00 of the Contract Documents:

- City of New Bedford Instructions To Bidders For Affirmative Action Issues
- City of New Bedford Non-Collusion and StateTax Compliance Certificate
- City of New Bedford OSHA Compliance Certificate
- City of New Bedford Undocumented Worker Certificate

(MINIMUM WAGE RATES AND HEALTH AND WELFARE AND PENSION CONTRIBUTIONS FOLLOW)

END OF SECTION
Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An awarding authority must request an updated wage schedule from the Department of Labor Standards ("DLS") if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CAM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
- All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). An apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.
- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CAM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
- Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at http://www.mass.gov/dols/pw.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
- Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and
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<th>Classification</th>
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<th>Base Wage</th>
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| **(3 AXLE) DRIVER - EQUIPMENT**<br>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B | 12/01/2018 | $33.32 | $11.91 | $12.70 | $0.00 | $57.93 |
| | 06/01/2019 | $34.32 | $11.91 | $12.70 | $0.00 | $58.93 |
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| | 12/01/2020 | $35.22 | $12.91 | $14.82 | $0.00 | $62.95 |
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| | 08/01/2021 | $36.02 | $13.41 | $14.82 | $0.00 | $64.25 |
| | 12/01/2021 | $36.02 | $13.41 | $16.01 | $0.00 | $65.44 |

| **(4 & 5 AXLE) DRIVER - EQUIPMENT**<br>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B | 12/01/2018 | $33.44 | $11.91 | $12.70 | $0.00 | $58.05 |
| | 06/01/2019 | $34.44 | $11.91 | $12.70 | $0.00 | $59.05 |
| | 08/01/2019 | $34.44 | $12.41 | $12.70 | $0.00 | $59.55 |
| | 12/01/2019 | $34.44 | $12.41 | $13.72 | $0.00 | $60.57 |
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| | 06/01/2021 | $36.14 | $12.91 | $14.82 | $0.00 | $63.87 |
| | 08/01/2021 | $36.14 | $13.41 | $14.82 | $0.00 | $64.37 |
| | 12/01/2021 | $36.14 | $13.41 | $16.01 | $0.00 | $65.56 |

| **ADS/SUBMERSIBLE PILOT**<br>PILE DRIVER LOCAL 56 (ZONE 2) | 08/01/2018 | $97.80 | $9.90 | $21.15 | $0.00 | $128.85 |
| | 08/01/2019 | $102.78 | $9.90 | $21.15 | $0.00 | $133.83 |

For apprentice rates see "Apprentice- PILE DRIVER"

| **AIR TRACK OPERATOR**<br>LABORERS - ZONE 2 | 12/01/2018 | $34.27 | $7.85 | $14.44 | $0.00 | $56.56 |
| | 06/01/2019 | $35.14 | $7.85 | $14.44 | $0.00 | $57.43 |
| | 12/01/2019 | $36.00 | $7.85 | $14.44 | $0.00 | $58.29 |
| | 06/01/2020 | $36.89 | $7.85 | $14.44 | $0.00 | $59.18 |
| | 12/01/2020 | $37.78 | $7.85 | $14.44 | $0.00 | $60.07 |
| | 06/01/2021 | $38.70 | $7.85 | $14.44 | $0.00 | $60.99 |
| | 12/01/2021 | $39.61 | $7.85 | $14.44 | $0.00 | $61.90 |

For apprentice rates see "Apprentice- LABORER"
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**Apprentice - BOILERMAKER - Local 29**

**Effective Date - 01/01/2019**

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**Notes:**

Apprentice to Journeyworker Ratio: 1:4

**BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)**

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**Notes:**

Apprentice to Journeyworker Ratio: 1:5

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- LABORER"

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### Notes:
- % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
- Step 1&2 $30.69/ 3&4 $36.59/ 5&6 $53.59/ 7&8 $59.55

Apprentice to Journeyworker Ratio: 1:5

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All Aspects of New Wood Frame Work
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### Notes:

- % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
- Step 1&2 $19.45/ 3&4 $26.96/ 5&6 $34.19/ 7&8 $36.95
- Apprentice to Journeyworker Ratio: 1:5

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### Cement Masonry/Plastering

**Bricklayers Local 3 (New Bedford)**

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**Issue Date:** 05/30/2019  **Wage Request Number:** 20190530-025
### CEMENT MASONRY/PLASTERING - Eastern Mass (New Bedford)

#### Apprentice -

**Effective Date:** 01/01/2019

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**Notes:**
- Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.
- Apprentice to Journeyworker Ratio: 1:3

### CHAIN SAW OPERATOR

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

### CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES

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For apprentice rates see "Apprentice- OPERATING ENGINEERS*"
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

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LABORERS - ZONE 2

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Issue Date: 05/30/2019  Wage Request Number: 20190530-025
### ELECTRICIAN - Local 223

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**Notes:**
- Steps are 750 hours
- Apprentice to Journeyworker Ratio: 2:3

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### ELEVATOR CONSTRUCTOR

**ELEVATOR CONSTRUCTORS LOCAL 4**

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**Notes:**
Steps 1-2 are 6 mos.; Steps 3-5 are 1 year

Apprentice to Journeyworker Ratio: 1:1

### Elevator Constructor Helper

**ELEVATOR CONSTRUCTOR HELPER**

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For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

### Fence & Guard Rail Erector

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For apprentice rates see "Apprentice - LABORER"

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**For apprentice rates see "Apprentice- LABORER"**
## FLOORCOVERER - Local 2168 Zone I

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### Notes:
- Steps are 750 hrs.
- % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
- Step 1&2 $30.55/ 3&4 $36.49/ 5&6 $53.33/ 7&8 $59.33

### Apprentice to Journeyworker Ratio: 1:1

---

## FORK LIFT/CHERRY PICKER

### OPERATING ENGINEERS LOCAL 4

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

## GENERATOR/LIGHTING PLANT/HEATERS

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

## GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

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### Apprentice - 06/01/2018

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**Notes:**

- Apprentice to Journeyworker Ratio: 1:3

### HOISTING ENGINEER/CRANES/GRADALLS

**OPERATING ENGINEERS LOCAL 4**

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### Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2018

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Effective Date - 06/01/2019

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Notes:

Apprentice to Journeyworker Ratio: 1:6

---

### HVAC (DUCTWORK)
SHEETMETAL WORKERS LOCAL 17 - B

- Issue Date: 04/01/2019
- Total Rate: $66.39

For apprentice rates see "Apprentice- SHEET METAL WORKER"

### HVAC (ELECTRICAL CONTROLS)
ELECTRICIANS LOCAL 225

- Issue Date: 03/01/2019, 09/01/2019, 03/01/2020
- Total Rates: $64.69, $65.95, $67.21

For apprentice rates see "Apprentice- ELECTRICIAN"

### HVAC (TESTING AND BALANCING - AIR)
SHEETMETAL WORKERS LOCAL 17 - B

- Issue Date: 04/01/2019
- Total Rate: $66.39

For apprentice rates see "Apprentice- SHEET METAL WORKER"

### HVAC (TESTING AND BALANCING - WATER)
PLUMBERS & PIPEFITTERS LOCAL 51

- Issue Date: 09/01/2018
- Total Rate: $70.24

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

### HVAC MECHANIC
PLUMBERS & PIPEFITTERS LOCAL 51

- Issue Date: 09/01/2018
- Total Rate: $70.24

For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"
### HYDRAULIC DRILLS

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

### INSULATOR (PIPES & TANKS)

**HEAT & FROST INSULATORS LOCAL 6 (SOUTHERN MASS)**

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

**Effective Date - 09/01/2018**

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**Effective Date - 09/01/2019**

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**Notes:**
Steps are 1 year

Apprentice to Journeyworker Ratio: 1:4

### IRONWORKER/WELDER

**IRONWORKERS LOCAL 37**

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Notes:
Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR
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06/01/2019 $34.64 $7.85 $14.44 $0.00 $56.93
12/01/2019 $35.50 $7.85 $14.44 $0.00 $57.79
06/01/2020 $36.39 $7.85 $14.44 $0.00 $58.68
12/01/2020 $37.28 $7.85 $14.44 $0.00 $59.57
06/01/2021 $38.20 $7.85 $14.44 $0.00 $60.49
12/01/2021 $39.11 $7.85 $14.44 $0.00 $61.40

For apprentice rates see "Apprentice- LABORER"

LABORER
LABORERS - ZONE 2
12/01/2018 $33.52 $7.85 $14.44 $0.00 $55.81
06/01/2019 $34.39 $7.85 $14.44 $0.00 $56.68
12/01/2019 $35.25 $7.85 $14.44 $0.00 $57.54
06/01/2020 $36.14 $7.85 $14.44 $0.00 $58.43
12/01/2020 $37.03 $7.85 $14.44 $0.00 $59.32
06/01/2021 $37.95 $7.85 $14.44 $0.00 $60.24
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Notes:
Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER
LABORERS - ZONE 2

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For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER
LABORERS - ZONE 2

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For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER
LABORERS - ZONE 2

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For apprentice rates see "Apprentice- LABORER"
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For apprentice rates see "Apprentice- LABORER"

| LABORER: MULTI-TRADE TENDER | 12/01/2018 | $33.52 | $7.85 | $14.44 | $0.00 | $55.81 |
| LABORERS - ZONE 2           | 06/01/2019 | $34.39 | $7.85 | $14.44 | $0.00 | $56.68 |
|                             | 12/01/2019 | $35.25 | $7.85 | $14.44 | $0.00 | $57.54 |
|                             | 06/01/2020 | $36.14 | $7.85 | $14.44 | $0.00 | $58.43 |
|                             | 12/01/2020 | $37.03 | $7.85 | $14.44 | $0.00 | $59.32 |
|                             | 06/01/2021 | $37.95 | $7.85 | $14.44 | $0.00 | $60.24 |
|                             | 12/01/2021 | $38.86 | $7.85 | $14.44 | $0.00 | $61.15 |

For apprentice rates see "Apprentice- LABORER"

| LABORER: TREE REMOVER       | 12/01/2018 | $33.52 | $7.85 | $14.44 | $0.00 | $55.81 |
| LABORERS - ZONE 2           | 06/01/2019 | $34.39 | $7.85 | $14.44 | $0.00 | $56.68 |
|                             | 12/01/2019 | $35.25 | $7.85 | $14.44 | $0.00 | $57.54 |
|                             | 06/01/2020 | $36.14 | $7.85 | $14.44 | $0.00 | $58.43 |
|                             | 12/01/2020 | $37.03 | $7.85 | $14.44 | $0.00 | $59.32 |
|                             | 06/01/2021 | $37.95 | $7.85 | $14.44 | $0.00 | $60.24 |
|                             | 12/01/2021 | $38.86 | $7.85 | $14.44 | $0.00 | $61.15 |

This classification applies to all tree work associated with the removal of standing trees, and trimming and removal of branches and limbs when the work is not done for a utility company for the purpose of operation, maintenance or repair of utility company equipment. For apprentice rates see "Apprentice- LABORER"

| LASER BEAM OPERATOR         | 12/01/2018 | $33.77 | $7.85 | $14.44 | $0.00 | $56.06 |
| LABORERS - ZONE 2           | 06/01/2019 | $34.64 | $7.85 | $14.44 | $0.00 | $56.93 |
|                             | 12/01/2019 | $35.50 | $7.85 | $14.44 | $0.00 | $57.79 |
|                             | 06/01/2020 | $36.39 | $7.85 | $14.44 | $0.00 | $58.68 |
|                             | 12/01/2020 | $37.28 | $7.85 | $14.44 | $0.00 | $59.57 |
|                             | 06/01/2021 | $38.20 | $7.85 | $14.44 | $0.00 | $60.49 |
|                             | 12/01/2021 | $39.11 | $7.85 | $14.44 | $0.00 | $61.40 |

For apprentice rates see "Apprentice- LABORER"

| MARBLE & TILE FINISHERS     | 02/01/2019   | $40.91 | $10.75 | $18.97 | $0.00 | $70.63 |
| BRICKLAYERS LOCAL 3 - MARBLE & TILE | 08/01/2019 | $41.99 | $10.75 | $19.11 | $0.00 | $71.85 |
|                             | 02/01/2020   | $42.50 | $10.75 | $19.11 | $0.00 | $72.36 |
|                             | 08/01/2020   | $43.58 | $10.75 | $19.26 | $0.00 | $73.59 |
|                             | 02/01/2021   | $44.09 | $10.75 | $19.26 | $0.00 | $74.10 |
|                             | 08/01/2021   | $45.21 | $10.75 | $19.42 | $0.00 | $75.38 |
|                             | 02/01/2022   | $45.68 | $10.75 | $19.42 | $0.00 | $75.85 |
## Apprentice - MARBLE & TILE FINISHER - Local 3 Marble & Tile
### Effective Date - 02/01/2019

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**Notes:**

Apprentice to Journeyworker Ratio: 1:3

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### MARBLE MASONS, TILELAYERS & TERRAZZO MECH
**BRICKLAYERS LOCAL 3 - MARBLE & TILE**

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**Notes:**
- Apprentice to Journeyworker Ratio: 1:5

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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**MILLRIGHTS LOCAL 1121 - Zone 2**

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**Issue Date:** 05/30/2019  **Wage Request Number:** 20190530-025  **Page 22 of 40**
### Apprentice - MILLWRIGHT - Local 1121 Zone 2

**Effective Date**: 04/01/2019

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**Notes:**

Steps are 2,000 hours

Apprentice to Journeyworker Ratio: 1:5

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### MORTAR MIXER

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"

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### OILER (OTHER THAN TRUCK CRANES, GRADALLS)

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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### OILER (TRUCK CRANES, GRADALLS)

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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### OTHER POWER DRIVEN EQUIPMENT - CLASS II

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"
### PAINTER (BRIDGES/TANKS)

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### Apprentice - PAINTER Local 35 - BRIDGES/TANKS

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**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio: 1:1**

### PAINTER (SIGN, PICTORIAL & DISPLAY)

**PAINTERS LOCAL 35 - ZONE 2**

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**Issue Date:** 05/30/2019  
**Wage Request Number:** 20190530-025  
**Page 24 of 40**
**Apprentice - PAINTER SIGN - Local 35 Zone 2**

**Effective Date:** 06/01/2013

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**Notes:**
- Steps are 4 mos.

**Apprentice to Journeyworker Ratio:** 1:1

**PAINTER (SPRAY OR SANDBLAST, NEW)***

* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2

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**Notes:**

Steps are 750 hrs.

**Apprentice to Journeyworker Ratio:** 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)

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**Notes:**

- Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

**PAINTER (TRAFFIC MARKINGS)**

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For Apprentice rates see "Apprentice - LABORER"

**PAINTER / TAPER (BRUSH, NEW)***

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* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. **PAINTERS LOCAL 35 - ZONE 2**
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**Notes:**
- Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

**PAINTER / TAPER (BRUSH, REPAINT)**

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**Effective Date - 07/01/2019**

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**Notes:**
Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

### PANEL & PICKUP TRUCKS DRIVER

TEAMSTERS JOINT COUNCIL NO. 10 ZONE B

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### PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)

PILE DRIVER LOCAL 56 (ZONE 2)

For apprentice rates see "Apprentice- PILE DRIVER"

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### PILE DRIVER

PILE DRIVER LOCAL 56 (ZONE 2)

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### PILE DRIVER - Local 56 Zone 2

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**Notes:** Apprentice wages shall be no less than the following Steps; (Same as set in Zone 1) $54.34/2/$58.99/3/$63.65/4/$65.98/5/$68.31/6/$68.31/7/$72.96/8/$72.96

**Apprentice to Journeyworker Ratio:** 1:5

### PIPELAYER LABORERS - ZONE 2

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For apprentice rates see "Apprentice- LABORER"

### PLUMBER & PIPEFITTER

**PLUMBERS & PIPEFITTERS LOCAL 51**

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### PLUMBER & PIPEFITTER - Local 51

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**Notes:** Steps 2000hrs. Prior 9/1/05; 40/40/45/50/55/60/65/75/80/85

**Apprentice to Journeyworker Ratio:** 1:3

### PNEUMATIC CONTROLS (TEMP.)

**PLUMBERS & PIPEFITTERS LOCAL 51**

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

### PNEUMATIC DRILL/ TOOL OPERATOR

**LABORERS - ZONE 2**

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For apprentice rates see "Apprentice- LABORER"
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### RIDE-ON MOTORIZED BUGGY OPERATOR LABORERS - ZONE 2

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For apprentice rates see "Apprentice- LABORER"

### ROLLER/SPREADER/MULCHING MACHINE OPERATING ENGINEERS LOCAL 4

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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

### ROOFER (Inc.Roof Waterproofing &Roofer Damproofg) ROOFERS LOCAL 33

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### Apprentice - ROOFER - Local 33

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<td>4</td>
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**Notes:** **1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1**

Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.

(Hot Pitch Mechanics' receive $1.00 hr. above ROOFER)

Apprentice to Journeyworker Ratio:**

### ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33

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For apprentice rates see "Apprentice- ROOFER"

### SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 - B

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**Notes:**

Apprentice to Journeyworker Ratio: 1:3

### Specialized Earth Moving Equip < 35 Tons

**Teamsters Joint Council No. 10 Zone B**

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### Specialized Earth Moving Equip > 35 Tons

**Teamsters Joint Council No. 10 Zone B**

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### Sprinkler Fitter

**Sprinkler Fitters Local 550 - (Section B) Zone 2**

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### Apprentice - SPRINKLER FITTER - Local 550 (Section B) Zone 2

**Effective Date:** 03/01/2019

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**Notes:**
- Apprentice entered prior 9/30/10: 40/45/50/55/60/65/70/75/80/85
- Steps are 850 hours

### STEAM BOILER OPERATOR

**Operating Engineers Local 4**

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For apprentice rates see "Apprentice- Operating Engineers"
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For apprentice rates see "Apprentice- OPERATING ENGINEERS"

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**Apprentice - TELECOMMUNICATION TECHNICIAN - Local 223**

**Effective Date - 03/01/2019**

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**Notes:** See Electrician Apprentice Wages

Steps are 750hrs

Telecom Apprentice Wages shall be the same as the Electrician Apprentice Wages

**Apprentice to Journeyworker Ratio:2:3***

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**Issue Date:** 05/30/2019  **Wage Request Number:** 20190530-025  **Page 35 of 40**
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**Notes:**

Apprentice to Journeyworker Ratio: 1:3

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**TEST BORING DRILLER**  
LABORERS - FOUNDATION AND MARINE

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For apprentice rates see "Apprentice- LABORER"

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**TEST BORING DRILLER HELPER**  
LABORERS - FOUNDATION AND MARINE

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For apprentice rates see "Apprentice- LABORER"

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**TEST BORING LABORER**  
LABORERS - FOUNDATION AND MARINE

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For apprentice rates see "Apprentice- LABORER"
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| | 12/01/2019 | $48.83 | $12.00 | $15.60 | $0.00 | $76.43 |
| | 06/01/2020 | $49.91 | $12.00 | $15.60 | $0.00 | $77.51 |
| | 12/01/2020 | $51.05 | $12.00 | $15.60 | $0.00 | $78.65 |
| | 06/01/2021 | $52.14 | $12.00 | $15.60 | $0.00 | $79.74 |
| | 12/01/2021 | $53.28 | $12.00 | $15.60 | $0.00 | $80.88 |
| **TRAILERS FOR EARTH MOVING EQUIPMENT**  
  TEAMSTERS/JOINT COUNCIL NO. 10 ZONE B | 12/01/2018 | $34.12 | $11.91 | $12.70 | $0.00 | $58.73 |
| | 06/01/2019 | $35.12 | $11.91 | $12.70 | $0.00 | $59.73 |
| | 08/01/2019 | $35.12 | $12.41 | $12.70 | $0.00 | $60.23 |
| | 12/01/2019 | $35.12 | $12.41 | $13.72 | $0.00 | $61.25 |
| | 06/01/2020 | $36.02 | $12.41 | $13.72 | $0.00 | $62.15 |
| | 08/01/2020 | $36.02 | $12.91 | $13.72 | $0.00 | $62.65 |
| | 12/01/2020 | $36.02 | $12.91 | $14.82 | $0.00 | $63.75 |
| | 06/01/2021 | $36.82 | $12.91 | $14.82 | $0.00 | $64.55 |
| | 08/01/2021 | $36.82 | $13.41 | $14.82 | $0.00 | $65.05 |
| | 12/01/2021 | $36.82 | $13.41 | $16.01 | $0.00 | $66.24 |
| **TUNNEL WORK - COMPRESSED AIR**  
  LABORERS (COMPRESSED AIR) | 12/01/2018 | $50.88 | $7.85 | $15.95 | $0.00 | $74.68 |
| | 06/01/2019 | $51.88 | $7.85 | $15.95 | $0.00 | $75.68 |
| | 12/01/2019 | $52.88 | $7.85 | $15.95 | $0.00 | $76.68 |
| | 06/01/2020 | $53.87 | $7.85 | $15.95 | $0.00 | $77.67 |
| | 12/01/2020 | $54.85 | $7.85 | $15.95 | $0.00 | $78.65 |
| | 06/01/2021 | $55.87 | $7.85 | $15.95 | $0.00 | $79.67 |
| | 12/01/2021 | $56.88 | $7.85 | $15.95 | $0.00 | $80.68 |
| **TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)**  
  LABORERS (COMPRESSED AIR) | 12/01/2018 | $52.88 | $7.85 | $15.95 | $0.00 | $76.68 |
| | 06/01/2019 | $53.88 | $7.85 | $15.95 | $0.00 | $77.68 |
| | 12/01/2019 | $54.88 | $7.85 | $15.95 | $0.00 | $78.68 |
| | 06/01/2020 | $55.87 | $7.85 | $15.95 | $0.00 | $79.67 |
| | 12/01/2020 | $56.85 | $7.85 | $15.95 | $0.00 | $80.65 |
| | 06/01/2021 | $57.87 | $7.85 | $15.95 | $0.00 | $81.67 |
| | 12/01/2021 | $58.88 | $7.85 | $15.95 | $0.00 | $82.68 |
| **TUNNEL WORK - FREE AIR**  
  LABORERS (FREE AIR TUNNEL) | 12/01/2018 | $42.95 | $7.85 | $15.95 | $0.00 | $66.75 |
| | 06/01/2019 | $43.95 | $7.85 | $15.95 | $0.00 | $67.75 |
| | 12/01/2019 | $44.95 | $7.85 | $15.95 | $0.00 | $68.75 |
| | 06/01/2020 | $45.94 | $7.85 | $15.95 | $0.00 | $69.74 |
| | 12/01/2020 | $46.92 | $7.85 | $15.95 | $0.00 | $70.72 |
| | 06/01/2021 | $47.94 | $7.85 | $15.95 | $0.00 | $71.74 |
| | 12/01/2021 | $48.95 | $7.85 | $15.95 | $0.00 | $72.75 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"
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For apprentice rates see "Apprentice- LABORER"

| VAC-HAUL | TEAMSTERS JOINT COUNCIL NO. 10 ZONE B | 12/01/2018 | $33.54 | $11.91 | $12.70 | $0.00 | $58.15 |
| | | 06/01/2019 | $34.54 | $11.91 | $12.70 | $0.00 | $59.15 |
| | | 08/01/2019 | $34.54 | $12.41 | $12.70 | $0.00 | $60.66 |
| | | 12/01/2019 | $34.54 | $12.41 | $13.72 | $0.00 | $66.67 |
| | | 06/01/2020 | $35.44 | $12.41 | $13.72 | $0.00 | $61.57 |
| | | 08/01/2020 | $35.44 | $12.91 | $13.72 | $0.00 | $62.07 |
| | | 12/01/2020 | $35.44 | $12.91 | $14.82 | $0.00 | $63.17 |
| | | 06/01/2021 | $36.24 | $12.91 | $14.82 | $0.00 | $63.97 |
| | | 08/01/2021 | $36.24 | $13.41 | $14.82 | $0.00 | $64.47 |
| | | 12/01/2021 | $36.24 | $13.41 | $16.01 | $0.00 | $65.66 |

For apprentice rates see "Apprentice- LABORER"

| WAGON DRILL OPERATOR | LABORERS - ZONE 2 | 12/01/2018 | $33.77 | $7.85 | $14.44 | $0.00 | $56.06 |
| | | 06/01/2019 | $34.64 | $7.85 | $14.44 | $0.00 | $56.93 |
| | | 12/01/2019 | $35.50 | $7.85 | $14.44 | $0.00 | $57.79 |
| | | 06/01/2020 | $36.39 | $7.85 | $14.44 | $0.00 | $58.68 |
| | | 12/01/2020 | $37.28 | $7.85 | $14.44 | $0.00 | $59.57 |
| | | 06/01/2021 | $38.20 | $7.85 | $14.44 | $0.00 | $60.49 |
| | | 12/01/2021 | $39.11 | $7.85 | $14.44 | $0.00 | $61.40 |

For apprentice rates see "Apprentice- LABORER"

| WASTE WATER PUMP OPERATOR | OPERATING ENGINEERS LOCAL 4 | 12/01/2018 | $47.58 | $11.50 | $15.60 | $0.00 | $74.68 |
| | | 06/01/2019 | $48.18 | $12.00 | $15.60 | $0.00 | $75.78 |
| | | 12/01/2019 | $49.33 | $12.00 | $15.60 | $0.00 | $76.93 |
| | | 06/01/2020 | $50.43 | $12.00 | $15.60 | $0.00 | $78.03 |
| | | 12/01/2020 | $51.58 | $12.00 | $15.60 | $0.00 | $79.18 |
| | | 06/01/2021 | $52.68 | $12.00 | $15.60 | $0.00 | $80.28 |
| | | 12/01/2021 | $53.83 | $12.00 | $15.60 | $0.00 | $81.43 |

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

| WATER METER INSTALLER | PLUMBERS & PIPEFITTERS LOCAL 51 | 09/01/2018 | $42.04 | $10.00 | $18.20 | $0.00 | $70.24 |

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

**Outside Electrical - East**

| CABLE TECHNICIAN (Power Zone) | OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 | 09/03/2017 | $27.14 | $7.75 | $1.81 | $0.00 | $36.70 |

For apprentice rates see "Apprentice- LINEMAN"

| CABLEMAN (Underground Ducts & Cables) | OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 | 09/03/2017 | $38.45 | $7.75 | $9.53 | $0.00 | $55.73 |

For apprentice rates see "Apprentice- LINEMAN"

| DRIVER / GROUNDMAN CDL | OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 | 09/03/2017 | $31.66 | $7.75 | $9.44 | $0.00 | $48.85 |

For apprentice rates see "Apprentice- LINEMAN"
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**Apprentice to Journeyworker Ratio:** 1:2

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Notes:

For apprentice rates see "Apprentice- LINEMAN"
**Classification**

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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, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

**** APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.
SECTION 01 00 00

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1- General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section applies to all Work performed under the Contract.
   B. Any discrepancies found in the Contract Documents after signing of the Owner-Contractor agreement must be brought to the attention of the Architect for resolution. The Architect will determine which document entry governs and his decision will be final. The Contractor will not be entitled to a change in the Contract Time or Contract Sum based on discrepancies found after signing of the Owner-Contractor agreement.
   C. Should conflict be evident between Contract Documents or within any Contract Document, the Contractor is deemed to have estimated the more expensive method of doing the Work unless he shall have asked for, and obtained, a written decision prior to submittal of bid or price quote, as to which method or materials will be required. Should the Work proceed after the discovery of errors, conflict, or omission by the Contractor and clarification has not been received from the Architect, the Contractor will be held fully responsible for replacement or correction, as directed by the Architect, at the Contractor's expense.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which effect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 PROJECT IDENTIFICATION AND DESCRIPTION OF WORK
   A. Project Identification: The name of the Project is “NEW BEDFORD CABLE ACCESS BUILDING - ROOF REPLACEMENT”. The Project site is located at 918 S. Rodney French Blvd., New Bedford, MA 02744.
   B. Abbreviated Written Summary: The Work of the Contract can be summarized by reference to the Contract Documents. Work of this Contract includes the coordination of the entire Work indicated by the Contract Documents. Work of this Contract includes architectural and demolition Work which together provide a fully functioning facility in accordance with requirements of the Contract Documents. All items shown, indicated, or inferable from the Contract Documents are to be included such that there are no omissions which would prevent full use in all respects. Materials shown or indicated in any one Contract Document are to be inferred as if required by all. Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the Contract Documents. Briefly, without limitation the Work can be summarized as follows:

General Requirements
01 00 00 - 1
1. The Project consists of: selective demolition; shower compartments; masonry walls and infill, concrete ramps, plumbing work, HVAC work, and electrical work at the New Bedford High School swimming pool and locker rooms.

C. Examination of Site and Documents:

1. All Bidders are required to visit the site and examine all Contract Documents before submitting a bid. Inspect and be thoroughly familiar with the same and conditions under which the Work will be carried out. Neither the Owner nor the Architect will be responsible for errors, omissions and/or charges for extra Work arising from Contractor’s failure to familiarize themselves with the Contract Documents or existing site and conditions. By submitting a Bid, the Bidder agrees and warrants that he had the opportunity to examine the building site and the Contract Documents, that he is familiar with the conditions and requirements of both and where they require, in any part of the Work, a given result to be produced, that the Contract Documents are adequate and that he will produce the required result.

2. The building site will be available for inspection as set forth in the City of New Bedford Front End, Pre-Bid Conference/Site Inspection.

1.05 SPECIFICATION INFORMATION

A. These specifications are a special form of technical writing edited from master specifications and contain deviations from traditional writing formats. Capitalization, underlining and bold print is only used to assist reader in finding information and no other meaning will be implied.

B. Except where specifically indicated otherwise, the subject of all imperative statements is the Contractor.

C. Sections are generally numbered in conformance with Construction Specifications Institute Master Format System. Numbering sequence is not consecutive. Refer to Index of Specification Sections for names and numbers of Sections included in this Project.

D. Pages are numbered separately for each Section. Each Section is noted with “End of Section” to indicate when Section is complete.

1.06 DEFINITIONS

A. Owner: City of New Bedford, New Bedford, Massachusetts.

B. Provide: means furnish and install, complete with all necessary components and accessories, ready for intended use.

C. Indicated: is a reference to other portions of the Contract Documents.

D. Approved: Except where specifically stated otherwise, the words "approved", "directed", "requested", "selected", "accepted" mean "approved by the Architect", "directed by the Architect" and so on. The words "approved" and "accepted" shall be held to the limitations stated in the General Conditions. In no case, shall "approval" or "acceptance" by the Architect be interpreted as a release of Contractor of his responsibilities to fulfill all the requirements of the Contract Documents. Where the Contract Documents require Contractor approval, approval must be submitted in writing using the word "approved" Contractor "review" only is not an acceptable substitute for Contractor approval.

E. Observe/Observation: Except as otherwise defined in greater detail, the Architect's observation of the Work will be held to the limitations stated in the General Conditions and the Owner/Architect agreement. In no case, shall observation by the Architect be interpreted as a release of Contractor of his responsibilities to fulfill all the requirements of the Contract Documents. Observe shall be defined in accordance with the General Conditions of the Contract to include only visiting the site periodically, observing the condition and progress of the Work, and reporting to the Owner.

F. Furnish: Except as otherwise defined in greater detail, furnish means supply, including shop fabrication if applicable, and deliver to project site, ready for unloading, unpacking, assembly, installation and the like as applicable in each instance.

G. Install: Except as otherwise defined in greater detail, install means operations at project site including, but not limited to, unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, placing in service and similar operations as applicable in each instance.
H. Installer: The person or firm engaged by Contractor or Subcontractor for performance of a specific unit of installation Work at the project site. It is a general requirement that Installers be expert and experienced in the Work they are engaged to perform.

I. Day: Except as otherwise defined in Owner-Contractor Agreement, day means calendar day.

J. Public: Any person in the building other than those attending to central mechanical, electrical, and plumbing services.

K. Public Areas: All areas other than rooms dedicated solely to central mechanical, electrical, and plumbing equipment.

L. Back-of-House Areas: Rooms not designated as part of a public area.

M. Continuation of Material: Where a given material is indicated on any of the Drawings, it is intended that such material be used throughout the length and height of walls, partitions, spandrels, panels, windows, lights, areas, etc., or in the assembly detail in which it occurs, for other similar locations throughout the building, unless a different material is specifically indicated.

1.07 INDUSTRY STANDARDS

A. Referenced standards are part of the Contract Documents and have the same force and effect as if bound with these specifications.

B. Except where specifically indicated otherwise, comply with the current standard in effect as of the date of the Owner/Contractor Agreement.

C. Obtain copies of industry standards directly from publisher.

D. The titles of industry standard organizations are commonly abbreviated; full titles may be found in Encyclopedia of Associations or consult Architect.

E. Where Workmanship is governed by a referenced standard, submit one copy to Architect and additional copies to fabricators, installers, and others involved in the performance of the Work.

1.08 CONTRACTOR USE OF PREMISES

A. The Contractor may be allowed to use a limited portion of the existing building for field offices and/or storage areas at the discretion of the Owner. Temporary office and storage space shall be provided by the Contractor in accordance with requirements of Section 01 50 00 - Temporary Facilities and Controls. Owner approval will be required for all temporary office facilities and storage areas, including their size and location.

B. The Contractor shall submit a Site Utilization Plan for approval prior to commencing the Work of this Contract. The plan shall include, but not be limited to, proposed locations for Contractor and Subcontractor laydown and/or material storage areas, field offices, and site access.

1.09 USER OCCUPANCY

A. The existing site will be occupied during the Work of this Contract. Work required to be performed in areas occupied for summer programs, as indicated on the Drawings, shall be performed before or after program hours, or on weekends, at no additional cost to the Owner.

1.10 PERMITS, INSPECTION AND TESTING REQUIRED BY GOVERNING AUTHORITIES

A. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested or approved, the Contractor shall give the Architect and such Authority timely notice of its readiness so that the Architect may observe such inspection and testing.

B. Prior to the start of construction, the Contractor shall complete application to the applicable Building Code enforcement authority for the building permits. Such Permits shall be displayed in a conspicuous location at the project sites. Fees for Building, Electrical, Plumbing, Fire Protection, and Mechanical Permits will be paid in accordance with the City of New Bedford Building Department Permit Fee Schedule.

1. Application for Building Permit shall include the following Documents:

b. Narrative Report for compliance with 780 CMR, 1301.8.4

C. Submit copies of all permits, licenses, certifications, inspection reports, releases, notices, judgements, and communications from authorities having jurisdiction.

1.11 CONSTRUCTION SCHEDULES

A. Within 14 days after signing the Owner/Contractor Agreement, provide the following for the Project:

   1. A comprehensive bar chart schedule showing all major and critical minor portions of the Work, sequence of Work and duration of each activity. Update and reissue regularly.

   2. Progress schedule indicating Substantial Completion within the specified Contract Time

   3. Critical path chart indicating the interrelationships of critical and non-critical events required to complete the Project on the dates established. The Contractor will be required to use “Primvera/P-3” CPM scheduling software.

   4. Update all schedules and distribute monthly.

   5. Other required schedules, including but not limited to, Submittals and Testing.

B. Provide all schedules in accordance with requirements of Section 01 51 11 – Progress Schedule.

1.12 SCHEDULE OF VALUES

A. Prepare Schedule of Values to coordinate with application for payment breakdown. The Schedule of Values shall be broken down into labor and materials for each Work activity with increments no greater than $50,000.00. Submit at least 10 days before first payment application. Update and reissue regularly. The CPM shall be tied into and reflect the Schedule of Values.

1.13 PAYMENT REQUESTS

A. Provide three copies of each request in a complete filled out copies of AIA G702 and continuation sheet G703. Substantiate requests with complete documentation; include change orders to date. Provide partial lien waivers for Work in progress and full lien waivers for completed Work. Contractor shall be required by Law to submit payroll records substantiating payment of wage rates to employees on a weekly basis.

B. Before first payment application, provide the following:
   1. List of Subcontractors, suppliers and fabricators
   2. Schedule of Values
   3. Progress Schedule
   4. Submittal Schedule keyed to project schedule
   5. List of Contractor's key project personnel
   6. Copies of permits and other communications from authorities
   7. Contractor's Certificate of Insurance
   8. Performance and Payment Bonds
   9. Unit Price Schedule
   10. Contractor's complete submittal log
   11. Contractor's complete submittal schedule

C. Before final payment application, provide and complete the following:
   1. Complete closeout requirements
   2. Complete punch list items
   3. Settle all claims
   4. Transmit Record Documents to Architect
   5. Prove that all taxes, fees and similar obligations have been paid
   6. Remove of temporary facilities and surplus materials
   7. Change lock cylinders or cores
   8. Clean the Work
   9. Submit Consent of Surety for final payment.
1.14 PROCEDURES & CONTROLS

A. Preconstruction Conference: Require representatives of all major Subcontractors and suppliers to attend; notify Owner and Architect at least 72 hours in advance.

B. Progress Meetings: Hold regular weekly meetings with Owner and Architect, and meetings before preparation of payment requests. The Contractor shall be represented by a principal, project manager, general superintendent or other authorized main office representative, as well as by his own superintendent. An authorized representative of any Subcontractor or Subcontractors shall attend such meetings if his presence is requested by the Architect. 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.

1. As a prerequisite for monthly payments, ordering schedules, shop drawing schedule, and coordination meeting schedules shall be prepared and maintained by the Contractor and shall be reviewed and updated in a monthly basis, and a copy shall be submitted to the Owner's Representative and Architect.

2. To expedite construction progress on this project, the Contractor shall order all materials immediately after the approval of shop drawings and shall obtain a fixed date of delivery to the project site for all materials ordered which shall not impede or otherwise interfere with construction progress.

3. Scheduling shall be discussed with all concerned parties, and methods shall be presented by the Contractor which shall reflect construction completion not being deferred, at no additional expense to the Owner.

4. Project meetings shall be chaired by the Architect.

5. Project Meeting Notes: The Contractor shall be responsible for recording meeting minutes at each project meeting. The minutes shall incorporate the substance of all issues discussed, noting date of entry of each issue, the resolution, the party responsible for issue resolution, and the date of resolution. The meeting minutes will be distributed to all attendees and responsible parties at the next scheduled project meeting.

C. Daily Reports: Prepare daily reports recording all important information concerning events at the site for each project site. Submit to Architect weekly. Minimum required information contained in the daily report will be:

1. Manpower by trade
2. Work activity by trade
3. Equipment by trade
4. Material deliveries by trade
5. Weather conditions
6. All safety violations and accidents
7. Inspections if any

D. Layout: Layout Work and be responsible for all lines, elevations, and measurements of the building, grading, utilities and other Work executed under the Contract.

E. Project Limit Line: The boundaries of the site do not limit the responsibility of the Contractor to perform the Work in its entirety. Make utility connections as indicated. The Contractor's superintendent must be present at each of the sites whenever any Work is being performed.

F. Matching: Where matching is indicated, the Architect shall be the sole and final judge of what is an acceptable match.

G. Observation: Notify the Architect and authorities having jurisdiction at least thirty-six hours in advance of concealing any Work.

H. Utilities: Prior to interrupting utilities, services or facilities, notify the utility owners and obtain their written approval.

I. Furnishings, Fixtures, and Equipment: Cooperate and permit the Owner to install his furnishings and equipment during the progress of the Work. Owner's installation of furnishings or equipment does not signify Owner's acceptance of any portion of the Work.

J. Clean-Up: Clean-up all waste at least once a week, remove from site regularly, and legally dispose of off-site.
K. Installer's Acceptance of Conditions: All installers shall inspect substrates and conditions under which Work is to be executed and shall report in writing to the Contractor all conditions detrimental to the proper execution and completion of the Work. Do not proceed with Work until unsatisfactory conditions are corrected. Beginning Work means installer accepts previous Work and conditions.

L. Documentation: The Contractor shall be responsible for providing and maintaining filing, reporting, Submittals, RFI's, Payment Requisitions, Schedules, Change Proposals, Change Orders, and the like for the project.

M. Management and Financial Records: Management and financial records shall be maintained by the Contractor pursuant to M.G.L. c 30 § 39 R.

N. Provide noise and dust control procedures in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

1.15 SPECIAL PROJECT CONDITIONS

A. The Contractor shall undertake every possible measure to prevent damage of any kind to any portion of existing surrounding properties or areas.

B. The Contractor is required to exercise all possible care in the conduct of any Work which would affect surrounding properties and occupied areas and to be aware of the potential for damage. The Contractor shall be prepared to stop any Work immediately which is deemed to cause deleterious affects to adjacent areas.

C. The Contractor shall be held responsible for any damage to surrounding properties and occupied areas resulting from his failure to exercise care during the course of construction.

1.16 PROTECTION OF EXISTING UTILITIES

A. The Contractor shall schedule, execute and pay all costs associated with implementation of all requirements related to disconnection or interruption of existing public or private utility services in accordance with requirements of local authorities having jurisdiction, including but not limited to the following:

1. City of New Bedford Police Department
2. City of New Bedford Fire Department
3. City of New Bedford Department of Public Works
4. City of New Bedford Water Department
5. Local Telephone Provider
6. Local Natural Gas Provider
7. Local Cable TV Provider
8. Dig Safe

B. Protect existing utilities which remain from damage due to construction operations. Identify locations of utilities with temporary markers.

C. The Contractor shall be responsible for determining locations of underground structures and utilities, including but not limited to: water, sewer, gas, electric, telephone, and cable TV. Utility services to adjacent buildings shall be maintained without interruption, unless otherwise authorized in writing by the Architect. Utilities located in public ways surrounding the Project site shall be protected from damage related to the Work of this Section. All costs related to repair or replacement of damage to existing utilities not called for to be altered under the Work of this Contract shall be paid by the Contractor. No excavation in a public street or way, or in any public or private place, shall take place prior to verification of the location of all underground utilities by DIG SAFE.

D. Place markers to indicate locations of disconnected services and identify service lines and capping locations on Project Record Documents.
1.17 Warranties
A. The Work of this Contract, including Substantial Completion, will be completed in two (2) Phases. The Contractor shall be responsible for providing full manufacturer warranties in accordance with requirements of individual trade Sections for specific product warranty requirements. Because of overlapping nature of the required construction Phases, the Contractor shall be responsible for providing manufacturer warranties, the Effective Starting Date of which, shall commence upon Substantial Completion of the respective Phase of the Work of the Contract, as described in the Contract Documents, and shall run for the warranty period indicated in the respective trade Section.

B. Procurement: Where a warranty is required, do not purchase or subcontract for materials or Work until it has been determined that parties required to countersign warranties are willing to do so.

C. Warranty Forms: Submit written warranty to Owner through Architect for approval prior to execution. Furnish 2 copies of executed warranty to Owner for his records; furnish 2 additional conformed copies where required for maintenance manual.

D. Work Covered: Contractor shall remove and replace other Work of project which has been damaged as a result of failure of warranted Work or equipment, or which must be removed and replaced to provide access to Work under warranty. Unless otherwise specified, warranty shall cover full cost of replacement or repair, and shall not be pro-rated on basis of useful service life.

E. Warranty Extensions: Work repaired or replaced under warranty shall be warranted until the original warranty expiration date or for ninety days whichever is later in time.

1.18 Delivery, Storage, Handling, & Installation Conditions
A. Manufacturer's Instructions: Strictly comply with manufacturer's instructions and recommendations and prevent damage, deterioration and loss, including theft.

B. Minimize long-term storage of products at the site. Maintain environmental conditions, temperature, ventilation, and humidity within range permitted by manufacturers of materials and products used.

1.19 Labels
A. Labels, Trademarks, & Trade Names: Locate required labels on inconspicuous surfaces (not typically visible to the public). No manufacturer labels, nameplates, trademarks, or other identifying markings shall be located on surfaces visible to the public. Any such markings shall be removed and damage repaired, or item replaced, at the discretion of the Architect. Provide permanent data plate on each item of mechanical equipment stating manufacturer, model, serial number, capacity, ratings and all other essential data.

1.20 Municipal Police Services
A. The Contractor shall make all necessary arrangements with the City of New Bedford Police Department in advance of times when regular off-duty, or reserve, police officers will be needed for traffic control protection, due to operations performed under this Contract. Officers shall be compensated, by the Contractor, in accordance with City of New Bedford wage rates for such services. Extend the Workman's compensation Insurance and Employer's Liability Insurance, required under the General Contract, to cover police used on the project.

1.21 Welding, Cutting, and Burning Procedures
A. Purpose
1. The purpose of this procedure is to provide minimum standards to prevent loss of life and property from fire during welding, cutting or burning processes involving the use of oxygen-fuel gas and electric arc cutting and welding equipment.

B. General Requirements
1. In the performance of welding, cutting and burning operations, only approved equipment shall be used and the equipment shall be installed and operated in accordance with OSHA standards, the manufacturer's instructions, and nationally recognized good practice.
2. A "Hot Work" permit for welding, cutting, burning or spark producing operations shall not be issued unless the individual in charge of performing such operations is deemed capable of doing such work in a safe manner by the Contractor's Safety Representative. Demonstration of knowledge of fire safety requirements and this welding and cutting procedure in addition to the equipment manufacturer's operational instructions shall constitute acceptable evidence of compliance.

3. A fire watch shall be provided by the Contractor or the Filed-Subcontractor's for their respective work to safeguard against the ignition of any material by the welding, cutting or burning operation, to make use of portable fire extinguishers or fire hose and to perform similar fire prevention and fire protection duties. The fire watch shall remain on the job at least 30 minutes after the "hot-work" including but not limited to welding or cutting operations have been completed to ensure that no fire exists. A signed inspection report attesting to that fact shall be filed and available for inspection by the local Fire Department.

4. A record shall be maintained by the responsible Contractor and Filed-Subcontractor Safety Representative of all locations where welding or cutting operations are performed. The record shall state the name of the assigned fire watch or watches and the length of time for which the fire watch standby was continued after work was completed (a minimum of 30 minutes). It shall include the date, time, and specific location at which work was done and describe the work, fire protection provided, and special precautions taken. Individual job authorizations shall be kept available always for inspection by the local Fire Department or the Owner's Representative. The assigned fire watch or fire watches shall sign the work authorization attesting to the fact that no fire existed after the work ceased and the standby period had passed.

5. Where welding, cutting or burning is done near walls, partitions, ceiling or roof of combustible construction, fire resistant shields or guards shall be provided to prevent ignition. When welding, cutting or burning is to be done on a metal wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side due to conduction of radiation. A fire watch shall be required on the other side of the exposed wall, partition, ceiling or roof if there is any danger of the welding, cutting or burning on one side to result in ignition of materials or structure on the unexposed side. Welding, cutting or burning shall not be attempted on a metal partition wall or on partitions of combustible sandwich-type panel construction.

C. FIRE SAFETY REQUIREMENTS

1. Cutting or welding operations shall be performed only in areas that have been protected against the ignition and spread of fire.

2. Within the confines of a Contractor and Filed-Subcontractor's work area welding, cutting or burning shall be done in specific areas designed and approved for such work as a maintenance shop, an outside location or a detached structure which shall be of noncombustible or fire resistive construction.

3. When work cannot be moved as in most construction or structural modification activity, the area shall be made fire safe by removing all combustible material within distance of 35 feet and all combustible material from beneath the location where welding, cutting or burning is to be performed.

4. When work cannot be relocated and combustible material cannot be feasibly relocated, all combustible material exposed within 35 feet horizontally or beneath the welding, cutting or burning operation or within 35 feet of exposed floor, ceiling or wall openings shall meet the following requirements:
   a. Such combustible construction or material shall be protected from possible sparks, hot metal or oxidized by fire resistive shields or noncombustible covers as required by the Massport Fire Rescue Department.
   b. Such floor, ceiling or wall openings shall be protected by fire resistive shields and openings or cracks in walls, floors or ducts shall be tightly covered to prevent the passage of sparks or slag to adjacent areas.

5. At least one portable fire extinguisher having a rating of not less than 4-A:60-B:C shall be kept at the location where welding, cutting or burning is done and at least one portable fire extinguisher having a rating of not less than 2-A:10-B:C shall be attached to all portable welding carts.

6. Welding, cutting or burning shall not be done in or near rooms or locations where flammable gases, liquids or vapors, lint dust or loose combustible stocks are present when sparks or hot metal from the welding, cutting or burning operations may cause ignition or explosion of such materials.

7. Welding, cutting or burning shall not be performed in the presence of explosive atmospheres or on containers, equipment or in hollow spaces or cavities which contain or have contained flammable fluids, gases or solids until these containers or equipment have been thoroughly cleaned, inverted or purged.
8. Sprinkler protection shall not be shut off while welding, cutting or burning work is being performed. When welding, cutting or burning work is being done close to automatic sprinkler heads, noncombustible board products or damp cloth guards shall be used to shield the individual heads, but shall be removed when the work is completed.

9. Where a sprinkler system will be impaired or rendered inoperative for any reason, this shall be noted in the application for permit so that all necessary precautions may be taken as required by the local Fire Department.

10. Hot tapping of other welding, cutting or burning on a flammable gas or liquid transmission or distribution utility pipe line shall be qualified to perform such work.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION
SECTION 01 10 90
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. All the Contract Documents, including Drawings, General and Supplementary Conditions and Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
A. The Work of this Section includes, but is not limited to, the following:
   1. All cutting, fitting, and patching required to complete the Work of this Contract.
   2. Making all parts of the Work fit together properly
   3. Uncovering portions of the Work to provide for installation of ill-timed Work
   4. Removal and replacement of defective Work
   5. Removal and replacement of Work not conforming to requirements of Contract Documents
   6. Removal of samples of installed Work as specified for testing
   7. Providing routine penetrations of non-structural surfaces for installation of ductwork, piping and electrical conduit.

1.03 RELATED WORK SPECIFIED ELSEWHERE
A. Carefully examine all of the Contract Documents for requirements which affect the Work of this Section.
B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 – Painting
   6. Section 22 00 00 - Plumbing

1.04 QUALITY ASSURANCE
A. Requirements for Structural Work: Do not cut and patch structural Work without prior approval of a structural engineer registered in the State of Massachusetts.
B. Operational and Safety Limitations: Do not cut and patch operational elements or safety related components in a manner that would result in a reduction of their capacity to perform in the manner intended, including energy performance, or that would result in increased maintenance, or decreased operational life or decreased safety.

1.05 SUBMITTALS
A. Procedural Proposal for Cutting and Patching: Where prior approval of cutting and patching is required, submit proposed procedures for this Work well in advance of the time Work shall be performed and request approval to proceed. Include the following information, as applicable, in the submittal.
C. List products to be used and firms that shall perform Work.
D. Give dates when Work is expected to be performed.
E. List utilities that shall be disturbed or otherwise be affected by Work, including those that shall be relocated and those that shall be out-of-service temporarily. Indicate how long utility service shall be disrupted.
F. Approval by the Architect to proceed with cutting and patching Work does not waive the right to later require complete removal and replacement of Work found to be cut and patched in an unsatisfactory manner.

G. Submit a written request for approval to Architect well in advance of executing any cutting or alteration which effects:
   1. The structural value or integrity of any element of the Project;
   2. The integrity or effectiveness of weather-exposed or moisture resistant elements or systems.
   3. The efficiency, operational life, maintenance or safety of operational elements;
   4. The visual qualities of sight-exposed elements.

H. The request shall include the following:
   1. Description of the effected Work, its’ proposed extent, and the reason it cannot be avoided.
   2. The necessity for cutting, alteration or excavation.
   3. The effect on the structural or weatherproof integrity of the Project.
   4. Description of the proposed Work:
      a. The scope of cutting, patching, alteration, or excavation.
      b. The trades who shall execute the Work.
      c. Products proposed to be used.
      d. The extent of refinishing to be done.
   5. Alternates to cutting and patching
   6. Cost proposal, when applicable
   7. List utilities that shall be disturbed or affected, including those that shall be relocated and this that shall be temporarily out of service. Indicate how long service shall be disrupted.
   8. Indicate dates when cutting and patching are to be performed.

1.06 QUALITY ASSURANCE

A. Requirements for Structural Work:
   1. Do not cut and patch structural elements in a manner that would reduce their load carrying capacity or load deflecting ratio.
   2. Obtain Architect and Engineer approval prior to cutting and patching of the following:
      a. Bearing and retaining walls
      b. Structural concrete
      c. Structural steel
      d. Structural deck
      e. Miscellaneous structural metals
      f. Equipment supports
      g. Piping, vessels and equipment

1.07 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Except as otherwise indicated, or directed by the Architect, use materials for patching that are identical to existing materials to remain. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials for cutting and patching that shall result in equal-or-better performance characteristics.
PART 3 - EXECUTION

3.01 INSPECTION
   A. Before cutting, examine the surface to be cut and patched and the conditions under which the Work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered notify the Architect immediately. Execute cutting (including excavation) fitting or patching of Work required to: make several parts fit properly; uncover Work to provide for installation or ill-timed Work; remove and replace defective Work; remove and replace Work not conforming to requirements of Contract Documents.

3.02 PREPARATION
   A. Temporary Support: To prevent failure provide temporary support of Work to be cut.
   B. Protection: Protect other Work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for that part of the project that may be exposed during cutting and patching operations.

3.03 PERFORMANCE
   A. General: Except as otherwise indicated or approved by the Architect, proceed with cutting and patching at the earliest feasible time and complete Work without delay.
   B. Cutting: Cut the Work using methods that are least likely to damage Work to be retained or adjoining Work. Where possible review proposed procedures with the original installer; comply with original installer’s recommendations.
   C. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as a carborundum saw or core drill to insure a neat hole. Cut holes and slots neatly to size required with minimum disturbance of adjacent Work. To avoid marring existing finished surfaces, cut or drill from exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
   D. Patching: Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the Work.
   E. Where feasible, inspect and test patched areas to demonstrate integrity of Work.
   F. Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining Work in a manner, which shall eliminate evidence of patching and refinishing.
   G. Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coat.

3.04 CLEANING
   A. Thoroughly clean areas and spaces where Work is performed or used as access to Work. Remove completely, point mortar, oils, putty, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.
   B. All waste and debris caused by the Work of this Section shall be removed and legally disposed of daily, in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART I - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section shall include, but not be limited to, the following:
      1. Administrative and procedural requirements for handling and processing Contract modifications.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specifications Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 MINOR CHANGES IN THE WORK
   A. Supplemental instructions authorizing minor changes the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Architect on AIA form G710, Architects Supplemental Instructions.

1.05 CHANGE ORDER PROPOSAL REQUESTS
   A. Prior to issuing instructions for changes in the Work which the Architect judges will require adjustment to the Contract Sum or Contract Time, the Architect may, at its discretion, request the Contractor to prepare an estimate of the amount of the adjustment.

   B. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of the proposed change and supplemental or revised Drawings and Specifications.
      1. Respond to the request by submitting a proposal to the Architect for the Owner’s review within 21 calendar days of receipt of the proposal request, unless a shorter period for response is indicated in the proposal request.
      2. Include in the proposal, an estimate of cost necessary to execute the proposed change and a statement indicating the effect the proposed change, in the Work will have on the Contract time. Include the supporting data listed in paragraph F, below.
      3. Proposal requests are not an instruction either to stop Work in progress, or to execute the proposed change. Continue with Work in progress that is not affected by the proposed change.

   C. Contractor-Initiated Change Order Requests: When latent or other unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
      1. Notify the Architect in writing of proposed changes within 21 calendar days after the occurrence of the event of observance of the condition giving rise to the change proposal request.
2. Submit the change-order proposal request within 21 calendar days after delivering such notification to the Architect.

3. Include a statement outlining the masons for the charge and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time. Include the supporting data listed in paragraph F, below.

4. Comply with requirements in Section "Product Substitutions" if the proposed change in the Work requires the substitution of one product or system for a product or system specified.

D. No extensions of Contract Time nor increase in the Contract Sum will be considered if the additional time or additional cost is a consequence of the Contractor's failure to submit an estimate within the time stipulated, regardless of whether the proposal request or change order request was initiated by the Owner or the Contractor.


1.06 CHANGE ORDERS

A. The following requirements shall apply to both Owner-initiated proposal requests and Contractor-initiated Change Order request.

1. Submit a complete and accurate Price to the Architect and the Construction Manager for review. Incomplete proposals will be returned to the Contractor without review, and shall be completed by the Contractor and returned to the Architect and the Construction Manager within the same time: period specified above for submittal of proposals; there shall be no extension of time for such re-submittals.

2. The Architect and the Construction Manager will review and act on the Contractor's Proposal within 21 days of receipt. The Architect's review, at the Architects discretion, may include consideration of Costs listed in Means "Construction Cost Data" or a similar data base, and/or on conversations with local manufacturers and suppliers.

3. Include applicable taxes, delivery charges, equipment rental, and amounts of trade, discounts.

4. Itemize Work which is to be performed by employees of the Contractor.

5. For Work which is not to be performed by employees of the Contractor, submit pricing on the letterhead of the proposed Subcontractor, fabricator or supplier.

6. Itemize General Conditions Work included in the proposed cost of the change; a lump sum or percentage of the cost will not be accepted.

7. Prices shall remain valid for a minimum of 90 days from the date of the initial pricing approval to execution of the Change Order by the Owner.

B. Consideration and Acceptance of Price Proposal: The following procedures shall apply to both Owner-Initiated proposal requests and Contractor-initiated Change Order requests:

1. Submit a complete and accurate Price to the Architect for review. Incomplete proposals will be returned to the Contractor without review, and shall be completed by the Contractor and returned to the Architect within the same time: period specified above for submittal of proposals; there shall be no extension of time for such resubmittals.

2. The Architect will review and act on the Contractor's Proposal within 21 days of receipt. The Architect's review, at the Architects discretion, may include consideration of Costs listed in Means "Construction Cost Data" or a similar database, and/or on conversations with local manufacturers and suppliers.

3. Within 10 calendar days after receipt of the Architect's comments, make changes to the cost proposal in response to the Architects comments and resubmit for approval.

4. The Architect will promptly notify the Contractor whether the pricing is accepted or will direct the Contractor to make additional changes.

5. When the Contractor's proposal is approved by the Architect the Architect will prepare a Change Order for execution by the Owner, the Architect and the Contractor.
1.07 CONSTRUCTION CHANGE DIRECTIVE
   A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal, the Architect may issue a Construction Change Directive on AIA Form G714, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
      1. The Construction Change Directive will contain a description of the change in the Work and designate the method to be followed to determine change in the Contract Sum or Contract Time, in accordance with Article 7.3 of the General Conditions.
   B. Documentation: If the Construction Change Directive is for Work which is to be compensated on the basis of Time and Materials, the Contractor shall maintain detailed daily records, verified with the Architect on a time and material basis of Work required by the Construction Change Directive.
      1. After completion of the change, the Contractor shall submit an itemized account, including supporting data, as may be required by the Architect and Construction Manager, to substantiate cost and time adjustments to the Contract.

1.08 CHANGE ORDER PROCEDURES
   A. Upon the Owner's approval of a Change Order Proposal Request, the Architect will issue a Change Order for signatures of the Owner and Contractor on AIA Form G701, as provided in the Conditions of the Contract.
   B. The Contractor shall promptly execute the Change Order.
   C. The Architect will present the Change Order to the Owner for review and approval. Upon Owner approval, the Change Order will then be forwarded by the Architect to the City of New Bedford DFFM Department for approval during its next regularly scheduled meeting subsequent to the date of the Change Order. A copy of the fully approved and executed Change Order will then be forwarded to all parties for the record.

1.09 PRE-INSTALLATION MEETING
   A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

1.10 COMPUTING EQUITABLE ADJUSTMENTS
   A. 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 as provided in subparagraph 1.10C, Items 3a through 3e, and the Contractor will provide the Owner with a written notice to that effect.
   B. The Contractor shall provide the Owner and the Architect 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.
      1. 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.
   C. 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:
      1. Fixed price basis, provided that the fixed price shall be inclusive of items (3a) through (3e) (below) and shall be computed in accordance with those provisions;
      2. 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;
3. 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 (3a) through (3e):
   a. The cost at prevailing rates for direct labor, material, supplies and use of equipment exclusive of hand tools;
   b. Plus cost of Workers Compensation Insurance, union fringe benefits, federal unemployment taxes, Federal Social Security, and Massachusetts Unemployment Compensation, the sum of which shall be no more than 20% of the total labor rate in Item (3a), or, as an alternative the Contractor may elect to use a flat twenty (20%) percent of the total labor rate in item (3a);
   c. Plus fifteen (15%) percent of item (3a) 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);
   d. 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;
   e. 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.

4. 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.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION
SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART I - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, the following:
      1. Administrative and supervisory requirements necessary for Project coordination
      2. Request for Information (RFI's)
      3. Coordination of the work and coordination among separate contractors
      4. Administrative and Supervisory personnel
      5. Project meetings
      6. Field measurements

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which effect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 REQUESTS FOR INFORMATION
   A. Contractor's responsibility for review of Contract Documents is set forth in the General and Supplementary Conditions.
   B. Study the Contract Documents applicable to each component of the Work sufficiently in advance of the time such Work will be ordered, fabricated or installed, so that if additional information or instructions are needed, the Architect will have sufficient time to respond such requests before the information is needed by the Contractor; allow at least 15 calendar days for the Architect to respond.
   C. When requesting additional Drawings, Specifications, or instructions, submit the request in writing and clearly state what information is required. Include a reference to the drawing sheet and detail number, and/or the specification Section and paragraph number requiring clarification, or give other similar precise information to direct the Architect's attention to the matter and to show that the Contractor has made a conscientious effort to locate the information and understand the information presented in the Contract Documents. Requests for information not accompanied by a precise, detailed reference to the Contract Documents will be returned to the Contractor unanswered for revision. Requests for information regarding information which is clearly shown or stated in the Contract Documents, will be returned to the Contractor unanswered. By submitting Requests for Information, the Contractor represents that the Contractor has determined and verified materials, field measurements, and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within each Request for Information with the requirements of the Work and of the Contract Documents. By submitting Requests for Information, the Contractor further represents that the Contractor has reviewed each Request for Information as it relates to the rest of the Work

Project Management and Coordination
01 31 00 - 1
and Contract Documents. The Architect's responses to the Contractor's Requests for Information shall not relieve the Contractor of the obligations of Paragraphs 3.3, 3.5, 3.12, and 4.2 of the General & Supplementary General Instructions.

1.05 COORDINATION

A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work.
   1. Schedule construction activities in the sequence required to obtain the best results. When best sequence cannot be achieved, make provisions to accommodate items scheduled for later installation.
   2. Where space is tight, coordinate installation of different components to provide maximum accessibility for required maintenance, service and repair.
   3. Coordinate construction activities under this Contract with separate contractors performing related work.

B. Where necessary, prepare memoranda outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings. Transmit to the Architect and distribute to all other parties involved.
   1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

C. Coordinate administrative activities with construction activities to avoid conflicts and ensure orderly progress of the Work. Examples of administrative activities which must be carried out in a timely fashion to facilitate timely progress of the work include, but without limitation: preparation of schedules, delivery and processing of submittals, scheduling meetings.

D. Provide Coordination Drawings in accordance with requirements of Section 01 33 00 – Submittal Procedures. The Contractor shall provide the services of a designated on-site representative to oversee implementation of Work related to completion of information contained in the Coordination Drawings, in accordance with requirements of the Contract Documents.

1.06 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

A. Employ a competent superintendent, reasonably acceptable to the Owner, and necessary assistants. Require these supervisory personnel to be in-attendance at the project site full time during the progress of the work from the beginning of the Work, until the date of Substantial Completion, and for such additional time thereafter as the Architect may determine to be necessary for the expeditious completion of the Work.
   1. "From the beginning of the Work" means before any temporary construction or sitework begins, including staking out the site, placing of erosion control devices, site clearing, or cutting of trees.
   2. Provide the superintendent with a cellular phone or paging device, so that he or she can be reached at all times.
   3. The Owner reserves the right to request replacement of the Contractor's Superintendent for just cause, in accordance with requirements of the Contract Documents.

B. Agency: The Contractor's superintendent shall attend the regularly scheduled project meetings and special project meetings as the Contractors agent, and shall be empowered to make binding commitments on all matters to be discussed, including costs, payments, change orders, time schedules, and manpower. Notices required under the Contract may be served on the Contractor's superintendent.

1.07 PROJECT MEETINGS

A. Project Meetings: Project meetings are specified in Section 01 00 00 – General Requirements.

B. Subcontractor Progress Meetings: In addition to meetings called by the Owner or Architect, schedule and administer weekly subcontractor progress meetings.
   1. Special Meetings; Schedule and attend additional informational and problem solving meetings as required by progress of the work or requested by the Owner or the Architect to discuss non-routine issues. The Architect will prepare and distribute agenda, record and distribute the minutes.
1.08 REVIEW OF WORK BY SUBCONTRACTORS
A. Before permitting any subcontractor to begin work on the project site, meet with the subcontractor to review the work ahead. As a minimum, review the Contract Documents for work pertaining to that subcontractor; review the subcontractor's shop drawings, examine existing conditions affecting the work of the subcontractor, and review environmental and other project conditions for conformance to specified requirements.

1.09 FIELD MEASUREMENTS
A. Before beginning the Work, check and compare critical dimensions at the site with those shown on the Drawings, and immediately bring discrepancies to the attention of the Architect and request resolution.

B. As the work progresses, continue to check and compare dimensions at the site with those shown on the Drawings before ordering materials, in preparation for producing shop drawings, before beginning fabrication, before ordering materials, and before cutting and fitting materials at the site, and at other times as frequently as required to ensure that the work will be fabricated to the right size(s) and will fit together correctly in the field. If discrepancies between site dimensions and Drawings are detected, immediately notify the Architect in writing, describing the nature and extent of the discrepancy, and attaching sketches or annotated copies of the plans if necessary to make the observation clear.

C. Mark on shop drawings, prior to submission to the Architect relevant field dimensions and note conflicts with the submitted material.

1.10 SUBMITTALS
A. Provide submittals in accordance with requirements of Section 01 33 00 – Submittal Procedures, or as otherwise required for completion and transmittal of all documents in accordance with requirements of the Contract Documents.

1.11 PRE-INSTALLATION MEETING
A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION
SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, the following:
      1. Administrative and procedural requirements for submittal of Shop Drawings, Product Data, Samples, and other required submittals as called for in the Contract Documents.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 - GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 GENERAL REQUIREMENTS
   A. Electronic Submittal Procedures
      1. General Requirements
         a. Shop Drawings and Product Data submittals shall be transmitted to the Architect in electronic (PDF) format.
         b. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
         c. The electronic submittal process is not intended for submittal of color samples, color charts, or physical material samples.
      2. Submittal Procedures
         a. The Contractor may use any or all of the following options for submittal preparation:
            1) Subcontractors and suppliers provide PDF submittals to the Contractor.
            2) Subcontractors and suppliers provide paper submittals to the Contractor who electronically scans and converts to PDF format.
            3) Subcontractors and suppliers provide paper submittals converted to PDF format.
         b. The Contractor shall review and apply electronic stamp certifying that the submittal complies with requirements of the Contract Documents, including verification of manufacturer and product, dimensions, and coordination of information required for integration into all related components of the Work.
         c. The Architect/Engineer will notify the Contractor by e-mail of completed review and will make review comments available.
         d. The Contractor is responsible for distribution of reviewed submittals to all subcontractors and suppliers.
e. The Contractor shall submit paper copies of reviewed submittals at Project closeout in accordance with requirements of Section 01 77 00 – Contract Closeout Procedures, Section 01 78 39 – Project Record Documents.

B. Prior to submittal of any shop drawings, product data or samples the Contractor shall submit to the Architect for approval, within 15 business days after being awarded the Contract, a complete submittal log and a schedule of submissions of shop drawings and miscellaneous Work-related submittals which corresponds to the requirements of the CPM schedule and the General Contract. No Submittals will be processed prior to the receipt of such schedule for the project. The schedules shall indicate, by trade, the date by which final approval of each item must be obtained, and shall be revised as required by the conditions of the Work, subject to the Architect’s approval. The Architect’s review period, including those of his consultants, will not exceed 30 days from the established date of each submission of shop drawings, product data, and samples, plus the additional time, if any, for distribution by the Contractor and receipt of submissions by the Architect. The Contractor shall be required to strictly adhere to the dates established in the schedule. The information in this submittal schedule shall also be included in the Contractor’s CPM schedule for the project submitted in accordance with Section 01 51 11 - Progress Schedule.

C. Following approval of submittal log and schedule, submit to the Architect, shop drawings, product data and samples required by each specification Section.

D. When the phrase “By Others” (or similar expression) appears on a submittal and refers to any of the Contract Work, it shall be interpreted to mean “by the General Contractor or another Subcontractor”. The Architect’s review of any submittal containing such phrase shall not be considered permission to delete any Work from the Contract.

E. Review and approval of shop drawings by the Architect does not indicate approval of changes in the Contract, Time or Cost

1.05 SHOP DRAWINGS

A. Original drawings, prepared by The Contractor, Subcontractor, Supplier or distributor which illustrate some portion of the Work; showing fabrication, layout, setting or erection details.
   1. Prepare drawings in a clear and thorough manner,
   2. Identify details by reference to sheet and detail numbers shown on Contract Drawings

1.06 PRODUCT DATA

A. Manufacturer's standard schematic drawings:
   1. Modify drawings to delete information which is not applicable to project.
   2. Supplement standard information to provide additional information applicable to project.

B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
   1. Clearly mark each copy to identify pertinent materials, products or models.
   2. Show dimensions and clearances required.
   3. Show performance characteristics and capacities.
   4. Show wiring diagrams and controls.

1.07 SAMPLES

A. Physical examples to illustrate materials, products, units of Work, equipment or Workmanship, and to establish standards by which completed Work is to be judged.
   1. Office samples: Of sufficient size and quality to clearly illustrate:
      a. Functional characteristics of product or material, with integrally related parts and attachment devices.
      b. Full range of color.

1.08 CONTRACTOR RESPONSIBILITIES

A. Review Shop Drawings, Project Data and Samples prior to submission.
B. Verify:
   1. Field measurements
   2. Field construction criteria
   3. Catalog numbers and similar data

C. Coordinate each submittal with requirements of Work and of Contract Documents.

D. Contractor's responsibility for errors and omissions in submittals is not relieved by Architect review of submittals.

E. Contractor's responsibility for deviation in submittals is not relieved by Architect review of submittals, unless the Architect gives written acceptance of specific deviations.

F. Notify Architect/Engineer, in writing at time of submission, of deviations in submittals from requirements of Contract Documents.

G. Furnish miscellaneous submittals (non-administrative) including, but not limited to warranties, maintenance agreements, Workmanship bonds, project photographs, survey data and reports, physical Work records, quality testing and certifying reports, copies of industry standards, record Documents, field measurement data, operating and maintenance materials, overrun stock, and similar information, devices and materials applicable to the Work.

1.09 SUBMISSION REQUIREMENTS

A. Schedule submissions to permit time for review and resubmission.

B. Submit number of Samples specified in each of specification Sections.

C. Accompany submittals with transmittal letter, in duplicate, containing:
   1. Date
   2. Project title and number
   3. Contractor's name and address
   4. Specification Section number, paragraph and item number
   5. The number of each Shop Drawing, Product Datum and Sample submitted
   6. Notification of deviations from Contract Documents
   7. Manufacturer's name or source of supply
   8. Trade name
   9. Catalog number
   10. Contractor's certification that he has checked all samples for compliance with Contract requirements and availability of material
   11. Name and address of Architect, Subcontractor, and supplier
   12. Other pertinent data

D. Submittals shall include:
   1. Date and revision dates
   2. Project title and number
   3. The names of:
      a. Architect
      b. Contractor
      c. Subcontractor
      d. Supplier
      e. Manufacturer
      f. Separate detailer when permitted
   4. Identification of product or material.
   5. Relation to adjacent structure or materials.
   6. Field Dimensions, clearly identified as such.
   7. Specification Section number, paragraph and item number.
   8. Applicable standards, such as ASTM number or Federal Specification.
   9. A blank space, 3 in. x 6 in., for Architect/Engineer's stamp.
Submittal Procedures

11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract Documents.

E. The Architect will complete the review and return the record sepias and product data to the Contractor.

F. The Contractor shall be fully responsible for delay in the delivery of materials or progress of Work caused by late review of shop drawings due to failure of the Contractor to submit, revise, or resubmit shop drawings in adequate time to allow the Architect reasonable time (up to 10 calendar days) for normal checking and processing of each submission or resubmission.

G. The Contractor shall assume full liability for delay attributed to insufficient time for delivery and/or installation of material or performance of the Work when approval of pertinent shop drawings and product data is withheld due to failure of the Contractor to submit, revise, or resubmit items in adequate time to allow the Architect reasonable time, not to exceed thirty (30) calendar days, for normal checking and processing of each submission or resubmission.

1.10 ARCHITECTS REVIEW ACTIONS

A. Submittals Marked "Reviewed as Required by Construction Contract Documents And Approved":
1. Submittals which require no corrections by the Architect will be marked "Reviewed as Required by Contract Documents and Approved". Reviewed as required by Contract Documents and approved, but only for conformance to the design concept of the Work, and subject to further limitations and requirements contained in the Construction Documents.

B. Submittals Marked "Furnish as Corrected":
1. Submittals which require only a minor amount of correcting will be marked "Furnish as Corrected". This mark means that checking is complete and all corrections are obvious without ambiguity. Fabrication will be allowed on Work "Furnish as Corrected", provided such action will expedite construction and noted corrections are adhered to. If fabrication is not made strictly in accordane with corrections noted, the item shall be rejected in the field and the Contractor will be required to replace such Work and that of other Contractor's, in accordance with corrected submittals, at his own expense.

C. Submittals Marked "Revise and Resubmit":
1. When submittals are marked "Revise and Resubmit" details of items noted by Architect shall be further clarified before full approval can be given and noted items must not be fabricated until corrected and approved.

D. Submittals Marked "Rejected":
1. When submittals are contrary to Contract requirements or too many corrections are required, they shall be marked "Rejected". No Work shall be fabricated under this mark. The Architect shall list his reasons for non-approval on the submittal or in a transmittal letter accompanying their return. The submittals must be corrected and resubmitted for approval.

E. Submittals Marked "Review":
1. Submittals sent for information only will be marked "Reviewed". No approval or disapproval is given unless requested by Contractor.

F. Return of Submittals To Contractor Unchecked:
1. The Architect may return submittals to the Contractor unchecked for any of the following reasons, in which case the submission will not be considered official:
   a. Submittal in violation of specified procedure or product
   b. Inadequately checked by Contractor
   c. Inaccurate and in substantial error

1.11 RESUBMISSION REQUIREMENTS

A. Shop Drawings:
1. Revise initial drawings as required and resubmit as specified for initial submittal.
2. Indicate on drawings any changes which have been made other than those requested by Architect/Engineer.

B. Product Data and Samples: Submit new data and samples as required for initial submittal.

1.12 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

A. Distribute copies of Shop Drawings and Product Data which carry Architect/Engineer’s stamp, to:
   1. Contractor’s Job site file
   2. Record Documents file
   3. Subcontractors and/or suppliers
   4. Owner
   5. Testing Agency (where applicable)

B. Distribute samples as directed.

1.13 ARCHITECT / ENGINEER’S DUTIES

A. Review submittals with reasonable promptness.

B. Review for:
   1. Design concept of project
   2. Information given in Contract Documents

C. Review of separate item does not constitute review of an assembly in which item functions.

D. Affix stamp and initials or signature certifying to review of submittal.

E. Return submittals to Contractor for distribution.

1.14 DAILY CONSTRUCTION REPORTS

A. Prepare daily construction reports, recording the following information concerning events at the site and submit copies to the Architect at weekly intervals.
   1. List of Subcontractors at the site
   2. Approximate count of personnel at the site
   3. High/low temperatures, general weather conditions
   4. Accidents and unusual events
   5. Meeting and significant events
   6. Stoppages and delays, shortages, losses
   7. Meter readings and similar recordings
   8. Emergency procedures
   9. Orders and requests of governing authorities
   10. Job modifications received and implemented
   11. Services connected, disconnected
   12. Equipment or system tests and start-ups
   13. Partial completion, occupancies
   14. Substantial completion authorization

1.15 EMERGENCY ADDRESSES

A. Within 15 days of Notice to Proceed, submit to the Owner and the Architect, in writing, the name, addresses and telephone numbers of key members of their organization including Superintendent and personnel at the site, to be contacted in the event of emergencies at the building site, which may occur during non-Working hours.

1.16 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.
PART 2 - PRODUCTS

2.01    SUBSTITUTIONS

A. Contractor's request for changes in products, materials and methods of construction required by Contract Documents are considered requests for "substitutions" and are subject to requirements specified under Section 01 60 00 – Product Requirements.

PART 3 - EXECUTION    NOT USED

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01- General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, the following:
      1. Administrative and procedural requirements for quality assurance and quality control.
      2. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with requirements of the Contract Document.
         a. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
         b. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with requirements of the Contract Documents.
         c. Requirements for Contractor to provide quality assurance and control services required by the Owner, Architect, or authorities having jurisdiction are not limited by provisions of this Section.
         d. Specific test and inspection requirements are not specified in this Section.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which effect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 DEFINITIONS
   A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
   B. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
   C. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
   D. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
E. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

F. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

G. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trades.

1.05 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.06 REPORTS AND DOCUMENTS

A. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
   1. Name, address, and telephone number of technical representative making report.
   2. Statement on condition of substrates and their acceptability for installation of product.
   3. Statement that products at Project site comply with requirements.
   4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
   5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
   6. Statement whether conditions, products, and installation will affect warranty.
   7. Other required items indicated in individual Specification Sections.

B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.07 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where
Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services
are defined as those performed for installations of the system, assembly, or product that are similar in material, design,
and extent to those indicated for this Project.

F. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained
and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in
material, design, and extent to those indicated for this Project.

G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is
trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material,
design, and extent to those indicated for this Project.

1.08 QUALITY CONTROL

A. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-
assembled components and equipment installation, including service connections. Report results in writing as
specified in Section 01 33 00 “Submittal Procedures.”

B. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and
inspect the Work. Manufacturer’s technical representative's services include participation in preinstallation
conferences, examination of substrates and conditions, verification of materials, observation of Installer activities,
inspection of completed portions of the Work, and submittal of written reports.

C. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide
quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply
with the Contract Documents.

1. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control
services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of
operations to permit assignment of personnel. Provide the following:

   a. Access to the Work.
   b. Incidental labor and facilities necessary to facilitate tests and inspections
   c. Adequate quantities of representative samples of materials that require testing and inspecting.
   d. Assist agency in obtaining samples.
   e. Facilities for storage and field curing of test samples.
   f. Delivery of samples to testing agencies as required
   g. Preliminary design mix proposed for use for material mixes that require control by testing agency. Security
      and protection for samples and for testing and inspecting equipment at Project site.
   h. Security and protection for samples and for testing and inspecting equipment at Project site.

2. Coordination: Coordinate sequence of activities to accommodate required quality assurance and control services
with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing
and inspecting.
   a. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.09 SUBMITTALS

A. Provide submittals in accordance with requirements of Section 01 33 00 – Submittal Procedures, or as otherwise
required for completion and transmittal of all documents required in accordance with requirements of the Contract
Documents.

1.10 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work,
maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The
meeting shall be attended by the General Contractor, Architect, and related Subcontractors.
PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
   1. Date test or inspection was conducted.
   2. Description of the Work tested or inspected.
   3. Date test or inspection results were transmitted to Architect.
   4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.02 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 51 00 – Cutting and Patching.
   2. Protect construction exposed by or for quality-control service activities.
   3. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION
SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART I - GENERAL

1.01 RELATED DOCUMENTS
A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
A. Provide, maintain, remove, and pay all costs related thereto, all temporary facilities included under the Work of this Section, or as otherwise required for progress and completion of the Work in accordance with requirements of the Contract Documents.
B. Coordinating and scheduling among all trades and Subcontractors, the furnishing and use of all temporary facilities for the Work in accordance with all Federal, State, and local governing rules and regulations.

1.03 RELATED WORK SPECIFIED ELSEWHERE
A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 – Painting
   6. Section 22 00 00 - Plumbing
C. Nothing in this Section is intended to limit types and amounts of temporary Work required, and no omission from this Section shall be recognized as an indication by the Architect that such temporary activity is not required for successful completion of the Work or compliance with requirements of the Contract Documents.

1.04 REQUIREMENTS OF REGULATORY AGENCIES
A. Provide and maintain all temporary facilities in compliance with governing rules, regulations, codes, ordinances and laws of agencies and utility companies having jurisdiction over Work involved in the project.
B. Be responsible for all temporary Work provided and obtain any necessary permits and inspections for such Work.
C. Do not interfere with normal use of streets in vicinity of project site accept as indicated on drawings and/or as necessary to execute required Work, and then only after proper arrangement has been made with applicable authorities, including traffic control.

1.05 FIELD OFFICES AND STORAGE SHEDS
A. The Owner will provide the use of an on-site Field Office that will include a Restroom and Electricity /Water.
B. The Contractor shall provide field offices and storage sheds as per the Contract. The storage of construction materials in the building are permitted, depending on the type of materials and the duration of expected storage, as determined by the Architect and Owner. All temporary structures shall be removed at Substantial Completion.
1.06 TEMPORARY SERVICES
A. Temporary Electricity and Lighting:
   1. The Contractor shall provide temporary wiring of a special nature, and power required to complete the Work in accordance with requirements of the Contract Documents.

B. Temporary Heat and Ventilation:
   1. The Contractor shall provide adequate ventilation of enclosed areas as required to disperse humidity and to prevent hazardous accumulation of dust, fumes, vapors or gasses.

C. Removal:
   1. Completely remove temporary materials and equipment when their use is no longer required.
   2. Clean and repair damage caused by temporary installations or used for temporary facilities.
   3. Restore permanent facilities used for temporary services to specified condition.
      a. 14 days prior to Substantial Completion, remove temporary lamps and install new lamps in all permanent light fixtures.

1.07 VEHICLE AND CONTRACTOR ACCESS AND TRAFFIC CONTROL
A. The General Contractor shall be responsible for all traffic control, including municipal police services, at streets adjacent to the Project site, as may be required to provide safe access and egress for Owner and construction related vehicles. Provide and maintain a suitable means of access to the Contract Work areas as necessary for vehicles and equipment of all trades requiring such access.

B. The General Contractor shall be responsible for all measures necessary to maintain public access at all times.

1.08 TEMPORARY PARKING
A. Parking for vehicles belonging to the General Contractor, Subcontractors, or other personnel providing services included under the Work of this Contract shall be the responsibility of the General Contractor and Subcontractors.

1.09 SCAFFOLDING, LADDERS, AND HOISTING FACILITIES
A. The General Contractor shall provide and maintain all temporary stairs, ramps, runways, chutes, ladders, staging, and hoists as required for proper execution of the Work in accordance with applicable requirements of Federal, State and Local Codes, except as otherwise indicated below. The construction, installation, and maintenance of such equipment shall be in accordance with applicable requirements of Federal, State and Local Codes.

B. The General Contractor shall provide means to safely enable access to all parts of Work by Architect, Owner, or other such person authorized to inspect Work.

1.10 TEMPORARY BARRICADES AND ENCLOSURES
A. The General Contractor shall provide temporary enclosure where indicated and where reasonably required to ensure adequate Workmanship and protection from weather, personnel, visitors, and unsatisfactory ambient conditions for the Work.
   1. Provide barricades as required for traffic control at streets adjacent to the Project site, as required to provide safe access and egress for Owner and construction related vehicles.

1.11 SECURITY AND PROTECTION PROVISIONS
A. The General Contractor shall provide temporary security and protection provisions including, but not be limited to, guard rails, fire protection, barricades, warning signs/lights, and similar provisions intended to minimize property loses, personal injuries and claims for damages at project site.
   1. Provide types, sizes, numbers and locations of fire extinguishers, as would be reasonably effective in extinguishing fires during early stages, by personnel at project site (minimum 2 per floor of each building). Provide type A extinguishers at locations of low-potential for either electrical or grease-oil-flammable liquids fires;
provide Type ABC dry chemical extinguishers at other locations; comply with recommendations of NFPA No. 10 “Standard for Portable Fire Extinguishers” and NFPA 241 “Standard for Safeguarding Construction, Alterations and Demolition Operations. Post warning and quick-instructions at each extinguisher location, and instruct all personnel at project site, at time of their first arrival, on proper use of extinguishers and other available facilities at project site. Post local fire department call number at project site.

a. Perform torch cutting and welding operations only when approved by the Contractor. Provide chemical extinguishers at all locations where such Work is in progress.

b. Maintain a fire watch of the interior and exterior of the facility for at least one hour after the Project’s daily quitting time when the following activities have been done: torching, welding or other activities capable of starting combustion.

1.12 HAZARDOUS MATERIALS

A. The General Contractor is solely responsible for all matters relating to hazardous or toxic materials and lawful removal of same from the site. If hazardous or toxic materials are indicated or discovered, properly inform governing authorities and abide by their requirements.

1.13 DUST AND NOISE CONTROL

A. The General Contractor shall use every effort and every means possible to minimize noise caused by his operations, which the Architect, Owner, or governing authorities may consider objectionable. The noise levels on the construction site will be controlled so that at no time will the noise level measured at the Limit of Work line shall exceed 70dB. The General Contractor shall provide Working machinery and equipment equipped with suitable mufflers and sound-deadening panels in accordance with the latest edition of the OSHA regulations. Compressors shall be equipped with silencers or mufflers on intake and exhaust lines. Wherever practical electricity shall be used for power to reduce noise. Dumping bins, hoppers and trucks used for disposal shall be lined with wood or other sound deadening material if required. Where required agencies have jurisdiction, certain noise-producing Work may have to be performed during specified periods only, further; the General Contractor and Subcontractors are required to comply with all applicable regulations.

1. Prior to the start of construction, the General Contractor shall submit to the Architect, a Noise Control Program for review where Work with high level of noise is anticipated to Work out plans to mitigate the noise impact, especially for Work anticipated to be done during normal work hours.

1.14 WEATHER PROTECTION

A. Hot Weather Protection: Use mortar within 1-1/2 hours after mixing. Discard all mortar over 1-1/2 hours old and all mortar that has stiffened due to hydration (setting).

B. Cold Weather Protection: The General Contractor shall strictly comply with recommendations of Brick Institute of America Technical Note No. 1a, Cold Weather Masonry Construction, Construction and Protection Recommendations and The Portland Cement Association. When the temperature is below 40°F temporary enclosures and heat shall be provided by the General Contractor and the following procedures shall be followed by the Masonry Subcontractor:

1. Cold Weather Protection:
   a. Preparation:
      1) Remove ice or snow formed on masonry bed by carefully applying heat until top surface is dry to touch.
      2) Remove frozen or damaged masonry.
      3) Sprinkle with heated water when brick suction exceeds 30 gm/min./30 sq. in.
         a) When units are above 32°F, heat water above 70°F.
         b) When units are below 32°F heat water above 130°F.
      4) Use dry masonry units.
      5) Do not use frozen units.

2. Construction requirements while Work is progressing:
   a. Air temperature 40°F to 32°F:
Temporary Facilities and Controls

01 50 00 - 4
1. The Work of this Contract shall be performed between the hours of 7:00 AM and 5:00 PM, Monday through Friday, and 9:00 AM and 4:00 PM on Saturday. Performance of the Work of this Contract shall not be allowed on Sunday or Holidays. Exceptions to the specified hours of Work shall be allowed in the event of an emergency, in coordination with the Owner.

B. The General Contractor shall coordinate all Work and extend full cooperation to Owner’s personnel and the Work of other trades.

C. The following rules and regulations will be required of all personnel providing services included under the Work of this Contract. No deviation or exception will be permitted without the express written approval of the Owner. The General Contractor shall take responsibility for ensuring all construction personnel adhere to and cooperate with the Owner in enforcing these responsibilities.

1. All Workers must be properly, permanently and visually identified.

2. All Workers shall maintain their actions in a professional and workmanlike manner while at the Project site. Failure to comply with the following restrictions shall be grounds for permanent removal from the list of authorized workers, as described above. Worker restrictions include, but are not limited to, the following:
   a. No abusive language
   b. No littering
   c. No lewd behavior
   d. No conduct otherwise deemed unacceptable by the Owner or Architect
   e. No smoking on Owner’s property, in accordance with State of Massachusetts law
   f. Consumption of alcoholic beverages on the job, or coming to Work in an intoxicated condition
   g. Possessing or consuming illegal drugs or any other illegal substance while working on the Project
   h. Using or removing Owner’s or Subcontractors’ possessions from the property without prior written authorization
   i. Violating any state, federal or city statues, rules, regulations, and the like while working on the Project
   j. Possessing firearms or explosives while Working on the Project
   k. Using Project facilities for jobs other than specific assignments directly related to the Work of this Project
   l. Physically abusing or harming an individual who Works at or visits the Project
   m. Duplication of any keys used in the existing or new building without prior written authorization by the Owner
   n. Providing building access at any time to anyone not directly working for the Contractor
   o. Abusing, defacing, or destroying existing or new property of the Owner
   p. Preventing access to all areas of the Project by the Owner, Architect and the Owner’s Consultants.

1.17 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.
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SECTION 01 51 11

PROGRESS SCHEDULE

PART I - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section shall include, but not be limited to, the following:
      1. Administrative and procedural requirements for the Contractor's Progress Schedule, which is required to be in a Critical Path Method (CPM) format.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 PRELIMINARY SCHEDULE
   A. Preliminary Submittal: Submit, within 10 calendar days following receipt of the Notice to Proceed, a detailed Project Schedule, in bar chart format.

1.05 PROGRESS SCHEDULE (CPM), SUBMITTALS
   A. Prepare the Progress Schedule required by the General Conditions in the form of a Critical Path Method network, to control work of this Contract and to provide a definitive basis for determining job progress. Require each principal subcontractor to provide detailed information about their own portion of the Work; include this information in the CPM Progress Schedule.
   B. Use commercially available CPM scheduling software to develop and maintain the schedule and to prepare and print spreadsheets, schedules, Gantt charts, and reports for the Project. The Contractor shall coordinate the required scheduling software with the Owner's designated representative. Prepare a spreadsheet listing activities, a network schedule showing the connections between activities, and Gantt Charts (bar charts) as required by this Section.
   C. Within 10 business days following receipt of the Notice to Proceed, submit the following to the Architect and Construction Manager for review:
      1. An illustration of a feasible CPM schedule for completion of the Work of the Contract within the time limits specified
      2. Sample format to be utilized for the detailed CPM in accordance with requirements of the Contract Documents
      3. Milestone dates
D. Upon approval of the draft submittal, prepare and submit the CPM network; prepare the schedule with spreadsheet information.
   1. Correlate the Progress Schedule with the Schedule of Values required under Section 01 00 00 – General Requirements, so that the value of the Work in place at any time can be definitively determined. Each activity on the CPM schedule shall appear on the Schedule of Values.
   2. Submit the full detailed schedule to the Architect and Owner for review and approval within 10 days following receipt of the Notice to Proceed, and at least 25 working days before the first Application for Payment is submitted. The Architect will not review any Application for Payment until the CPM schedule has been submitted and approved.

E. Submit 3 copies, and electronic file in format acceptable to the Architect, of the schedule for review by Architect and Owner. Make changes as directed by the Architect and resubmit within 10 calendar days.
   1. Acceptance and approval of the Construction Schedule by the Owner and Architect is a prerequisite to certification of the first Application for Payment.
   2. The Architect's approval of the Construction Schedule shall not relieve the Contractor of responsibility for timing, planning and scheduling of the Work, nor impose any duty on the Architect or Owner with respect to the timing, planning or scheduling of the Work.

F. After the initial schedule has been approved, print, and distribute colored copies of the approved schedule to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Place one copy in the job site file and post copies in the Project meeting room and temporary field office.
   1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.06 PROGRESS SCHEDULE, CONTENT AND FORMAT
A. The Start Date for the CPM Progress Schedule shall be the date of the Notice to Proceed. The date for Final Completion, shall be 10 days after the date scheduled for Substantial Completion.

B. Classes of Work: List as separate classes of work on the spreadsheet and schedules:
   1. Each category of work listed in the Schedule of Values
   2. Activities by others that have to be coordinated with Contractor's work, such as:
      a. Inspections by the Owner's Testing and Inspection Agency
      b. Work by separate contractors
      c. Architect's inspection at the time of Partial Completions and at the time of Substantial Completion
      d. Additional subdivisions of work as the Contractor deems necessary to control the progress of the Work, or as requested by the Owner or Architect.

C. Input from Subcontractors: Require each Principal subcontractor to provide detailed information about their own Portion of the Work; include this information in the Progress Schedule.

D. Spreadsheet: On the spreadsheet for the Project, for each activity included in the spreadsheet, as a minimum the following information:
   1. A code number for the activity.
   2. Description of the activity
   3. Early and late start dates. These dates may not be changed after the activity has commenced and the actual start date has been inserted (see item 10).
   4. Duration
   5. Early and late finish dates. These dates may not be changed after the activity has bow completed, and the actual finish date has been inserted (see item 10).
   6. Activity float
   7. Percentage completion
   8. Remaining duration
   9. Predecessor activities and successor activities, including start constraints for activities with no predecessor.
10. Blank columns for Actual Start and Actual Finish dates, to be filled in with each monthly submission.
11. Dollar amount for the activity.
12. Number of tradesmen and laborers required for each activity ("manpower loading")
13. Print in red activities on the critical path.

E. CPM Schedule: On the CPM Schedule for the Project, show the order and interdependence of activities and the sequence in which work is to be accomplished, as planned by the Contractor. Show predecessor and successor activities; show the start of a given activity is dependent on completion of preceding activities and how its completion is necessary for the start of following activities.
1. Provide a path for each trade or significant type of work. Use the same breakdown of units of the Work as indicated for the spreadsheet.
2. Arrange schedule to show graphically major sequences for Coordinating work; lead times required; float time allowed; all major categories of work and critical minor work units affecting overall work sequences. Show phased completion dates. Show dates when Owner will be moving in equipment, furniture, and fixtures.
3. Break each trade or class of Work into specific activities, each of duration no longer than 20 calendar days, and structured by Work area, i.e., floors, wings, etc. Selection and number of activities shall be subject to Architect's approval. Non-construction activities (such as procurement and delivery) and such other activities which the Architect may approve, may be of longer duration. At a minimum, break out the following as separate activities, where they apply to a type of Work.
   a. Construction activities
   b. Fabrication
   c. Delivery
   d. Installation
   e. Testing
   f. Start-up
   g. Instruction of Owner's Personnel
4. Critical Path: Clearly define the Critical Path beginning with the Notice to Proceed and ending at Substantial Completion. Activities on the Critical Path shall have no (zero) float time indicated. Print in red activities which are on the critical path.

F. Utilization of Float Time: It is intended by the Awarding Authority that the Work should progress as expeditiously as possible. To this end, the Contractor shall proceed with the start of each activity promptly upon the completion of the previous activity or activities on which it depends. If the Contractor completes an activity on the scheduled "early finish date" or sooner, the Contractor shall not expend the "float time" for that activity (if any) but rather reserve it as a safeguard against possible impediments or delays which may occur later in the progress of the Work. Float time is to be expended judiciously, for the benefit of the Project as a whole, and not for the convenience of the Contractor or the Owner. Neither the Contractor nor the Owner "owns" the project float time: the float time belongs to the Project.

1.07 MONTHLY REPORTS
A. Report progress for the Project on a bi-weekly basis. Evaluate the status of the work as of the 25th of each month to show actual progress and identify, problem areas. Include Change Orders and Construction Change Directives within the updated schedule. With each Contractor Application for Payment, submit one (1) electronic copy, and three (3) colored copies of the complete update schedule, accompanied by a written narrative.

1.08 SUBMITTALS
A. Provide submittals in accordance with requirements of Section 01 33 00 – Submittal Procedures, or as otherwise required for completion and transmittal of all documents required in accordance with requirements of the Contract Documents.
PART 2 – PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED
PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
A. Products, which include materials, equipment, and systems of assemblies of materials and equipment, shall conform to the requirements listed in each of Section of the Specifications. Provide connections, fasteners, accessory materials, trim, finish and other accessories needed for proper use, function and appearance.
   1. Where available, provide standard products of types which have been produced and used previously and successfully on other projects and in similar applications.
   2. Where additional amounts of a product, by nature of its application, are likely to be needed by Owner at a later date for maintenance and repair or replacement Work, provide a standard, domestically produced product which is likely to be available to Owner at such later date.
B. Name Plates: Except as otherwise indicated for required approval labels, and operating data, do not permanently attach or imprint manufacturer’s or producer’s nameplates or trademarks on exposed surfaces of products which shall be exposed in occupied spaces or on exterior of the Work.
   1. Labels: Locate required labels and stamps on a concealed surface, or where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.
   2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings, and similar essential operating data. Locate nameplates on an easily accessed surface which in occupied spaces, is not conspicuous.
C. Products are specified by:
   1. The descriptive method: Listing qualities that they must possess
   2. The reference standard method: Listing published product standards
   3. The proprietary method: Listing one or more source names, which may include such information as name of manufacturer or fabricator, trade name, or catalog number
   4. A combination of the above three.
D. Where a reference standard is specified, the edition of the standard in the current governing building code shall be followed. Where the standard is not listed in the building code, follow the edition current with the issue date of these Specifications.

1.03 RELATED WORK SPECIFIED ELSEWHERE
A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 – Painting
6. Section 22 00 00 - Plumbing

1.04 PRECEDENCE: QUALITY, REFERENCE STANDARD, AND SOURCE

A. Qualities:
   1. For the products specified by stated qualities or by the description, as well as by the reference standard or by the source, the specified qualities or description shall take precedence.
   2. For a product specified only by stated qualities or by the description, provide materials, equipment or fabrications conforming to those qualities and description, suitable for the uses shown on the Drawings.

B. Reference Standards:
   1. For product specified by reference to a published standard, as well as buy the source, the reference standard shall take precedence over the source.
   2. For a product described only by reference standard, provide material, equipment or fabrications conforming to that reference standard, suitable for the use shown on the Drawings.

C. Procedures for Selecting Products: Contractor's options for selecting products are limited to Contract document requirements and governing regulations and are not controlled by industry traditions or procedures experienced by Contractor on previous construction projects. Required procedures include, but are not limited to, the following for various methods of specifying:
   1. For a product described by manufacturer, manufacturer's brand name, or origin, with or without catalog number or model number, provide a product that conforms to the specified qualities and reference standards.
   2. For a product specified by source and "no substitution", provide only that product specified. No request for substitution shall be considered.
   3. For a product specified by one or more names, provide any one of the products specified. Where two or more sources are named, the choice is the Contractor's. Any other product shall be considered only if requested as substitution.
   4. For a product specified by one or more source names and "or approved substitute", provide one of the specified products, or, submit a request for substitution for a product not named which the Contractor can demonstrate to be of equal or higher quality.
   5. Performance Requirements: Provide products which comply with specific performances indicated, and which are recommended by manufacturer for overall application indicated. Overall performance of a product is implied where product is specified with only certain specific performance requirements.
   6. Prescriptive Requirements: Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations in manufacturing process.
   7. Visual Matching: Where matching with an existing product or established sample is required, final judgement of whether a product proposed by the Contractor matches sample satisfactorily is the Architect's judgement. Where no product within specified cost category is available, which matches sample satisfactorily and complies with requirements, comply with Contract document provisions concerning, "Substitutions" and "Change Orders" for selection of a matching product outside established cost category or a product not complying with requirements.

1.05 CONTRACTOR'S OPTION

A. Where an option (or choice) is specified, provide one or the other of the options. The choice of an option is the Contractor's. Where submittals are required, he shall state which option has been chosen by him.

B. For economy of drawing, only one option is usually shown on the Drawings. If another option is elected by the Contractor, he shall adjust details, dimensions and physical settings to conform. The Contractor shall review adjustments and details with the Architect before implementation.
1.06 SPECIAL WARRANTIES AND SERVICE
A. In addition to the warranty and correction Work provisions of the General Conditions, provide the following as specified:
   1. Special Warranties: A warranty or guarantee provide by the manufacturer, fabricator, supplier or installer and the Contractor providing specific representation of quality and fitness for a specific period. When also specified, a special warranty lists the actions the Contractor, his installer, supplier or manufacturer shall take to correct defective Work.
   2. Service: Specific programs of service that a manufacturer, fabricator, supplier or installer and the Contractor shall provide for a specific period of time. Service programs shall, as specified, provide such Work as inspections, reports, parts, materials, and other products or Work needed to render the services.
B. The Architect and Owner reserve the right to not accept unrequested warranties and guarantees offered by the Contractor, his installers or suppliers.
C. Special warranties shall not be required to cover failure from:
   1. Hurricane, floods or acts of God;
   2. Misuse or improper maintenance by the Owner;
   3. Vandalism or misuse by the public after time of Substantial Completion.
D. When defective Work is corrected under the special warranty provisions, the warranty period shall be extended by the period of time between Substantial Completion and the correction of the Work.

1.07 CERTIFICATION BY MANUFACTURERS OR INSTALLERS
A. Provide where specified, as a submittal, certification by the manufacturer or installer that the product and its method of installation are suitable for:
   1. The type of construction and use of this product
   2. For the New England climate
   3. For the design intent expressed in the Contract Documents

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING
A. Deliver handle and store products in accordance with manufacturer's recommendations and by methods which prevent damage, deterioration and loss, including theft.
B. Control delivery schedule to minimize long term storage of products at site and overcrowding of construction spaces. Provide delivery/installation coordination to ensure minimum holding or storage times for products that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.

1.09 SUBMITTALS
A. Provide submittals in accordance with requirements of Section 01 33 00 – Submittal Procedures

1.10 SUBSTITUTION REQUEST PROCEDURE
A. For a period of 60 days after the start of Contract Time, the Architect will review written requests from the Contractor for changes in products, materials and methods of construction required by Contract Documents. These changes are considered request for “substitutions”, and are subject to requirements hereof. Substitutions received after the 60-day commencement of Work may be considered rejected at the discretion of the Architect.
   1. Work not defined as Substitutions: The requirements for substitutions do not apply to the following:
      a. Specified Contractor options on products and construction methods.
      b. Revisions to Contract Documents requested by Owner or Architect are “changes” not "substitutions".
      c. Requested substitutions during bidding period, which have been accepted prior to Contract Date and included in Contract Documents.
d. Contractor's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions" and do not constitute a basis for change orders, except as provided for in Contract Documents.

B. Requests for Substitutions: Submit 3 copies of substitution request form provided herein, fully identified for product or method being replaced by substitution, including related specification Section and drawing number(s), and fully documented to show compliance with requirements for substitutions. Include product data/drawings, description of methods, samples where applicable, Contractor's detailed comparison of significant qualities between specified item and proposed substitution, statement of effect on construction time and coordination with other affected Work, cost information or, proposal, fabrication and installation procedures and Contractor's statement to the overall Work as a substitute to or -better-than Work originally indicated.

C. Conditions: Contractor's request for substitution shall be received and considered when extensive revisions to Contract Documents are not required and changes are in keeping with the general intent of Contract Documents; when timely, fully documented and properly submitted; and when one or more of the following conditions is satisfied, all as judged by the Architect. The review of substitution requests is an extra service of the Architect, limited by the Owner's authorization of the Architect to perform such services. The Owner will charge the Contractor for the Architect's processing of substitution requests, except when the Contractor can demonstrate that one of the following cases applies. Otherwise, requests shall be returned without action except to record non-compliance with these requirements.

1. When the indicated product or method cannot be provided within the approved progress schedule, but not as the result of the Contractor's failure to Contract, order, purchase, fabricate, prepare other Work, or coordinate the Work well in advance of need.

2. When the indicated product or method is not compatible with other products or Work, cannot be coordinated or fit into Work, or shall demonstrably have adverse effect on permanence, function or use of the Work.

3. When the indicated product or method is not approved by public authorities.

4. When the substitute request is made in response to a source specified as "Architect approved substitute".

1.11 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED
SUBSTITUTION REQUEST

Project: New Bedford High Cable Access Building – Roof Replacement  
Project No.: 02014.71

Owner: City of New Bedford

To: Mount Vernon Group Architects, Inc.  
From: Architects: 47 N. Second Street  
From: New Bedford, MA 02740  
Attn: Mr. Jorge Fiqueiredo

CONTRACTOR’S REQUEST, WITH SUPPORTING DATA

1. Section of Specifications to which this request applies: ______________________
   6 Digit Section number

   ___ Product data for proposed substitution is attached (description of product, reference standards, performance and test data).

   ___ Sample is attached  

   ___ Sample shall be sent if requested by Architect

2. Itemized comparison of proposed substitution with product specified.

   ORIGINAL PRODUCT  
   SUBSTITUTION

   Name, brand:

   Catalog No.:

   Manufacturer:

   Significant Variation:

3. Unit cost of original product and proposed substitution. State whether cost is for _____ material only, or _____ material installed.

   Original Product: $_________ per _______  
   Substitution: $_________ per _______

4. Proposed change in Contract Sum:

   Credit to Owner: ____________________  
   Additional cost to Owner:

5. Proposed change in Contract Time:

   Reduce/Increase Contract time by: _____________ days.

6. Effect of the proposed substitute on other parts of the Work, or on other Contracts:

7. Reason for requesting substitution:

Product Requirements
01 60 00 - 5
CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENTS:

I/we have investigated the proposed substitution. I/we

1. believe that it is equal or superior in all respects to the originally specified product, except as stated in 2. above;
2. shall provide the same warranty in accordance with General Conditions 4.1.5.;
3. shall provide the same special warranty or guaranty as specified;
4. have included all cost data and cost implications of the proposed substitution;
5. shall pay redesign and special inspection costs caused by the use of this product;
6. shall pay additional costs to other Contractors caused by substitution;
7. shall coordinate the incorporation of the proposed substitution in the Work;
8. shall modify other parts of the Work as needed, to make all parts of the Work complete and functioning.
9. waive further claims for added cost to Contractor caused by the proposed substitution.

Contractor: ____________________________ Date: __________________

ARCHITECT REVIEW AND ACTION

A. Provide more information in the following categories. Resubmit.
B. Sign Contractor's Statement of Conformance. Resubmit.
C. The proposed substitution is approved, with the following conditions:

D. The following changes shall be made by change order:
   1. Addition/Deduction from the Contract Sum:
   2. Addition/Deduction from Contract Time:

Mount Vernon Group Architects, Inc.: ________________________________ Date: __________________

END OF SECTION
SECTION 01 71 00
CLEANING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 1 - General Requirements, apply to the work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section shall include, but not be limited to, the following:
      1. Cleaning of the Project site and building interior during progress of the Work, and at completion of the Work, in accordance with requirements of the Contract Documents.
      2. Re-cleaning of areas affected by the new construction following completion of the Work.
      3. Polish existing concrete floor to match existing.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 PRE-INSTALLATION MEETING
   A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 MATERIALS
   A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
   B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
   C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.
PART 3 - EXECUTION

3.01 DURING CONSTRUCTION
A. Execute periodic cleaning to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
B. Provide on-site containers for the collection of waste materials, debris and rubbish.
C. Remove waste materials, debris and rubbish from the site periodically and dispose of at a legal disposal areas away from the site.

3.02 DUST CONTROL
A. Clean interior and exterior spaces and surfaces upon completion of work.

3.03 FINAL CLEANING
A. Employ skilled Workmen for final cleaning.
B. Just prior to inspection for Final Completion, perform a complete cleaning of the project area including, without limitation the following:
   1. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials form sight-exposed interior and exterior surfaces.
   2. Sweep resilient flooring
   3. Vacuum carpet.
   4. Remove protective covers from, clean and polish exposed to view equipment, Mechanical and electrical fixtures, windows, hardware etc.
   5. Remove debris and dirt from concealed spaces such as ceiling plenums, chases, pipe and duct spaces.
   6. Clean electric light fixtures to allow for full efficiency.
C. Owner will assume responsibility for cleaning as of the date designated on Certificate of Substantial Completion for the Owner's acceptance of project, or portion thereof.

3.04 RUBBISH REMOVAL
A. The General Contractor shall remove all waste and debris and dispose daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
SECTION 01 77 00

CONTRACT CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK

A. The Work of this Section includes, but is not limited to, the following:

1. Supplementary instructions regarding preparation for Contract closeout, including Punch-List, prerequisites to Substantial Completion and Final Inspection, Substantial Completion, Affidavit in regard to liens, submittals of guarantees and other Documents and instruction to Owner's personnel.

2. Specific requirements for individual units of Work are specified in Sections of Division 2 through 31. Time of closeout is directly related to "Substantial Completion" for all phases of the Work and therefore shall be a series of time periods for the individual phases of the Work which have been certified as substantially complete at different dates.

B. Acceptance testing of Mechanical and Electrical Systems shall be in accordance with requirements of 780 CMR, Chapter 13, and specified requirements of the Contract Documents.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Carefully examine all of the Contract Documents for requirements which affect the Work of this Section.

B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:

1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein

2. Section 02 41 13 – Selective Demolition

3. Section 06 10 00 – Rough Carpentry

4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein

5. Section 09 91 13 – Painting

6. Section 22 00 00 - Plumbing

1.04 PUNCH-LIST AND FINAL INSPECTION

A. In accordance with requirements of the General Conditions, when the General Contractor considers the Work to be substantially complete, for either entire Work or specified phases thereof, he shall notify the Owner and the Architect in writing that the Work shall be ready for final inspection on a definite date which shall be stated in the notice. Such notice shall be given at least 10 days prior to the date stated for final inspection.

1. Written notice shall also be given to Owner and Architect by the General Contractor upon completion of any Work which was determined during the above referenced final inspection, to be incomplete, incorrect or unsatisfactory.

2. On receipt of such notice from the General Contractor, additional inspection(s) shall be made until completion of all Contract requirements is complete, as determined by the Architect.

B. The Architect will review the General Contractor's punchlist and verify Substantial Completion for individual specified phases of the Work and the entire Work. Verification of Substantial Completion by the Architect is intended to be a final inspection of the Work to determine that the Work has been executed in accordance with requirements of the Contract Documents. Requests to the Architect by the General Contractor for verification of Substantial Completion of incomplete Work, or prior to receipt by the Architect of the General Contractor's punchlist, shall not be honored.
1.05 SUBSTANTIAL COMPLETION

A. Upon determination of Substantial Completion for individual specified phases of the Work and the entire Work, the Architect will prepare a Certification of Substantial Completion in accordance with requirements of the Contract Documents. Unless specifically provided otherwise by the Architect in the Certificate of Substantial Completion, the General Contractor shall be responsible for providing full manufacturer warranties in accordance with requirements of individual trade Sections for specific product warranty requirements. As a result of the overlapping nature of Substantial Completion for the specified individual phases of the Work, the General Contractor shall be responsible for providing manufacturer warranties, the Effective Starting Date of which, shall commence upon Substantial Completion of Phase 1D of the Work, as described in the Contract Documents. Warranties shall run for the warranty period indicated in the respective trade Section.

1. Upon written declaration of Substantial Completion by the General Contractor, the General Contractor shall show 100% completion for the specified individual phase of the Work claimed as substantially complete. The General Contractor shall include supporting documentation of Substantial Completion in accordance with requirements of the Contract Documents, and a statement showing an accounting of changes to the Contract Sum.

a. If 100% completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.

1.06 SUBMITTAL OF DOCUMENTS AND PROCEDURAL REQUIREMENTS

A. At the "Substantial Completion Stage" of the Contract, the General Contractor shall submit the following items to the Architect for transmission to the Owner:

1. Certificates of inspection applicable to the Work evidencing compliance with governing regulations, including:
   a. Certificates of Occupancy
   b. Certificates of inspection of elevators
   c. Certificates of inspection for mechanical Work
   d. Certificates of inspection for electrical Work

2. Certifications, testing and balancing reports, and similar information substantiating that project conforms to requirements of the Contract Documents and is fully operational.

3. Start-up performance reports and video recordings of all equipment start-up and routine maintenance.

4. Change over information related to Owner’s occupancy, use, operation and maintenance, including final meter readings, if applicable.

5. Change-over from construction keying to final keying. Turn over keys and keying schedule to Architect for delivery to the Owner.

6. Application for reduction in retainage, and consent of surety.

7. List of incomplete Work, which is to be attached to the Architects Certificate of Substantial Completion as a clarification.

8. Complete project Operational and Maintenance Manuals, assembled in three ring binders.

9. One copy of each special warranty required by the Contract Documents, endorsed by the General Contractor, and in a form reasonably acceptable to the Architect. If the Architect accepts unbound warranties at this time, those warranties shall be returned to the General Contractor for binding into the Warranty Binders specified below.

   a. Warranties required by the Contract Documents for Work cited as not complete on the punch list shall commence when such Work is accepted as complete by the Architect, unless otherwise provided in the Certificate of Substantial Completion.

B. Remove construction facilities and temporary controls, except those that are required to complete punch-list Work.

C. At “Final Completion” the General Contractor shall prepare closeout submittals and submit to the Architect prior to “Final Completion”, allowing at least 15 Working days time for review.

1. Project record Documents marked with changes made during construction.

2. Copy of approved shop drawings or installed drawings for all phases of the Work.

3. Project warranties (guarantees) and maintenance agreements, assembled in 3 ring binders.
4. Spare parts neatly wrapped or packaged in standard sizes and clearly labeled.
5. Final construction photographs.
6. Certified building location survey.
7. Certificate of insurance for products and completed operations.
8. Consent of Surety to Final Payment.
9. An affidavit that all bills and indebtedness connected with the Work has been paid.
10. Typed list of Subcontractors and major Material Suppliers. (Shall include address, telephone number and name of individual to Contract regarding this project.
11. Waivers of lien from all Subcontractors and suppliers, or bond satisfactory to the Owner indemnifying Owner against all liens or other claims.
12. Proof that all taxes, fees and similar obligations have been paid.
13. Additional change over information which may be required by Owner’s lender and Owner’s property insurer.
14. Records of training sessions and videos for Owner’s personnel to instruct them in the operation of equipment and controls, to document completion of training.
15. Deliver tools, spare parts, extra stock, and similar items.
16. Complete final clean-up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred and exposed finishes.

D. Complete punch list items or, if acceptable to the Owner, furnish proposed schedule for completion and assurances that Work not completed and accepted shall be completed without undue delay. The Architect will re-inspect the Work to determine whether it is complete.

E. The General Contractor shall complete all the items stated in the Closeout Procedures within 45 days of date of the Certificate of Substantial Completion. Failure to complete the closeout requirements within the allowed time frame will require the Owner to charge back all costs of the Architect, Project Manager and other Consultants which the Owner requires for the completion of the project closeout. The Architect will process this by preparing a Final Change Order, reflecting adjustments to the Contract Sum not previously made by other Change Orders.

1.07 AFFIDAVIT IN REGARD TO LIENS

A. A valid "Contractor's Affidavit in regard to Liens", which certifies the following, must be submitted with "Request For Final Payment".

1. The undersigned hereby certifies that all Work required under the above Contract has been performed in accordance with the terms thereof, that all material, men, Subcontractors, mechanics and laborers have been paid and satisfied in full and that there are no outstanding claims of any character arising out of the performance of the Contract which have been paid and satisfied in full.

2. The undersigned further certifies that to the best of his knowledge or belief, there are no unsatisfied claims for damages resulting from injury or death to any employees, Subcontractors or the public at large arising out of the performance of the Contract, or any suits or claims for any other damage of any kind, nature or description which might constitute a lien upon the property of the Owner.

3. General Contractor shall provide a written guarantee in a form acceptable to the Owner and Architect at Substantial Completion.

1.08 INSTRUCTION OF PERSONNEL

A. General Contractor shall provide free instruction, including video tape instruction, in the proper use of all installed equipment to designated representative of the Owner.

B. Instruction of the Owner's Maintenance Supervisor in the proper methods of cleaning and maintaining all of the finished surfaces and the proper method of replacement of the consumable items shall be part of this Work.
1.09 OPERATIONAL AND MAINTENANCE MANUALS

A. Prior to date of substantial completion, submit to the architect Maintenance and Operational Manuals in accordance with requirements of Section 01 78 39 - Project Record Documents. Include operations and maintenance information for all items of equipment, and maintenance information for all products which may require special care, such as carpet and special finishes whether, or not a submittal is specifically required by technical Sections of these specifications.

1.10 FINAL INSPECTION

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following: List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and complete operations where required.

2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.

3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.

4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for correcting elements of the Work.

5. Submit consent of surety to final payment.


7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION
SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of
      Division 1 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section shall include, but not be limited to, maintaining at the site for the Building Superintendent one
      record copy of the following:
      1. Drawings
      2. Specifications
      3. Addenda
      4. Change Orders and other Modifications to the Contract
      5. Architect's Field Orders or written instructions
      6. Approved Shop Drawings, Product Data and Samples
      7. Field Test Records

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which effect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the
      following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 GENERAL REQUIREMENTS
   A. Provide all necessary equipment, including but not limited to, lockable files, racks, and secure storage as required to
      maintain storage of documents and samples in a clean, dry, legible condition and in good order.
   B. Documents and samples shall be filed in accordance with data Filing Format of the Uniform Construction Index.
   C. Record Documents shall not be used for construction purposes.
   D. Make Documents and samples available at all times for inspection by Architect/Engineer.
   E. Provide felt tip marking pens for recording information in the color code designated by the Architect.

1.05 RECORDING
   A. Label each document "PROJECT RECORD" in neat large printed letters located in the bottom right hand corner.
   B. Record information concurrently with construction progress.
      1. Do not conceal any Work until required information is recorded.
C. Drawings shall be legibly mark daily to record actual construction, as follows:
   1. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface
      improvements.
   2. Location of internal utilities and appurtenances concealed in construction, referenced to visible and accessible
      features of the structure.
   3. Field changes of dimensions and detail.
   4. Changes made by Field Order or by Change Order.
   5. Details not on original Contract drawings.
   6. Record Drawings shall be updated each Working day. Monthly pay requisitions shall not be processed if record
      drawings are not up to date.

D. Individual Specification Sections and Contract Document Addenda shall be legibly marked to record the following.
   1. Manufacturer, trade name, catalogue number, and supplier of each product and item of installed equipment.
   2. Changes made by Field Order or by Change Order.

1.06 SUBMITTALS
A. Provide submittals in accordance with requirements of Section 01 33 00 – Submittal Procedures in accordance with
   requirements of the Contract Documents.
B. Prior to Contractor claim of Substantial Completion for specified phases of the Work and the entire Work, the
   Contractor shall deliver Record Documents to the Architect for review and approval.
C. Upon receipt of approval of Record Documents from the Architect, the Contractor and Subcontractors shall transfer the
   as-built information shown on the Record Drawings onto compact disc, in a format compatible with equipment and
   programs provided under the Work of Section 01 50 00 – Temporary Facilities and Controls, or as otherwise required
   by the Owner.
D. Submission of accurate record drawings and their approval shall be a condition precedent to final payment.
E. Submittals of Record Documents shall be accompanied with transmittal letter in duplicate, containing the following
   information:
      1. Date
      2. Title and number of each Record Document
      3. Signature of the Contractor or his authorized representative

1.07 OPERATIONS AND MAINTENANCE MANUALS
A. Prior to Contractor claim of Substantial Completion for specified phases of the Work and the entire Work, submit
   Operation and Maintenance (O&M) manuals to the Architect for review. Generally, include operation and maintenance
   information for all items of equipment, and maintenance information for all products which may require special care,
   such as carpet and special finishes, whether or not a submittal is specifically required by the technical Sections of
   these specifications.
      1. Include complete schematic, electrical and connection diagrams for each item of equipment.
      2. Include instructions for installation, start-up. Operation, inspections, maintenance, parts lists and data sheets.
      3. On manufacturer's printed literature, where the literature covers more than one model, indicate by check mark or
         circle in ink the correct model number and data for the model number.
B. Arrange manuals, instruction books, diagrams, etc. in the order and manner prescribed by the Owner. In the absence
   of other instructions from the Owner, organize the operation and maintenance manuals as described in this Article.
C. Bind instruction books in hard durable covers supplied by the manufacturer, or in 3-ring binders with vinyl covers.
   1. Identify each volume on front and spine with typed or printed title "OPERATING AND MAINTENANCE
      INSTRUCTIONS," title of Projects, identity of subject matter covered in each volume.
   2. Inside cover and Title Page shall repeat information on the cover and identify the General Contractor, name of
      responsible principal, address and telephone number.
3. Provide Table of Contents for each volume, arranged in systematic order, neatly type written. Organize information by systems, following the sequence of the table of contents of the Project Manual.
4. Separate products and systems within the binder by tabbed and labeled dividers.
5. For each item or system, include the name, address and phone number of the Subcontractor who furnished and/or installed the equipment, the name(s) and telephone numbers of the Subcontractor’s representative to be contacted in the event of an emergency, and the name, address and phone number of the nearest service facility authorized by the manufacturer.

D. Require each manufacturer to prepare/provide information on its own products. In those instances where equipment or controls are job-assembled by a Subcontractor, then require that the Subcontractor prepare maintenance instructions.

E. Information for complex systems, such as elevators and handicap lifts, may be separately bound. Include a tabbed divider for the system and insert a page directing the reader to the separate volume, or include a clear cross reference in the table of contents.

F. Submit one review copy of the fully compiled data in final form. The Architect will review the copy and return it with comments. Upon receipt of approval of O&M Manuals from the Architect and OPM, the Contractor and Subcontractors shall resubmit one (1) corrected and bound hard copies, and three (3) electronic disk copies in a format compatible with equipment and programs provided under the Work of Section 01 50 00 – Temporary Facilities and Controls.

1.08 WARRANTIES AND WARRANTIES

A. Prior to Contractor claim of Substantial Completion for specified phases of the Work and the entire Work, assemble two (2) executed copies of each warranty, bond, and service and maintenance Contract required for the project. Warranties are specified in the respective trade Sections of the specifications.

B. Bind these in 3-ring loose leaf binders with vinyl covers
   1. Identify each volume on front and spine with typed or printed title "WARRANTIES," title of Projects, identity of subject matter covered in each particular volume.
   2. Inside cover and Title Page shall repeat information on the cover and identify the General Contractor, name of responsible principal, address and telephone number.
   3. Table of contents: For each volume, arrange in systematic order, neatly type written.

C. For items of Work delayed beyond Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.09 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

B. Deliver to Project site and place in location directed. Obtain receipt prior to final payment.

1.10 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 – PRODUCTS NOT USED

PART 3 – EXECUTION NOT USED

END OF SECTION

Project Record Documents
01 78 39 - 3
SECTION 02 41 13
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
A. The Work of this Section includes, but is not limited to, Labor and Materials as required to complete the following:
   1. Remove all existing upper & lower roof PVC roofing membrane system in its entirety down to existing cellular & acoustical steel roof decking
   2. Remove all roof drains & horizontal leaders to main vertical leaders
   3. Remove existing plumbing vent
   4. Remove all flashing around all existing roof penetrations
   5. Remove roof hatches at lower & upper roofs
   6. Remove all existing metal coping roof edges, extruded PVC termination bars & associated mechanical attachments in its entirety.
   7. Remove all surface mounted flashing on existing wall panels
B. Scheduling and sequencing operations without interrupt utilities serving occupied areas. If interruption is required, obtain written permission from the utility company and the Owner. Provide temporary services as necessary to serve occupied and usable facilities when permanent utilities must be interrupted, or schedule interruption when the least amount of inconvenience will result.

1.03 RELATED WORK SPECIFIED ELSEWHERE
A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 – Painting
   6. Section 22 00 00 - Plumbing

1.04 DEFINITIONS
A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
B. Remove and Salvage: Detach items from existing construction and deliver them to the Owner, ready for reuse, at a location designated by the Owner. Protect from weather until accepted by Owner.
C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated. Protect from weather until reinstallation.
D.  Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.05  MATERIALS OWNERSHIP
A.  Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques, antiques, and other items of interest or value to the Owner that may be encountered during selective demolition remain property of the Owner. Carefully remove each item or object in a manner to prevent damage and deliver promptly to a location acceptable to the Owner.

1.06  SUBMITTALS
A.  Provide submittals in accordance with requirements of Section 01 30 00 of the Contract Documents
B.  Provide qualification data for demolition firm, professional engineer, and refrigerant recovery technician.
C.  Provide schedule of demolition activities, including but not limited to, the following:
   1.  Detailed sequence of demolition and removal work, with starting and ending dates for each activity. Schedule shall ensure that the Owner's building and on-site operations are uninterrupted.
   2.  Interruption of utility services, including dates and duration of interruption.
   3.  Coordination for shutoff, capping, and continuation of utility services.
   4.  Means of protection for items to remain.
D.  Provide an inventory list of items that have been removed and salvaged following completion of the Work of this Section.
E.  Provide photographs and videotapes showing existing conditions of adjoining construction and site improvements, prior to commencement of the Work of this Section that may be misconstrued as damage caused by the Work of this Section.

1.07  QUALITY ASSURANCE
A.  Examination of Existing Conditions: The Contractor shall examine the Contract Drawings for demolition and removal requirements and provisions for new work. Verify all existing conditions and dimensions before commencing work. The Contractor shall visit the site and examine the existing conditions as he finds them and shall inform himself of the character, extent and type of demolition and removal work to be performed. Submit any questions regarding the extent and character of the demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.
B.  Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
C.  Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
D.  Standards: Comply with ANSI A10.6 and NFPA 241.
E.  Pre-demolition Conference: Review methods and procedures related to selective demolition including, but not limited to, the following:
   1.  Inspect and discuss condition of construction to be selectively demolished.
   2.  Review structural load limitations of existing structure.
   3.  Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
   4.  Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
   5.  Review areas where existing construction is to remain and requires protection.
1.08 PROJECT CONDITIONS
   A. Owner Occupancy:
      1. The existing New Bedford Cable Access Building will be occupied during the Work of this Contract. Insure any impact or disruption to these occupants is kept to a minimum. The Contractor shall employ all measures necessary to protect the existing buildings and adjacent property from damage caused by the Work of this Contract.

1.09 WARRANTY
   A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

1.10 PRE-INSTALLATION MEETING
   A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 GENERAL
   A. All Repair materials shall be compatible with existing materials to remain and shall be as approved by the Architect.

PART 3 - EXECUTION

3.01 EXAMINATION
   A. Verify that utilities have been disconnected and capped.
   B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
   C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
   D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Designer.
   E. Engage the services of a professional engineer registered in the Commonwealth of Massachusetts to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
      1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
   F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
   G. Utility Services:
      1. Existing utility services shall be maintained to existing facilities. Provide a minimum three (3) day notice of service shutdown to the Owner.
      2. Shut-off all utilities shall be conducted by the Contractor in compliance with requirements of authorities having jurisdiction.
H. Site Access and Temporary Controls:
   1. Existing streets and walks shall remain open at all times. Maintain all existing building access and egress capabilities as required by local authorities having jurisdiction.
   2. Provide and maintain temporary protection, including chain link fencing as necessary.
   3. Provide and maintain protection around existing trees and plantings located on adjacent property.

I. Temporary Facilities:
   1. Provide and maintain temporary barricades to prevent injury to people.
   2. Provide and maintain temporary weather protection as required.
   3. Provide and maintain protection of existing finish work to remain.
   4. Provide and maintain protection of existing interior furnishings and equipment.
   5. Provide and maintain protection of exterior site improvements to remain, including on adjacent property.

J. Provide and maintain temporary weather-tight enclosure for building exterior as required.

K. Provide and maintain temporary shoring of existing structural building components to remain, including but not limited to, structural steel, brick masonry walls, and concrete floors and wood roof framing.

L. Items to be removed and salvaged shall be cleaned, stored, and transported to the Owner's designated storage area.

M. Items to be removed and reinstalled shall be cleaned, repaired, stored, and reinstalled as required.

N. Existing items to remain shall be protected against damage during construction.

O. Cleaning and Disposal: All waste and debris caused by the Work of this Section shall be legally disposed of off site, daily, at a facility licensed to receive and process building demolition debris. Burning shall not be permitted. Provide original Bills of Lading to the Owner in accordance with requirements of the Owner.

3.02 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
   1. Comply with requirements for access and protection in accordance with requirements of Division 01.
   2. Maintain adequate passage to and from all exits at all times. Before any work is done which significantly alters access or egress patterns, consult with the Designer and obtain approval of code required egress. Under no condition block or interfere with the free flow of people at legally required exits, or in any way alter the required condition of such exits.

B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of selective demolition.
   2. Remove temporary shoring, bracing and structural supports when no longer required.
   3. Post warning signs and place barricades as applicable during placement and removal of temporary shoring.

C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area(s).
   1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction. Provide temporary barricades as required to limit access to demolition areas.
   2. Protect existing site improvements, appurtenances, and landscaping to remain.

D. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.
3.03 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.

2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.

3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

5. Maintain adequate ventilation when using cutting torches.

6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.

8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

9. All waste and debris caused by the Work of this Section shall be removed and legally disposed of daily, in accordance with requirements of Section 01 50 00 - Temporary Facilities and Controls.

B. Removed and Salvaged Items:

1. Clean salvaged items.

2. Pack or crate items after cleaning. Identify contents of containers.

3. Store items in a secure area until delivery to Owner.

4. Transport items to storage area designated by the Owner.

5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.

2. Pack or crate items after cleaning and repairing. Identify contents of containers.

3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Designer, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

E. Items for Re-use and Preservation of Existing Surfaces to Remain:

1. The Contractor shall inspect closely each item specifically designated to be relocated, re-used, or turned over to the Owner prior to its removal, and immediately report damages and defects to the Designer and Owner. The Contractor shall be responsible for any subsequent damage to the same other than latent defects not readily apparent from close inspection, and shall bear responsibility for its repair or same replacement as directed by the Designer.

F. Unless special surface preparation is specified under other Specification Sections, leave existing surfaces that are to remain in a condition suitable to receive new materials and/or finishes.
3.04 PROTECTION OF PUBLIC AND PROPERTY

A. Provide all measures required by federal, state and municipal laws, regulations, and ordinances for the protection of surrounding property, the public, and workmen during all demolition and removal operations. Measures are to be taken, but not limited to installation of sidewalks, sheds, barricades, fences, warning lights and signs, trash chutes and temporary lighting.

B. Protect all walks, roads, streets, curbs, pavements, trees and plantings, on and off premises, and bear all costs for correcting such damage as directed by the Designer.

C. Demolition shall be performed in such a manner that will insure the safety of adjacent property. Protect adjacent property from damage and protect persons occupying adjacent property from injuries which might occur from falling debris or other cause and so as not to cause interference with the use of other portions of the building, of adjacent buildings or the free access and safe passage to and from the same.

D. Every precaution shall be taken to protect against movement or settlement of the building, of adjacent buildings, sidewalks, roads, streets, curbs and pavements. Provide and place at the Contractor's own expense, all necessary bracing and shoring in connection with demolition and removal work.

E. Remove portions of structures with care by using tools and methods that will not transfer heavy shocks to existing and adjacent building structures, both internal and external of the particular work area.

F. Provide and maintain in proper condition, suitable fire resistive dust barriers around areas where interior demolition and removal work is in progress. Dust barriers shall prevent the dust migration to adjacent areas. Remove dust barriers upon completion of major demolition and removal in the particular work area.

3.05 DISCOVERY OF HAZARDOUS MATERIALS

A. If hazardous materials, such as chemicals, asbestos-containing materials, or other hazardous materials are discovered during the course of the work, cease work in affected area only and immediately notify the Designer of such discovery. Do not proceed with work in such areas until instructions are issued by the Designer. Continue work in other areas.

B. If unmarked containers are discovered during the course of the work, cease work in the affected area only and immediately notify the Designer of such discovery. Do not proceed with work in such areas until instructions are issued by the Designer. Take immediate precautions to prohibit endangering the containers integrity. Continue work in other areas.

3.06 CUTTING

A. Perform all cutting of existing surfaces in a manner which will ensure a minimal difference between the cut area and new materials when patched. Use extreme care when cutting existing surfaces containing concealed utility lines which are indicated to remain and bear full responsibility for repairing or replacement of all such utilities that are accidentally damaged.

B. Provide a flush saw cut edge where pavement, curb and concrete removals abut new construction work or existing surfaces to remain undisturbed.

3.07 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Comply with requirements of Division 1, and the following.
   1. Do not allow demolished materials to accumulate on-site.
   2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
   3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

B. Burning: Do not burn demolished materials.
3.08 CLEANING
A. Clean adjacent structures and improvements of dust, dirt, and debris caused by the Work of this Section. Premises shall be left in a clean condition and ready to accept alteration work and new construction.

3.09 RUBBISH REMOVAL
A. The General Contractor shall remove all waste and debris and dispose daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, provision and installation of the following:
      1. Wood blocking for roofing
      2. Plywood, wood nailers, furring, grounds and blocking for all exterior Work.
      3. Pressure treated wood framing members and plywood for all wood in contact with concrete or masonry
      4. Fire retardant treated wood framing members and plywood required by codes and ordinances.
      5. Wood preservative treatment for lumber and plywood cut in field
      6. Nails, screws, bolts and fasteners for securing items of rough carpentry installed under the Work of this Section

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which effect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 PURPOSE
   A. The Work of this Section shall be to provide concealed blocking, grounds, nailers, and backing panels, for the Work of this Project. Portions of Work related to this Section include, but are not limited to, toilet accessories, handrails and railings, and telephone and electrical equipment.

1.05 QUALITY ASSURANCE
   A. Lumber Grading Rules and Wood Species to be in conformance with Voluntary Product Standard PS-20; grading rules of the following associations apply to materials furnished under this Section.
      1. Northeast Lumber Manufacturer's Association, Inc.
      2. Western Wood Products Association.
   B. Plywood Grading Rules:
   C. Grade Marks: Identify all lumber and plywood by the official grade mark.
      1. Lumber: Grade stamp to contain symbol of grading agency, mill number or name, grade of lumber, species grouping or combination designation, rules under which graded, where applicable and condition of seasoning at time of surfacing.

Rough Carpentry
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   a. Type, grade, class and Identification Index.
   b. Inspection and testing agency mark.
3. Hardwood Plywood: Appropriate grade trademark of the American Plywood Association or other qualified testing and grading agency.

D. Requirements of Regulatory Agencies:

1.06 SUBMITTALS
A. Submit manufacturer's product data, installation instructions, use limitations and recommendations for each material used. Provide certifications demonstrating materials comply with requirements of the Contract Documents.
B. Certifications:
1. Pressure Treated Wood: Submit certification by treating plant stating chemicals and process used, net amount of salts retained, and conformance with applicable standards.
2. Pressure Treated Wood: Submit certification for water-borne preservative that moisture content was reduced to 19% maximum, after treatment.
3. Fire Retardant Treatment: Submit certification by the treating plant that the fire-retardant treatment materials comply with governing ordinances and that the treatment shall not bleed through finished surfaces.
4. Fire Treated Wood: Submit certification from the supplier of the fire retardant treated lumber or plywood attesting that the wood is Dricon wood or satisfies the following:
   a. All pieces of lumber have been kiln dried to a maximum moisture content of 19% or less after treatment. All plywood shall be dried to a moisture content of 15% after treatment.
   b. The fire retardant chemicals used to treat the lumber were free of halogens, sulfates, ammonium phosphate and formaldehyde.
   c. The fire retardant treated wood does not require brush treatment of end cuts made in the field.
   d. The fire retardant treated wood has an equilibrium moisture content of not more than 25% when tested in accordance with ASTM D3201 procedures at 95% relative humidity and 80°F.

1.07 DELIVERY STORAGE AND HANDLING
A. Deliver, store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from moisture and damage. Stack materials to promote air circulation. Protect sheet materials from corner breakage and other damage.

1.08 PRE-INSTALLATION MEETING
A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Owner's Project Manager, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 LUMBER
A. Provide kiln dried southern yellow pine or hem-fir construction grade boards, stud grade or no. 2 boards, and structural light framing, complying with applicable requirements of PS 20 “American Softwood Lumber Standards”, and having 19 percent maximum moisture content.
B. Provide above ground lumber and plywood in contact with masonry, concrete and damp proofing that is pressure treated to a level of 0.25 pounds per cubic foot of wood product, with waterborne CCA preservatives in accordance with requirements of AWPA Standard U1 and T1. Pressure treated lumber shall be dried to a maximum moisture content of 15 percent after treatment.

C. Provide UL labeled fire-retardant treated wood in telephone and electrical closets, window framing, and elsewhere as indicated. Provide fire-retardant treatment suitable for interior exposures and complying with AWPA C20. Kiln dry lumber after treatment.

2.02 PLYWOOD

A. Backing panels, interior wall sheathing panels, and continuous or partial partition blocking, shall be APA trademarked, UL labeled, fire-retardant treated, BD, Group 2, Exposure 1 plywood panels not less than 3/4 in. thick at locations of electrical and telephone panels, or 1/2 in. thick for wall sheathing. Panels shall comply with requirements of PS 1. Plywood shall be fire retardant treated to yield a flame spread rating of not more than 25 when tested according to ASTM E84. Kiln dry after treatment to maximum moisture content of 15%.

2.03 FASTENERS AND MISCELLANEOUS MATERIALS

A. Provide size, type, and material appropriate for intended use, as follows:

1. Self-Tapping Screws, surface hardened with a fluoropolymer paint finish equal to Buildex or Stalgard. Threads shall be self-locking to prevent backing out under wind load, vibration or other stress. A 5/8 in. penetration of the screw through the metal deck is required.

   2. Bolts:
      a. Bolts, and nuts shall conform to Fed. Spec. FF-B-571a and FF-B-575, as applicable.
      b. Expansion shields shall conform to Fed. Spec. FF-S-325. Shields shall be accurately recessed and, unless otherwise indicated, shall be not less than 2-1/2 in. into concrete or masonry. Devices of Groups IV, V, VI and VII shall not be used in sizes greater than 3/8 in. unless otherwise indicated.
      c. Lag screws or lag bolts shall conform to Fed. Spec. FF-B-561b.
      d. Toggle bolts shall conform to Fed. Spec. FF-B-588b.


B. Provide fasteners with G-90 hot dip galvanized coating, or fluoropolymer coating, at areas of high humidity, including roof blocking and sheathing. Fasteners for use with non-CCA pressure treated lumber, including ACQ Types B and D, CBA-A, and CA-B, shall be stainless steel.

C. Preservative treatment for field cut surfaces of pressure treated blocking and sheathing shall contain 2% copper naphthenate complying with AWPA Standard M4. Material shall be Green No. 10, as manufactured by Cuprinol, or Architect approved equal by WM Barr or Behr.

2.04 FINISHES

A. Paint all surfaces, exposed and concealed, of plywood backing panels at electrical and telephone panels, and mechanical rooms with fire retardant paint in accordance with requirements of Section 09 91 13 - Painting, and the approved manufacturer’s written instructions.
PART 3 - EXECUTION

3.01 INSPECTION
   A. The Installer/Erector shall examine substrates, supports, and conditions under which this Work is to be performed and notify General Contractor, in writing, of conditions detrimental to the proper completion of the Work. Do not proceed with Work until unsatisfactory conditions are corrected. Beginning Work means Installer accepts substrates and conditions.

3.02 INSTALLATION / ERECTION
   A. Strictly comply with National Forest Products Association, Manual for House Framing and building codes, except where more restrictive requirements are specified in this Section or indicated on the drawings.
   B. Choose wood members carefully to eliminate split, warped and twisted members. Set Work to required levels and lines with members plumb and true to line with joints neatly and tightly cut and butted. Securely anchor Work in strict compliance with referenced standards and building code nailing schedule. Countersink bolts and other fasteners flush with face of wood to provide a proper substrate for later Work.
   C. Blocking shall be provided as necessary for the applications of sheathing, wallboard and other materials or building items, and to provide fire stopping. Blocking shall be cut to fit between framing members and rigidly attached thereto.
   D. Saturate cut ends of treated wood with same chemicals used for original treatment.
   E. Install nailers and blocking at metal studs as indicated. All wood shall be pressure treated or fire treated as indicated on drawings. Apply two brush coats of same preservative used in original treatment to all sawed or cut surfaces of preservative treated lumber.
      1. Bolt nailers to deck, not over 24 inches on center. Counter sink bolt heads.
      2. Screw nailers to studs, not over 12 inches on center.

3.03 INSTALLATION OF CONSTRUCTION PANELS
   A. Reference Standards: Comply with instructions and recommendations of APA, Design and Construction Guide - Residential and Commercial for types of panels, nail size and fastening spacing used and applications indicated.
   B. Fasten panels as indicated below:
      1. Backerboards: Screw to framing or expansion bolt to CMU.
      2. Wall Sheathing: Screw to framing or expansion bolt to CMU.

3.04 RUBBISH REMOVAL
   A. The General Contractor shall remove all waste and debris and legally disposed daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, furnishing and installation of the following:
      1. Dust and debris containment
      2. Vacuum roof aggregates and debris
      3. Full tear-off of roofing system
      4. Remove skylights and accessories
      5. Remove roof edge and accessories
      6. Remove base flashings
      7. Remove damaged plywood sheathing

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all of the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following Divisions:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 DEFINITIONS
   A. Roofing Terminology: Definitions in ASTM D 1079 and glossary of NRCA’s "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.
   B. Roof Re-Cover Preparation: Existing roofing system is to remain and be prepared for new roof installed over it.
   C. Full Roof Tear-Off: Removal of existing roofing system from deck.
   D. Partial Roof Tear-Off: Removal of selected components and accessories from existing roofing system.

1.05 ACTION SUBMITTALS
   A. Product Data: For each type of product.
   B. Shop Drawings: Include plans, sections, and details.
   C. Temporary Roofing Submittal: Product data and description of temporary roofing system. If temporary roof remains in place, include surface preparation requirements needed to receive permanent roof, and submit a letter from roofing manufacturer, stating acceptance of the temporary roof and that its inclusion does not adversely affect the roofing system’s resistance to fire and wind.
1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.
   1. Include certificate that Installer is approved by warrantor of existing roofing system.
   2. Include certificate that Installer is licensed to perform asbestos abatement.

B. Fastener pull-out test report.

C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations. Submit before Work begins.

D. Landfill Records: Indicate receipt and acceptance of demolished roofing materials by a landfill facility licensed to accept them.

1.07 QUALITY ASSURANCE

A. Installer Qualifications: Approved by warrantor of existing roofing system to work on existing roofing.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning roofing removal. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Reroofing Conference: Conduct conference at Project site.
   1. Meet with Owner; Architect; Owner's insurer if applicable; testing and inspecting agency representative; roofing system manufacturer's representative; roofing Installer, including project manager, superintendent, and foreman; and installers whose work interfaces with or affects reroofing, including installers of roof deck, roof accessories, and roof-mounted equipment.
   2. Review methods and procedures related to roofing system tear-off and replacement, including, but not limited to, the following:
      a. Reroofing preparation, including roofing system manufacturer's written instructions.
      b. Temporary protection requirements for existing roofing system components that are to remain.
      c. Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.
      d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
      e. Existing roof deck conditions requiring notification of Architect.
      f. Existing roof deck removal procedures and Owner notifications.
      g. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
      h. Structural loading limitations of roof deck during reroofing.
      i. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.
      j. HVAC shutdown and sealing of air intakes.
      k. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
      l. Asbestos removal and discovery of asbestos-containing materials.
      m. Governing regulations and requirements for insurance and certificates if applicable.
      n. Existing conditions that may require notification of Architect before proceeding.

1.08 FIELD CONDITIONS

A. Existing Roof Assemblies: 4-ply asphalt and gravel built-up roof over mechanically attached 1 in. thick polyisocyanurate insulation over 60 mil EPDM over 2 in. thick polyisocyanurate insulation over 3 in. x 8 in. splined wood decking.

B. Owner will occupy portions of building immediately below re-roofing area. Conduct re-roofing so Owner's operations are not disrupted. Provide Owner with not less than 48 hours' notice of activities that may affect Owner's operations.
1. Coordinate work activities daily with Owner so Owner can place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.

2. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.

C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.

D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

E. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.

1. Remove only as much roofing in one day as can be made watertight in the same day.

F. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work. Existing roof will be left no less watertight than before removal.

2. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

1.09 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during reroofing, by methods and with materials so as not to void existing roofing system warranty. Notify warrantor before proceeding.

1. Notify warrantor of existing roofing system on completion of reroofing, and obtain documentation verifying that existing roofing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

1.10 PRE-INSTALLATION MEETING

B. The Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by: Owner, Contractors, Architect, Roofing Consultant, and Manufacturer’s Representatives.

PART 2 - PRODUCTS

2.01 DUST AND DEBRIS CONTAINMENT


B. Polyethylene Tape: (Low VOC); Low density polyethylene material; glue one side, compatible with polyethylene sheeting and other substrates.

C. Polyester Cord Strapping: Bonded and woven, 1/4 – 1 inch widths.

D. Brackets/Seals: (TuffWrap Bracket/Tuff Seal) Metal brackets and foam seal.

E. Silicone Caulk: ASTM C 920-87, Type S, Grade NS, Class 25, Use NT, G and A. One component, 100 percent RTV silicone adhesive/sealant designed to meet the requirement of MIL -A-46106A. Amend 2, Type 1. NSF Standard 51 - Plastic materials and components used in food equipment. USDA Rating P1, UL E 170194.

F. Food Grade Sanitary Wipes (ECO-WIPE FCS): FDA Food Code Compliant and USEPA registered and approved. Effectively sanitizes hard, non-porous food contact and food preparation surfaces. Wipes are packaged 100 per canister, and dispense one at a time for single use convenience.
G. Approvals
   1. UL 723 - Flammability and smoke generation
   2. UL 723S - Installation below sprinkler system.

2.02 TEMPORARY PROTECTION MATERIALS
   A. Expanded Polystyrene (EPS) Insulation: ASTM C 578.
   B. Plywood: DOC PS1, Grade CD Exposure 1.
   C. OSB: DOC PS2, Exposure 1

2.03 INFILL AND REPLACEMENT MATERIALS
   A. Plywood sheathing, wood blocking, wood sleepers, and nailers are specified in Section 06 10 00 - Rough Carpentry.

2.04 AUXILIARY RE-ROOFING MATERIALS
   A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

PART 3 - EXECUTION

3.01 PREPARATION
   A. Prior to roof tear-off provide dust and containment protection.
   B. Shut off rooftop utilities and service piping before beginning the Work.
   C. Test existing roof drains to verify that they are not blocked or restricted. Immediately notify Architect of any blockages or restrictions.
   D. Coordinate with Owner to shut down air-intake equipment at the vicinity of the Work. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
   E. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
   F. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
      1. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding. Do not permit water to enter into/under existing roofing system components that are to remain.

3.02 DUST AND DEBRIS CONTAINMENT INSTALLATION PROCEDURES/PRACTICES
   A. Installation material provider’s technicians according to manufacturer's instructions.
   B. Interior protection shall be located below roofing work areas.
   C. Suspended Cover Installation Method:
      1. Discuss site line with Owner to ensure proper height requirements and least amount of penetrations possible.
      2. Use largest sheet size possible.
3. Securely fasten and support in a manner to positively contain light dust and debris and prevent displacement and/or collapse.
   a. Wall Connections:
      1) Critical Areas: Attach sheeting to walls with combination metal Tuff Brackets/Tuff Seal.
      2) Non-Critical Areas: Minimum load rating for each tie off anchor is 50 lbs., spacing 10 ft. on center.
   b. Mid Span Supports:
      1) Install suspended mid span supports 14 ft, maximum.
      2) Utilize appropriate existing structure, equipment or conduit to adequately support a minimum of 30 lb. point load.

D. Take Down Procedures/Practices:
   1. Cover and Drape of Product or Storage:
      a. Just prior to takedown of suspended cover interior protection; protect Owner’s products and equipment by draping with 4 mil plastic, secured in-place; to provide additional protection from dust and debris.
   2. Careful Containment:
      a. Exercise care when removing suspended covers, to contain all dust and debris. Suspended cover shall not be removed until directed by Owner.
      b. Use vacuum equipment and/or air filtration as required by Owner’s bid specifications.
   3. Structure Clean-Up:
      a. Remove all tape, support systems, plastic covering, and debris with minimal disruption to existing equipment and personnel.
   4. Disposal of materials:
      a. Carefully remove all clean-up materials from site and properly dispose of in accordance with applicable codes and regulations; unless Owner provides disposal containers/dumpsters.

3.03 ROOF TEAR-OFF
   A. General: Notify Owner each day of extent of roof tear-off proposed for that day.
   B. Full Roof Tear-Off: Remove existing roofing and other roofing system components down to the deck.
      1. Remove wood blocking, curbs, and nailers.
      2. Bitumen and felts that are firmly bonded to concrete decks are permitted to remain if felts are dry. Remove unadhered bitumen, unadhered felts, and wet felts.
      3. Remove fasteners from deck.

3.04 DECK PREPARATION
   A. Inspect deck after tear-off of roofing system.
   B. If broken or loose fasteners that secure deck panels to one another or to structure are observed, or if deck appears or feels inadequately attached, immediately notify Architect. Do not proceed with installation until directed by Architect.
   C. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect. Do not proceed with installation until directed by Architect.
   D. Provide additional deck securement within roof perimeter and corners as indicated on Drawings.
   E. Replace damaged plywood sheathing with new plywood sheathing to match existing deck. Plywood sheathing replacement will be paid by adjusting the Contract Sum as per unit prices included in the Contract Documents.

3.05 BASE FLASHING REMOVAL
   A. Remove existing base flashings. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
B. Do not damage metal counterflashing that are to remain. Replace metal counterflashing damaged during removal with counterflashing specified in Section 07 62 00 - Sheet Metal Flashing and Trim.

C. Inspect parapet sheathing, wood blocking, curbs, and nailers for deterioration and damage. If parapet sheathing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

D. Remove existing parapet plywood sheathing and replace with new parapet plywood sheathing to comply with Section 06 10 00 – Rough Carpentry. If parapet framing, wood blocking, curbs, or nailers have deteriorated, immediately notify Architect.

E. When directed by Architect, replace parapet framing, wood blocking, curbs, and nailers to comply with Section 06 10 00 - Rough Carpentry.

3.06 FASTENER PULL-OUT TESTING

A. Perform fastener pull-out tests according to SPRI FX-1, and submit test report to Architect and roofing manufacturer before installing new roofing system.

1. Obtain Architect's approval to proceed with specified fastening pattern. Roofing manufacturer may furnish revised fastening pattern commensurate with pull-out test results.

3.07 CLEANING

A. All materials, waste and debris caused by the Work of this Section shall be stock piled daily, remove, and legally disposed daily by the Contractor, in accordance with requirements of Section 01 50 00 - Temporary Facilities and Controls.

END OF SECTION
PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, furnishing and installation of the following:
      1. New mechanically attached induction welded PVC membrane roofing system including, but not limited to, the following:
         a. Overlayment board
         b. Flat and tapered rigid insulation
         c. Walkway pads
         d. Air barrier membrane
         e. Expansion joints, base flashing membranes, penetration boots
         f. Roof metal edge and fascia
         g. Sealants
      2. Pressure treated and non-pressure treated plywood sheathing, eaves blocking for membrane securement, including all fasteners.

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all of the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following Divisions:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 QUALITY ASSURANCE
   A. Roofing system shall be applied by a Trade Contractor for this Section shall have a minimum 10 years of experience who has been approved and authorized prior to bid, by the approved roof membrane manufacturer.
   B. All roof membrane system materials, components, insulation, and accessories shall be the products of a single manufacturer for compliance with requirements of the Contract Documents to provide twenty-five (25) year, full system warranty.
   C. Upon completion of the installation, and at appropriate intervals during installation, an inspection shall be made by a representative of the manufacturer to ascertain that the roofing system has been installed according to applicable manufacturer's specifications and details.
1.05 PERFORMANCE REQUIREMENTS

A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.

C. Roofing System Design: Provide a membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE 7-10.
   1. Field-of-Roof Uplift Pressure: 51 psf.
   2. Perimeter Uplift Pressure: 76 psf.

D. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
   1. Fire/Windstorm Classification: Class 1A-60.
   2. Hail Resistance: MH.

E. Underwriters Laboratories
   1. Class A Assembly Rating: UL 1256; Insulated Metal Deck Construction Assemblies – No. 120, 123, 292; UL 790; UL 263 Hourly Rated P Series Roof Assemblies.

1.06 SUBMITTALS

A. Certificates:
   1. Submit certified manufacturer documentation of acceptance of roof membrane system installer.
   2. Written certification by the approved manufacturer of roofing and insulation materials that all materials supplied comply with all requirements of the appropriate ASTM Standards, and that all the materials are suitable for the specified roofing system. Certification shall be provided in time to prevent delay in implementation of the Work of this Section.
   3. Pressure Treated Wood: Submit certification by treating plant stating chemicals and process used, net amount of salts retained, and conformance with applicable standards.
   4. Pressure Treated Wood: Submit certification for water-borne preservative that moisture content was reduced to 19% maximum, after treatment.
   5. Preservative treatment for field cut surfaces of pressure treated blocking and sheathing shall contain 2% copper naphthenate complying with AWPA Standard M4. Material shall be Green No. 10, as manufactured by Cuprinol, or Architect approved equal by WM Barr or Behr.

B. Samples and Shop Drawings:
   1. Provide two samples, labeled, of all materials provided under the Work of this Section.
   2. Provide shop drawings to include, but not be limited to, the following:
      a. Outline of roofs and sizes, showing field, corners, and perimeters
      b. Insulation fastening pattern for fasteners and adhesives at field, corners, and perimeter
      c. Location and type of all penetrations
      d. Perimeter and penetration flashing details
      e. Rigid insulation manufacturer brand, thickness
      f. Tapered and flat rigid insulation layout
      g. Fastener manufacturer, brand and length
      h. Warranty type and period
      i. Technical acceptance from membrane manufacturer

C. Provide the manufacturer's most recent edition of material and performance specifications for all materials provided under the Work of this Section.
D. Provide three copies of membrane manufacturer's full system warranty, and three (3) copies of the applicators warranty.

1.07 DELIVERY, STORAGE AND HANDLING
A. Deliver materials and products in unopened factory labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage.
B. Handle all materials to avoid damage to materials and roof deck. Store rolled goods directed by manufacturer. Discard rolls which have been flattened, creased, or otherwise damaged. Bonding adhesive shall be stored at temperatures above 40°F.
C. All flammable materials shall be stored in a cool dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
D. Do not allow materials or incomplete roofing Work to be exposed to moisture, anywhere, at any time, during transportation, storage, handling or installation. Use pallets and tarpaulins to cover all stored material, top to bottom. Secure tarpaulin.

1.08 PROJECT CONDITIONS
A. Perform Work only when existing and forecasted weather conditions are within the limits established by manufacturers of the materials and products used.
B. Only as much of the new roofing as can be made weather-tight each day including all flashing Work, shall be installed.
C. All Work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.
D. The membrane manufacturer requires the owner's representative or Trade Contractor for this Section run pullout tests of fasteners to verify condition of deck/substrate and confirm pullout values.
E. All surfaces to receive new insulation, membrane or flashings shall be thoroughly dry. Should surface moisture occur, the Trade Contractor for this Section shall provide the necessary equipment to dry the surface prior to application.
F. Temporary water stops shall be installed at the end of each day's Work, and shall be removed before proceeding with the next day's Work. Waterstops shall be compatible with all materials and shall not emit dangerous or incompatible fumes. Provide waterstops for all roofing systems described in this specification per manufacturers recommendations.
G. The Trade Contractor for this Section shall provide all necessary protection and barriers to segregate the Work area and to prevent damage to adjacent areas. Plywood protection shall be provided for all new roofing areas which shall receive traffic during construction.
H. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air and/or similar methods.
I. Membranes and accessories shall not be exposed to prolonged temperature in excess of 160° F.
J. Contaminants, such as grease, fats, oils and solvents, shall not be allowed to come into direct contact with the roofing membrane. Any unusual exposures shall be presented to the membrane manufacturer for assessment of any impact on the roofing membrane.

1.09 WARRANTY
A. Provide twenty-five year full system warranty, no cap, non-prorated, transferable, labor and material, manufacturer's warranty to the Owner by the approved roof membrane system manufacturer from the date of Final Completion. Warranty length:
B. The Roofing Subcontractor, as a condition precedent to final payment, shall execute his own written guarantee direct to the Owner, warranting all roofing, base flashing and sheet metal work to be weather and watertight for a period of two years after date of final completion on the Project. Any imperfections as a whole or in part, by reason of defective materials, workmanship or arrangement of the various parts shall be made good to the satisfaction of the Owner at the Trade Contractor's expense.

1.10 PRE-INSTALLATION MEETING

A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 ROOF MEMBRANE SYSTEM

A. Mechanically attached induction-welded PVC membrane as indicated on the Drawings shall be Type II, Grade 1, thermoplastic PVC membrane with fiberglass reinforcement conforming with ASTM D 4434 (latest version), “Standard for Poly Vinyl Chloride Sheet Roofing”, S327 as manufactured by Sika Sarnafil, Inc., or Architect approved equal by Carlisle SynTec or Johns-Manville.

B. Minimum roof membrane requirements shall comply with the following physical material and performance characteristics:

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>ASTM TEST METHOD</th>
<th>PHYSICAL PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reinforcing Material:</td>
<td>Fiberglass</td>
<td></td>
</tr>
<tr>
<td>2. Overall Thickness (mil):</td>
<td>D751</td>
<td>72</td>
</tr>
<tr>
<td>3. Thickness Over Scrim (mil):</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>4. Felt Weight (oz/yt²):</td>
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<td>9</td>
</tr>
<tr>
<td>5. Tensile Strength, mi., psi, (Mpa)</td>
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<td></td>
</tr>
<tr>
<td>a. Machine Direction (%):</td>
<td>D638</td>
<td>1625</td>
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<tr>
<td>b. Cross Direction (5):</td>
<td>D638</td>
<td>1575</td>
</tr>
<tr>
<td>6. Elongation of Break, min.</td>
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<td></td>
</tr>
<tr>
<td>a. Machine Direction (%):</td>
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<td>250</td>
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<tr>
<td>b. Cross Direction (%):</td>
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<td>220</td>
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<tr>
<td>7. Seam Strength, min., (% of original):</td>
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<td>Pass</td>
</tr>
<tr>
<td>8. Retention of Properties After Heat Aging</td>
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<td></td>
</tr>
<tr>
<td>a. Tensile Strength, min. (% of original):</td>
<td>D638</td>
<td>Pass</td>
</tr>
<tr>
<td>b. Elongation, min., (% of original):</td>
<td>D638</td>
<td>Pass</td>
</tr>
<tr>
<td>10. Low Temperature Bend (-40° F):</td>
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<td>11. Accelerated Weathering Test</td>
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<tr>
<td>a. Cracking (7x magnification):</td>
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<td>None</td>
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<tr>
<td>b. Discoloration (by observation):</td>
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<td>Negligible</td>
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<tr>
<td>c. Crazing (7x magnification):</td>
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<tr>
<td>12. Linear Dimensional Change (%):</td>
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<tr>
<td>13. Weight Change After</td>
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<td>Immersion in Water (%):</td>
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<td>14. Static Puncture Resistance, 33 lbf</td>
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<tr>
<td>15. Dynamic Puncture Resistance, 7.3 ft-lbf</td>
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<td>16. Color:</td>
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<td>a. Initial Reflectivity:</td>
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<tr>
<td>b. Initial Emissivity:</td>
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</tr>
<tr>
<td>c. Solar Reflective Index (SRI):</td>
<td>104 (ENERGY STAR listed)</td>
<td></td>
</tr>
</tbody>
</table>
2.02 ROOF METAL EDGE

A. Provide PVC coated, heat-weldable sheet metal, cut to size and formed to shape, Sarnaclad as manufactured by Sika Sarnafil, or Architect approved equal.
   1. Gauge: 24 gauge, G90 galvanized
   2. Aluminum Finish: Standard color as selected by the Architect from the roof manufacturer’s color chart
   5. Flashing Strip: Hot-air welded Sarnafil flashing strip

2.03 PRE-FINISHED ALUMINUM FASCIA

A. Provide pre-finished aluminum fascia with continuous metal hook strip. Fascia shall be formed into shapes as shown on the drawings.
   1. Gauge: 0.050 in. thick formed aluminum
   2. Aluminum Finish: Standard color Kynar 500 as selected by the Architect from the roof manufacturer’s color chart
   4. Metal Hook Strip: shall be continuous 22 gauge and fastened using galvanized annular ring nails.

B. Color of aluminum sheet shall be as selected by the Architect from the approved manufacturer’s complete selection of standard and premium colors.

2.04 WOOD BLOCKING AND PLYWOOD SHEATHING

A. Provide wood blocking and plywood sheathing that is pressure treated to a level of 0.25 pounds per cubic foot of wood product, with waterborne CCA preservatives in accordance with requirements of AWPA Standard U1 and T1. Plywood shall be dried to a maximum moisture content of 19 percent after treatment.
   1. Provide non-pressure treated lumber at all locations where roof membrane and adhesive flashings are required to be directly adhered to the lumber surface.

B. Provide APA trademarked, Exposure 1 Rated and non-rated plywood performance rated sheathing, 3/4 in. thick, with span rating for spans indicated. Use of particleboard, flakeboard, or oriented strand board (OSB), shall not be allowed. Sheathing shall be pressure treated to a level of 0.25 pounds per cubic foot of wood product, with waterborne CCA preservatives in accordance with requirements of AWPA Standard U1 and T1.
   1. Provide non-pressure treated plywood at all locations where roof membrane and adhesive flashings are required to be directly adhered to the plywood surface.

C. Wood blocking and nailers shall be in profiles and sizes as indicated on the Drawings or as otherwise required by the approved roof membrane manufacturer. Blocking and nailers shall be installed at the perimeter of the entire roof and around all other roof projections and penetrations. Thickness of blocking and nailers shall be fabricated and installed to provide a smooth transition from blocking to adjacent insulation.

D. Provide fasteners with G-90 hot dip galvanized coating, or fluoropolymer coating, at areas of high humidity, including roof blocking and sheathing. Fasteners for use with non-CCA pressure treated lumber, including ACQ Types B and D, CBA-A, and CA-B, shall be stainless steel.

2.05 INSULATION AND ACCESSORIES

A. Roof insulation shall be Type II, Class 2, Grade 3 polyisocyanurate insulation, ASTM C 1289, as approved by the roof membrane manufacturer modified as follows:
   1. Facers: Coated glass.
   2. Board size: 4 ft x 8 ft.
   3. Thickness: Bottom layer 3 in., top later 2.5 in. Total thickness: 5.5 in.
4. Density: 25 psi minimum
5. Edges: Square

B. Provide compatible tapered insulation to provide crickets and drain insulation sumps where shown on the Drawings. Tapered insulation slope shall be 1/2 in. per foot.

C. Insulation Fasteners:
1. The fastening system shall be 3 in. metal plate with a polymer coating, Sarnadisc Rhinobond and #12 fastener, Sarnafastener as manufactured by Sika Sarnafil, or Architect approved equal. The metal plate is positioned on the surface of the insulation board. The fastener is set through the center of the metal plate and holds the insulation in place into the roof deck.
2. Fasteners and fastening plates incorporated in roofing system shall conform to FM 4470 standard and DIN 50018 specification for corrosion resistance.

D. Membrane and Flashing Adhesives and Sealants:
1. Membrane and flashing adhesive shall be VOC compliant as supplied by the approved roof membrane manufacturer for the required substrate. Application rates shall be in compliance with the approved manufacturer's recommendations for the intended substrate.
2. Sealant shall be as supplied by the approved roof membrane manufacturer, with color to match the adjacent roof membrane.

E. Elastomeric Flashing:
1. Base flashing shall be compatible with sheet membrane as supplied by the approved roof membrane manufacturer.
2. Pipe seals and prefabricated flashing accessories shall be as supplied by the approved roof membrane manufacturer.
3. Molded Pipe Flashing shall be as supplied by the approved roof membrane manufacturer.

F. Provide the following accessory products as manufactured by the approved membrane manufacturer:
1. Provide all clips, cleats, straps, anchors and similar items necessary to properly complete the Work. Provide accessories that are compatible with sheet metal materials used and which are of sufficient size and gage to perform as intended.
2. Provide the approved manufacturer's recommended roof expansion joints at all locations as indicated on the Drawings, or as otherwise required to comply with the approved roof system manufacturer's written warranty requirements.

G. Provide spray foam insulation to achieve R15 at exposed flutes of metal roof deck. See Architectural drawings for locations. The spray foam insulation shall be Class 1, Class A, ASTM E-94, K-13 as manufactured by International Cellulose Corporation, or Architect approved equal.

H. Overlayment Board and Adhesive:
1. Coverboard shall be 5/8 in. thick, water and mold resistant, silicone treated gypsum sheathing, Dens Deck Prime, as provided by Sarnafil, or Architect approved equal by Georgia Pacific, complying with requirements of ASTM C 1177. Board dimensions shall be as follows:
   a. 4 ft x 4 ft boards when adhering board with low-rise foam adhesive.
2. Overlayment board adhesives shall be low-rise foam urethane adhesive as manufactured by the approved roofing membrane manufacturer.

2.06 MISCELLANEOUS ACCESSORIES
A. Expansion Joint Assembly: 2 in. expansion joint with hot-air welded flashing strip, compatible foam rod tubing, Sarnadisc Rhinobond plates, Sarnafastener No. 21, and batt insulation.
B. Aluminum Tape: 2 in. wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond-breaker under the coverstrip at Sarnaclad joints.
C. Multi-Purpose Tape: High performance sealant tape used with metal flashings as a preventive measure against air and wind-blown moisture entry.

D. Seam Cleaner: Used on PVC membranes to clean the in the seam area only.

E. Peel Stop Perimeter Bar: Extruded 1/8 x 1 in. aluminum, low profile bar with predrilled holes on 6 in. centers used to attach to the roof deck or to walls/curbs at terminations, penetrations and at incline changes of the substrate

F. Miscellaneous fasteners and anchors shall be of the same type as metal being secured. In general, all fasteners, anchors, nails, straps, shall be of zinc or cadmium plated steel, galvanized, or stainless steel. All fasteners and anchors shall have a minimum embedment of 1-1/4 inches and shall be approved for such use by the fastener manufacturer. Fasteners for attachment of metal to wood blocking shall be annular ring nails. Fasteners for attachment of metal to masonry shall be expansion type fasteners. All fasteners shall meet Factory Mutual Standard 4470 for corrosion resistance.
   1. Fasteners for attachment of pressure treated blocking shall be stainless steel.

2.07 WALKWAY PADS
A. Provide 39 in. wide thermoplastic rolled-out heat welded walkway, ASTM D751, Sarnatred-V as manufactured by Sika, or Architect approved equal. The walkway pads shall have the following material and performance characteristics:
   2. Overall Thickness: 0.096 in.
   3. Tensile Strength: 275 psi
   4. Elongation at Break: 15 lbf. min.
   5. Tearing Resistance: 50 lbf. min.
   6. Low Temperature Bend: Pass, ASTM D2136
   8. UV Resistance: 5,000 hrs., ASTM D2565
   9. Puncture Resistance: 54 lbs., ASTM 2065
   10. Recycled Content: 1% Post-Consumer, 9% Pre-Consumer

2.08 AIR BARRIER MEMBRANE
A. Air barrier membrane at roof assemblies shall be 10 mil air barrier membrane, Sarnavap-10 as manufactured by Sarnafil, or Architect approved equal. Air barrier membrane shall comply with requirements of 780 CMR, Commonwealth of Massachusetts Building Code, Chapter 13, Section 1304.3, Air Leakage, and the following material and performance characteristics:
   1. Tensile Strength: 3470 psi per ASTM D 882
   2. Elongation at Break: 1000% per ASTM D 882
   3. Yield Strength: 1595 psi per ASTM D 882
   4. Water Vapor Permeance: 0.019 perms per ASTM E 96
   5. Impact Strength: 1.67 lbs. per ASTM D 1709

B. Provide the approved roof membrane manufacturer’s recommended spray applied foam insulation for infill of exposed steel roof deck flutes perpendicular to the edge of roof penetrations.

PART 3 - EXECUTION

3.01 GENERAL
A. The Work of this Section shall include coordination of the installation as necessary to ensure each area is made watertight at the end of each Work period.

3.02 DECK PREPARATION
A. At new steel decks a proper substrate shall be provided to receive the membrane as a mechanically attached system.
B. The Trade Contractor for this Section shall inspect the roofing surface for defects, including but not limited to, proper anchorage for compliance with required wind uplift resistance ratings, excessive surface roughness, contaminated surfaces, and structurally unsound substrates that shall adversely affect the quality of Work. Do not proceed with application of roofing until defects are corrected, and the surfaces have been approved by a representative of the membrane manufacturer.

C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.

D. Verify that the Work of other trades which penetrates roof deck has been completed, and that nailers have been installed at perimeter and at vents.

E. Remove all materials that could inhibit adhesion or could contain or include water.

3.03 PERIMETER METAL EDGE INSTALLATION

A. Perimeter edge blocking system, including bottom and top sections and concealed splice plates at all joints shall be attached to metal deck with mechanical fasteners in accordance with the approved manufacturer’s written instructions.

B. Edge blocking system shall be filled with rigid roof insulation to fully fill the entire cavity as indicated on the Drawings.

C. Starting at the corners, install a closure strip at the end of the metal deck closing off the flutes and a finish strip parallel with the flutes providing a level surface for the EdgeBox blocking. Fasten bottom sections of the blocking to the metal deck using the provided fasteners leaving an 1/8 in. gap for expansion. Place a concealed splice plate at exposed ends of bottom section. Starting at the corners, place top section to fully join the top and bottom sections. Secure each end with the supplied fasteners into the counter sunk holes.

3.04 WOOD BLOCKING INSTALLATION FOR NON-PERIMETER AREAS

A. Wood blocking and nailers shall be installed using the approved roof membrane manufacturers non-corrosive fasteners, or as otherwise required to comply with F.M. 1-60 wind uplift resistance requirements. All blocking and nailers required to be anchored by bolts and/or screws shall be counter bored to allow the top of the bolt or screw head to be flush with, or slightly below, the top of the finished wood surface. Provide all required expansion sleeves and other anchorages necessary and required for compliance with requirements of the Contract Documents.

   1. Perform pull-out test to field verify integrity of fasteners

B. Wood blocking and nailers shall be provided in accordance with the approved roof membrane manufacturers installation details, or as otherwise required to accommodate field conditions, approved by the Architect.

C. Provide non-pressure treated blocking and plywood at all locations where roof membrane is required to be directly adhered to the exposed wood surface. Coordinate areas to receive fully adhered membrane roofing to ensure the proper substrate material is used in accordance with the approved roof membrane manufacturer’s written recommendations, and the Contract Documents.

D. Refer to the Drawings for all conditions necessary to complete the Work. In the absence of Drawing details, blocking shall be provided in accordance with the approved roof membrane manufacturer’s written installation details, or as otherwise required to accommodate field conditions approved by the Architect.

E. Install plywood roof sheathing with the grain of the outer plies at right angles to supports. Stagger end joints and locate over the center lines of supports. Allow 1/6 in. spacing at panel ends and 1/8 in. at panel edges. Fasten panels to metal members with self-tapping screws and to wood members with wood screw nails spaced 6 in. on centers at bearings.

3.05 INSTALLATION OF AIR BARRIER MEMBRANE

A. Air barrier membrane shall be placed over metal deck and pulled tight in all directions to eliminate all wrinkles and air bubbles. All seams and penetrations shall be taped in accordance with the approved manufacturer’s written instructions, or as otherwise required to comply with requirements of the Contract Documents.

   1. At locations where flutes of roof deck are exposed and perpendicular to roof edge and roof deck penetrations, flutes shall be filled solid with expanding foam sealant to eliminate air flow.
2. Seal all joints in air infiltration barrier and provide adhesives as recommended by the approved roof membrane manufacturer for securing air barrier membrane to steel deck prior to application of rigid insulation.

3. Air barrier membrane shall extend beyond all roof edges whatever distance necessary for connection of the roof air barrier membrane to the wall air barrier membrane. The Work of this Section shall be coordinated with the Work of Section 07 27 26 – Fluid Applied Membrane Air Barriers* to provide a complete and fully functional air barrier system in accordance with requirements of 780 CMR, 9th Edition, Chapter 13, including Section 1304.3, Air Leakage, and the Contract Documents.

3.06 APPLICATION OF ROOF INSULATION

A. Verify all dimensions, drain heights and drain locations in the field prior to installation of the tapered insulation system.

B. Starting at low points lay flat and tapered insulation panels directly over the steel or concrete decks in strict accordance with the layout pattern indicated on the Architect approved shop drawings. Flat insulation panels shall be installed over the deck substrates in thickness as indicated on the Drawings. All flat and tapered insulation panels shall be butted snugly with no gaps greater than 1/4 in. Gaps greater than 1/4 in. shall be filled with the same material.
   1. Perform pull-out test to field verify integrity of fasteners.
   2. Mechanically attach insulation to structural deck with roof membrane approved fasteners and plates at a rate approved and tested by the roof membrane manufacturer to meet uplift pressures as defined in Part 1 of this Section.

C. Fill insulation shall be utilized in 2 in. increments as necessary to achieve the specified thickness and thermal values.

D. Install crickets where indicated on the Drawings

E. Provide 9 ft. - 4 in by 9 ft. - 4 in. insulation sumps where shown on Drawings using tapered roof insulation to ensure final membrane surface is flush and smooth, and does not restrict flow of water.

3.07 ROOF MEMBRANE INSTALLATION

A. The surface of the insulation shall be inspected prior to installation of roof membrane. The insulation surface shall be clean and dry and smooth without excess surface roughness, contaminated surfaces or unsound surfaces.
   1. Over the properly installed and prepared insulation surface, apply approved adhesive and membrane in strict accordance with membrane manufacturer's printed instructions. All sheets shall be overlapped a minimum of three inches or as otherwise required for compliance with specified and approved welding techniques.
      a. Roof membrane shall not be installed when the dewpoint temperature is within 5 degrees Fahrenheit of the ambient air temperature.
   2. Installer shall take steps to ensure all membrane installation including seams, joints, accessories, and welding are of the highest standard, uniform in appearance providing roof surface with a monolithic appearance.

B. Membrane Securement:
   1. Securement shall be provided at the perimeter of each roof level, roof section, curb, skylight, and all other roof penetrations, and at base of slope where slope or combined slopes exceed 2 in. in one horizontal foot.
   2. Bar fastenings shall be mechanically fastened into the appropriate structural substrate and secured to roofing membrane.
   3. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary membrane flashing shall be allowed without the prior written approval of the membrane manufacturer and Architect. Approval shall only be for specific locations on specific dates.

3.08 HOT-AIR WELDING OF SEAM LAPS

A. General
   1. All seams shall be hot-air welded. Seam overlaps should be 3 in. wide when automatic machine-welding and 4 in. wide when hand-welding, except for certain details.
2. Weld coverstrips at all membrane seams that do not have a factory selvage edge such as butt joints and cut edges.

3. Welding equipment shall be provided by or approved by membrane manufacturer. All mechanics intending to use the equipment shall have successfully completed a training course provided by Sika Sarnafil Technical Representative prior to welding. Ensure welding equipment is functioning properly prior to using.

4. All membrane to be welded shall be clean and dry.

B. Hand-Welding
1. Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.

2. Back edge of seam shall be welded with a narrow but continuous weld to prevent loss of hot air during final welding.

3. Insert nozzle into seam at a 45° angle to edge of membrane. Once proper welding temperature has been reached and membrane begins to "flow," position hand roller perpendicular to nozzle and roll lightly. For straight seams, use 1-1/2 in. wide nozzle. For corners and compound connections, use 3/4 in. wide nozzle.

C. Machine Welding
1. Machine welded seams are achieved by the use of approved automatic welding equipment. When using this equipment, manufacturer's instructions shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated off simultaneously the generator.

2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.

D. Quality Control of Welded Seams
1. Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark grey material from the underside of the top membrane.

2. On-site evaluation of welded seams shall be made daily by the Applicator at locations directed by the Owner's Representative or manufacturer's representative.

3. 1 in. wide cross-section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld.

4. Each test cut shall be patched by the Applicator at no additional cost to the Owner.

5. Apply roofing membrane with side laps shingled in such a manner that water runs over or parallel to lap. Do not allow roof membrane to "buck" water.

E. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.

2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.

3. Repair tears, voids, and lapped seams in roofing membrane that do not meet requirements.

4. T-Joints (three-way overlaps): Wherever possible, the head lap shall extend under the field seam so that the T-joint patch only has to step down over one thickness of membrane. When welding a T-joint, the top edge of the second membrane layer shall be chamfered to create a smooth transition for the top membrane layer to conform to for positive welding. Chamfer the edge of the membrane using a hand-held chamfer tool supplied by the manufacturer. Provide T-joint patches at all T-joints.

F. Spread sealant over deck drain flange at roof drains and securely seal membrane in place with clamping ring.
3.10 PERIMETER PEEL STOP
A. Provide enhanced mechanical attachment of membrane perimeter with a 1/8 x 1 in. bar attached on 12 in. centers 3 ft. from roof perimeter. Gap bar ends 1 in. Wrap bar ends with PVC membrane prior to membrane stripping.
B. Provide PVC membrane stripping centered over bar. Heat-weld stripping to membrane roofing with minimum 3 in. wide weld.

3.11 WALKWAY INSTALLATION
A. Prior to walkway installation check all existing deck membrane seams that are to be covered. Re-weld any inconsistencies before installation
B. Install walkway in locations indicated on Drawings. Install according to roofing system manufacturer’s written instructions. Adhere walkway to roof membrane and heat weld entire perimeter.
C. Use connecting clips for butting two walkway ends together. Use 5 clips to join butt ends and one clip every 2 ft. to connect adjacent parallel walkways. Secure each side of walkway to membrane roofing on 5 ft. centers with loops of PVC membrane welded to field sheet.

3.12 COMPLETION
A. All Trade Contractor for this Section and manufacturer warranties required under the Work of this Section shall be submitted for approval prior to final payment.

3.09 RUBBISH REMOVAL
A. The Subcontractor of a Filed Sub-Bid Section shall stock pile and drop all waste and debris daily to the floor.
B. The General Contractor shall remove all waste and debris and legally disposed daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
NEW BEDFORD CABLE ACCESS BUILDING - ROOF REPLACEMENT
918 S. RODNEY FRENCH BLVD., NEW BEDFORD, MA 02744
Mount Vernon Group Architects, Inc., Project No. 02014.71

SECTION 07 72 00
ROOF ACCESSORIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
   A. All the Contract Documents, including Drawings, General Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK
   A. The Work of this Section includes, but is not limited to, furnishing and installation of the following:
      1. Pipe chase housing box and curb
      2. Rated and non-rated roof access hatches
      3. Safety Railings
      4. Formed Counter flashing and cap flashing
      5. Roof vents
      6. Roof drain marker
      7. Fasteners and other anchorage devices for installation and attachment of wood blocking and sheathing provided under the Work of other Sections.
      8. Pressure treated, non-pressure treated blocking, and plywood sheathing, including all fasteners.
      9. Equipment support curbs

1.03 RELATED WORK SPECIFIED ELSEWHERE
   A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
   B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
      1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
      2. Section 02 41 13 – Selective Demolition
      3. Section 06 10 00 – Rough Carpentry
      4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
      5. Section 09 91 13 – Painting
      6. Section 22 00 00 - Plumbing

1.04 QUALITY ASSURANCE
   A. For each type of product required for the Work of this Section, provide products of one manufacturer. Provide secondary materials which are acceptable to the manufacturers of the primary products.
      1. Provide combination louvers and shut-off dampers whose performance ratings have been determined in compliance with the Air Movement and Control Association Standard 500 and which bear the AMCA Certified Ratings Seal.
   B. Fire-Resistance and Performance: Provide heat and smoke vent units that have been tested, listed and labeled by UL or another agency acceptable to authorities having jurisdiction. Provide UL class A lids for all roof accessories.
   C. Comply with applicable recommendations and details of SMACNA Architectural Sheet Metal Manual and NRCA Roofing and Waterproofing Manual. The Work of this Section shall include submission of written documentation that anchoring of all roof accessories complies with requirements of FEMA Advisory for Attachment of Rooftop Equipment in High Wind Regions dated July 2006, and load calculations in accordance with ASHRAE Journal, Volume 48, Number 3, March 2006 for Calculating Wind Loads and Anchorage Requirements for Rooftop Equipment,
D. Provide units designed to withstand 20 psf internal loading and 40 psf external loading.
E. Combination louvers and air shut-off dampers shall comply with requirements of 780 CMR, Chapter 13, Section 1304.3.7 Air Tight Dampers.

1.05 SUBMITTALS
A. Submit manufacturer's product data, including but not limited to, installation instructions, use limitations and recommendations for each material used, and certifications demonstrating materials comply with requirements.
B. Submit two representative samples of each material that is to be exposed in the finished Work, showing the full range of color and finish variations expected. Samples shall have a minimum area of 144 square inches.
C. Provide large scale shop drawings showing installation, anchorage and interface of the Work of this Section with the Work of adjacent trades.

1.06 DELIVERY, STORAGE AND HANDLING
A. Deliver, store and handle material in accordance with the approved manufacturer’s written requirements to protect from damage.

1.07 PRE-INSTALLATION MEETING
A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, determine acceptable mock-ups, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Steel shall be commercial quality, ASTM A525 G90 hot-dip galvanized, mill phosphatized.
C. Fasteners shall be non-corrosive metal matching finish of roof accessories.
D. Isolation coating shall be SSPC paint 12.

2.02 SHEET METALS
A. Valley flashing, step-flashing, and counterflashing shall be .063 in., pre-finished aluminum sheet, ASTM B 209, Alloy 3003, 3004, 3105, or 5005, Temper suitable for forming and structural performance required, but not less than H14.
   1. Aluminum sheet shall be finished with the approved manufacturer's standard 3-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight, with a minimum total dry film thickness of 1.5 mil; complying with AAMA 2605.
   2. Color of aluminum sheet shall be as selected by the Architect from the approved manufacturer’s complete selection of standard and premium colors.
B. Step flashing, counterflashing, formed roof scuppers, and related accessories and fasteners shall be Type 304 stainless steel in sizes and configurations as indicated on the Drawings

2.03 ROOF ACCESS HATCH
A. Provide factory assembled, 30 in. x 54 in., single leaf, roof access hatch, Model No. NB as manufactured by Bilco, or Architect approved equal by Milcor or Dur-Red. The roof access hatch shall comply with the following characteristics:
1. The cover shall be 14-gauge paint bond G-90 galvanized steel with a 3 in. beaded flange with formed reinforcing members.
2. Heavy extruded EPDM rubber gasket that is bonded to the cover interior to assure a continuous seal when compressed to the top surface of the curb.
3. Reinforced to support a minimum live load of 40 psf with a maximum deflection of 1/150th of the span or 20 psf wind uplift.
4. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
5. Operation of the cover shall not be affected by temperature.
6. Entire hatch shall be weather tight with fully welded corner joints on cover and curb.
7. Cover insulation shall be fiberglass of 1 in. thickness, fully covered and protected by a metal liner 22 gauge paint bond G-90 galvanized steel.
8. Curb shall be 12 in. in height and of 14 gauge paint bond G-90 galvanized steel. The curb shall be formed with a 3-1/2 in. flange with 7/16 in. holes provided for securing to the roof deck. The curb shall be equipped with an integral metal cap flashing of the same gauge and material as the curb, fully welded at the corners, that features the Bil-Clip® flashing system, including stamped tabs, 6 in. on center, to be bent inward to hold single ply roofing membrane securely in place.
9. Curb insulation shall be rigid, high-density fiberboard of 1 in. thickness on outside of curb.
10. Lifting mechanisms shall provide compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe for steel construction through bolted to the curb assembly.
11. Hardware:
   a. Heavy pintle hinges shall be provided.
   b. Cover shall be equipped with a spring latch with interior and exterior turn handles.
   c. Roof hatch shall be equipped with interior and exterior padlock hasps.
   d. The latch strike shall be a stamped component bolted to the curb assembly.
   e. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1” (25mm) diameter red vinyl grip handle to permit easy release for closing.
   f. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be zinc plated and chromate sealed. [For installation in highly corrosive environments or when prolonged exposure to hot water or steam is anticipated, specify Type 316 stainless steel hardware].
   g. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.
12. Factory finishes shall be alkyd based red oxide primed steel.

2.04 PIPE CHASE HOUSING BOX AND CURB

A. Provide five pipe chase housing box Model No. AL-161010 and five curb system Model No. AL-158C, both as manufactured by Alta Products, LLC, or Architect approved equal by Dur-Red or Milcor.

13. The housing and curb shall be 0.080 in. thick aluminum with stainless steel fasteners and full thermal break in the housing, curb, and lid interior. Provide gaskets between the lid to housing and housing to curb connection points.
14. The housing and curb color shall be beige with UV protected powder coated finish (2 mil. thick).
15. The housing shall have seven Sigrist Exit Seal to accommodate pipe and conduit sizes ranging from 1/4 inch to 1 5/8 inch outside diameter in 1/8 in. increments. The Sigrist Exit Seal shall be injected molded ABS resin, high impact, and UV protected.
16. The Work of this Section shall include coordination with the Work of Section 23 00 01 – HVAC and Section 26 00 01 - Electrical as necessary and required to verify pipe and conduit sizes, and specific housing locations, required to complete the Work of each respective Section.
2.05  SAFETY RAILINGS

A. Roof Edge Protection: Provide freestanding pedestrian egress barrier system on roof, including pipe railings, uprights, bases, and fittings.
   1. Acceptable Manufacturers:
      a. BlueWater Manufacturing, Inc., Chaska, MN.
      b. Garlock Equipment, Plymouth, MN.
      c. Safety Rail Systems, Spring Park, MN.
   2. Standards: System shall have top and mid rail in accordance with OSHA Standards - 29 CFR 1910.23 (a)(2) as well as returns at either end of linear run if runs can not be joined at ends due to roof elevation differences.
   4. Height: 42 in., min.
   5. Railings: 1-5/8 in. O.D. hot rolled pickled electric weld tubing, free of sharp edges and snag points.
   6. Mounting Bases: Class 30 gray iron material cast with four receiver posts. Provide rubber pads on bottom of bases.
   7. Roof Pad under Mounting Bases: CrossGrip Walkway.
   8. Receiver Posts: Shall have a positive locking system into slots that allow rails to be mounted in any direction. Friction locking systems are not allowed. Receiver posts shall have drain holes.

B. Pipe Fittings:
   1. Type: Provide fittings required for a complete operational system that meets OSHA requirements.
   2. Material, Structural Pipe Fittings: Malleable iron, in accordance with BS EN 1562.
   3. Material, Fitting Types 26, 27 and 90: Weldable cast steel, in accordance with BS 3100.
   4. Finish: Pipe fittings shall be galvanized in accordance with BS EN ISO 1461.
   5. Fitting, Inside Diameter:
      a. 1.38 in.
      b. 1.73 in.
      c. 1.97 in.

C. Hardware: Stainless steel set screws, in accordance with BS 970 Grade 420. Each set screw shall support axial load of 900 kg when tightened to torque of 40Nm.

D. Finish
   1. Finish: Factory finished powder coat paint.
   2. Color: Gray.

E. Fabrication
   1. Assemble components with joints tightly fitted and secured. Accurately form components to suit installation.

2.06  ROOF DRAIN MARKER

A. Roof Drain Marker: Drain dome-mounted vertical fiberglass flag marker secured in aluminum socket in turn secured with pre-punched aluminum bracket configured for through-bolting to roof drain dome.

B. Basis-of-Design Product: Provide roof drain markers manufactured by Roof Drain Marker Co., LLC., West Bridgewater, MA; (877) 571-6644.

C. Marker: Pultruded fiber-reinforced polymer rod, 1/2 in. diameter x 48 in. long, with reflective dual-colored reversible ends enabling marking of selected drains.
   1. Flexural Strength, min.: 700,000 psi. (ASTM D 790).

D. Marker Base: ASTM B 209 extruded aluminum bar, 1 x 1 x 4 in. with milled flag receiver, threaded flag set screw retainer, and threaded base.
E. Flag Bracket: ASTM B 221, aluminum plate bracket, 1 x 11 x 0.063 in.

F. Fasteners:

2.07 FABRICATION
A. Fabricate Work to be straight, plumb, level and square. Where roof slope exceeds 1/4 in. per foot, provide units with tapered bases to keep top of units level.
B. Provide Work to sizes, shapes, and profiles indicated on approved shop drawings.
C. Make Work with uniform, weathertight joints.

2.08 FINISHES
A. Steel curb units: Provide minimum 2.0 mil dry film thickness of rust-inhibiting primer which is compatible with finish paint specified in Finish Painting Section 09900. Acceptable alkyd products include:
   1. Benjamin Moore, Iron-Clad Retardo No. 163
   2. PPG, Inhibitive Metal Primer
   3. Rust-Oleum, Bare Metal Primer
B. Aluminum Components: Aluminum access and smoke hatches, elevator vent louvers and framing shall receive a minimum 1.2 mil dry film thickness of thermo-cured fluorocarbon coating containing minimum 70% Kynar 500 resin over substrate which has been prepared by inhibited chemical cleaning, conversion coating, and priming in compliance with coating manufacturer's instructions and recommendations. Color shall be selected by Architect from manufacturer's standard and premium color ranges.

PART 3 - EXECUTION

3.01 INSPECTION
A. The Installer shall examine substrates, supports, and conditions under which this Work is to be performed and notify the General Contractor, in writing, of conditions detrimental to the proper completion of the Work. Do not proceed with Work until unsatisfactory conditions are corrected. Beginning Work means Installer accepts substrates and conditions.

3.02 WOOD BLOCKING INSTALLATION
A. Wood blocking and nailers shall be installed using the approved roof accessory manufacturers non-corrosive fasteners, or as otherwise required to comply with F.M. Class I and F.M. 1-75 wind uplift resistance requirements. All blocking and nailers required to be anchored by bolts and/or screws shall be sufficiently counter bored to allow the top of the bolt or screw head to be flush with, or slightly below, the top of the finished wood surface. Provide all required expansion sleeves and other anchorages required to comply with requirements of the Contract Documents.
   1. Fasteners and other related anchorage devices for wood blocking and sheathing shall be as provided under the Work of Section 07 54 19 – Polyvinyl-Chloride (PVC) Roofing.
B. Wood blocking and nailers shall be provided in accordance with the approved roof accessories manufacturers installation details, or as otherwise required to accommodate field conditions, as approved by the Architect.

3.03 INSTALLATION
A. General: Install roof accessories according to manufacturer's written instructions.
   1. Install roof accessories level; plumb; true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
   2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.

4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.

B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
   1. Coat concealed side of [uncoated aluminum] [stainless-steel] roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
   2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of underlayment and cover with manufacturer's recommended slip sheet.

C. Equipment Support Installation: Install equipment supports so top surfaces are level with each other.

D. Pipe Penetration Housing Installation: Install according to manufacturer's recommendations. Coordinate exit seal sizes with mechanical contractor.

E. Roof Drain Marker Installation
   1. Install roof drain markers on each roof drain dome in roof area indicated according to manufacturer's instructions.
   2. Attach bracket to drain dome using manufacturer-furnished corrosion-resistant fasteners. Tighten securely.
   3. Thread marker base to threaded stud on marker bracket and tighten securely.
   4. Insert marker into marker base and secure using set screw. Coordinate selection of colored marker end based upon drain condition.

3.04 ADJUSTING AND CLEANING
   A. Adjust any operating parts to Work easily, smoothly, and correctly. Lubricate as necessary.
   B. Touch-up damaged coatings and finishes to eliminate evidence of repair.
   C. Repair minor damage to eliminate all evidence of repair. Remove and replace Work which cannot be satisfactorily repaired.

3.10 RUBBISH REMOVAL
   A. The General Contractor shall remove all waste and debris and dispose daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.

1.02 DESCRIPTION OF WORK

A. The Work of this Section includes, but is not limited to, furnishing and installation of the following:
   1. Exterior polyurethane sealant for roofing membrane, aluminum fascia, and metal flashing
   2. Joint fillers and sealers, including preparation, filling, sealing, and curing of joints at all exterior locations, as described in Part 3 – Execution of this Section
   3. Backer rods
   4. Concealed sealants
   5. Protection of completed Work

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Carefully examine all the Contracts Documents for requirements which affect the Work of this Section.

B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 – Painting
   6. Section 22 00 00 - Plumbing

1.04 QUALITY ASSURANCE

A. The Work of this Section shall be performed by manufacturer approved applicators having a minimum of five (5) years application experience with the required materials.

B. For each type of material required for the Work of this Section, provide primary materials which are the products of one manufacturer. Provide secondary materials which are acceptable to the manufacturers of the primary materials.

C. Make all arrangements and payments necessary to have the approved manufacturer’s authorized representative on-site at beginning of waterproofing to advise installer and to ensure compliance with manufacturer’s requirements.

D. Provide materials suitable for the intended use and compatible with the materials with which they shall be in contact. Compatibility of sealants and accessories shall be verified in writing by the approved manufacturer.

E. Provide products and materials tested and certified for low emissions of volatile organic compounds (VOC), in accordance with requirements of the Contract Documents. Testing and certification shall comply with requirements of the following:
   1. All paints and architectural coatings totaling 90% or more of the total volumes of such products applied in the project’s interior shall meet the VOC content requirements in the applicable category of South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings (amended July 2007 or current version).
2. All adhesives and sealants shall meet the VOC content requirements in the applicable category of South Coast Air Quality Management District (SCAQMD) Rule 1168, Adhesive and Sealant Applications (amended January 2005, or current version).

1.05 SUBMITTALS

A. Submit manufacturer's product data, installation instructions, use limitations and recommendations for each material and system required by the Work this Section.
   1. Prior to ordering waterproofing materials, the Waterproofing Subcontractor for this Section shall submit the items listed below to the Architect for approval:
      a. 3 copies of manufacturer's specifications for proposed products and installation instructions.
      b. Written approval of manufacturers use of the products in the proposed system.
      c. Specimen copy of membrane manufacturer's warranty.
      d. Dimensioned shop drawings indicating areas of Work, membrane layout and profile details of flashing methods for penetrations and terminations. It shall be the manufacturer's responsibility to verify compatibility with surrounding materials, especially at interface with other types of waterproofing.

B. Provide samples as follows:
   1. Submit representative samples of each control joint, sealant and expansion joint specified herein, showing the full range of color and finish variations expected. Provide actual samples having minimum length of 6 inches.
   2. Provide samples of each waterproofing material to be used in the systems described herein, including primers, mastics, tapes, liquid waterproofing, termination bars and fasteners, protection and drainage composite boards.

C. Provide certifications as follows:
   1. Provide manufacturer's certification of sealant and joint material performance, including compatibility with adjacent materials to which material shall be applied. Provide certified test reports on aged performances, hardness, stain resistance, adhesion, cohesion and tensile strength, low temperature flexibility, elongation, modules of elasticity, water absorption, and the resistance to weight loss and deterioration due to heat, ozone and ultraviolet exposure.

1.06 TESTS

A. Submit samples of every material to be used in the Work including, but not limited to, glass, gaskets, glazing materials, framing members, and all other components such as precast concrete, brick, concrete block and other adjoining materials, and accessories, to glazing sealant manufacturer to verify sealant compatibility and to determine, by testing in accordance with requirements of ASTM C794, if primers and what type of primers are required to ensure adhesion to substrates.
   1. Submit at least 6 pieces of each type, class, kind, condition, and form of glass including monolithic, laminated, coated and insulated glass for adhesion testing. Provide 6 pieces of each type of brick, precast concrete, concrete block, and other adjoining materials for adhesion and staining testing.
   2. Schedule sufficient time for testing, analysis and reporting of results, understanding that long lead times are required by the sealant manufacturer.
   3. Obtain manufacturer's written report and recommendations regarding proper sealant choice and use. Use sealants and substrates only in combinations for which favorable adhesion and compatibility results have been obtained.
   4. Make all arrangements and pay all expenses related to these tests.

B. Periodically test sealants in place for adhesion using methods recommended by sealant manufacturer. Promptly replace all sealant which does not adhere or which fails to cure properly.

C. If manufacturers cannot or shall not perform these tests, employ at the expense of the Waterproofing Subcontractor for this Section an independent testing agency acceptable to the Architect to perform tests and certifications indicated.
1.07 DELIVERY, STORAGE AND HANDLING
   A. Deliver materials and products to the job site in original, unopened package, clearly labeled with the manufacturer's identification and printed instructions. All material shall be stored and handled in accordance with manufacturer's instructions and recommendations. Protect from damage.

1.08 PROJECT CONDITIONS
   A. Perform Work only when ambient conditions are within the limits established by manufacturers of the materials and products used.
   B. Proceed with Work related to composite sheet waterproofing only when substrate construction and penetrating Work is complete and concrete or mortar has cured for at least 28 days.
   C. Provide ventilation in accordance with the approved manufacturer's written requirements and recommendations throughout application and curing for all materials specified in this Section.

1.09 WARRANTY
   A. Provide written warranty signed by manufacturer, agreeing to repair or replace Work which exhibits defects in materials or Workmanship. "Defects" shall include, but not be limited to, leakage of water, abnormal aging or deterioration, and failure to perform in accordance with requirements of the Contract Documents. Include requirement for removal and replacement of covering and connected adjacent Work. Warranty periods shall be as follows:
      1. Sealants and Crack Control Materials: 5 years from date of Substantial Completion
      2. Waterproofing: 10 years from date of Substantial Completion
      3. Exterior sealants: 20 years from date of Substantial Completion

1.10 PRE-INSTALLATION MEETING
   A. The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.
   B. Advise other trades to ensure that no other Work adversely effects sealer bonding surfaces.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS
   A. Each sealant shall be checked for adhesion and compatibility with all adjacent materials. Select a sealant that is recommended by the approved manufacturer for the specified application.
   B. Color of each sealant shall be as selected by the Architect from the approved manufacturer's complete selection of standard and premium colors.

2.02 EXTERIOR SEALANT
   A. Provide single-component, non-sag, moisture-cure, polyurethane sealant, Dymonic 100, as manufactured by Tremco, or Architect approved equal by Pecora or Dow Corning. Polyurethane sealant is for exterior caulking of perimeter wall openings, expansion and control joints. Polyurethane sealant shall comply with the following requirements:
      1. Color: As selected by Architect from Manufacturer's standard and premium line of not less than 20 colors.
      2. Solids: 98%
      3. Application: gun-grade sealant, applied with typical caulking equipment
      5. Movement Capability: +/-50%, ASTM C719
      6. Tensile Strength: 350 to 450 psi, ASTM D412
      7. % Elongation: 800 to 900%, ASTM D412
NEW BEDFORD CABLE ACCESS BUILDING - ROOF REPLACEMENT  
June 5, 2019 
918 S. RODNEY FRENCH BLVD., NEW BEDFORD, MA 02744 
Mount Vernon Group Architects, Inc., Project No. 02014.71 

8. Modulus at 100% 75 to 85 psi, ASTM D412 
9. Tear Strength: 65 to 75 psi, ASTM D412 
10. Application Temperature: 40 to 100°F 
11. Smoke Development: 5, ASTM E84 
12. Fire Spread: 5, ASTM E84 

2.03 MISCELLANEOUS MATERIALS 
A. Provide appropriate surface primers and accessories for surfaces to be adhered to, in accordance with the approved manufacturer's written requirements. 
B. Provide bond breaker tape No. 40 or No. 531 (heavy duty), as manufactured by Valley Industrial Products, or Architect approved equal by Decker, in accordance with the approved manufacturer's written requirements, appropriate for the sealant being used. 
C. Provide backer rods compatible with the specified sealant, and as follows: 
   1. Backer rod for all building joints shall be non-absorbing, with highly resistant interior network of closed and open cells, SOF ROD as manufactured by Applied Extrusion Technologies, or Architect approved equal. 
   2. Backer rod for paving and floor joints shall be closed cell polyethylene rod extruded in continuous lengths, GREEN ROD as manufactured by NMC, or Architect approved equal. 
D. Sealant shall be non-drying, non-hardening, non-bleeding, non-staining sealant complying with ASTM C 834 and C 919. 

PART 3 - EXECUTION 

3.01 INSPECTION 
A. For each material the installer shall examine substrates, supports, and conditions under which this Work is to be performed and notify General Contractor, in writing, of conditions detrimental to the proper completion of the Work. Do not proceed with Work until unsatisfactory conditions are corrected. Beginning Work means Installer accepts substrates and conditions. 
B. Strictly comply with the approved manufacturer's written instructions and recommendations, except where more restrictive requirements are specified in this Section. 

3.02 JOINT SEALANTS AND FILLERS 
A. Clean joint surfaces immediately before installation of sealants, primers, tapes and fillers. Remove all substances which could interfere with bond. Prime, etch, or roughen joint surfaces as necessary to improve bond. Tape or mask adjoining surfaces to prevent spillage and migration problems. Provide backer rods for all liquid sealants except where specifically recommended against by sealant manufacturers. Prevent three-sided adhesion by use of bond breaker tapes or backer rods. 
B. Force sealant into joints to provide uniform, dense, continuous ribbons free from gaps and air pockets. Install sealants so that compressed sealants do not protrude from joints. Dry tool sealants to form a smooth dense surface with joint surfaces adhering equally on opposite sides. At horizontal joints form a slight cove to prevent trapping water. Except in hot weather, make sealant surface slightly concave. 
   1. Make sealant joint depth equal to joint width for joints up to 1/2 in. wide. For joints over 1/2 in. wide, make depth equal to one-half of the joint width. Joint depth at exterior silicone sealant shall not be greater than 1/2 in. 
   2. Fill all joints solidly and continuously with a sealant, neatly applied with a standard caulking gun in a continuous motion, using slight pressure. "Push" the sealant bead ahead of the nozzle; do not "drag" the nozzle. 
   3. Within 5 minutes of sealant application and before sealant skins over, dry tool the joint surface with a concave tool to insure intimate contact with substrate and to eliminate air bubbles. Do not use any liquid for tooling. Provide a smooth, uniform, finished surface.
4. Avoid contaminating adjacent surfaces with excess sealant. Remove all traces of smears and droppings on metal, stone, glass, or other surfaces promptly, using a solvent recommended by the sealant manufacturer and that shall not damage or discolor the building surfaces. Remove smears and droppings on face surfaces by mechanical means after the initial cure of the sealant.

5. Coordinate Work with other trades to prevent contamination of fresh sealant by dust or other debris. Do not seal over any epoxy placements which are not cured.

6. Install internal wall joints so as to maintain connectivity between vertical and horizontal constructions. Extend internal sealant to the face of wall where indicated and as otherwise directed by Architect to compartmentalize waterproofing protection.

7. Install internal sealant materials at sufficient depth (2 1/2 in.+) to maintain 3/4 in. clear unobstructed cavity between finish face of internal sealant and back of external sealant backing material.

8. Internal joint integrity shall be equal to external joint integrity. Internal seals are primary seals to prevent internal building water intrusion.

C. Provide acoustic insulation and sealant to seal tightly and completely around all penetrating objects through non-fire rated gypsum drywall and masonry walls and concrete floors, including but not limited to, HVAC duct, fire protection piping, and electrical conduit penetrations, as indicated on the Drawings.

1. Provide a thin sheet metal sleeves at all penetrations through gypsum drywall construction to allow a minimum 3/4 in. wide gap between the penetrating object and adjacent gypsum drywall construction. Fit the sheet metal sleeve tightly to the surrounding drywall construction on all sides, or the entire perimeter, of the penetrating object. Pack the resulting 3/4 in. space between the sleeve and the penetrating object solidly with fibrous acoustical insulation. Provide resilient, non-hardening acoustical sealant to completely seal both sides of wall between the penetrating object and adjacent gypsum drywall construction.

2. At all penetrations through masonry walls wrap the penetrating object with 1 in. thick fibrous acoustic insulation and fill the space remaining between the acoustic insulation and masonry wall opening solid with cementitious grout prepared in accordance with Section 04 20 00 – Unit Masonry. Provide resilient, non-hardening acoustical sealant to completely seal both sides of wall between the penetrating object and adjacent masonry construction and grout infill.

3. Installation of acoustic insulation and sealant is not required at locations of penetrating objects through fire rated gypsum drywall and masonry walls.

D. Seal all interior and exterior joints, seams, intersections between dissimilar materials, unless specifically noted to be performed under the Work of other Sections.

1. The Work of this Section shall include, but not be limited to, sealing of the following exterior conditions:
   a. Building expansion and control joints
   b. Concrete to concrete at cold joints
   c. Vertical wall flashing terminations and reglets

2. The Work of this Section shall include, but not be limited to, sealing of the following interior conditions at new and existing building:
   a. Perimeter wall openings at H.M. door frames, H.M. security window frames, and overhead sectional door frames.
   b. All joints between gypsum drywall and dissimilar materials
   c. Backsplash to counter joints and backsplash to wall joints at countertops
   d. Completely around all plumbing fixtures, fittings, and trim to countertops, walls and floors
   e. At the perimeters of all backsplashes to wall, ends, and backsplash to counter whether a sink is present or not and all counter to wall areas with no backsplash.
   f. At all slab-on-grade construction joints, control joints, and column bases.

E. Cure sealants in strict compliance with the approved manufacturers’ instructions and recommendations to obtain highest quality surface and maximum adhesion. Make every effort to minimize accelerated aging effects and increase in modulus of elasticity.
3.03 REPAIR AND CLEANING
   A. Remove and replace Work which is damaged or deteriorated in any respect.
   B. Clean adjacent surfaces using materials and methods recommended by system manufacturer. Remove and replace Work that cannot be successfully cleaned.

3.04 RUBBISH REMOVAL
   A. The General Contractor shall remove all waste and debris and legally disposed daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

END OF SECTION
SECTION 09 91 13
PAINTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS
A. All the Contract Documents, including Drawings, General Conditions, Supplementary Conditions, and all Sections of Division 01 - General Requirements, apply to the Work of this Section.
B. Carefully examine all the Contract Documents for requirements which affect the Work of this Section. The exact scope of Work of this Section cannot be determined without a thorough review of all specification Sections and other Contract Documents.

1.02 DESCRIPTION OF WORK
A. The Work of this Section includes, but is not limited to, preparation, painting and finishing of all exposed interior and exterior surfaces including existing exterior windows (interior and exterior window frame), except the following:
   1. Factory finished items
   2. Finished metal surfaces of stainless steel, copper, brass, bronze, and aluminum
   3. Testing for VOC compliance

1.03 RELATED WORK SPECIFIED ELSEWHERE
A. Carefully examine all the Contract Documents for requirements which affect the Work of this Section.
B. Other Specification Sections which directly relate to the Work of this Section include, but are not limited to, the following:
   1. DIVISION 01 – GENERAL REQUIREMENTS; including all Sections contained therein
   2. Section 02 41 13 – Selective Demolition
   3. Section 06 10 00 – Rough Carpentry
   4. DIVISION 07 – THERMAL AND MOISTURE PROTECTION; including all Sections contained therein
   5. Section 09 91 13 - Painting

1.04 QUALITY ASSURANCE
A. All materials, including primers, other undercoat paint, and finish paint shall be produced by a single manufacturer. Use thinners and other accessory materials acceptable to the approved paint manufacturer, and use only within the approved manufacturer’s recommended limits.
B. Review other Sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure that compatible coats are used.
C. Before beginning primary Work of this Section, provide 100 square foot mock-ups of each color and paint system at locations acceptable to Architect and obtain Architect's acceptance of visual qualities. Protect and maintain acceptable mock-ups throughout the Work of this Section to serve as criteria for acceptance of this Work. Acceptable mock-ups may be incorporated into the finished Work.

1.05 TESTS
A. The Owner may employ an independent testing agency to perform tests, evaluations and certifications. Cooperate and permit samples of materials to be taken as they are used. The Painting Subcontractor shall pay all costs associated with tests demonstrating failure of the tested material to comply with requirements of the Contract Documents.
1.06  SUBMITTALS
   A.  Submit list of all materials proposed for use, indicating:
       6.  Manufacturer
       7.  Product name
       8.  Surface for which proposed
   B.  Submit color swatches showing complete range of colors and finishes available for each paint and finish system.
   C.  Before painting mock-ups, submit representative samples of each material that is to be exposed in the finished Work, showing the full range of color and finish variations expected. Prepare paint samples on gypsum drywall or poster board and make samples not less than 12 inches square. On actual wood surfaces provide 4 in. x 8 in. samples of each natural and stained wood finish.

1.07  DELIVERY, STORAGE AND HANDLING
   A.  Deliver materials and products in unopened, factory labeled packages. Store and handle in strict compliance with the approved manufacturers' written instructions, and protect from freezing and damage.
   B.  Avoid the possibility of fire by removing flammable materials, solvents and spirits from the project site or by storing materials in UL approved fire-resistant cabinets. Keep Work area free from flammable waste and soiled rags.

1.08  PROJECT CONDITIONS
   A.  Perform Work only when existing and forecasted conditions are within the limits established by the approved manufacturer of the materials and products used.
       1.  Apply water-based paints only when temperature of surfaces to be painted and surrounding air temperatures are between 50°F and 90°F, unless otherwise permitted by manufacturer's printed instructions.
       2.  Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45°F and 95°F, unless otherwise permitted by paint manufacturer's printed instructions.
       3.  Do not apply paint in snow, rain, fog or mist, or when relative humidity exceeds 85%, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.
   B.  The Painting Subcontractor shall examine substrates, supports, and conditions under which this Work is to be performed and notify General Contractor, in writing, of conditions detrimental to the proper completion of the Work. Do not proceed with Work until unsatisfactory conditions are corrected. Beginning Work means Installer accepts substrates and conditions.
   C.  Comply with the approved manufacturer's requirements and recommendations for area ventilation.
   D.  Perform Work only when permanent lighting system is operational and in use. If not in use provide temporary lighting that simulates as closely as possible permanent lighting system.
   E.  Cover or otherwise protect finished Work of other trades.

1.09  EXTRA MATERIAL
   A.  Provide maintenance stock in the approved manufacturer's new, unopened containers equal to 5% of the actual quantity installed. Provide a minimum of two, five-gallon containers of each wall color and two, one-gallon containers of each trim color.

1.10  PRE-INSTALLATION MEETING
   A.  The General Contractor shall schedule a pre-installation meeting to establish compliance and expectation of Work, maintain optimum working conditions, and coordinate the Work of this Section with related and adjacent Work. The meeting shall be attended by the General Contractor, Architect, and related Subcontractors.
B. Coordinate the Work of this Section with Work specified in other Sections. Furnish information on finish materials to be used in the field to ensure that correct prime coats are used in the shop.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Materials shall be first line products of one of the following manufacturers, approved by the Architect:

1. Conventional Paint Finishes:
   a. Sherwin-Williams
   b. Benjamin Moore
   c. California Paints

2. Specialty Paint Finishes
   a. Sherwin Williams
   b. DuPont
   c. Albi Manufacturing

3. Colored Concrete Sealer
   a. Scofield
   b. Benjamin Moore
   c. Sherwin-Williams

2.02 MATERIALS

A. Products specified are as manufactured by Sherwin Williams, unless otherwise indicated. Similar products of acceptable manufacturers listed in Paragraph 2.01 may be furnished in lieu of those listed, approved by the Architect.

1. Provide primary products of the system from the products of a single manufacturer.

2. Products not specified by name and required for the job, such as shellac, thinners, putty, shall be "best grade" or "first Line" products of a reputable manufacturer and acceptable to the approved manufacturer of the paint coatings.

3. Colors shall be as selected by the Architect from the approved manufacturer’s complete selection of standard and premium colors. Public areas of the building shall be considered decorative and shall require the use of several colors, including but not limited to, deetone, bright, and accent colors.
   a. Classrooms and offices shall be limited to one wall of accent color. Cafeteria, Library, Art Rooms, Music Room, Lobbies, and Corridors shall contain no more than three different wall colors and one trim color. Building wide, the Owner shall select no more than ten wall colors, five trim colors, and two structural steel, steel deck, ductwork, and mechanical system colors.
   b. Exposed structural steel, metal deck, plumbing piping, fire protection piping, and electrical conduit shall be painted one color. Exposed HVAC ductwork shall be painted one color. Colors shall be as selected by the Architect from the approved manufacturers' complete selection of standard colors.

PART 3 - EXECUTION

3.01 INSPECTION AND PREPARATION

A. The Installer shall be solely responsible for the finishing Work and shall prepare substrates as needed to obtain the highest quality finished surfaces.

B. Strictly comply with the approved manufacturers' written instructions, except where more restrictive requirements are specified in this Section.
C. Clean surfaces in accordance with the approved manufacturer's requirements for removal of dirt, oil, grease, mildew, asphalt, concrete splatters, and all other foreign substances. Do not finish over dirt, rust, grease, moisture and other conditions detrimental to formation of a durable finish film.

D. Remove finish hardware, fixtures, accessories, and similar items, or tape and mask all surfaces not to be painted to protect these surfaces from damage or overpaint. Replace these items when finishing Work is completed.

E. Remove incompatible primers and re-prime or provide barrier coats in compliance with the approved finish paint manufacturer's written instructions.

F. Prepare masonry and concrete materials by removing laitance, efflorescence, form release agents, and surface glaze by cleaning and washing as recommended by the approved finish paint manufacturer and approved by Architect. Brush surfaces to remove loose particles. Fill cracks and irregularities with Portland cement grout to provide uniform surface texture. Allow a minimum of 60 to 90 days curing time before finishing poured and pre-cast concrete. Allow a minimum of 30 to 60 days curing time before finishing concrete masonry. Determine substrate alkalinity and moisture content and, if necessary, take appropriate remedial actions as recommended by the approved finish paint manufacturer.

G. Prepare all wood surfaces not indicated to be factory finished under the Work of Section 06 20 00 by sanding smooth, sealing knots, setting nails and fasteners, and filling holes, cracks, and imperfections with putty acceptable to the approved finish manufacturer. For transparent finished Work, use putty and filler color matched to wood to minimize its appearance. All interior and exterior woodwork shall be sealed and back primed immediately after delivery to site and before installation.

H. Prepare shop primed, ferrous metal surfaces by solvent wiping, sanding and touching-up shop prime coats. Prepare bare metal surfaces by power tool cleaning in accordance with SSPC SP 3 requirements. Remove rust, welding flux and splatter, burrs, and all other surface defects and foreign substances. Clean surfaces by washing with water followed by phosphate rinsing. Apply prime coats immediately after completion of cleaning.

I. Aggressively clean new galvanized surfaces with grease cutting solvent, such as mineral spirits, to remove fabricating oils. After cleaning provide a SSPC SP 7 brush off blast of galvanized steel surfaces to create a 2mil profile for paint adherance. Touch-up abraded surfaces immediately with zinc-rich paint having a minimum dry film content of 95% by weight, Galvilite Galvanizing Repair Compound, as manufactured by ZRC, or Architect approved equal.

J. Solvent clean aluminum surfaces in accordance with SSPC SP 1 requirements.

K. Finish tops, bottoms, and edges of all doors the same as door faces.

L. Clean gypsum drywall surfaces as to make free of dust and foreign substances. Joint treatment materials shall be thoroughly dry. Paint metal corner beads and trim with metal primer before application of water based finish coatings.

M. Ducts visible through supply and return grilles shall be painted flat black.

3.02 APPLICATION

A. Strictly comply with the approved manufacturers' written instructions, except where more restrictive requirements are specified in this Section.

B. Mix and prepare materials in strict compliance with the approved manufacturers' written instructions. Do not thin materials without Architect's approval. Keep foreign substances out of finishing materials.

C. Provide primers as recommended by the approved finish paint manufacturer for substrates encountered. Tint all primers and undercoats to the approximate shade of the finish coat, making each coat slightly darker and closer to the finished shade. Use deep base primers for deep tone, bright, and accent colors. Prime surfaces immediately after surface preparation to prevent contamination of substrate.

D. Apply finish materials at the lowest coverage rate and the highest dry film thickness recommended by the approved manufacturer. Provide additional coats as needed to eliminate all show through and bleed through areas. Apply paint and finish systems as scheduled using brushes or rollers. Stain shall be applied with a brush and then wiped off at the proper time to produce the desired effect.
1. Spray application of paint and finish systems is acceptable for CMU, gypsum drywall, metal doors and frames, interior steel roof decks, structural steel joists, HVAC ducts, and mechanical piping, where Painting Subcontractor can demonstrate adequate control of overspray, control of coats, and has first obtained Architect’s written permission. CMU and gypsum drywall shall be rolled following spray application of paint to provide a dense, uniform appearance. Provide uniform final finishes, free of runs, sags, wrinkles, streaks, shiners, brush/roller marks, color variations and other imperfections.

E. Finish interior of HVAC ductwork behind louvers and grilles, when these surfaces are visible, with flat black paint. Wall surfaces located behind wall mounted markerboards and tack boards shall be painted. Painting of surfaces located behind metal corridor lockers and pre-manufactured casework is not required.

F. Fine sand all painted woodwork and painted metal between coats in accordance with the approved manufacturers’ written instructions.

G. Allow the required waiting period between successive coats in accordance with the approved manufacturer’s written instructions.

H. Provide final finishes which exactly match Architect approved mock-ups.

3.03 TOUCH UP, CLEANING, AND PROTECTION

A. Touch up damaged coatings and finishes to eliminate evidence of repair.

B. Clean finished surfaces and remove all finish splatters from adjacent Work. Remove and replace Work that cannot be successfully cleaned.

C. Provide signs and temporary protection to ensure Work being without damage or deterioration at time of final acceptance. Remove protections and re-clean as necessary immediately before final acceptance.

3.04 RUBBISH REMOVAL

A. The General Contractor shall remove all waste and debris and legally disposed daily in accordance with requirements of Section 01 50 00 – Temporary Facilities and Controls.

3.05 FINISH PAINTING SCHEDULE

A. The following finish systems refer to products of Sherwin Williams, unless indicated otherwise. Provide these systems or comparable systems from any specified manufacturer, approved by the Architect.

1. EXTERIOR FERROUS METAL
   Primer: Sherwin Williams Pro-Cryl Primer B66 Series
   Finish Coat 1: Sherwin Williams Pro Industrial DTM Satin B66
   Finish Coat 2: Sherwin Williams Pro Industrial DTM Satin NB66
   Note 1: Where rust has formed, scrape, sand and provide one coat of IMC Rust Converter M 82, prior to application of primer

2. EXTERIOR FERROUS METAL - GALVANIZED
   Primer: Sherwin Williams Pro-Cryl Primer, B66 Series
   Finish Coat 1: Sherwin Williams Pro Industrial DTM Satin B66
   Finish Coat 2: Sherwin Williams Pro Industrial DTM Satin NB66

B. SPECIALTY PAINT FINISHES
   The following finish systems refer to products of California Paints, Benjamin Moore, and Tnemec unless indicated otherwise. Provide these systems or comparable systems for any specified manufacturer, approved by the Architect.

1. OVERHEAD EXPOSED STRUCTURAL STEEL AND INTERIOR STEEL ROOF DECK
   NOTE: Primary surface preparation: Self-priming, test patch recommended on galvanized ceiling deck to check for presence of factory-applied stabilizers.
a. Rust and other surface contaminate shall be removed from ferrous metals, aluminum, copper, brass, and galvanized steel. The surface shall be thoroughly cleaned in accordance with the approved manufacturer’s written preparation method.

b. Additional Prep for Galvanized Steel: Caution must be used when selecting coatings for use on all galvanized metal surfaces. These substrates may have a factory-applied stabilizer, which is used to prevent white rusting during storage and shipping. Such stabilizers must be removed by either brush blasting or chemical treatment applied directly to properly prepared galvanized steel, with the exception of areas that are subjected to high humidity.

2. GALVANIZED STEEL AND METAL FINAL COATINGS
   a. Sherwin Williams: Pro Industrial Waterborne Acrylic Dryfall White 15-2.5 mils DFT
   b. California Paints:  Latex Flat Dryfall No. 3701
   c. Benjamin Moore:  M53 Sweep-up Spray Flat Latex, 1.5 – 2.5 mils DFT
   d. Tnemec:  Uni-bond 115 DF Acrylic Dryfall, 2-4 mils DFT

END OF SECTION
SECTION 22 00 00

PLUMBING

PART 1 - GENERAL

1.1 Examination of site and documents:
   A. The Contractor affirms that he/she has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions.
   B. Contractor is to verify all conditions affecting his/her work prior to Bid. No additional compensation will be made for errors or inaccuracies that may be found herein.
   C. Inspect surfaces to receive work of this Section and the conditions under which the work will be installed. Report in writing to the Designer all conditions which might adversely affect the installation. Do not complete the installation until defects have been corrected and conditions are satisfactory.

1.2 DESCRIPTION OF WORK
   A. Replacement of existing roof drains and fittings to vertical risers with new drains and fittings.
   B. Pipe insulation at all drain bowls and new piping.

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 methods needed for proper performance of the work of this Section.
   B. Attend Preconstruction Conference.

1.4 SUBMITTALS
   A. Comply with pertinent provisions of Section 01 33 00 Submittal Procedures.
   B. Product literature data sheets to Architect. Maintenance safety data sheets (MSDS) directly to Owner.
   C. Drainage verification letter.

PART 2 - PRODUCTS

2.1 DRAINS
   A. New Drains: Dura-Coated cast iron body including combined membrane flashing clamp/gravel stop, low silhouette cast aluminum vandal resistant dome and stainless steel set screws, top-set deck plate, 3-1/2 in. static extension, Model ZA-100-DP-E3.5 by Zum Industries Inc., Hydromechanics Division, Erie, PA or approved equal. Outlet size: Same as existing. Do not use drains that incorporate threads within the waterway.
B. Fittings: ASTM A74 cast iron fittings. All pipe and fitting shall be made in the United States and marked with the collective trademark of the Cast Iron Soil Pipe Institute.

C. No-hub fittings: ASTM C 564 neoprene coupling with stainless steel bands sized to fit pipe, Husky SD Series 4000, by Anaco, Corona, CA.
   1. 1-1/2, 2, 3, and 4 in. diameter pipe: 4 bands.
   2. 5, 6, 8, and 10 in. pipe: 6 bands.

D. Insulation for interior drain leaders: ASTM C 547 preformed Fiberglas ASJ/SSL-II, 1 in. thick, to fit piping by Owens-Corning Corporation, Toledo, OH or approved equal.

E. Insulation at fittings and drain bowl: ASTM D 1784 Zeston 2000 insulated PVC fitting covers complete with fibrous glass, solvent welding adhesive, stainless steel thumb tacks, and PVC Z-Tape for use at fittings and drain bowls by Mechanical Insulations Division, Johns Manville, Denver, CO.

PART 3 - EXECUTION

3.1 EXAMINATION
   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 PROTECTION
   A. Protect paved areas, building and its contents, interior finishes, autos, trucks, and the site from the affects of work in this Section and against all risks associated with this Work. Repair all damage to building and appurtenances as a result of the work of this Section to the condition at start of work, or if this cannot be determined, to the original condition by approved means at no extra cost.

3.3 REPLACEMENT DRAINS
   A. Preparation: Remove existing drain. For new drains locate in locations shown on the Drawings.

   B. Drain installation
      1. Locate and install drain body within sump receiver. Secure sump receiver to deck with mechanical fasteners and drain to structural deck with underdeck clamp.
      2. Seal/plug drain to prevent water entry until service connection is completed.

   C. Service connection
      1. Install coupleings with a preset torque wrench calibrated at 80 in. lbs. to accommodate 1/4 in. stainless steel hex head/shoulder screw. Make all connections watertight.
      2. Ensure cut ends of pipe are smooth and square.
      3. Place neoprene gasket on end of pipe or fitting until it is firmly seated against the center stop.
      4. Place stainless steel housing with clamps on end of other pipe and slip pipe into gasket until it is also firmly seated against center stop.
      5. Slide housing into position directly over the gasket. Using preset torque wrench, alternately tighten clamps to 80 in/lbs of torque.
      6. Verify watertight connection to drain leaders. Remove seal/plug.
D. Insulation

1. Provide insulation on all horizontal interior pipes and fittings from drains to vertical risers/leaders with pipe insulation. Ensure full continuity of insulation over pipes, fittings and connections. Provide concealed saddles at all hangers.

2. Insulate drain bowl, horizontal, and vertical drain leaders.

3.4 ADJUSTING AND CLEANING

A. Deficiency Repair – Installation or details noted as deficient during plumbing inspection must be repaired and corrected by applicator and made ready for reinspection within five working days.

B. Clean-Up – Work area shall be clean of debris on a daily basis. Upon completion, remove all tools and excess material.

END OF SECTION