

**PURCHASING DIVISION  
CITY OF WORCESTER  
MASSACHUSETTS 01608-1895  
ROOM 201 - CITY HALL, 455 MAIN ST.  
PHONE (508) 799-1220**

**SEALED BID INVITATION  
(Labor, - Filed Sub-Bids NOT Required)  
M.G.L. Chapter 30, §39M /  
M.G.L. Chapter 149, s.44A (C)**

<b>SEALED BID NO. 8134-W4</b>
<b>DATE: January 3, 2024</b>
<b>CITY OF WORCESTER Christopher J. Gagliastro, MCPPO Purchasing Agent</b>
<b>Buyer: Christopher Gagliastro</b>

All bids are subject to the terms and conditions and specificity herein set forth.

**COMPLETE FORM FOR GENERAL BID (ENCLOSED) MUST BE SUBMITTED IN A SEALED ENVELOPE:**

DATE: January 31, 2024 TIME: 10:00 A.M. LOCAL TIME

PLACE: Purchasing Division, Room 201, City Hall, Worcester, Massachusetts

MARK SEALED ENVELOPE **"Sealed Bid No. 8134-W4, Lighting Installation – Madison Street Bridge / E.D."**

The name and address of the bidder must appear in the upper left-hand corner of the envelope. The City of Worcester is not responsible for bids not properly marked.

**A COMPLETE BID PACKAGE SUBMISSION CONSISTS OF THE FOLLOWING:**

- Form for General Bid (81 – 86)
- Bid Security (5% of Total Bid)
- Forms required by City Policies & Programs

**OTHER CONDITIONS:**

- Please go to ([www.worcesterma.gov](http://www.worcesterma.gov)) to review bid results.
- All questions **must** be referred in writing to Chris Gagliastro via e-mail at [gagliastroc@worcesterma.gov](mailto:gagliastroc@worcesterma.gov)
- A pre-bid meeting will be held on January 17, 2024 at 9:30 AM at the Madison Street Bridge Underpass, Worcester, MA. All prospective bidders are encouraged to attend.

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## **ARTICLE 101: INSTRUCTIONS TO BIDDERS**

### **SECTION 1 - INTRODUCTION; DEFINITIONS**

1.1 In accordance with an Advertisement for Bids, the City of Worcester (the "Owner") has invited bids for the project described in the specifications contained herein.

1.2 These Instructions to Bidders (the "Instructions") are intended to assist bidders in the preparation of their bids, to call attention to various legal requirements and to set forth certain conditions upon which bids are submitted and received.

1.3 The award of the contract is governed by Chapter 30, s. 39M of the Massachusetts General Laws. Certain provisions of the foregoing statute and of other applicable statutes are summarized in these Instructions. Whenever these Instructions or any other contract documents set forth or summarize applicable statutory provisions, whether or not the statutes have been specifically referred to, such summaries are for convenience only, do not purport to be complete or correct as summaries of any particular material, and shall in no respect supersede, expand or limit rights or duties of the Owner or bidders in matters governed by the statute.

1.4 The following definitions shall apply in these Instructions and in the other Contract Documents:

- 1) The term "bidding documents" shall include the Advertisement for Bids, these Instructions, the bid forms, contract forms and other Contract Documents bound herewith, the Drawings, the Specifications, and all Addenda issued prior to receipt of bids.
- 2) The terms "Addenda" and "Addendum" shall mean written documents and/or drawings issued by the Owner prior to execution of the contract which supplement, modify, correct, explain or interpret the bidding documents.
- 3) All definitions set forth in the Conditions of the Contract or the other Contract Documents as therein defined are applicable to these Instructions and to the other bidding documents
- 4) On any project for the construction, reconstruction, installation, demolition, maintenance or repair of any building, or public work, to be funded in whole or in part by city funds, or funds which, in accordance with a federal or state grant, program, or otherwise, the city expends or administers, or any such project to which the city is a signatory to the contract therefore, the provisions of this section shall apply and the same shall be referenced in every invitation to bid for such project and,

the following paragraphs shall be contained in every resulting contract there from: "It shall be a material breach of this contract if the contractor and each subcontractor shall not at all times adhere to the provisions of § 1A(e)(9) of chapter nine of the Revised Ordinances of the city by limiting their on- site, noise producing construction and related work to the hours specified by said ordinance".

- 5) The director of purchasing, commissioner of code enforcement and the head of any department shall have the authority to adopt any rules and regulations they deem necessary to implement this subsection with respect to contracts generally and the head of the department awarding any such contract shall have the authority to adopt any rules and regulations he or she deems necessary to implement this subsection with respect to any particular project.

## **SECTION 2 - AVAILABILITY OF CONTRACT DOCUMENTS**

2.1 Each person requesting Contract Documents including bid forms, plans and specifications shall proceed as directed in the Advertisement for Bids.

## **SECTION 3 - EXAMINATION OF SITE AND CONTRACT DOCUMENTS; PRE-BID CONFERENCE**

3.1 Before submitting a bid, each bidder must: (a) thoroughly examine the Contract Documents (b) visit the site to fully examine and acquaint himself with local conditions that may in any manner affect cost, progress, or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work, and (d) study and carefully correlate his observations with the requirements of the Contract Documents. Failure of a bidder to visit the site and acquaint himself with the Contract Documents or to attend the pre-bid conference, if any, shall in no way relieve the bidder from any obligation with respect to his bid.

3.2 On request, the Owner will provide each bidder access to the site to conduct such reasonable investigations and tests as such bidder deems necessary to prepare his bid.

3.3 Each bidder shall promptly notify the Contracting Officer of any ambiguity, inconsistency or error he may discover upon examination of the Contract Documents, the site or other local conditions. Whenever the title "Contracting Officer" is referenced it shall be interpreted as follows: Purchasing Director, City of Worcester. The submission of a bid will constitute a representation by the bidder that he has complied with every requirement of this Section 3 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work of this contract.

## **SECTION 4 - ADDENDA AND INTERPRETATION OF CONTRACT DOCUMENTS**

4.1 All questions and requests for clarifications or interpretations of the meaning of the Contract Documents shall be in writing, addressed to the Purchasing Department, City of Worcester, and to be given consideration must be received at least five (5) days prior to the date fixed for opening of bids.

4.2 Clarifications or such interpretations and any supplemental instructions or forms, if issued, will be issued in the form of written Addenda and when possible, not later than two days before the date fixed for opening of bids. Each bidder shall be responsible for determining that he has received all Addenda issued, and failure of any bidder to receive any such Addendum shall not relieve such bidder from any obligation under its bid as submitted.

4.3 All Addenda so issued shall become part of the Contract Documents.

4.4. Oral clarifications or interpretations will be of no legal effect. The Owner will not be responsible for, and no bidder may rely upon or use as the basis of a claim against the Owner or the Owner's agent, any information, explanation or interpretation of the Contract Documents rendered in any fashion except as herein provided.

## **SECTION 5 - WAGE RATES**

5.1 Minimum rates of wages for work performed under this contract will be as predetermined by the state Department of Labor and Workforce Development, in accordance with the provisions of Sections 27 of Chapter 149 of the Massachusetts General Laws.

5.2 Section 27B of said Chapter 149 provides record-keeping requirements for contractors and subcontractors with respect to employees, hours, wages and other matters.

5.3 Bidders' attention is called to Section 148 of Chapter 149 of the Massachusetts General Laws, relating to the weekly payment of wages.

## **SECTION 6 - SALES TAX**

6.1 Section 6(f) of Chapter 54H of the Massachusetts General Laws exempts from Massachusetts sales tax, building materials and supplies to be used in the project, and bidders shall not include in their bids any amount therefor. The number of the certificate granted by the Commissioner of Revenue for use in obtaining the exemption may be obtained from the City of Worcester.

## **SECTION 7 - PREPARATION AND SUBMISSION OF BIDS**



7.1 Each bid shall be submitted upon the bid forms furnished by the Owner, copies of which are bound with the bid documents. The bid forms shall be submitted, as bound, with the balance of the Contract Documents. All blank spaces shall be filled in, in ink or typewritten, in words or figures. The bid prices for each item on the bid forms shall be stated in both words and figures. Where itemized lump sum or unit prices are called for, all such prices shall be provided by the bidder. In the event of a discrepancy between prices written in words and prices written in figures, the written words shall govern. In the event of a discrepancy between the indicated sum of any column of figures and the correct sum thereof, the correct sum shall govern. The bid shall state the legal name of the bidder and shall be signed in ink by a person or persons legally authorized to bind the bidder to a contract. The name and title of the person or persons signing the bid shall be typed or printed below the signatures.

7.2 Each bid and the bid deposit (described below) shall be submitted to the Owner at the place stated in the Advertisement for Bids in a sealed opaque envelope bearing on the outside the name of the bidder, his address and the title of the project for which the bid is submitted. If forwarded by mail, the sealed bid and the bid deposit shall be enclosed in an envelope with the notation "BID ENCLOSED" on the face and addressed as indicated in the Advertisement for Bids.

7.3 Section 39L of Chapter 30 of the Massachusetts General Laws prohibits the Owner from entering into a contract for this work with, and shall not approve as a subcontractor furnishing labor and materials for a part of any such work, a foreign corporation which has not filed with the Owner, a certificate of the state secretary stating that such corporation has complied with M.G.L. c. 181, sections 3 and 5. Therefore, every Foreign Corporation must furnish a certified copy of its Certificate of Registration that has been duly filed with the state secretary's office. Any bid, general or sub, of a foreign corporation submitted without a Certificate may be rejected pursuant to Section 11.

## **SECTION 8 - RECEIPT OF BIDS**

8.1 All bidders are cautioned to allow ample time for transmittal of bids. Bidders are solely responsible for delivery to and receipt by the Owner of bids at the place stated in the advertisement for Bids. Bids received after the specified time or at other than the specified location will not be accepted or recognized. The time of receipt will determine the acceptability of mailed bids, regardless of postmark.

8.2 Any bid may be withdrawn by the bidder or his duly authorized representative by written notice received by the Owner at the address for receipt of bids specified in the Advertisement for Bids prior to the time scheduled for the opening of such bids or authorized postponement thereof. No bid may be withdrawn for sixty (60) days, Saturdays, Sundays and legal holidays excluded, after the opening of general bids. No telephone or telegraphic bid, change in bid or withdrawal of bid

will be received or recognized. A bid may be amended or modified only by withdrawing the bid and resubmitting another bid prior to the time for the opening of bids.

8.3 Bids will be opened and read publicly at the place and time stated in the Advertisement for Bids or the authorized postponement thereof. Bidders or their authorized representatives are invited to be present.

## **SECTION 9 - BID DEPOSIT**

9.1 Each bid must be accompanied by a bid deposit in the form of a bid bond, or a certified check on, or a treasurer's or cashier check issued by, a responsible bank or trust company, payable to the City of Worcester. A bid bond shall be

- a) in form satisfactory to the Owner substantially conforming to the sample contained in the Contract Documents,
- b) with a surety company qualified to do business (licensed) in the Commonwealth of Massachusetts and satisfactory to the Owner, and
- c) conditioned upon the faithful performance by the principal of the agreements contained in the bid. The bid deposit shall be in the amount of 5% of the value of the bid.

## **SECTION 10 - REJECTION OF BIDS**

10.1 The Owner shall reject every general bid which is not accompanied by the required bid deposit, or which otherwise does not conform to the statutory requirements or the bid documents.

10.2 The Owner reserves the right to reject any and all general bids which contains erasures, alterations, additions, errors or irregularities of any kind, or which contains proposed prices for any class or item of work which are, in the judgment of the Owner, substantially less or more than the actual cost to complete the work; provided, however, that the Owner reserves the right to waive any and all informalities as to form. Matters as to substance shall not be waived.

## **SECTION 11 - AWARD OF CONTRACT**

11.1 The general contract will be awarded to the lowest responsible and eligible general bidder complying with the conditions and requirements provided in these Instructions, the bid forms and the other bid documents.

11.2 Award of the contract will be made within ninety (90) days, Saturdays, Sundays and legal holidays excluded, after (i) the opening of the bids or (ii) the

receipt by the Owner of any approvals necessary from federal or state agencies in connection with the project, whichever is later.

11.3 The successful bidder will be notified in writing, by mail or otherwise, that his bid has been accepted and that he has been awarded the contract. The successful bidder shall execute the contract and furnish the required bonds, at the offices of the Owner within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation of the contract to him or notice to him that the contract is ready for execution.

11.4 If the bidder selected as the general contractor fails to perform his agreement to execute the contract in accordance with the terms of his bid and furnish a performance bond and also a labor and materials payment bond as stated in his bid, the award will be made to the next lowest responsible and eligible general bidder.

## **SECTION 12 - CERTIFICATES AND DOCUMENTS TO BE FURNISHED UPON EXECUTION OF THE CONTRACT**

12.1 Pursuant to Sections 49A of Chapter 62C of the Massachusetts General Laws the contractor must certify that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes. A form of certificate for this purpose is included in the Contract Documents.

12.2 Prior to commencement of work, the contractor must furnish to the Owner certificates evidencing required insurance coverage in accordance with the provisions of the insurance requirements contained in the Supplementary Conditions of the Contract.

12.3 The affidavit of compliance with certain laws of the Commonwealth relating to corporations, and evidence of corporate authority with respect to execution of the contract documents on behalf of the contractor, on the form contained in the bidding documents, must be furnished by the contractor to the Owner at the time of execution of the contract.

12.4 A performance bond and a labor and materials payment bond, each in the amount of the contract sum, must be furnished by the general contractor as stated in the bid form. Such bonds must be on the forms contained in the bid documents and must be executed and delivered to the Owner at the time of execution of the contract. Each attorney-in-fact who executes such a bond on behalf of the surety must affix thereto a certified and current copy of his power of attorney.

## **SECTION 13 - MINORITY/WOMEN BUSINESS ENTERPRISE PROGRAM**

- 13.1 The Owner has established goals for the participation of minority and women contractors and subcontractors on all City projects. In furtherance thereof, the City of Worcester's Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program is included in the Bidding Documents, and all bidders shall comply with the requirements set forth therein.

**ARTICLE 102:  
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**

**SECTION 1  
GENERAL PROVISIONS**

**1.1 DEFINITIONS**

**1.1.1 THE CONTRACT DOCUMENTS**

The Contract Documents consist of the Owner-Contractor Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), Performance Bond, Payment Bond, Vote of Corporation, Information to Bidders, Bid Proposal, the Drawings, the Specifications, and all Addenda issued prior to and all Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the Contracting Officer pursuant to Subparagraph 2.2.3, or (4) a written order for a minor change in the Work issued by the Contracting Officer pursuant to Paragraph 12.3. The Contract Documents do not include Bidding Documents such as, sample forms, or portions of Addenda relating to any of these, or any other documents, unless specifically enumerated in the Owner-Contractor Agreement. The Drawings of this Contract shall be as listed on the cover sheet of the Drawings, as applicable. The Specifications of this Contract shall be listed on the Index to the Technical Specifications. In the event of any conflict among the Contract Documents, the Documents shall be construed according to the following priorities: Highest Priority - Modifications, Second Priority-Agreement, Third Priority - Addenda-later date to take precedence, Fourth Priority - Special Requirements, Fifth Priority - Special Conditions, Sixth Priority - Supplementary General Conditions, Seventh Priority - General Conditions, Eighth Priority - Specifications, Ninth Priority - Drawings.

**1.1.2 THE CONTRACT**

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1. These General Conditions, wherever applicable, shall be construed consistent with, and terms of the Owner-Contractor Agreement, provided further however, that the terms of such Agreement shall take

precedence, as provided in Subparagraph 1.1.1. Except for the special agreements in Paragraph 4.18, nothing contained in the Contract Documents shall be construed to create any contractual relationship of any kind between the Architect and the Contractor. Nothing contained in the Contract Documents shall create any contractual relationship between the Owner or the Architect and any Subcontractor or Sub-subcontractor.

### **1.1.3 THE WORK**

The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

### **1.1.4 THE PROJECT**

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part.

## **1.2 EXECUTION, CORRELATION AND INTENT**

1.2.1 The Contract Documents shall be signed in not less than duplicate by the Owner and the Contractor.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings. All work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of this Contract unless it is specifically indicated in the Contract Documents that such work is to be done by others. Should the drawings or the Specifications disagree in themselves or with each other, the Contractor shall provide the better quality or greater quantity of work and/or materials unless otherwise directed by written addendum to the Contract.

1.2.4 The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. The Contractor and all Subcontractors shall refer to all of the

Drawings, including those showing primarily the work of the mechanical, electrical and other specialized trades, and to all of the Sections of the Specifications, and shall perform all work reasonably inferable therefrom as being necessary to produce the indicated results.

1.2.5 All indications or notations which apply to one of a number of similar situations, materials or processes shall be deemed to apply to all such situations, materials or processes wherever they appear in the Work, except where a contrary result is clearly indicated by the Contract Documents.

1.2.6 Where codes, standards, requirements and publications of public and private bodies are referred to in the Specifications, references shall be understood to be to the latest revision prior to the date of receiving bids, except where otherwise indicated.

1.2.7 Where no explicit quality or standards for materials or workmanship are established for work, such work is to be of good quality for the intended use and consistent with the quality of the surrounding work and of the construction of the Project generally.

1.2.8 All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents.

1.2.9 Any test boring or soil test information included with the Contract Documents or otherwise made accessible to the Contractor was obtained by the Owner or Architect for use by the Architect in the design. The Owner and Architect do not hold out such information to the Contractor as an accurate or approximate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from a reliance by the Contractor on such information shall be allowed except as provided in M.G.L. c. 30, section 39N.

### **1.3 OWNERSHIP AND USE OF DOCUMENTS**

1.3.1 All Drawings and Specifications furnished by the Architect, and all copies thereof and the copyright therein, are the property of the Architect or the Owner. They are to be used only with respect to this Project and are not to be used on any other project. With the exception of one contract set for each party to the Contract, such documents are to be returned or suitably accounted for to the Architect on request at the completion of the Work. Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Owner's common law copyright or other reserved rights.

## **SECTION 2 ARCHITECT**

## **2.1 DEFINITION**

2.1.1 The term Architect refers to either, (a) a professionally licensed architect, engineer, or landscape architect, hired or used by the City, or in the absence of thereof, (b) the Contracting Officer identified in the Instruction to Bidders. The Architect is referred to throughout the Contract Documents as if singular in number and masculine in gender.

## **2.2 ADMINISTRATION OF THE CONTRACT**

2.2.1 The Architect will provide administration of the Contract as herein described and pursuant to the terms of the contract between the Architect and the Owner.

2.2.2 The Architect will be the Owner's representative during construction and until final payment is due. The Architect will advise and consult with the Owner. The Owner's instructions to the Contractor shall be forwarded through the Architect. The Architect will have the authority to act on behalf of the Owner only to the extent provided in the Contract Documents and the Design Services Agreement between the two, unless otherwise modified by written instrument in accordance with Subparagraph 2.2.17.

2.2.3 The Architect will visit the site at intervals appropriate to the stage of construction to familiarize himself generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of his on-site observations as an architect, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.

2.2.4 The Architect will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

2.2.5 The Architect shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the Architect may perform his functions under the Contract Documents.

2.2.6 Based on the Architect's observations and an evaluation of the Contractor's Applications for Payment, the Architect will determine the amounts owing to the Contractor and will certify Certificates for Payment in such amounts, as provided in Paragraph 9.4.

2.2.7 The Architect will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and Contractor.

2.2.8 The Architect will render interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with M.G.L. c. 30, section 39P, or any lesser time limit agreed upon. Either party to the Contract may make written request to the Architect for such interpretations.

2.2.9 Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution of progress of the Work or the interpretation of the Contract Documents shall be referred initially to the Architect for decision, which he will render in writing within a reasonable time.

2.2.10 All interpretations and decisions of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. In his capacity as interpreter and judge, he will endeavor to secure faithful performance by both the Owner and the Contractor, will not show partiality to either, and will not be liable for the result of any interpretation or decision rendered in good faith, and in the absence of negligence, in such capacity.

2.2.11 The Architect's decisions in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.

2.2.12 The Architect will have authority to reject Work that does not conform to the Contract Documents. Whenever, in his opinion, he considers it necessary or advisable for the implementation of the intent of the Contract Documents, he will have authority to require special inspection or testing of the Work in accordance with Subparagraph 7.7.2, whether or not such Work be then fabricated, installed or completed. However, neither the Architect's authority to act under this Subparagraph 2.2.12 nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.

2.2.13 The Architect will review and approve or take other appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and with the information given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The Architect's approval of a special item shall not indicate approval of an assembly of which the item is a component.

2.2.14 The Architect will prepare Change Orders in accordance with Article 12, and will have authority to order minor changes in the Work as provided in Subparagraph 12.3.1.



2.2.15 The Architect will conduct inspections to determine the dates of Substantial Completion and final completion, will receive and forward to the Owner for the Owner's review written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate of Payment upon compliance with the requirements of Paragraph 9.9.

2.2.16 If the Owner and Architect agree, the Architect will provide one or more Project Representatives to assist the Architect in carrying out his responsibilities at the site. The duties, responsibilities and limitations of authority of any such Project Representative shall be as set forth in an exhibit to be incorporated in the Contract Documents.

2.2.17 The duties, responsibilities, and limitations of authority of the Architect as the Owner's representative during construction, as set forth in the Contract Documents and the contract between the two, will not be modified or extended without consent of the Owner and the Architect.

2.2.18 In case of the termination of the employment of the Architect, the Owner shall appoint an architect against whom the Contractor makes no reasonable objection whose status under the Contract Documents shall be the same as that of the former architect.

### **SECTION 3 OWNER**

#### **3.1 DEFINITION**

3.1.1 The term Owner means the city of Worcester.

#### **INFORMATION AND SERVICES REQUIRED OF THE OWNER**

3.2.1 The Owner shall, at the time of execution of the Owner-Contractor Agreement, furnish the certification of adequate appropriation pursuant to M. G. L. Chapter 44, section 31C of the General Laws.

3.2.2 The Owner shall furnish existing surveys, if any, describing the physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site.

3.2.3 Except as provided in Subparagraph 4.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

3.2.4 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness after receipt from the Contractor of a written request for such information or services.

3.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, three (3) copies of Drawings and Specifications reasonably necessary for the execution of the Work.

3.2.6 The Owner shall forward all instructions to the Contractor through the Architect.

3.2.7 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Work by Owner or by Separate Contractors, Payments and Completion, and Insurance in Articles 6, 9 and 11 respectively.

### **3.3 OWNER'S RIGHT TO STOP THE WORK**

3.3.1 If the Contractor fails to correct defective Work as required by Paragraph 13.2 or persistently fails to carry out the Work in accordance with the Contract Documents, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Subparagraph 6.1.3.

### **3.4 OWNER'S RIGHT TO CARRY OUT THE WORK**

3.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and the amount charged to the Contractor are both subject to prior notice being given to the Architect by the Owner. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

## **SECTION 4 CONTRACTOR**

### **4.1 DEFINITION**

4.1.1 The Contractor is the person or entity identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if

singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

## **4.2 REVIEW OF CONTRACT DOCUMENTS**

4.2.1 Before starting the Work, and at frequent intervals during the progress thereof, the Contractor shall carefully study and compare the Agreement, Conditions of the Contract, Drawings, Specifications, Addenda and other Contract Documents and shall at once report to the Architect any error, inconsistency or omission he may discover. Any necessary change shall be ordered as provided in Article 12, subject to the requirements of paragraph 1.2 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice to the Architect, having discovered such errors, inconsistencies or omissions, or if by reasonably study of the Contract Documents he could have discovered such, the Contractor shall bear all costs arising therefrom.

4.2.2 The Contractor shall give the Architect timely notice of any additional design drawings, specifications, or instructions required to define the Work in greater detail, or to permit the proper progress of the Work.

4.2.3 The Contractor shall not proceed with any Work not clearly and consistently defined in detail in the Contract Documents, but shall request additional drawings or instructions from the Architect as provided in subparagraph 4.2.2. If the Contractor proceeds with such Work without obtaining further drawings or instructions, he shall correct Work incorrectly done at his own expense.

## **SUPERVISION AND CONSTRUCTION PROCEDURES**

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Architect in his administration of the Contract, or by inspections, tests or approvals required or performed under Paragraph 7.7 by persons other than the Contractor.

4.3.4 Where the Contract Documents refer to particular construction means, methods, techniques, sequences or procedures or indicate or imply that such are to be used in the Work, such mention is intended only to indicate that the operations of the Contractor shall be as to produce at least the quality of work implied by the operations described, but the actual determination of whether or not

the described operations may be safely and suitably employed on the Work shall be the responsibility of the Contractor, who shall notify the Architect in writing of the actual means, methods, techniques, sequences or procedures which will be employed on the Work, if these differ from those mentioned in the Contract Documents. All loss, damage, or liability, or cost of correcting defective work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be borne by the Contractor, notwithstanding that such construction means, methods, techniques, sequences or procedures are referred to, indicated or implied by the Contract Documents, unless the Contractor has given timely notice to the Architect in writing that such means, methods, techniques, sequences or procedures are not safe or suitable, and the Contractor has then been instructed in writing by the Owner to proceed at the Owner's risk.

#### **4.4 LABOR AND MATERIALS**

4.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The word 'provide' shall mean furnish and install complete, including connections, unless otherwise specified.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him.

## **4.5 WARRANTY**

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new and of recent manufacture unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective.

4.5.2 The Contractor shall be responsible for determining that all materials furnished for the Work meet all requirements of the Contract Documents. The Architect may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, reports of studies by qualified experts, or other evidence which, in the opinion of the Architect, would lead to a reasonable certainty that any material used, or proposed to be used, in the Work meets the requirements of the Contract Documents. All such data shall be furnished at the Contractor's expense. This provision shall not require the Contractor to pay for periodic testing of different batches of the same material, unless such testing is specifically required by the Contract Documents to be performed at the Contractor's expense.

4.5.3 If the Contractor proposed to use a material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, he shall inform the Architect in writing of the nature of such deviations at the time the material is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents.

4.5.4 In requesting approval of the deviations or substitutions, the Contractor shall provide, upon request, evidence leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that otherwise attainable. If, in the opinion of the Architect, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation without further investigation.

4.5.5 The Contract Documents are intended to produce a completed project of consistent character and quality of design. All components of the project have been selected to have a coordinated design in relation to the overall appearance. The Architect shall judge the design and appearance of proposed substitutes on the basis of their suitability in relation to the overall design of the project, as well as for their intrinsic merits. The Architect will not approve as equal to materials specified proposed substitutes which, in his opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the project. In order to permit coordinated design of color and finishes the Contractor shall, if required by the Architect, furnish the substituted material in any color, finish, texture, or pattern that would have been available from the manufacturer originally specified, at no additional cost to the Owner.

4.5.6 Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the Contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner.

4.5.7 The warranty provided in this paragraph 4.5 shall be in addition to and not in limitation of any other warranty required by the Contract Documents or otherwise prescribed by law.

4.5.8 The Contractor shall procure and deliver to the Architect, no later than the date claimed by the Contractor as the date of Substantial Completion, all special warranties required by the Contract Documents. Delivery by the Contractor shall constitute the Contractor's guarantee to the Owner that the warranty will be performed in accordance with its terms and conditions.

#### **4.6 TAXES**

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

4.6.2 IMPORTANT TAX NOTE: This project, being constructed for a political subdivision of the Commonwealth of Massachusetts, is exempt from certain taxes. It is therefore required that the Contractor and all Subcontractors purchasing taxable goods covered by the governing tax codes make known to suppliers the tax-exempt status of the institution in order that such taxes will not appear in the Contract Sum. The Owner will provide the necessary evidence and certificates of its tax exemption upon request of those concerned. The most applicable taxes concerned are:

- a. Federal Excise Taxes as applied to articles which are taxable under Chapter 12 of the Internal Revenue Code of 1954, as amended.
- b. Commonwealth of Massachusetts Sales tax.

#### **4.7 PERMITS, FEES AND NOTICES**

4.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and for all other permits and governmental fees, licenses and inspections necessary for the proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required at the time the bids are received.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 It is not the responsibility of the Contractor to make certain the Contract Documents are in accordance with the applicable laws, statutes, building codes and regulations. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Architect in writing, and any necessary changes shall be accomplished by appropriate Modification.

4.7.4 If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect, he shall assume full responsibility therefore and shall bear all costs attributable thereto.

#### **4.8 ALLOWANCES**

4.8.1. The Contract shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection. Note, however, that the use of such allowances are prohibited in any contract or work subject to the provisions of M.G.L. c. 149, section 44A.

4.8.2 Unless otherwise provided in the Contract Documents:

.1 these allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes;

.2 the Contractor's costs for unloading and handling of the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance;

.3 whenever the cost is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses.

## **4.9 SUPERINTENDENCE**

4.9.1 The Contractor shall employ one (1) competent superintendent who shall be in attendance at the Project site full time during the progress 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. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be so confirmed on written request in each case.

4.9.2 The Contractor shall retain a competent Registered Professional Engineer or Registered Land Surveyor, registered in the Commonwealth of Massachusetts, acceptable to the Architect, who shall establish, where necessary, the exterior lines and required elevations of all buildings and structures to be erected on the site and shall establish sufficient lines and grades for the construction of associated work such as, but not limited to, layout, utilities and site grading. The Engineer or Land Surveyor shall certify as to the actual location of the constructed facilities in relation to property lines, building lines, easements, and other restrictive boundaries and shall establish survey control points onsite.

4.9.3 The Contractor shall establish the grades, lines, levels, and necessary layout required by the various subcontractors in laying out their work.

4.9.4 The Contractor shall coordinate and supervise the work performed by Subcontractors to the end that the work, is carried out without conflict between trades and so that no trade, at any time, causes delay to the general progress of the Work. The Contractor and all Subcontractors shall at all times afford each trade, any separate contractor, or the Owner, every reasonable opportunity for the installation of work and the storage of materials.

## **4.10 PROGRESS SCHEDULE**

4.10.1 The Contractor shall prepare and submit to the Landscape Architect a progress schedule as described in subparagraphs 8.2.3 through 8.2.9.

## **4.11 DOCUMENTS AND SAMPLES AT THE SITE**

4.11.1 The Contractor shall maintain at the site for the Owner the record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data and Samples. These shall be available to the Architect and shall be delivered to him for the Owner upon completion of the Work.



4.11.2 Refer to Specifications Section entitled CONTRACT CLOSEOUT, for additional requirements for Record Drawings and Maintenance and Operating Manuals.

#### **4.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

4.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

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

4.12.4 The Contractor shall review, approve and submit, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents.

4.12.5 By approving and submitting Shop Drawings, Product Data, and, Samples, the Contractor thereby represents that he has determined and verified all dimensions, quantities, field dimensions, relations to existing work, coordination with work to be installed later, coordination with information on previously accepted Shop Drawings, Product Data, or Samples and verification of compliance with all the requirements of the Contract Documents. The accuracy of all such information is the responsibility of the Contractor. In reviewing Shop Drawings, Product Data, and Samples, the Architect shall be entitled to rely upon the Contractor's representation that such information is correct and accurate.

4.12.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data or Samples under Subparagraph 2.2.14 unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data or Samples by the Architect's approval thereof.

4.12.7 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the Architect on previous submittals. Unless such written notice has been given, the Architect's approval of a resubmitted Shop Drawing, Product Data, or Sample shall not constitute approval of any changes not requested on the prior submittal.

4.12.8 No portion of the Work requiring submission of a Shop Drawing, Product Data or Sample shall be commenced until the submittal has been approved by the Architect as provided in Subparagraph 2.2.14. All such portions of the Work shall be in accordance with approved submittals.

4.12.9 Refer to Specifications Section entitled, SUBMITTALS, for additional requirements.

#### **4.13 USE OF SITE**

4.13.1 The right of possession of the premises and the improvements made thereon by the Contractor shall remain at all times in the Owner. The Contractor's right of entry and use thereof arises solely from the permission granted by the Owner under the Contract Documents. The Contractor shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, ordinances, the Contract Documents and permits and/or directions by the Architect and shall not unreasonably encumber the premises with his materials.

#### **4.14 CUTTING AND PATCHING WORK**

4.14.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.14.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and such separate contractor. The Contractor shall not unreasonably withhold from the Owner or any separate contractor his consent to cutting or otherwise altering the Work.

#### **4.15 CLEANING UP**

4.15.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery and surplus materials. Immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises. Concrete and ceramic surfaces shall be cleaned and washed. Resilient coverings shall be cleaned, waxed and buffed. Woodwork shall be dusted and cleaned. Sash, fixtures, and equipment shall be thoroughly cleaned. Stains, spots, dust, marks and smears shall be removed from all surfaces. Hardware and all metal surfaces shall be cleaned and polished. Glass and plastic surfaces shall be thoroughly

cleaned by professional window cleaners. All damaged, broken or scratched glass or plastic shall be replaced by the Contractor at this expense.

4.15.2 If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in Paragraph 3.4 and the cost thereof shall be charged to the Contractor.

4.15.3 Refer to Specifications Section entitled, PROJECT CLOSEOUT, for additional requirements.

#### **4.16 COMMUNICATIONS**

4.16.1 The Contractor shall forward all communications to the Owner through the Architect.

#### **4.17 ROYALTIES AND PATENTS**

4.17.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Architect shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Architect.

#### **4.18 INDEMNIFICATION**

4.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Architect and its agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. 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 Paragraph 4.18.

4.18.2 In any and all claims against the Architect or any of his agents or employees, by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.18 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.

4.18.3 The obligations of the Contractor under this Paragraph 4.18 shall not extend to the liability of the Architect, his agents or employees, arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the Architect, his agents or employees provided, such giving or failure to give is the primary cause of the injury or damage.

## **SECTION 5 SUBCONTRACTORS**

### **5.1 DEFINITION**

5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site and as further defined by M.G.L. c. 30, section 39F(3). The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractors.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contact with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

### **5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK**

5.2.1 Unless otherwise required by the Contract Documents or the Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Owner and the Architect, in writing, the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

5.2.2 The Contractor shall not contract with any such proposed person or entity to which the Owner or the Architect has made reasonable objection under the provisions of Subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he has a reasonable objection.

5.2.3 If the Owner or the Architect has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Architect has no reasonable objection, and the Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued; however no increase in the Contract Sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting names as required by Subparagraph 5.2.1

5.2.4 The Contractor shall make no substitution for any Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **5.3 SUBCONTRACTUAL RELATIONS**

5.3.1 By an appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume to the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner and the Architect. Said agreement shall preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed Subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to his Sub-subcontractors.

## **SECTION 6**

### **WORK BY OWNER OR BY SEPARATE CONTRACTORS**

#### **6.1 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS**

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, he shall make such claim as provided elsewhere in the Contract Documents.

6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 The Owner will provide for the coordination of the work of his own forces and of each separate contractor with the Work of the Contractor, who shall cooperate therewith as provided in Paragraph 6.2.

6.1.4 The Contractor shall permit the Owner to place and install as much equipment during the progress of the work as is possible before the completion of the various parts of the work, and agrees that such placing and the installation of equipment shall not in any way evidence the completion of the work or any portion of it, nor shall it signify the Owner's completion of the work or any portion thereof.

#### **6.2 MUTUAL RESPONSIBILITY**

6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends for proper execution or results upon the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Architect any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acceptance of the Owner's or separate contractors' work as fit and proper to receive his Work, except as to defects which may subsequently become apparent in such work by others.

6.2.3 Any costs caused by defective or ill-timed work shall be borne by the party responsible therefor.

6.2.4 Should the Contractor wrongfully cause damage to the work or property of the Owner, or to other work on the site, the Contractor shall promptly remedy such damages as provided in Subparagraph 10.2.5.

6.2.5 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor.

### **6.3 OWNER'S RIGHT TO CLEAN UP**

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.15, the Owner may clean up and charge the cost thereof to the contractors responsible therefor as the Architect shall determine to be just.

## **SECTION 7 MISCELLANEOUS PROVISIONS**

### **7.1 GOVERNING LAW**

7.1.1 The Contract shall be governed by the law of the Commonwealth of Massachusetts.

### **7.2 SUCCESSORS AND ASSIGNS**

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party with respect to all covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the Owner.

7.2.2 If, after making final payment, the Owner conveys to a third party any building or other improvement constructed under the Contract, any rights with respect to the property so conveyed which the Owner may have against the Contractor under Article 13 or by virtue of claims which, under the terms of subparagraph 9.9.4, are reserved to the Owner after the making and acceptance of final payment, shall automatically transfer to such third party.

### **7.3 WRITTEN NOTICE**

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to an authorized representative of the person or entity for whom it was

intended, or if delivered at or sent by registered or certified mail or by telegraph to the address of such person or entity set forth in the Agreement or in a subsequent written notice.

#### **7.4 CONSENT OR WAIVER**

7.4.1 No consent or waiver, express or implied, by the Owner or the Architect to, or of, any breach of any covenant, condition or duty of the Contractor shall be construed as a consent to or waiver of any other breach of the same or any other covenant, condition or duty.

#### **7.5 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND**

7.5.1 The Owner shall have the right to require the Contractor to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder if and as required in the Bidding Documents or in the Contract Documents.

#### **7.6 RIGHTS AND REMEDIES**

7.6.1 The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

#### **7.7 TESTS**

7.7.1 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 timely notice of its readiness so the Architect may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals conducted by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspections, tests or approvals.

7.7.2 If the Architect determines that any Work requires special inspection, testing, or approval which Subparagraph 7.7.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in Subparagraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply with the requirements of the Contract Documents, the Contractor shall bear all costs thereof, including compensation for the Architect's additional services made necessary by such failure, otherwise the Owner shall bear such costs, and an appropriate Change Order shall be issued.

7.7.3 The Contractor shall obtain and deliver promptly to the Architect any occupancy permit or any certificates of final inspection of any part of his work or



operating permits for any mechanical apparatus, such as elevators, escalators, boilers, air compressors, etc., which may be required by law to permit full use and occupancy of the premises by the Owner. Receipt of such permits or certificates by the Architect shall be a condition precedent to Substantial Completion of the Work.

## **SECTION 8 TIME**

### **8.1 DEFINITIONS**

8.1.1 Unless otherwise provided, the Contract Time is the period of time allotted in the Contract Documents for Substantial Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of commencement of the Work is the date established in a notice to proceed. If there is no notice to proceed, it shall be the date of the Owner-Contractor Agreement or such other date as may be established therein.

8.1.3 The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Architect when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended and only minor items which can be corrected or completed without substantial interference with the Owner's use of the Work remain to be corrected or completed.

8.1.4 The term day as used in the Contract Documents shall mean calendar day unless otherwise specifically designated.

8.1.5 The term "working day" shall mean any calendar day except Saturdays, Sundays, and legal holidays at the place of the project.

### **8.2 PROGRESS AND COMPLETION**

8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.2.3 Within two weeks after award of the Contract, the Contractor shall submit to the Architect a Progress Schedule showing for each class of work included in the Schedule of Values, the percentage completion to be obtained and the total dollar value of work to be completed as of the first of each month until Substantial

Completion. All calculations shall be on the basis of work in place, but not including the value of materials delivered but not in place.

8.2.4 The Progress Schedule shall be based on an orderly progression of the Work, allowing adequate time for each operation, and leading to a reasonable certainty of Substantial Completion by the date established in the Agreement. The Progress Schedule will be reviewed by the Architect for compliance with the requirements of this article and will be accepted by him or returned to the Contractor for revision and re-submittal. Unless specifically required by law, no payment under this Contract shall be due until the Progress Schedule has been approved by the Architect.

8.2.5 If in any Application for Payment the total value of the completed Work in place, as certified by the Architect, is less than 90% of the total value of the Work in place estimated in the Progress Schedule, the Owner may, at his option, require the Contractor to accelerate the progress of the work without cost to the Owner by increasing the work force or hours of work, or by other reasonable means approved by the Architect.

8.2.6 If each of three successive applications, as certified by the Architect, indicate that the actual work completed is less than 90% of the values estimated in the Progress Schedule to be completed by the respective dates, the Owner may at his option, treat the Contractor's delinquency as a default justifying the Owner to initiate a termination of the Contract.

8.2.7 If the Architect has determined that the Contractor should be permitted to extend the time for completion, as provided in paragraph 8.3, the calendar dates in the Progress Schedule shall be adjusted accordingly to retain their same relationship to the adjusted date of Substantial Completion, and the dollar value of work to be completed as of the first of each month shall be adjusted pro-rata.

8.2.8 If the Contractor fails to submit any Application for Payment in any month, the Architect shall, for the purpose of this evaluation of progress, certify separately to the actual value of the work in place and completed as of the first of the month, to the best of his knowledge.

8.2.9 Nothing herein shall limit the Owner's right to liquidated or other damages for delays by the Contractor or to any other remedy which he may possess under other provisions of the Contract Documents or by law.

### **8.3 DELAYS AND EXTENSIONS OF TIME**

8.3.1 Any delay and subsequent request for an extension of time shall be governed by M.G.L. c. 30, section 39(O) and the Owner-Contractor Agreement.

8.3.2 No work shall be suspended without the written permission of the Owner or his representative.

8.3.3 If no agreement is made stating the dates upon which interpretations as provided in Subparagraph 2.2.8 shall be furnished, then no claim for delay shall be allowed on account of failure to furnish such interpretations until thirty days after written request is made for them, and not then unless such claim is reasonable.

8.3.4 This Paragraph 8.3 does not exclude the recovery of damages for delay by either party under other provisions of the Contract Documents.

### **SECTION 9 PAYMENTS AND COMPLETION**

9.1.1 The Contract Sum is stated in the Owner-Contractor Agreement and, including authorized adjustments thereto, is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents.

### **9.2 SCHEDULE OF VALUES**

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require and shall be revised if later found by the Architect to be inaccurate. This schedule, unless objected to by the Architect, shall be used only as a basis for the Contractor's Applications for Payment.

### **9.3 APPLICATIONS FOR PAYMENT**

9.3.1 At least ten days before the date for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment notarized if required, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect may require, and reflecting retainage, if any, as provided in Supplemental General Conditions-Part I, Article I, Paragraph 1.8 or 1.9; whichever is applicable. The format and number of copies of such Applications for Payment shall be as directed by the Architect.

9.3.2 Unless otherwise provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site and, if approved in advance by the Owner,

payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance and transportation to the site for those materials and equipment stored off the site. The Contractor shall reimburse the Owner for any loss or damage to such unincorporated materials or equipment not covered by insurance.

9.3.3 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens". The Contractor further agrees that the submission of any Application for Payment shall conclusively be deemed to waive all liens with respect to said work, materials and labor to which the Contractor then may be entitled; provided, however, that in no event shall such waiver of lien rights waive right to payment for said Work, materials and labor.

9.3.4 Each Application for Payment or periodic estimate requesting payment must be accompanied by a certificate from each subcontractor stating that he has been paid all amounts due him on the basis of the previous periodic payment to the Contractor, or else stating the amount not so paid and the reason for the discrepancy. In the event of any such discrepancy, the Contractor shall be required to furnish his own written explanation.

## **9.4 CERTIFICATES FOR PAYMENT**

9.4.1 The Architect will, within seven days after the receipt of the Contractor's Application for Payment, either certify a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor in writing his reasons for withholding certification of a Certificate as provided in Subparagraph 9.6.1.

9.4.2 The certification of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.3 and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate); and that the Contractor is entitled to payment in the amount certified. However, by certifying a Certificate

for Payment, the Architect shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that he has reviewed the construction means, methods, techniques, sequences or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the moneys previously paid on account of the Contract.

## **9.5 PROGRESS PAYMENTS**

9.5.1 After the Architect has certified a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents.

9.5.2 The Contractor shall promptly pay each Subcontractor upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

9.5.3 The Architect may, on request and at his discretion, furnish to any Subcontractor, if practicable, information regarding the percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the Architect on account of Work done by such Subcontractor.

9.5.4 Neither the Owner nor the Architect shall have any obligation to pay or to see the payment of any moneys to any Subcontractor except as may otherwise be required by law.

9.5.5 No Certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

## **9.6 PAYMENTS WITHHELD**

9.6.1 The Architect may decline to certify payment, in whole or in part, to the extent reasonably necessary to protect the Owner, if in his/her opinion he/she is unable to make representations to the Owner as provided in Subparagraph 9.4.2. If the Architect is unable to make representations to the Owner as provided in Subparagraph 9.4.2 and to certify payment in the amount of the Application, he/she will notify the Contractor as provided in Subparagraph 9.4.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly certify a Certificate for Payment for the amount for which he/she is able to make such representations to the Owner. The Architect may also decline to certify payment or because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment

previously certified, to such extent as may be necessary in his/her opinion to protect the Owner from loss because of:

1. defective Work not remedied
2. third party claims filed or reasonable evidence indicating probable filing of such claims,
3. failure of the Contractor to make payments properly to subcontractors or for labor, materials or equipment
4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum,
5. damage to the Owner,
6. reasonable evidence that the Work will not be completed within the Contract Time or
7. persistent failure to carry out the Work in accordance with the Contract Documents
8. failure of mechanical trades or electrical trades subcontractors to comply with mandatory requirements for maintaining record drawings. The Contractor shall be required to check record drawings each month. Written conformation that the record drawings are "up-to-date" shall be required by the Architect before approval of the Contractor's monthly payment requisition will be considered.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made for amounts withheld because of them.

## **9.7 FAILURE OF PAYMENT**

9.7.1 If the Architect does not certify a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor as required by the Contract Documents any amount certified by the Architect, then the Contractor may, upon seven additional days written notice to the Owner and the Architect, stop the Work until payment of the amount owing has been received.

## **9.8 SUBSTANTIAL COMPLETION**

9.8.1 When the Contractor considers that the Work, or a portion thereof designated in the Contract Documents for separate completion, is substantially complete as defined in subparagraph 8.1.3, the Contractor shall submit to the Architect (1) a list of items to be completed or corrected, and (2) all special

warranties required by the Contract Documents endorsed by the Contractor and in a form reasonably acceptable to the Architect. The failure to include any items on the list mentioned in the preceding sentence does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Architect on the basis of an inspection determines that the Work or designed portion thereof is substantially complete, and when the Contractor has submitted to the Architect the special warranties, as provided in the first sentence of this subparagraph, the Architect will then certify a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.8.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents.

## **9.9 FINAL COMPLETION AND FINAL PAYMENT**

9.9.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when he finds the Work acceptable under the Contract Documents and the Contract fully performed, he will promptly certify a final Certificate of Payment stating that to the best of his knowledge, information and belief, and on the basis of his observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable. The Architect's certification of the final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.9.2 have been fulfilled.

9.9.2 Unless otherwise required by applicable law, neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment and (3), if required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens, arising out of the Contract, to the extent and in such form as may be designated by the Owner. If the Contractor fails to

furnish such releases or waivers as the Owner reasonably requires to satisfy the Owner that there are not outstanding claims, the Owner may require the Contractor, as a condition of final payment, to furnish a bond satisfactory to the Owner to indemnify the Owner against any such claims.

9.9.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by the issuance of Change Orders affecting final completion, and the Architect so confirms, the Owners shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than the retainage stipulated in the Contract Documents, and if bonds have been furnished as provided in Paragraph 7.5., the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.9.4 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from: (1) unsettled claims under the Bonds required elsewhere in the Contract Documents, (2) faulty or defective Work appearing after Substantial Completion, (3) failure of the Work to comply with the requirements of the Contract Documents, or (4) terms of any special warranties required by the Contract Documents.

9.9.5 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

## **SECTION 10**

### **PROTECTION OF PERSONS AND PROPERTY**

#### **10.1 SAFETY PRECAUTIONS AND PROGRAMS**

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

#### **10.2 SAFETY OF PERSONS AND PROPERTY**

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to: (1) all employees on the Work and all other persons who may be affected thereby; (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 his Subcontractors or Sub-subcontractors; and (3) other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements,



roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy all damage or loss (other than damage or loss insured under Paragraph 11.3) to any property referred to in Clause 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone whose acts any of them may be liable and for which the Contractor is responsible under Clauses 10.2.1.2 and 10.2.1.3, except damage or loss attributable to the acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either by of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to his obligations under Paragraph 4.18.

10.2.6 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designed by the Contractor in writing to the Owner and the Architect.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

### **10.3 EMERGENCIES**

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for the Changes in the Work.

## **SECTION 11 INSURANCE**

## **11.1 CONTRACTOR'S LIABILITY INSURANCE**

11.1.1 The Contractor shall purchase and maintain in a company or companies to which the Owner has no reasonable objection, such insurance as will protect him from claims set forth below which may arise out of or result from the Contractor's operations under the Contract whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- 1) claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts;
- 2) claims for damages because of bodily injury, occupational sickness or disease, or death of his or her employees
- 3) claims for damages because of bodily injury, sickness or disease, or death of any person other than his or her employees
- 4) claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the contractor or, (2) by any other person;
- 5) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- 6) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle

11.1.2 The insurance required by subparagraph 11.1.1 shall include all major divisions of coverage, and shall be on a comprehensive general basis including Premises and Operations (including X-C-U), Owner's and Contractor's Protective Products and Completed Operations, and Owned, Non-owned, and Hired Motor Vehicles. Such insurance shall be written for not less than any limits of liability required by law or those set forth below, whichever is greater.

1. Workmen's Compensation -Statutory/Employers Liability \$500,000.

2. Commercial General Liability - Per Occurrence / Aggregate  
\$1,000,000 / 2,000,000
3. Automobile Liability – Combined Single Limit
4. Bodily Injury & Property Damage combined single limit of \$ 1,000,000 (all owned, hired and non-owned autos).
5. Excess / Umbrella Liability – Per Occurrence / Aggregate \$ 1,000,000 / \$ 1,000,000
6. Independent Contractors -Same limits as above
7. Products and Completed Operations -Same limits as above commencing with issuance of final Certificate of Payment.
8. Contractual Liability - Same limits as above.

11.1.3 The insurance required by Subparagraph 11.1.1 shall include contractual liability insurance applicable to the Contractor's obligations under Paragraph 4.18.

11.1.4 Certificates of Insurance acceptable to the Owner shall be filed with the Owner. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled until at least thirty days prior written notice has been given to the Owner.

11.1.4.1 These certificates shall set forth evidence of all coverage required by 11.1.1, 11.1.2 and 11.1.3. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending limits of coverage.

## **11.2 OWNER'S LIABILITY INSURANCE**

11.2.1 The Owner shall be responsible for maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect him against claims which may arise from operations under the Contract.

## **11.3 PROPERTY INSURANCE**

11.3.1 The Contractor shall purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief.

11.3.2 The Owner shall purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This

insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.3.3 Any loss insured under Subparagraph 11.3.1 is to be adjusted with the Contractor and made payable to the Contractor as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgagee clause and of Subparagraph 11.3.8.

11.3.4. The Contractor shall pay each Subcontractor a just share of any insurance moneys received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.3.5 The Contractor shall file a copy of all policies with the Owner before an exposure to loss may occur.

11.3.6 The Owner and Contractor waive all rights against (1) each other and the Subcontractors, Sub-subcontractors, agents and employees each of the other, and (2) the Architect and separate contractors, if any, and their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to this Paragraph 11.3 or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the Contractor as trustee. The foregoing waiver afforded the Architect, his agents and employees shall not extend to the liability imposed by Subparagraph 4.18.3. The Owner or the Contractor, as appropriate, shall require of the Architect, separate contractors, Subcontractors, and Sub-subcontractors by appropriate agreements, written where legally required for validity, similar waivers each in favor of all other parties enumerated in this Subparagraph 11.3.6.

11.3.7 If required in writing by any party in interest, the Contractor as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of his duties. He shall deposit in a separate account any money so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach or in accordance with the direction of a court of competent jurisdiction.

11.3.8 The Contractor as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five days after the occurrence of loss to the Contractor's exercise of this power. If such objection be made, the Contractor as trustee shall make settlement with the insurers in accordance with the direction of a court of competent jurisdiction.

## **11.4 LOSS OF USE INSURANCE**

11.4.1 The Owner, at his option, may purchase and maintain such insurance as will insure him against loss of use of his property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of his property including consequential losses due to fire or other hazards however caused, to the extent covered by insurance under this Paragraph 11.4.

## **SECTION 12 CHANGES IN THE WORK**

### **12.1 CHANGE ORDERS**

12.1.1 The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the Work shall be authorized by Change Order, and shall be performed under the applicable conditions of the Contract Documents.

12.1.2 A Change Order is a written order to the Contractor signed by the Owner and the Architect, issued after execution of the Contract, authorizing or directing a change in the Work and/or an adjustment in the Contract Sum or the Contract Time, or both. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement with the terms thereof, including the adjustment in the Contract Sum and/or the Contract Time.

12.1.3 If the Contractor does not agree with the terms of the Change Order, the Contractor shall return the unsigned Change Order to the Owner. In such event, the Work, Contract Sum and /or Contract Time shall be adjusted as reflected in the Change Order, subject to the Contractor's rights under M.G.L. Chapter 30, Section 39J, but in no event shall the Contractor refuse to perform the Work as modified by the Change Order.

### **12.2 CLAIMS FOR ADDITIONAL COST**

12.2.1 If the Contractor claims that any instructions or orders, whether oral, written, drawings, or otherwise, involve extra cost or time, and such instructions or orders are not accompanied by a written acknowledgment by the Owner that extra payment will be made or time extended, he shall promptly so notify the Owner in writing and shall not proceed with the work until he has received a further written order to proceed; except, as provided in Paragraph 10.3, in the case of an emergency affecting life or property.

12.2.2 Upon receipt from the Contractor of a written notice of claim as provided in Paragraph 12.2.1, the Architect shall review such claim, and if he determines that any work in dispute should proceed, he shall issue to the Contractor a written order, signed by the Owner, (1) to proceed, which shall approve or deny the Contractor's claim, in whole or in part, or (2) to proceed subject to a later determination by the Architect of the Contractor's right to extra payment.

12.2.3 To the extent that the Architect, when issuing the written order to proceed described in 12.2.2, approves the Contractor's claim, the Contract Sum and/or Contract Time shall be adjusted by Change Order. If the Architect, when issuing his written order to proceed denies, in whole or in part, the Contractor's claim, the Contractor shall proceed with the work without delay, subject to the Contractor's rights under M.G.L. Chapter 30, Section 39J. If the Architect, when issuing his written order to proceed, instructs the Contractor to proceed with the work subject to a later determination by the Architect of the Contractor's right to extra payment or time, the Contractor shall proceed with the Work without delay.

### **12.3 MINOR CHANGES IN THE WORK**

12.3.1 The Architect shall have the authority to order minor changes in the Work that do not involve an adjustment in the Contract Sum or an extension of the Contract Time, and are not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order, and shall be binding on the Owner and the Contractor. The Contractor shall carry out such written orders promptly.

### **12.4 EQUITABLE ADJUSTMENTS**

12.4.1 Equitable adjustments in the Contract Sum 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 price shall be inclusive of items 3(a) through 3(d), 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 adjustments.
- 3) Time and materials basis, based upon a not to exceed, predetermined upset amount to be subsequently adjusted on the basis of actual costs comprised of items (a) through (d) below:
  - a) the costs at prevailing rates for direct labor, material and use of equipment;

- b) plus, the costs of Worker's Compensation Insurance, Liability Insurance, Federal Social Security and Massachusetts Unemployment Compensation; or as an alternative, the Contractor may elect to add a flat twenty-five (25%) percent to the total labor rate in (a), above;
- c) plus ten (10) percent of (a), above, for overhead, superintendence and profit which will be paid to the Contractor for the work of the Contractor and all subcontractors. The contracting parties referred to in this subparagraph shall agree upon the distribution of the ten (10) percent as a matter of contract between each other;
- d) plus actual direct premium costs of payment and performance bonds required of the Contractor provided there would be an appropriate credit for premiums for a credit change order
- e) if the extra work requires the use of heavy equipment, cranes and hoisting equipment, and special tools not on site and not originally required to be used upon the work, then the cost of transportation to and from the work site, not exceeding 100 miles, shall be included. The cost of extra work shall not include any cost or rental of small tools, buildings, or any portion of the time of the Contractor's management or office personnel, or any allowance for use of capital.

12.4.2 If the net change is an addition to the Contract Sum, it shall include the Contractor's overhead, superintendence and profit. On any change that involves a net credit, no allowance for overhead superintendence and profit shall be figured. 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, notwithstanding any net increase in the Contract Sum. Charges for small tools known as "tools of the trade" are not to be computed in the amount of an equitable change.

## **SECTION 13**

### **UNCOVERING AND CORRECTION OF WORK**

#### **13.1 UNCOVERING OF WORK**

13.1.1 If any portion of the Work should be covered contrary to the request of the Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect, with the approval of the Owner, may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract

Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such Work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it is found that this condition was caused by the Owner or a separate contractor as provided in Article 6, in which event the Owner shall be responsible.

## **13.2 CORRECTION OF WORK**

13.2.1 The Contractor shall promptly correct all Work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including compensation for the Architect's additional services made necessary thereby and any costs, loss, or damages to the Owner resulting from such failure or defect.

13.2.2 If, within one year after the Date of Substantial Completion of the Work or designated portion thereof or within one year after acceptance by the Owner of designated equipment or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the Work which are defective or non-conforming and which have not been corrected under Subparagraphs 4.5.1, 13.2.1, and 13.2.2, unless removal is waived by the Owner.

13.2.4 If the Contractor fails to correct defective or nonconforming Work as provided in Subparagraphs 4.5.1, 13.2.1, and 13.2.2, the Owner may correct it in accordance with Paragraph 3.4.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may upon ten additional days written notice, sell such Work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Architect's additional services made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then



or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

13.2.7 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his obligations other than specifically to correct the Work.

### **13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK**

13.3.1 If the Owner prefers to accept defective or non-conforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## **SUPPLEMENTARY GENERAL CONDITIONS – PART I**

### **STATUTORY PROVISIONS FOR MASSACHUSETTS PUBLIC CONSTRUCTION CONTRACTS CONTENTS**

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1.2	Delays	M.G.L. Chapter 30, Section 39O
1.3	Deviations	M.G.L. Chapter 30, Section 39I
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1.5	Differing Site Conditions	M.G.L. Chapter 30, Section 39N
1.6	Timely Decisions	M.G.L. Chapter 30, Section 39P
1.7	Certificate of Appropriation	M.G.L. Chapter 44, Section 31C
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**SUPPLEMENTARY GENERAL CONDITIONS – PART I**  
**STATUTORY PROVISIONS FOR MASSACHUSETTS**  
**PUBLIC CONSTRUCTION CONTRACTS**

The following provisions are required by or are intended to be consistent with requirements of Massachusetts statutes governing public construction contracts in the Commonwealth of Massachusetts (hereinafter referred by statute to be included herein shall be deemed to be so included. In addition, the parties recognize that other rights, duties, and obligations with respect to public construction contracts are provided for in the Contract Documents. In case of conflict between the provisions of these Supplementary General Conditions and other provisions in the Contract Documents, the provisions of these Supplementary General Conditions shall govern. In case of conflict between the provisions of these Supplementary General Conditions and the provisions of any applicable statute, the statutory provisions shall govern. Where the term “awarding authority” appears in the following paragraphs, it shall be taken as meaning the Owner.

**ARTICLE 1 – PAYMENT, CONTRACT ADMINISTRATION, etc.**

**1.1 “Or Equal” Clause: (Statutory reference: M.G.L. Chapter 30, Section 39M(b))**

This Paragraph 1.1 applies to every contract subject to M.G.L. Chapter 30, Section 39M(b).

This Paragraph 1.1 applies to every contract for the construction, reconstruction or repair of any public work or for the purchase of any material by the Commonwealth, any political subdivision thereof, or any county, city, town, district or housing authority (above certain dollar limits, as stated in the statute), and to contracts awarded pursuant to M.G.L. Chapter 149, Sections 44A through 44H. The said Sections 44A through 44H apply to every contract for the construction, reconstruction, installation, demolition, maintenance or repair of any building by a department, agency, board, commission, authority, or other instrumentality of the Commonwealth or political subdivision thereof, or two or more subdivisions thereof, but not including the Massachusetts Bay Transportation Authority, estimated to cost more than a dollar amount set forth in M.G.L. Chapter 149, Section 44A.

Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished. 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 will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and
- c. it conforms substantially, even with deviations, to the detailed requirements for the items as indicated by the specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of

material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said name or described materials.

Any structural or mechanical changes made necessary to accommodate substituted equipment under this paragraph shall be at the expense of the Contractor or Subcontractor responsible for the work item. See other paragraphs of General and Supplementary Conditions for procedures to be used in determining compliance with the standards of this paragraph.

1.2 Delays: (Statutory reference: Chapter 30, Section 39O). This Paragraph 1.2 applies to every contract subject to M.G.L. Chapter 30, Section 39M and to every contract subject to Chapter 149, Sections 44A through 44H.

In the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

Except as otherwise provided by law and by this Paragraph 1.2, the Contractor shall not be entitled to damages on account of any hindrances or delays, avoidable or unavoidable; but if such delay be occasioned by the awarding authority, the Contractor may be entitled to an extension of time only, in which to complete the work, to be determined by the Architect.

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

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

1.3 Deviations: (Statutory referenced: M.G.L. Chapter 30, section 39I) This Paragraph 1.3 applies to every contract for the construction, alteration, maintenance, repair or demolition of,

or addition to, any public building or public works for the Commonwealth or any political subdivision thereof.

The Contractor shall perform all the work required by this contract in conformity with the plans and specifications contained therein. No willful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the Engineer or Architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract, such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such Engineer or Architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating: (1) If such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is the same cost and quality, or that an equitable adjustment has been agreed upon between the awarding authority and the Contractor and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the awarding authority.

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

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

1.4 Finality of Decisions by Awarding Authority or Architect: (Statutory reference: M.G.L. Chapter 30, Section 39J) This Paragraph 1.4 applies to every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the Commonwealth or by any county, city, district, board, commission, or other public body, when the amount of the contract exceeds the amount stated in M.G.L. Chapter 30, Section 39J.

Notwithstanding any contrary provision of this contract, a decision by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily, is unsupported by substantial evidence, or is based upon error of law.

1.5 Differing Site Conditions: (Statutory reference: M.G.L. Chapter 30, Section 39N) This Paragraph 1.5 applies to every contract subject to M.G.L. Chapter 30, Section 39M and to every contract subject to M.G.L. Chapter 49, Sections 44A through 44H.

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 awarding authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the Contract Documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and Contract Documents and are such a nature as to cause an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.

1.6 Timely Decision by Awarding Authority: (Statutory reference: M.G.L. Chapter 30, Section 39P) This Paragraph 1.6 applies to every contract subject to M.G.L. Chapter 30, Section 39M, and to every contract subject to M.G.L. Chapter 149, Sections 44A through 44H.

In every case in which this contract 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, the decision shall 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.

1.7 Certificate of Appropriation: (Statutory reference: M.G.L. Chapter 44, Section 31C) This Paragraph 1.7 applies to contracts for construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public work by any city or town costing more than the amount set forth in M.G.L. Chapter 44, Section 31C.

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



1.8 Method of Payment: (Statutory reference: M.G.L. Chapter 30, Section 39K) This Paragraph 1.8 applies to every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the Commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than two thousand dollars, or the amount set forth in M.G.L. Chapter 30, Section 39K.

1.8.1 Within fifteen days after receipt from the Contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the Contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the Contractor has title or to which a Subcontractor has title and has authorized the Contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the Contractor and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Paragraph 1.10 of these Supplementary General Conditions, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the Contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one percent of the original contract price, or (b) the Contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the Contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to Subcontractors based on demands for same in accordance with the provisions of Paragraph 1.10 of these Supplementary General Conditions, or based on the record of payments by the Contractor to the Subcontractors under this contract if such record of payment indicates that the Contractor has not paid Subcontractors as provided in Paragraph 1.10. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days...after receipt of such periodic estimate from the Contractor, at the place designated by the awarding authority if such a place is so designated. The Contractor agrees to pay to each Subcontractor a portion of any such interest paid in accordance with the amount due each Subcontractor.

1.8.2 The awarding authority may make changes in any periodic estimate submitted by the Contractor, and the payment due on said periodic estimate shall be computed in accordance with the change so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the Contractor for correction, any periodic estimate which is not in

the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter.

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

1.8.4 A certificate of the Architect to the effect that the Contractor has fully or substantially completed the work shall, subject to the provisions of Paragraph 1.4 of these Supplementary General Conditions, be conclusive for the purposes of this Paragraph 1.8.

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

1.9 Method of Payment: (Statutory reference: M.G.L. Chapter 30, section 39G) This Paragraph 1.9 applies to every contract for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways; including bridges and other highway structures, sewers and water mains, airports and other public works entered into with the commonwealth, or any agency or political subdivision thereof.

1.9.1 Upon substantial completion of the work required by a contract with the commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and water mains, airports and other public works, the contractor shall present

in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty-one day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

1.9.2 Within sixty-five days after the effective date of a declaration of substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quality and price of the work done and all but one percent retainage on that work, including the quantity, price and all but one percent retainage for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payments filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section 1.10, but no contract subject to said section 1.10 shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

1.9.3 If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by section 1.9.2, on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate, at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

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

1.9.5 Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority

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

1.9.6 The awarding authority shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the day of payment. Within 15 days after receipt from the contractor, if such place is so designated by the awarding authority, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that materials are free from all encumbrances. The awarding authority shall include with each such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claim against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section 1.10, and a retention to secure satisfactory performance of the contractual work not exceeding five percent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section 1.10; provided, that a five percent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

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

1.9.8 Substantial completion, for the purpose of this section 1.9, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been

completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract.

1.10 Direct Payment: (Statutory reference: M.G.L. Chapter 30, Section 39F) This Paragraph 1.10 applies to every contract awarded pursuant to M.G.L. Chapter 149, Sections 44A through 44J, and (with the exception of Subparagraph 1.10.9) to every contract awarded pursuant to M.G.L. Chapter 30, Section 39M.

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

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

1.10.3 Each payment made by the awarding authority to the General Contractor pursuant to Subparagraphs 1.10.1 and 1.10.2 of this Paragraph 1.10 for the labor performed and the materials furnished by a Subcontractor shall be made to the General Contractor for the account of that Subcontractor; and the awarding authority shall take reasonable steps to compel the General Contractor to make each such payment to each such Subcontractor. If the awarding authority has received a demand for direct payment from a Subcontractor for any amount which has already been included in a payment to the General Contractor for payment to the Subcontractor as provided in Subparagraphs 1.10.1 and 1.10.2, the awarding authority shall act upon the demand as provided in this Paragraph 1.10.

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

may reply to the demand. The reply shall be a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the Subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract, including any amount due for extra labor and materials furnished to the General Contractor and of the amount due for each claim made by the General Contractor against the Subcontractor.

1.10.5 Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the Subcontractor of the balance due under the subcontract, including any amount due for extra labor and materials furnished to the General Contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the General Contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by Subparagraph 1.10.4. The awarding authority shall make further direct payments to the Subcontractor forthwith after the removal of the basis for deduction from direct payments made as provided in parts (i) and (ii) of this Subparagraph.

1.10.6 The awarding authority shall forthwith deposit the amounts deducted from a direct payment as provided in part (iii) of the Subparagraph 1.10.5 in an interest-bearing joint account in the names of the General Contractor and the Subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the General Contractor and the Subcontractor and shall notify the General Contractor and the Subcontractor of the date of the deposit and the account, including accrued interest, as provided in an agreement between the General Contractor and the Subcontractor or as determined by decree of a court of competent jurisdiction.

1.10.7 All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to Subparagraph 1.10.6 shall be made out of amounts payable to the General Contractor at the time of receipt of a demand for direct payment from a Subcontractor and out of amounts which later become payable to the General Contractor and in the order or receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the Contractor to the extent of such payment.

1.10.8 The awarding authority shall deduct from payments to a General Contractor amounts which, together with the deposits in interest-bearing accounts pursuant to Subparagraph 1.10.6, are sufficient to satisfy all unpaid balances of demands for direct payments received from Subcontractors. All such amounts shall be earmarked for such direct payments, and the Subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the General Contractor.

1.10.9 If the Subcontractor does not receive payment as provided in Subparagraph 1.10.1 or if the General Contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the Subcontractor and the Subcontractor does not receive payment

for same when due less the deductions provided for in Subparagraph 1.10.1, the Subcontractor may demand direct payment by following the procedure in Subparagraph 1.10.4 and the General Contractor may file a sworn reply as provided in that same Subparagraph. A demand made after the first day of the month following that for which the Subcontractor performed or furnished the labor and materials for which the Subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the General Contractor. Thereafter the awarding authority shall proceed as provided in Subparagraphs 1.10.5, 1.10.6, 1.10.7 and 1.10.8.

1.10.10 Any assignment by a Subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of M.G.L. Chapter 149, Section 29 shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority or which are on deposit pursuant to Subparagraph 1.10.6 shall be subordinate to the rights of all Subcontractors who are entitled to be paid under this section and who have not been paid in full.

1.10.11 "Subcontractor" as used in this Paragraph 1.10 (i) for contracts awarded as provided in M.G.L. Chapter 149, Sections 44A-44J, inclusive, shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the General Contractor, (ii) for contracts awarded as provided in M.G.L. Chapter 30, Section 39M(a), shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the General Contractor.

1.10.12 A General Contractor or a Subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in Subparagraph 1.1.6 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A Subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in Subparagraph 1.10.6 by a petition in equity in the superior court against the awarding authority and the Contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. M.G.L. Chapter 231, Sections 59 and 59B shall apply to such petitions. The Court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to Sections 59 and 59B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any Subcontractor with the petition of one or more Subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a Subcontractor filing a demand for direct payment for which no funds due the Contractor are available for direct payment shall have a right to file a petition in a court of equity against the awarding authority claiming a demand for direct payment is premature, and such Subcontractor

must file the petition before the awarding authority has made a direct payment to the Subcontractor and has made a deposit of the disputed portion as provided in part (iii) of Subparagraph 1.10.5 and in Subparagraph 1.10.6.

1.10.13 In any petition to collect any claim for which a Subcontractor has filed a demand for direct payment the court shall, upon motion of the General Contractor, reduce by the amount of any deposit of a disputed amount by the awarding authority as provided in part (iii) of Subparagraph 1.10.5 and in Subparagraph 1.10.6 any amount held under a trustee writ or pursuant to a restraining order or injunction.

1.11 Discharge or Release of Bonds (Statutory reference: M.G.L. c.30, section 40) This Paragraph 1.11 applies to every contract awarded for the construction or repair of public buildings or other public works.

1.11.1 Bonds given to the commonwealth, any county, city, town or political subdivision to secure the performance of contracts for the construction or repair of public buildings or other public works may be discharged or released by the awarding authority, upon such terms as it deems expedient, after the expiration of one year from the time of completion, subject to Section 1.8, of the work contracted to be done; provided that no claim filed under said bond is pending, and provided further, that no such bonds shall be discharged or released prior to the expiration of all special guarantees provided for in the contract unless new bonds in substitution therefor specifically relating to the unexpired guarantees shall be taken.

## ARTICLE 2 – WAGES AND EMPLOYMENT PRACTICES

2.1 Preference To Veterans and Citizens In Public Works; Rate of Wages: (Statutory reference: M.G.L. c. 149, Section 26) This Paragraph 2.1 applies to every contract or subcontract for the construction of public works by the Commonwealth or by a county, town or district.

2.1.1 In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment, who are veterans as defined in M.G.L. Chapter 4, Section 7, clause 43, and who are qualified to perform the work to which the employment relates and, within such preference, preference shall be given to service-disabled veterans; and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect. Each county, town or district in the construction of public works, or persons contracting or subcontracting for such works, shall give preference to veterans and citizens who are residents of such county, town, authority or district, and within such preference, preference shall be given to service-disabled veterans.

2.1.2 The rate per hour of the wages paid to said mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the Commissioner as hereinafter provided; provided that



the wages paid to laborers employed on said works shall not be less than those paid to laborers in the municipal service of the town or towns where said works are being constructed; provided further, that where the same public work is to be constructed in two or more towns, the wages paid to laborers shall not be less than those paid to laborers in the municipal town paying the highest rate; provided further, that if, in any of the towns where the works are to be constructed, a wage rate or wage rates have been established in certain trades and occupations by collective agreements or understandings in the private construction industry between organized labor and employers, the rate or rates to be paid on said works shall not be less than the rates so established; provided further, that in towns where no such rate or rates have been established, the wages paid to mechanics, teamsters, chauffeurs and laborers on public works, shall not be less than the wages paid to the employees in the same trades and occupations by private employers engaged in the construction industry. This section shall also apply to regular employees of the Commonwealth or a county, town, authority or district, when such employees are employed in the construction, addition to or alteration of public buildings for which special appropriations of more than one thousand dollars are provided. Payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans under collective bargaining agreements or understandings between organized labor and employers shall be included for the purpose of establishing minimum wage rates as herein provided.

2.2 List of Jobs; Classifications; Determination of Rate of Wages; Schedule: (Statutory reference: M.G.L. Chapter 149, Section 27) This Paragraph 2.2. applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

2.2.1 The commissioner shall prepare, for the use of such public officials or public bodies whose duty it shall be to cause public works to be constructed, a list of the several jobs usually performed on various types of public works upon which mechanics and apprentices, teamsters, chauffeurs and laborers are employed, including the transportation of gravel or fill to the site of said public works or the removal of surplus gravel or fill from such site. The commissioner shall classify said jobs, and he may revise such classification from time to time, as he may deem advisable. Prior to awarding a contract for the construction of public works, said public official or public body shall submit to the commissioner a list of the jobs upon which mechanics and apprentices, teamsters, chauffeurs and laborers are to be employed, and shall request the commissioner to determine the rate of wages to be paid on each job. Each year after the awarding of the contract, the public official or public body shall submit to the commissioner a list of the jobs upon which mechanics and apprentices and laborers are to be employed and shall request that the commissioner update the determination of the rate of wages to be paid on each job. The general contractor shall annually obtain updated rates from the public official or public body and no contractor or subcontractor shall pay less than the rates so established. Said rates shall apply to all persons engaged in transporting gravel or fill to the site of said public works or removing gravel or fill from such site, regardless of whether such persons are employed by a contractor or subcontractor or are independent contractors or owner-operators. The commissioner, subject to the provisions of Section 2.1, shall proceed forthwith to determine the same, and shall furnish said official or public body with a schedule of such rate or rates of wages as soon as said determination shall have been made. In advertising or calling for bids for said works, the awarding official or public body shall incorporate said schedule in the advertisement or call for bids by an appropriate reference thereto, and shall furnish a copy of said schedule,

without cost, to any person requesting the same. Said schedule shall be made a part of the contract for said works and shall continue to be the minimum rate or rates of wages for said employees during the life of the contract. Any person engaged in the construction of said works shall cause a legible copy of said schedule and subsequent updates to be kept posted in a conspicuous place at the site of said works during the life of the contract. An apprentice performing work on a project subject to this section shall maintain in his possession an apprentice identification card issued pursuant to section M.G.L. Chapter 23, Section 11W. The aforesaid rates of wages in the schedule of wage rates shall include payments by employers to health and welfare plans, pension plans and supplementary unemployment benefit plans as provided in said Section 2.1, and such payments shall be considered as payments to persons under this section performing work as herein provided. Any employer engaged in the construction of such works who does not make payments to a health and welfare plan, a pension plan and a supplementary unemployment benefit plan, where such payments are included in said rates of wages, shall pay the amount of said payments directly to each employee engaged in said construction. Whoever shall pay less than said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner, and whoever, for himself, or as representative, agent or officer of another, shall take or receive for his own use or the use of any other person, as a rebate, refund or gratuity, or in any other guise, any part or portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to any such person for work done or service rendered on said public works, shall have violated this section and shall be punished or shall be subject to a civil citation or order as provided in M.G.L. Chapter 149, Section 27C. The president and treasurer of a corporation and any officers or agents having the management of such corporation shall also be deemed to be employers of the employees of any corporation within the meaning of Sections 2.1 to 2.3, inclusive. Offers of restitution or payment of restitution shall not be considered in imposing such punishment.

2.2.2 When an investigation by the attorney general's office reveals that a contractor or subcontractor has violated this section by failing to pay said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner, or that a contractor or subcontractor has, for himself, or as representative, agent or officer of another, taken or received for his own use or the use of any other person, as a rebate, refund or gratuity, or in any other guise, any portion of the wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, paid to any such person for work done or service rendered on said public works, the attorney general may, upon written notice to the contractor or subcontractor and the sureties of the contractor or subcontractor, and after a hearing thereon, order work halted on the part of the contract on which such wage violations occurred, until the defaulting contractor or subcontractor has filed with the attorney general's office a bond in the amount of such penal sum as the attorney general shall determine, conditioned upon payment of said rate or rates of wages, including payments to health and welfare funds and pension funds, or the equivalent payment in wages, on said works to any person performing work within classifications as determined by the commissioner. An employee claiming to be aggrieved by a violation of this section may, 90 days after the filing of a complaint with the attorney general, or sooner if the attorney general assents in writing, and within 3 years after the violation, institute and prosecute in his own name and on his own behalf,

or for himself and for others similarly situated, a civil action for injunctive relief, for any damages incurred, and for any lost wages and other benefits. An employee so aggrieved who prevails in such an action shall be awarded treble damages, as liquidated damages, for any lost wages and other benefits and shall also be awarded the costs of the litigation and reasonable attorneys' fees.

2.3 Employment Records To Be Kept By Contractor, Subcontractors; Statement of Compliance: (Statutory reference: M.G.L. c. 149, Section 27B) This Paragraph 2.3 applies to every contract or subcontract for the construction of public works by the Commonwealth, or by a county, town or district.

Every Contractor, Subcontractor or public body engaged in said public works to which Paragraph 2.3 of these Supplementary General Conditions applies shall keep a true and accurate records of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on said works, and hours worked by, and wages paid to, each such employee, and shall promptly furnish to the Attorney General or his representative, upon his request, a copy of said record, signed by the employer or his authorized agent under the penalties of perjury. For every week in which an apprentice is employed by a contractor, subcontractor or public body subject to this section, a photocopy of the apprentice's apprentice identification card, issued pursuant to M.G.L. Chapter 23, Section 11W, shall be attached to the records submitted under this section. Such records shall be open to inspection by any authorized representative of the department at any reasonable time, and as often as may be necessary. Every contractor and subcontractor required to keep such a record shall submit a copy of said record to the awarding authority directly and on a weekly basis.

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

Each such Contractor, Subcontractor or public body shall furnish to the awarding authority directly within fifteen days after completion of its portion of the work a statement, executed by the Contractor, Subcontractor, or public body who supervises the payment of wages, in the following form.

## STATEMENT OF COMPLIANCE

I, \_\_\_\_\_  
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

\_\_\_\_\_  
(Contractor, Subcontractor or public body)

on the \_\_\_\_\_ and that all mechanics  
(building or project)

and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Laws.

Signature \_\_\_\_\_

Title \_\_\_\_\_

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

2.4 Wages Paid to Operators of Trucks and Other Equipment: (Statutory reference: M.G.L. c. 149, Section 27F) This Paragraph 2.4 applies to every contract for the construction of public works by the Commonwealth, or by a county, city, town or district.

No agreement of lease, rental or other arrangement, and no order or requisition under which a truck or any automotive or other vehicle or equipment is to be engaged in public works by the commonwealth or by a county, city, town or district, shall be entered into or given by any public official or public body unless said agreement, order or requisition contains a stipulation requiring prescribed rates of wages, as determined by the commissioner, to be paid to the operators of said trucks, vehicles or equipment. Any such agreement, order or requisition which does not contain said stipulation shall be invalid, and no payment shall be made thereunder. Said rates of wages shall be requested of said commissioner by said public official or public body, and shall be furnished by the commissioner in a schedule containing the classifications of jobs, and the rate of wages to be paid for each job. Said rates of wages shall include payments to health and welfare plans, or, if no such plan is in effect between employers and employees, the amount of such payments shall be paid directly to said operators. Whoever pays less than said rates of wages, including payments to health and welfare funds, or the equivalent in wages, on said works, and whoever accepts for his own use, or for the use of any other person, as a rebate, gratuity or in any other guise, any part or portion of said wages or health and welfare funds, shall have violated this section and shall be punished or shall be subject to a civil citation or order as

provided in M.G.L. Chapter 149, Section 27C. An employee claiming to be aggrieved by a violation of this section may, 90 days after the filing of a complaint with the attorney general, or sooner if the attorney general assents in writing, and within 3 years after the violation, institute and prosecute in his own name and on his own behalf, or for himself and for others similarly situated, a civil action for injunctive relief, for any damages incurred, and for any lost wages and other benefits. An employee so aggrieved who prevails in such an action shall be awarded treble damages, as liquidated damages, for any lost wages and other benefits and shall also be awarded the costs of the litigation and reasonable attorneys' fees.

2.5 Reserve Police Officers: (Statutory reference: M.G.L. Chapter 149, Section 34B) This Paragraph 2.5 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the Commonwealth or any political subdivision thereof.

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.

2.6 Eight-hour Day, etc.: (Statutory reference: M.G.L. Chapter 149, Sections 30, 34, and 34A) This Paragraph 2.6 applies only to contracts which are subject to the provisions of the aforesaid sections of the Massachusetts General Laws.

No laborer, worker, mechanic, foreman or inspector working within this Commonwealth in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of extraordinary emergency.

2.7 Lodging, etc.: (Statutory reference: M.G.L. Chapter 149, Section 25) This paragraph 2.7 applies to every contract for the doing of public work with the Commonwealth, a county, city or town, or with a department, board, commission, or officer acting therefor.

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.

2.8 Access to Contractor's Records: (Executive Order No. 195) This Paragraph 2.8 applies to every contract for the purchase of services or materials by any agency, bureau, board, commission, institution, or department of the Commonwealth or a municipal contract funded, in whole or in part, by the Commonwealth.

The Governor or his designee, the secretary of administration and finance, and the state auditor or his designee shall have the right at reasonable times and upon reasonable notice to examine the books, records and other compilations of data of the Contractor which pertain to the performance and requirements of this contract.

2.9 Worker's Compensation Insurance: (Statutory reference: M.G.L. chapter 149, Section 34) This Paragraph 2.9 applies to every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the Commonwealth or any political subdivision thereof.

The Contractor shall, before commencing performance of the contract, provide by insurance for the payment of and the furnishing of other benefits under M.G.L. Chapter 152 to all persons to be employed under the contract, and the Contractor shall continue such insurance in full force and effect during the term of the contract. Sufficient proof of compliance with this Paragraph 2.9 must be furnished at the time of execution of this contract. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to other party and to the awarding authority at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice.

Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be a sufficient notice. An affidavit of any officer, agent or employee of the insurer or of the insured, as the case may be, duly authorized for the purpose, that he has so sent such notice addressed as aforesaid shall be prima facie evidence of the sending thereof as aforesaid. This section shall apply to the legal representative, trustee in bankruptcy, receiver, assignee, trustee and the successor in interest of any such contractor. The superior court shall have jurisdiction in equity to enforce this section. Whoever violates any provision of this section shall be punished by a fine of not more than one hundred dollars or by imprisonment for six months, or both; and, in addition, any contractor who violates any provision of this section shall be prohibited from contracting, directly or indirectly, with the commonwealth or any political subdivision thereof, for the construction, alteration, demolition, maintenance or repair of, or addition to, any public works or public building for a period of two years from the date of conviction of said violation.

## ARTICLE 3 – CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS

3.1 (Statutory reference: M.G.L. Chapter 30, Section 39R)

This Article 3 applies to "Contracts" and "Contractors", as defined in Subparagraph 3.1.1 and 3.1.2, below.

3.1.1 "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to Sections 38A 1/2 to 38O, inclusive, of Chapter 7, Section 39M of Chapter 30, Sections 44A-44J, inclusive, of Chapter 149, or Section 11C of Chapter 25A which is for an amount or estimated amount that exceeds the dollar amount set forth in M.G.L. Chapter 30, Section 39R.

3.1.2 "Contract" means any contract awarded or executed pursuant to Sections 38A 1/2 to 38O, inclusive, of Chapter 7, Section 39M of Chapter 30, Sections 44A-44J, inclusive, of Chapter 149, or Section 11C of Chapter 25A which is for an amount or estimated amount that exceeds the dollar amount set forth in M.G.L. Chapter 30, Section 39R.

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

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

3.1.5 “Audit”, when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepting 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.

3.1.6 “Accountant’s Report”, when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed, the reasons therefor shall be stated. An accountant’s report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the auditing financial statement is a true and complete statement of the financial condition of the Contractor.

3.1.7 “Management”, when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the Contractor.

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

3.2 Subparagraph 3.1.2 hereof notwithstanding, every agreement or contract awarded or executed pursuant to Sections 38A 1/2 to 38O, inclusive, of Chapter 7, Section 39M of Chapter 30, Sections 44A-44J, inclusive, of Chapter 149, or Section 11C of Chapter 25A, shall provide that:

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

3.2.2 Until the expiration of six years after final payment, the awarding authority, office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the Contractor or his Subcontractors that directly pertain to, and involve transactions relating to, the Contractor or his Subcontractors; and

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

3.2.4 If the agreement is a contract as defined herein, the Contractor has filed a statement of management on internal accounting controls as set forth in Paragraph 3.3 below prior to the execution of the contract.

3.2.5 If the agreement is a contract as defined herein, the Contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in Paragraph 3.5 below.

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

3.3.1 transactions are executed in accordance with management's general and specific authorization:

3.3.2 transactions are recorded as necessary

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

(ii) to maintain accountability for assets;

3.3.3 Access to assets is permitted only in accordance with management's general or specific authorization; and

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

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



3.4.1 Whether the representations of management in response to this paragraph and Paragraph 3.2 above are consistent with the result of management's evaluation of the system of internal accounting controls; and

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

3.5 Every Contractor awarded a contract by the Commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report.

#### ARTICLE 4 – MISCELLANEOUS

4.1 Weather Protection: This Paragraph 4.1 applies to every contract subject to M.G.L. Chapter 149, Section 44A.

4.1.1 The Contractor shall install weather protection and provide adequate heat in the protected area from November 1 to March 31, as required by M.G.L. Chapter 149 Section 44F(1).

4.2 Form for Sub-contract: This Paragraph 4.2 applies to every contract subject to M.G.L. Chapter 149 Section 44A.

4.2.1 The Contractor when sub-contracting with sub-bidders filed pursuant to M.G.L. Chapter 149, Section 44F shall use the form for sub-contract in Chapter 149 Section 44F(4)(c).

4.3 Foreign Corporations: This Paragraph 4.3 applies to every contract with the Commonwealth, a county, city, town, district, board, commission, or other public body for the construction, reconstruction, alteration, remodeling, repair, or demolition of any public building or other public works.

4.3.1 The Contractor, if a foreign corporation, shall comply with M.G.L. Chapter 30, Section 39L.

4.4 Shoring: (Statutory reference: M.G.L. Chapter 149, Section 129A). This Paragraph 4.4 applies to every construction project carried on by any city, town, county, or other subdivision of the Commonwealth in which a trench is to be dug to a depth of five feet or more, except a trench for laying of water pipes dug to a depth of six and one-half feet which will be open less than 48 hours, and except for digging of graves.

4.4.1 Such trenches shall be shored and braced in conformity with rules and regulations for the prevention of accidents in construction operations, as adopted and enforced by the Attorney General.

4.5 Certification of Compliance with Tax Laws: (Statutory reference: M.G.L. Chapter 62C, Section 49A) This Paragraph 4.5 applies to contracts for goods or services furnished by any department, board, commission, division, authority, district or other agency of the Commonwealth or any subdivision of the Commonwealth, including a city, town or district.

4.5.1 By executing this contract, the Contractor certifies, under penalties of perjury, that to the best of his information, knowledge and belief he has complied with all laws of the Commonwealth relating to taxes.

4.6 Verification of Construction Debris Disposal: (Worcester Revised Ordinances Chapter 8, Section 7) This paragraph 4.6 shall apply to every contract entered into by the City of Worcester for the demolition, renovation, rehabilitation, or alteration of a building or structure.

- a. In furtherance of the requirements set forth in G.L. c.40, §54, and §114.1.3 of the State Building Code, the building commissioner shall require any person who obtains a permit for the demolition, renovation, rehabilitation, or alteration of a building or structure to provide verification that the debris resulting from such activities was disposed of at the licensed solid waste facility named in conjunction with the permit application.
- b. The verification required under sub-section (a), above, shall consist of the following:
  - 1) a dated receipt, signed by the owner/operator of the licensed solid waste disposal facility where the debris was deposited.
  - 2) the receipt shall contain a description of the debris disposed of, and its weight, or volume.
  - 3) the permit holder shall also provide the building commissioner with an affidavit that the receipt submitted is true and accurate to the best of the permit holder's knowledge.
  - 4) if the permit holder cannot dispose of the debris at the location indicated, it shall be the permit holder's obligation to obtain an amendment to the permit reflecting the new disposal location. The building commissioner shall be so notified, and the permit amended, prior to the disposal of the debris at the new disposal location.
- c. This section shall not apply to the construction of a new building or structure.

4.7 Responsible Employer Ordinance: (Worcester Revised Ordinances, Chapter 2, Section 35) *This paragraph 4.7 shall apply to every contract entered into by the City of Worcester for the construction, reconstruction, installation, demolition, maintenance or repair of any building, where the contract amount is more than one hundred thousand dollars.*

- a. The city council hereby finds and determines that taxpayer money is most efficiently and productively spent by awarding construction contracts to firms that include and enforce provisions requiring compliance with state laws governing the payment of prevailing wages, the provision of workers compensation coverage, and the proper classification of individuals as employees and not as independent contractors, as well as provisions concerning health insurance coverage and state-certified apprenticeship programs. The city council hereby further finds and determines that it is appropriate for it to exercise its entrepreneurial discretion by requiring firms that are awarded such contracts to comply with this ordinance because failure to comply is injurious to the life, health, and happiness of individuals employed by such firms and is deleterious to the quality of life in the city where most of such individuals reside.
- b. Every contract awarded by the city under G.L. c.149 and G.L. 149A shall be deemed to incorporate by reference the provisions of sub-parts (c)(1) through (8) of together with the provisions of subsections (d) and (e) of this section. Any person, company or corporation shall acknowledge, in writing, receipt of said requirements with their bid or proposal.
- c. All bidders or proposers and all subcontractors and trade contractors, including subcontractors that are not subject to G.L. c.149, Section 44F, under the bidder for projects subject to G.L. c.149, Section 44A(2), and proposers under G.L. c. 149A, shall as a condition for bidding or subcontracting verify under oath and in writing at the time of bidding or subcontracting verify under oath and in writing at the time of budding or submittal in response to and RFP or in any event prior to entering into a subcontract at any tier, that they comply with the following conditions for bidding or subcontracting and, for the duration of the project, shall comply with the following obligations:
  - 1) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must comply with the obligations established under G.L. c. 149 to pay the appropriate lawful prevailing wage rates to their employees.
  - 2) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must at a the time of bidding maintain or participate in a bona fide apprentice training program as defined by G.L. c.23, Sections 11H and 11I for each apprenticable trade or occupation represented in their workforce that is approved by the Division of Apprentice Standards of the Department of Labor and Workforce Development, regardless of whether or not the program qualifies as an employee welfare benefit plan under ERISA, and must register all apprentices with the Division and abide by the apprentice to journeyman ratio for each trade prescribed therein in the performance of any work on the project. This provision does not require the program to be an ERISA plan; the program need only have been approved by the Division of Apprentice Standards. All general bidders or

proposers and all trade contractors and sub-bidders at every tier must submit with its bid or proposal an original, stamped Sponsor Verification letter from the Commonwealth of Massachusetts, Department of Labor and Workforce Development – Division Apprentice Standards, issued within the past 90 days, evidencing that at the time of submitting a bid or proposal, the bidder or proposer is currently an Approved Sponsor of Apprentices. Any bid or proposal submitted without the above documentation shall be rejected; *(Compliance with the apprentice training provision is currently suspended 7/24/14)*

- 3) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must maintain appropriate industrial accident insurance coverage for all the employees on the project in accordance with G.L. c. 152;
- 4) The bidder or proposer and all trade contractors and subcontractors under the bidder must properly classify employees as employees rather than independent contractors and treat them accordingly for purposes of workers' compensation insurance coverage, unemployment taxes, social security taxes and income tax withholding. (G.L. c.149, Section 148B on employee classification);
- 5) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must at the time of bidding certify that, at the time employees begin work at the worksite, all employees 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, and shall ensure that all employees working at the worksite possess such qualifications at all times throughout the duration of their work on the project and furnish documentation of successful completion of the course;
- 6) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must be in compliance with the health and hospitalization requirements of the Massachusetts Health Care Reform law established by Chapter 58 of the Acts of 2006, as amended, and regulations promulgated under that statute by the Commonwealth Health Insurance Connector Authority.
- 7) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer must make arrangements to ensure that each employee of every contractor entering or leaving the project individually completes the appropriate entries in a daily sign-in/out log. The sign-in/out log shall include: the location of the project; current date; printed employee name; signed employee name; and the time of each entry or exiting. The log shall contain a prominent

notice that employees are entitled under state law to receive the prevailing wage rate for their work on the project. Such sign-in/out logs shall be provided to the City on a daily basis.

- 8) The bidder or proposer and all trade contractors and subcontractors under the bidder or proposer, prior to bidding or, if not subject to bidding requirements, prior to performing any work on the project, shall sign under oath and provide to the City a certification that they are not debarred or otherwise prevented from bidding for or performing work on a public project in the Commonwealth of Massachusetts or in the City.
- d. A proposal or bid submitted by any general bidder or by any trade contractor or subcontractor under the general bidder or proposer that does not comply with any of the foregoing conditions for bidding shall be rejected, and no subcontract for work outside the scope of G.L. c.149, Section 44F shall be awarded to a subcontractor that does not comply with the foregoing conditions.
  - e. All bidders or proposers and all trade contractors and subcontractors under the bidder or proposer who are awarded or who otherwise obtain contracts on the projects subject to G.L. c.149, Section 44A(2) or c.149A, shall comply with each of the obligations set forth in this Section 4.7 for the entire duration of their work on the project, and an officer of each bidder or subcontractor under the bidder shall certify under oath and in writing on a weekly basis that they are in compliance with such obligations.
  - f. Any proposer, bidder, trade contractor or subcontractor under the bidder or proposer who fails to comply with any one of the obligations set forth in this Section 4.7 for any period of time shall be, at the sole discretion of the City, subject to one or more of the following sanctions:
    - 1) cessation of work on the project until compliance is obtained;
    - 2) withholding of payment due under any contract or subcontract until compliance is obtained;
    - 3) permanent removal from any further work on the project;
    - 4) liquidated damages payable to the City in the amount of 5% of the dollar value of the contract.
  - g. In addition to the sanctions outlined in subsection (h) above, a proposer, general bidder or contractor shall be equally liable for the violations of its subcontractor with the exception of violations arising from work performed pursuant to subcontracts that are subject to G.L. c.149, Section 44F. Any contractor or subcontractor that has been determined by the City or by any court or agency to have violated any of the obligations set forth in this Section 4.7 shall be barred from performing any work on any future projects for six months for a first violation, three years for a second violation and permanently for a third violation.

4.8 Regulation of Construction Noise: (Worcester Revised Ordinances, Chapter 8, Section 34) This paragraph 4.8 shall apply to anyone operating powered construction equipment delivering construction equipment and/or supplies at any construction site or project within the city of Worcester.

- a. It shall be unlawful for any person, firm, corporation, partnership, or other entity to operate powered construction equipment or to build, erect, construct, demolish, alter, repair, excavate or engage in hoisting, grading, site work, including tree and brush removal, dredging or pneumatic hammering, or to deliver construction equipment and/or supplies to the site on any building, road, tower, parking lot, machine, pipe, sewer, sidewalk, or any other construction project (hereafter collectively the "construction project"), except between the hours of 7:00 a.m. and 9:00 p.m. on weekdays and Saturday, except for "emergency work" which is performed in the interest of public safety or welfare and for which a permit has been issued by the commissioner of public works and parks or the commissioner of inspectional services.

It shall be unlawful for any person, firm, corporation, partnership, or other entity to engage in a construction project activity on Sundays or legal holidays without a permit from the police chief issued pursuant to G.L. c. 136, Section 7 or 15 and a permit issued by the commissioner of inspectional services hereunder.

- b. Emergency work permits may be issued in:
  - 1) cases of urgent necessity and for the interests of health, safety and convenience of the public. The commissioner of inspectional services shall whether the reasons given for the urgent necessity are valid and reasonable, and whether the health, safety and convenience of the public will be protected or better served by granting the permit requested and whether the manner and amount of loss or inconvenience to the party in interest imposes a significant hardship; or,
  - 2) cases where, because the location and nature of the work, the noise caused by said work will not be heard by anyone not working on the project. The commissioner of inspectional services shall consider whether supplying machinery and/or materials to the construction project site will cause unreasonable noise along the routes to the construction project site, and whether such activity will impact residential neighborhoods, and shall not grant any emergency work permit unless unreasonable noise in residential areas will be prevented.
- c. Emergency work permits may be issued to the general contractor on a blanket basis that applies to all of the contractors working on the job, or may be issued to specific contractors on the construction project, at the discretion of the Commissioner.

Emergency work permits may be issued for not more than one week at a time, and may be renewed for additional one week periods at the discretion of the Commissioner.

- d. Prior to issuing or reissuing said emergency work permit, the commissioner of inspectional services shall review the work being conducted and all attendant circumstances, and shall prescribe whatever limitations possible to minimize the generation of noise, and to minimize the impact of noise on the neighbors to the construction project.
- e. Emergency repair work performed by the Department of Public Works and/or any public utility is exempt from this section.
- f. The fee for each such Emergency work permits issued under this section shall be set in accordance with Chapter 2, § 24 of the City of Worcester Revised Ordinances of 2008.
- g. On any project for the construction, reconstruction, installation, demolition, maintenance or repair of any building, or public work, to be funded in whole or in part by city funds, or funds which, in accordance with a federal or state grant, program, or otherwise, the city expends or administers, or any such project to which the city is a signatory to the contract therefor, the provisions of this section shall apply and the same shall be referred in every invitation to bid for such project and, the following paragraphs shall be contained in every resulting contract therefrom:

“It shall be a material breach of this contract if the contractor and each subcontractor shall not at all times adhere to the provisions of § 34 of chapter eight of the Revised Ordinances of the city, by limiting their on-site, noise producing construction and related work to the hours specified by the Ordinance.

A waiver from the above requirements may, in certain circumstances, be granted in accordance with subsections (b), (c) and (d) of § 34 of chapter eight of the Revised Ordinances of the city.”

- h. The commissioner of inspectional services shall have the authority to adopt any rules and regulations he or she deems necessary to implement this section.
- i. Nothing in this section shall be deemed to prevent an individual from performing work on his or her own property, so long as the work is being done by the owner of the property or by direct relative(s) of the owner, and said work is not being done for profit.
- j. This section may be enforced by the commissioner of inspectional services, the building commissioner, the chief of police or their subordinates.

Any violation of this section by any person, firm, corporation, partnership, or other entity, shall be individually punished with a fine of \$100.00. Each day upon which a violation of this section occurs shall be considered a separate violation. Employers shall be deemed the violator for violations committed by their employees.

4.9 Regulation of Excessive and Unreasonable Noise: (Worcester Revised Ordinances, Chapter 9, Section 1A(e)(9) This paragraph 4.9 shall apply to anyone operating powered construction equipment delivering construction equipment and/or supplies at any construction site or project within the city of Worcester.

- a. No person shall operate any powered construction equipment or build, erect, construct, demolish, alter, repair, excavate or engage in hoisting, grading, site work, including tree and brush removal, dredging or pneumatic hammering, or deliver construction equipment and/or supplies to the site on any building, road, tower, parking lot, machine, pipe, sewer, sidewalk, or any other construction project, except between the hours of 7:00 a.m. and 9:00 p.m. on weekdays and Saturday, and between the hours of 9:00 a.m. and 7:00 p.m. on Sundays, except for work performed by a public service or municipal utility department or "emergency work" performed with the express written permission of the commissioner of inspectional services or the commissioner of public works and parks. Emergency work shall be limited to such work that is clearly essential to respond to a sudden and unexpected threat to public health or public safety. Emergency work permission may be granted to a general or sub-contractor on a blanket basis governing all persons working on a specified portion of a particular job. Emergency work permission may be granted for not more than one week at a time, and may be renewed for additional one week periods at the discretion of the commissioner who granted the initial permission.



## ARTICLE 104: GENERAL BID FORM

*for*

### **Lighting Installation – Madison Street Bridge / E.D.** **BID #: 8134-W4**

#### BIDDER

\_\_\_\_\_  
Print Name of the Firm or Proprietorship Submitting this Bid

This bid must be accompanied by a deposit in the form of cash, or bid bond, or a certified check, treasurer's check, or cashier's check, payable to the City of Worcester (hereinafter referred to as the "Owner", or the "Awarding Authority") in the amount of five percent (5%) of the total value of the bid. No other form of bid security will be accepted.

By submitting this bid the Bidder represents that it has carefully examined the site of work described herein; has become thoroughly familiar with local conditions and the character and extent of the work; has carefully examined the Drawings, Project Manual and Contract Documents including all Addenda which are a part of this proposal, the General Bid Form, and thoroughly understands their stipulations, requirements, and provisions, and that the Bidder will contract, in the form of contract required, to provide all necessary and proper machinery, equipment, facilities, and means to do all the work and furnish all the materials necessary and proper to carry out such contract in the manner and on the conditions set forth therein in accordance with the Contract Documents, and to perform or observe all other contract requirements thereby. By submitting this bid, the Bidder further represents that it agrees to be subject to the jurisdiction of the courts of the Commonwealth of Massachusetts with respect to any actions arising out of or related to this bid or any contract that may be entered into based upon this bid, and that any such actions commenced by the Bidder shall be commenced in the courts of the Commonwealth of Massachusetts.

A bidder wishing to amend this bid after transmittal to the Owner may do so only by withdrawing this bid and resubmitting another bid prior to the time for opening bids.

#### TO THE AWARDING AUTHORITY:

- A. The undersigned Bidder proposes to furnish all labor, materials, and equipment necessary and required for the project described herein in Worcester, MA, in accordance with the accompanying plans and specifications for the contract price specified below, subject to additions or deductions according to the terms of the Contract Documents.

**B. This Bid includes Addenda numbered:** \_\_\_\_\_

**C. The proposed total base Bid price is:**

\$ \_\_\_\_\_

\_\_\_\_\_  
(TOTAL BASE BID WRITTEN IN WORDS)

**D. BID ALTERNATES: N/A**

The owner may select at its option, any Alternate or combination of Alternates, or none of the Alternates. The Bidder is required to provide a bid for each Alternate listed below. If selected by the Owner, the Alternate(s) will be added to the total Base Bid price to determine the low bidder.

**E. UNIT PRICES:**

In addition to stating the Total Base Bid Price, the Bidder shall state prices for the various items of work as may be listed herein. The Unit Prices listed below, if accepted by the Owner in the award of the contract, may be used for computing adjustments during the course of construction, based upon extra work ordered by the Owner, or for work countermanded, reduced, or omitted by the Owner.

**F. TIME FOR COMPLETION**

**Work of this contract shall be completed by October 31, 2024.**

- G.** The Bidder agrees that if it is selected as the lowest responsible and eligible bidder, the Bidder will within five (5) days, Saturdays, Sundays and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials (a.k.a., payment) bond, each of a surety company qualified to do business under the laws of the Commonwealth of Massachusetts 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 Bidder and are included in the bid price(s) contained herein.

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

The undersigned further certifies under penalties of perjury that this bid is in all respects bona-fide, fair and made without collusion or fraud with any other person. As used herein 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 29F of Chapter 29 or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

Date: \_\_\_\_\_

\_\_\_\_\_  
(Print Name of Bidder)

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

By: \_\_\_\_\_  
(Name of Person Signing Bid and Title)

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

\_\_\_\_\_  
(City, State and Zip Code)

Fax: (\_\_\_\_\_) \_\_\_\_\_

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

Social Security Number or  
Federal Identification Number: \_\_\_\_\_

**E-Mail Address:** \_\_\_\_\_

NOTE: If Bidder is a corporation, indicate state of incorporation; if a partnership, give full names and addresses of all partners; and if a sole proprietorship, give residential address if different from business address. Use the following spaces:

If a Corporation:

Incorporated in what state: \_\_\_\_\_

President: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Secretary: \_\_\_\_\_

If a foreign corporation (incorporated or organized under laws other than laws of the Commonwealth of Massachusetts), is the corporation registered with the Massachusetts Secretary of State's office? Yes \_\_\_\_\_ No \_\_\_\_\_

*If the Bidder is a foreign corporation, it is required under M.G.L. c. 30, section 39L to furnish to the awarding authority a certificate of the Secretary of State stating that the corporation has complied with M.G.L. c. 156D, Part 15, subdivision A, s. 15.03, and Part 16, subdivision B, s. 16.22.*

If a Partnership: (Name all Partners)

Name of Partner: \_\_\_\_\_

Residence: \_\_\_\_\_

\_\_\_\_\_

Name of Partner: \_\_\_\_\_

Residence: \_\_\_\_\_

\_\_\_\_\_

Name of Partner: \_\_\_\_\_

Residence: \_\_\_\_\_

\_\_\_\_\_

If an Individual:

Name: \_\_\_\_\_

Residence: \_\_\_\_\_

\_\_\_\_\_

If an Individual doing business under a firm name:

Name of Firm: \_\_\_\_\_

Name of Individual: \_\_\_\_\_

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

\_\_\_\_\_

Residential Address \_\_\_\_\_  
(if different from above)

\_\_\_\_\_

Other form of business organization:

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**SURETY INFORMATION:**

**The bidder will give below the name and address and State of Incorporation of the surety company who will sign the bonds. Performance and Payment Bonds in the amount of 100% of the dollar value of the contract will be required at time of contract execution.**

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***It is contractor's responsibility to submit the required bond documentation in a form satisfactory to the City.***

**STATEMENT OF BIDDER'S QUALIFICATIONS**

**The bidder is requested to state below what work of a similar character to that included in the proposed contract he/she has done and to give references that will enable the Owner to judge his/her experience, skill, business standing and overall responsibility. Supplemental forms may be used by the bidder.**

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**END OF GENERAL BID FORM**

## ARTICLE 105: OWNER-CONTRACTOR AGREEMENT

THIS AGREEMENT made on \_\_\_\_\_ at Worcester, in the County of Worcester and Commonwealth of Massachusetts, by and between \_\_\_\_\_ (hereinafter called the Contractor), and the City of Worcester, a municipal corporation within said County of Worcester, (hereinafter called the City).

### WITNESSETH:

That the Contractor, in consideration of the payments hereinafter mentioned, and of the fulfillment of the agreements herein mutually entered into, agrees with the City as follows:

#### SCOPE OF WORK:

(1) The Contractor shall, pursuant to the terms of this AGREEMENT, provide all the supplies, materials, and equipment, and perform all the labor, services and supervision necessary and proper for \_\_\_\_\_ (hereinafter called the "Project") in the City of Worcester, Massachusetts, and to accomplish any and all work incidental thereto.

#### BONDS:

(2) The Contractor shall obtain and deposit with the City the following bond(s) in the amount of:

PERFORMANCE BOND: \_\_\_\_\_ (\$ \_\_\_\_\_)

PAYMENT BOND: \_\_\_\_\_ (\$ \_\_\_\_\_)

with sureties satisfactory to the Contracting Officer to (a) guarantee the faithful performance by the Contractor of all its obligations under this AGREEMENT and (b) constitute the security required by Massachusetts General Laws Chapter 149, Section 29, and Chapter 30, Section 39A, as amended, for the payment by the Contractor and its subcontractors for all labor performed or furnished and for all materials used or employed in connection with this AGREEMENT.

#### CONTRACTING OFFICER:

(3) Wherever used in this AGREEMENT, the term "Contracting Officer" shall mean the City Official(s) so designated below, or the individual duly appointed by him/her for the performance of any of his/her functions or responsibilities under this AGREEMENT. The work performed hereunder shall be carried out under the direction and subject to the approval and acceptance of \_\_\_\_\_ (hereinafter called the Contracting Officer).

#### INCORPORATED DOCUMENTS:

(4) The performance of this AGREEMENT is subject to the provisions of the following documents, all of which are attached hereto and intended to be an integral part of this AGREEMENT (hereinafter collectively referred to as "the Contract Documents").

- a. Information to Bidders
- b. Bid Proposal
- c. Specifications, Drawings and Addenda

The Contract Documents are to be read collectively and complementary to one another; any requirement under one shall be as binding as if required by all. In the event of any conflict or inconsistency between the provisions of this AGREEMENT and any of the other Contract Documents, the provisions of this AGREEMENT shall prevail. In the event of any conflict or inconsistency between this AGREEMENT, the Contract Documents and any applicable state law, the applicable statutory provisions shall prevail.

**TIME FOR PERFORMANCE:**

(5) Time is of the essence for this AGREEMENT. The work of this AGREEMENT must be substantially completed \_\_\_\_\_.

**PRICE:**

(6) The City will pay the Contractor for all materials delivered or furnished and for all the work performed pursuant to Article (1) hereof a sum of money as follows:

\_\_\_\_\_ (\$ \_\_\_\_\_).

**PAYMENT:**

(7) Payment shall be made by the City in accordance with General Laws Chapter 30, Section 39G (1988 ed.), as amended, which is included in the Supplementary General Conditions to the Contract.

(a) In addition to the retainage provided for in the above statutory provisions, the City may also, with the written consent of the Contractor, use any of the sums payable under this contract to pay for labor, materials, and for the rental of equipment that has been furnished to the Contractor or any of its subcontractors in connection with work under this contract, regardless of whether claims for such obligations have been filed with the City under General Laws Chapter 149, Section 29 or Chapter 30, Section 39A.

(b) The payment shall be in full for furnishing all materials, supplies, labor services, supervision, tools and equipment and the use thereof as embraced under the AGREEMENT and shall also constitute the payment for all loss or damage to the Contractor arising out of the nature of the work or from the action of the elements or from any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the work until its final approval by the Contracting Officer, and for all risks to the Contractor of every description



connected with the prosecution of the work or infringement of patents, trademarks, or copyrights and for completing the work in an acceptable manner.

(c) The payment of any periodic estimate or of any retained percentage shall in no way constitute an acceptance of the work or in no way prejudice or affect the obligation of the Contractor at his own cost or expense to repair, correct, renew, or replace any defects or imperfections in the construction as well as all damages due or attributable to such defects, nor shall any such payment for any current estimate or of any retained percentages prejudice or affect the rights of the City to hold the Contractor liable for breach of contract or to avail itself of the remedies under Article 15, hereof.

(d) If at any time there shall be evidence of any lien or other claim for which, if established, the City may become liable, directly or indirectly, and which is chargeable to the Contractor, the City may retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify it against any such claim. If there prove to be any such claim after all the payments are made, the Contractor shall refund to the City all moneys that the City pays in discharging such claim in consequence of the Contractor's default.

(e) The Contractor, and each subcontractor, at every tier, represents, warrants and certifies that it has complied with all laws of the Commonwealth of Massachusetts relating to taxes and all Ordinances and Orders of the City of Worcester relating to taxes, fees and charges, or is lawfully contesting the validity of the same. The Contractor, and each subcontractor, at every tier, further represents, warrants and certifies that it will remain in such compliance during the term of this Agreement, including any amendments or extensions hereto. Breach of any of these provisions shall be deemed a material breach which shall entitle the City to immediately terminate this Agreement and take any other action authorized by law to collect any amounts due the City.

#### PAYMENT OF SUBCONTRACTORS

(8) Payment to subcontractors shall be made in accordance with General Laws Chapter 30, Section 39F (1988 ed.), as amended, which is included in the Supplementary General Conditions.

#### NOTICE:

(9) Wherever in this AGREEMENT the City is to give or receive a notice, the Contracting Officer as defined in Article (3) shall be the City's agent for such purpose.

#### PERFORMANCE:

(10) (a) The Contractor shall give his personal attention constantly to the faithful prosecution of the work and shall keep the same under his personal control. He shall not assign by power of attorney or otherwise the work or any part thereof without the previous written consent of the Contracting Officer. He shall not either legally or equitably assign any of the moneys payable under this contract or any claim thereto unless by and with like consent on the part of the Contracting Officer and the City Treasurer. He shall be responsible for all the acts and omissions

of his employees and of all persons directly or indirectly employed by him in connection with the prosecution of this work.

(b) The Contractor shall provide sufficient and proper facilities at all times for the inspection of the work by the City. He shall, after receiving written notice that certain work or construction is improper, unsafe or defective or that such construction in any way fails to conform to the contract documents, forthwith remove such unsafe or defective construction and reconstruct the same in a manner satisfactory to the Contracting Officer. Upon failure of the Contractor to remedy the construction after being so notified, the Contracting Officer may cause such defective work to be remedied or replaced and the City may deduct the cost thereof from any moneys due or to become due the Contractor.

(c) The City, acting through the Contracting Officer, shall have the authority to suspend the work wholly, or in part thereof, for such period as he shall deem necessary, due to failure of the Contractor to carry out orders given or to perform any provision of the contract. Upon receipt of written order from the Contracting Officer, the Contractor shall immediately suspend the work or such part thereof in accordance with the order. No work shall be suspended without the written permission of the Contracting Officer. The work shall be resumed when conditions so warrant, or deficiencies have been corrected and the condition of the contract satisfied as ordered or approved in writing by the Contracting Officer. No allowance of any kind will be made for suspension of work by order of the Contracting Officer pursuant to this paragraph.

(d) If, during the process of the work, the Contractor or the City 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 City may request an equitable adjustment in the price of the AGREEMENT 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 the Contractor, or upon its own initiative, the City 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 work, the City shall make an equitable adjustment in the contract price and the AGREEMENT shall be modified in writing accordingly. (G. L. c. 30, s.39N, as amended, which is included in the Supplementary General Conditions).

(e) The Contractor agrees that it will have no claim for damages of any kind on account of any delay in commencement of the Work, or any delay or suspension of any portion thereof, except as hereinafter provided. Post commencement, the Contractor shall have no claim for damages of any kind on account of any delay or suspension of any portion of the work except as hereinafter provided. Adjustments, if any, in the contract price due to a suspension, delay, interruption or failure to act by the City shall be governed by the provisions of General Laws Chapter 30, section 39(O), as amended, which is included in the Supplementary Conditions. Provided, however, the provisions of this paragraph shall not apply to any suspension pursuant

to paragraph 10(c), or for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this AGREEMENT provides for an equitable adjustment of the contract price, or time under any other AGREEMENT provision. Provided further, that no adjustment shall be made if the performance of the Contractor would have been prevented by other causes, even if the work had not been so suspended, delayed or interrupted by the City. Provided further, that a subcontractor shall have the same rights against the Contractor for payment for an increase in the cost of his performance as the provisions of this paragraph gives the Contractor against the City, but nothing herein shall in any way change, modify or alter any other rights which the Contractor and subcontractor may have against each other.

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

(g) The City may award other contracts for additional work. The Contractor shall cooperate fully with other contractors and carefully fit his own work to that of other contracts as may be directed by the Contracting Officer. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor.

(h) The Contractor shall comply with all the laws, state and federal, applicable to the work and construction herein provided for. This AGREEMENT is made subject to all laws, state and federal; and if any clause hereof does not conform to such law, then such clause shall be void and the operative state or federal law shall be inserted in lieu thereof. Any violation by the Contractor of state or federal laws relating to the employment of labor upon the work or the construction contemplated by this AGREEMENT shall be a sufficient cause for the City to cancel the AGREEMENT without in any way being liable in damages therefor. Should the City cancel the AGREEMENT because of the failure on the part of the Contractor to observe the state or federal laws, or the rules and regulations relating to employment and labor upon the work herein contemplated, then upon cancellation the City reserves all rights and benefits herein or by law provided against the Contractor for the breach of the conditions of this AGREEMENT.

(i) When the use of explosives is necessary for the prosecution of the work, the Contractor shall take the utmost care not to endanger life and property. Whenever directed, the number and size of the charges shall be reduced. All explosives shall be stored in a secure manner. All such storage places shall be marked clearly "DANGEROUS - EXPLOSIVES", and shall be in the care of competent watchmen at all times. The method of storage and handling explosives and highly inflammable materials shall conform to all the State laws and regulations, as well as any local requirements.

(j) Upon the completion of the work, the Contractor shall at his own expense remove all equipment, temporary Contractor's buildings and sheds, fencing, rubbish and waste material in and about the area that has been worked and he shall leave the premises and the work performed all in a neat and proper condition.

(k) Before commencing the work, the Contractor shall, if required, submit a schedule of operations for approval by the Contracting Officer. The schedule shall show the methods and order of operations that the Contractor proposes to use. The approval of the schedule by the Contracting Officer shall not be construed as relieving the Contractor from any responsibility.

(l) Should the Contractor be obstructed or delayed in the prosecution of the work by any act or neglect on the part of the City, or as a result of damage which may be caused by lightning, earthquake, rain, storm, or cyclone, then the time fixed for completion may be extended for a period equivalent to the time lost by reason of any of the foregoing causes. No such extension shall be made unless a claim therefor is presented in writing to the Contracting Officer within forty-eight hours of the occurrence of such delay. The Contractor shall have no claim against the City for damages on account of such delay. The duration of the extension itself must be certified to by the Contracting Officer.

#### ADDITIONAL WORK:

(11) (a) The Contractor agrees to perform any work related to the subject matter of the AGREEMENT, but not within the scope of the AGREEMENT and its specifications, upon the written order of the Contracting Officer, the payment for such extra work to be made in accordance with one of the methods set forth in Article 12 of the General Conditions of the Contract for Construction.

(b) The Contracting Officer may make alterations in the line, grade, plan, form, dimensions, or materials of the subject matter of the contract, or any part thereof either before or after commencement of construction. Where such alterations increase the quantity or standard of the work to be done, payment for such increase shall be made in the same way that payment is made for such extra work under (a), above. Where such alterations diminish the quantity or standard of the work to be done, an adjustment shall be made to the benefit of the City based upon the unit prices where used, or where unit prices are not used, as the Contracting Officer shall determine.

#### EMPLOYMENT:

(12) (a) The Contractor shall employ competent workers, and if notified by the Contracting Officer in writing that any person engaged upon the work is incompetent, unfaithful, disorderly or otherwise unsatisfactory, then such worker shall be discharged from the work.

(b) In the employment of persons, including mechanics, teamsters, chauffeurs and laborers, under this contract, preference shall be given

First: To citizens of the Commonwealth who are residents of the City of Worcester and who have served in the Army or Navy 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 to which the employment relates.

Second: To citizens of the Commonwealth who are residents of Worcester and are qualified to perform the work to which the employment relates.

Third: To citizens of the Commonwealth who have served in the Army or Navy 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 to which the employment relates.

Fourth: To citizens of the Commonwealth generally.

Fifth: To citizens of the United States.

The foregoing provisions shall not apply to those persons employed in a supervisory capacity. In so far as practicable preference is to be given Worcester Truckers in hauling materials.

(c) No laborer, worker, mechanic, foreman, or inspector working within the Commonwealth of Massachusetts in the employ of the Contractor, sub-contractors, or other persons doing or contracting to do the whole or part of the work contemplated by this AGREEMENT, shall be required or permitted to work more than eight hours in any one calendar day; or more than 48 hours in one week, or more than 6 days in any one week in full compliance with provisions of G. L. c. 149, sec. 34, except in cases of emergency.

(d) Every employee in the work covered by this AGREEMENT shall lodge, board and trade where and with whom he elects and neither the Contractor nor his agents or employees shall directly or indirectly require as a condition of employment therein that an employee shall lodge, board or trade at a particular place or with a particular person.

(e) The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the Department of Public Health, local health officials or of other appropriate authorities. The maintenance of all sanitary facilities shall be subject to the laws of the Commonwealth and to the rules and regulations of the State Board of Health and of the Commissioner of Public Health for the City of Worcester.

(f) The Contractor shall, before commencing the work, provide by insurance for the payment of compensation and the furnishing of other benefits under Chapter 152 of the General Laws (Ter. Ed.) to all persons employed under the AGREEMENT, and he shall continue such insurance in force and effect during the term thereof. The City may require the Contractor to deliver certificates of insurance as sufficient proof of compliance with the foregoing. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the AGREEMENT and shall entitle the City to terminate the AGREEMENT without in any way being liable in damages therefor.

(g) The Contractor shall keep a true and accurate register of all mechanics, teamsters, chauffeurs and laborers employed upon the work contemplated by this AGREEMENT, showing the name, address and occupational classification of each such employee, the hours worked by and the wages paid to each such employee, and shall furnish the Massachusetts Attorney General's office, or such other appropriate state official upon request a true statement thereof.

(h) Minimum wage rates under the provisions of General Laws c. 149, section 27, as amended, have been determined by the state Department of Labor and Workforce Development, and the Contractor shall in the payment of wages be bound by them during the life of the AGREEMENT. The applicable schedule of minimum wage rates, as so determined, is incorporated elsewhere within the Contract Documents.

#### TERMINATION:

(13) (a) If the Contractor shall be adjudged a bankrupt, or if he shall make a general assignment for the benefit of his creditors, or if a receiver of his property shall be appointed, or if the work to be done under the AGREEMENT shall be abandoned, or if the AGREEMENT or any part thereof shall be sublet without the previous written consent of the Contracting Officer, or if the AGREEMENT or any claim thereunder shall be assigned by the Contractor otherwise than as herein specified, or if at any time the Contracting Officer shall be of the opinion that the work, or any part thereof, is unnecessarily or unreasonably delayed, or that the Contractor has violated any of the provisions of the AGREEMENT, the Contracting Officer, for and in behalf of the City, may notify the Contractor to discontinue all work, or any part thereof; and thereupon the Contractor shall discontinue such work or such part thereof as the Contracting Officer may designate, remove his equipment, tools, supplies and materials as the Contracting Officer directs, and the City may thereupon, by contract or otherwise, as it may determine, complete the work, or such part thereof, and charge the entire expense of so completing the work or any part thereof to the Contractor.

(b) If the Contracting Officer shall certify by written notice to the Contractor that the rate of progress is not satisfactory, the City may, instead of notifying the Contractor to discontinue all of the work or any part thereof, notify him from time to time to increase the force, equipment and plant, or any of them, employed on the whole or any part of the work, stating the amount of increase required. Unless the Contractor shall, within five days after such notice, increase his force, equipment and plant to the extent required therein, and maintain and employ the same from day to day until the completion of the work or such part thereof, or until the conditions of the work or such part thereof, or until the conditions as to the rate of progress shall, in the opinion of the Contracting Officer, be fulfilled, the City may employ and direct the labors of such additional force, equipment and plant as may, in the opinion of the Contracting Officer, be necessary to insure the completion of the work or such part thereof within the time specified or at the earliest possible date thereafter, and charge the expense thereof to the Contractor. Neither the notice from the Contracting Officer to the Contractor to increase his force, equipment or plant nor the employment of additional force, equipment or plant by the City shall be held to prevent a subsequent notice to the Contractor from the City to discontinue the work under the provisions of the preceding portion of this Article.

(c) All expenses charged under this Article shall be deducted by the City out of moneys then due or to become due the Contractor under this AGREEMENT, or any part thereof. In such accounting, the City shall not be obligated to obtain the lowest figures for the work of completing the AGREEMENT or any part thereof, or for insuring its proper completion, and all sums actually paid by the City shall be charged to the Contractor. If the expense so charged is greater than the sum which would have been payable under the AGREEMENT, if the same had been

completed by the Contractor, then the Contractor shall pay the amount of the excess to the City upon completion of the work and without further demand being made therefor.

(d) The Contractor shall not be relieved of liability to the City by virtue of any termination of this AGREEMENT and any claim for damages against the Contractor relating to the Contractor's performance under this AGREEMENT shall survive any termination hereunder.

#### GUARANTEES:

(14) (a) The Contractor guarantees the work under this AGREEMENT and the materials furnished by him for use in connection therewith to be free from defects or flaws for one year after the completion of the AGREEMENT. It is expressly understood, however, that this guarantee provision shall not absolve the Contractor from any liability to the City arising out of a failure to substantially comply with the terms of the AGREEMENT.

(b) If at any time within said guaranty period, any part of the work constructed under the terms of this AGREEMENT shall in the opinion of the Contracting Officer require repairing due to defective work or materials furnished by the Contractor he may notify the Contractor in writing to make the required repairs. If the Contractor shall neglect to start such repairs within ten days of the date of giving him notice thereof and to complete the same to the satisfaction of the Contracting Officer with reasonable dispatch, then the latter may employ other persons to make such repairs. The City shall charge the expense thereof to the Contractor and may use any moneys still retained to pay for the same, and if such sum is insufficient, the Contractor shall be obligated to pay the balance thereof.

#### INDEMNIFICATION:

(15) (a) The Contractor shall indemnify and save harmless the City of Worcester and all of its officers, agents and employees against all suits, claims or liability of every name, nature, and description arising out of or in consequence of the acts or omissions of this AGREEMENT in the performance of the work covered by the contract and/or his failure to comply with the terms and conditions hereof; and will at his own cost and expense defend any and all such suits and actions.

(b) The Contractor shall bear all losses resulting from the use or storage of explosives and highly inflammable materials and shall save the City harmless from all claims for bodily injuries or death to any person and from all claims for property damage or destruction arising out of the use or storage of explosives and highly inflammable materials.

(c) The Contractor further covenants to hold and save the City, its officers, servants and employees harmless from and against all and every demand or demands, of any nature or kind for or on account of the use of any patented invention, article or appliance included in the materials and equipment agreed to be furnished, supplied or used under this AGREEMENT.

#### INSURANCE:

(16) (a) The Contractor shall carry public liability insurance so as to save the City harmless from any and all claims for damages arising out of bodily injury to, or death of, any person or persons and for all claims for damages arising out of injury to or destruction of property caused by accidents resulting from the use of implements, equipment or labor used in the performance of the AGREEMENT or from any neglect, default, omission or want of proper care or misconduct on the part of the Contractor or of any one in his employ during the execution of the work. Such insurance shall include coverage for blasting and explosion if explosives are to be used.

(b) The Contractor shall carry any other types of insurance as may be required elsewhere in the Contract Documents. All insurance policies required in the Contract Document shall be provided by companies satisfactory to the City.

(c) Prior to starting work under this AGREEMENT the Contractor shall deposit with the City's Purchasing Division certificates from the insurers to the effect that the insurance policies required in the above paragraphs have been issued to the Contractor. The certificates must be on a form satisfactory to the City.

(d) Unless greater amounts of insurance coverage are required elsewhere in the Contract Documents, the amounts of such public liability insurance shall not be less than the minimum amounts set forth below:

(i) Commercial General Liability \$1,000,000.00 per occurrence / \$ 2,000,000.00 aggregate.

(ii) Automotive Liability, for bodily injury & property damage combined single limit of, \$ 1,000,000.00 (all owned, hired and non-owned autos).

(iii) Excess / Umbrella Liability – Per Occurrence / Aggregate \$ 1,000,000 / \$ 1,000,000

(e) Unless greater amounts of insurance coverage are required elsewhere in the Contract Documents, the Contractor shall also carry bodily injury and property damage insurance in amounts not less than those set forth above covering the operation of all motor vehicles owned by the Contractor and engaged in this work.

(f) No cancellation of any insurance whether by the insurer or by insured shall be effective unless written notice thereof is given to the City at least fifteen days prior to the intended effective date thereof, which date has been expressed in the notice. Prior to the effective date of any such cancellation the Contractor shall take out new insurance to cover the policies so canceled. The Insurance Companies shall remain liable, however, until new and satisfactory insurance policies have been delivered to and accepted by the City.

## CONFLICT OF INTEREST

(17) (a) The Contractor warrants that he has complied with all provisions of law regarding the award of this AGREEMENT and that he, or his employees, agents, officers, directors or trustees



have not offered or attempted to offer anything of value to any employee of the City in connection with this AGREEMENT.

(b) The Contractor further warrants that no elected official or employee of the City of Worcester, including unpaid members of the City boards and commissions, serves as an officer, director, trustee or employee of Contractor, and that no elected officials or employees of the City of Worcester have or will have a direct or indirect financial interest in this AGREEMENT.

(c) Violation of this Article shall be material breach of this AGREEMENT and shall be grounds for immediate termination of this AGREEMENT by the City without regard to any enforcement activities undertaken or completed by any enforcement agency.

(d) Termination of this AGREEMENT pursuant to this Article shall not waive any claims for damages that the City may have against the Contractor resulting from Contractor's violation of the terms of this Article.

#### SEVERABILITY:

(18) If any provision of this AGREEMENT is held invalid by any court or body of competent jurisdiction, the remainder of this AGREEMENT shall remain in full force and effect.

#### HEADINGS:

(19) The section headings in this AGREEMENT are for convenience and reference only and in no way define or limit the scope or content of this AGREEMENT or in any way affect its provisions.

#### AMENDMENTS:

(20) This AGREEMENT may be amended or modified only by written instrument duly executed by the parties.

#### ENTIRE AGREEMENT:

(21) This AGREEMENT contains the entire understanding of the parties and supersedes all prior agreements, representations, proposals and undertakings of the parties.

IN WITNESS WHEREOF, the Contractor has hereunto set his hand and seal, and the City has caused its corporate seal to be hereto affixed and this AGREEMENT to be executed in its name and behalf the day and year first above written.

CITY OF WORCESTER

(CONTRACTOR)

By: \_\_\_\_\_  
Christopher J. Gagliastro  
Purchasing Director

By: \_\_\_\_\_  
(Seal)

APPROVED AS TO LEGAL FORM:

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

CERTIFICATION OF FUNDING:

I certify that an appropriation of funds in the amount of this Agreement is contained in account number \_\_\_\_\_.

By: \_\_\_\_\_  
Robert V. Stearns  
City Auditor

APPROVED:

By: \_\_\_\_\_  
Eric D. Batista  
City Manager

## ARTICLE 106: PAYMENT BOND

KNOW ALL BY THESE PRESENTS, that \_\_\_\_\_ a corporation duly established by law and having a usual place of business at \_\_\_\_\_ as PRINCIPAL, and, \_\_\_\_\_ a corporation organized under the laws of the (State/Commonwealth) of \_\_\_\_\_ and duly authorized and admitted, under the provisions of Chapter 175 of the Massachusetts General Laws as amended, to transact the business of a fidelity and surety company in Massachusetts, as SURETY, are held and firmly bound unto the City of Worcester, a municipal corporation within the Commonwealth of Massachusetts, in the sum of \_\_\_\_\_ lawful money of the United States of America, to be paid to the City of Worcester, its successors and assigns, to the payment of which, well and truly to be made, the PRINCIPAL and the SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said PRINCIPAL has entered into an Agreement of even date herewith with the City of Worcester, said Agreement being for the \_\_\_\_\_ in the city of Worcester, Massachusetts;

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

IN TESTIMONY WHEREOF, the PRINCIPAL has hereunto caused its name and seal to be affixed, and the SURETY has caused its corporate seal to be hereunto affixed by a duly authorized officer thereof and this instrument to be executed and delivered in its name and behalf by its attorney-in-fact, duly authorized by its by-laws and votes, powers of attorney, and letters of appointment and authorization, certificated copies of which documents are annexed to this bond and may be introduced in evidence as if a part hereof.

(Principal)

(Seal)

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

(Surety)

(Seal)

BY: \_\_\_\_\_  
Attorney-in-Fact

## ARTICLE 107: PERFORMANCE BOND

KNOW ALL BY THESE PRESENTS, that \_\_\_\_\_ a corporation duly established by law and having a usual place of business at as PRINCIPAL, and \_\_\_\_\_, a corporation duly established under the laws of the (**Commonwealth/State**) of \_\_\_\_\_ and duly authorized and admitted, under the provisions of Chapter 175 of the Massachusetts General Laws as amended, to transact the business of a fidelity and surety company in Massachusetts, as SURETY, are held and firmly bound unto the City of Worcester, a municipal corporation within the Commonwealth of Massachusetts, in the sum of \_\_\_\_\_ lawful money of the United States of America, to be paid to said City of Worcester, its successors and assigns, to the payment of which, well and truly to be made, the PRINCIPAL and said SURETY bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Whereas the said PRINCIPAL has entered into an Agreement of even date hereof with the City of Worcester, said Agreement being for the \_\_\_\_\_ in the city of Worcester, Massachusetts;

NOW THEREFORE, the condition of this obligation is such that if the said PRINCIPAL shall well and faithfully perform all the terms and conditions of said Agreement on its part to be kept and performed as therein stipulated, including guarantee and maintenance provisions therein, and shall pay for all materials furnished and for all labor performed in the execution of said Agreement, and shall indemnify and save harmless the said City of Worcester as therein stipulated, then this obligation shall be of no effect; otherwise it shall remain in full force and virtue.

And the said SURETY, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said Agreement, or to the work to be performed thereunder, or to the specifications accompanying the same, shall in any way effect its obligation on this bond; and it does hereby waive notice of any change, extension of time, alterations or additions to the terms of said Agreement, or to the work, or to the specifications.

In the event that the Agreement is abandoned by the Contractor, or is terminated by the City under the provisions thereof, said SURETY hereby further agrees that it shall, if requested in writing by the City, take such action as is necessary to complete said Agreement.

IN TESTIMONY WHEREOF, the PRINCIPAL has hereunto caused its name and seal to be affixed, and the said SURETY has caused its corporate seal to be hereunto affixed by a duly authorized officer thereof and this instrument to be executed and delivered in its name and behalf by its attorney-in-fact, duly authorized by its by-laws and votes, powers of attorney, and letters of appointment and authorization, certificated copies of which documents are annexed to this bond and may be introduced in evidence as if a part hereof.

(PRINCIPAL)

(SEAL)

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

(SURETY)

(SEAL)

By: \_\_\_\_\_  
Attorney-in-fact

## **ARTICLE 108 - APPLICATIONS FOR PAYMENT**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, are hereby made a part of this Section.

#### **1.2 SUMMARY**

A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, List of Subcontracts, and Submittal Schedule.

B. The Contractor's Construction Schedule and Submittal Schedule are included in Section "Submittals".

#### **1.3 SCHEDULE OF VALUES**

A. Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

- a. Contractor's construction schedule.
- b. Application for Payment form.
- c. List of subcontractors.
- d. Schedule of allowances, if any.
- e. Schedule of alternates, if any.
- f. List products.
- g. List of principal suppliers and fabricators.
- h. Schedule of submittals.

2. Submit the Schedule of Values to the Architect at the earliest feasible date, but in no case later than seven (7) days before the date scheduled for submittal of the initial Application for Payment.

3. Sub-Schedules: Where the Work is separated into phases that require separately phased payments, provide sub-schedules showing values correlated with each phase of payment.

B. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values. Coordinate with the Clerk of the Works for exact breakdown of major categories of work.

1. Identification: Include the following Project identification on the Schedule of Values:

- a. Project name and location.
- b. Name of the Architect.
- c. Project number.
- d. Contractor's name and address.
- e. Date of submittal.

2. Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed:

- a. Generic name.
- b. Related Specification Section.
- c. Name of subcontractor.
- d. Name of manufacturer or fabricator.
- e. Name of supplier.
- f. Change Orders (numbers) that have affected value.
- g. Dollar value to nearest dollar.
- h. Percentage of Contract Sum to the nearest percent, adjusted to total 100 percent

3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items.

4. Round amounts off to the nearest whole dollar; the total shall equal the Contract Sum.

5. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

6. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead and profit margin.



a. At the Contractor's option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.

7. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders result in a change in the Contract Sum.

#### **1.4 APPLICATIONS FOR PAYMENT:**

A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

B. Payment Application Times: Each progress payment date is as indicated in the Agreement. The period of construction Work covered by each Application or Payment is the period indicated in the Agreement.

C. Payment Application Forms: Use AIA Document G 702 and Continuation Sheets G 703 as the form for Application for Payment. No exceptions will be made.

D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Contractor. Incomplete applications will be returned without action.

1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made.

2. Include amounts of Change Orders issued prior to the last day of the construction period covered by the application.

E. Transmittal: Submit six (6) executed copies of each Application for Payment to the Architect by means ensuring receipt within twenty-four (24) hours; one (1) copy shall be complete, including proof of payments (see, 1.4F) and similar attachments, when required.

1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Architect.

2. With each requisition, after the first requisition, submit one (1) copy of up-dated as-built drawings for all underground and concealed work, showing locations, depths, or elevations.

F. Proof of Payments: With each Application for Payment, submit proof of payment to every subcontractor and supplier, at each tier, entitled to payment under the previous requisition and periodic payment made by the Owner to the Contractor on behalf of all such entities.

1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.

2. When an application shows completion of an item, submit final or full waivers or proof of payments.

3. Proof of Payment Delays: Submit each Application for Payment with the Contractor's proof of payment for the period of construction covered by the Application or it may be returned as incomplete.

- a. Submit final Application for Payment with or preceded by final proof of payment for every entity involved with performance of Work covered by the application who could lawfully be entitled to file for direct payment under M.G.L. c. 30, s. 39F, and/or against the Contractor's Labor and Materials Payment Bond.

4. Submit proof of payment in a manner acceptable to Owner.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include the following:

1. List of subcontractors.
2. List of principal suppliers and fabricators.
3. Schedule of Values.
4. Contractor's Construction Schedule (preliminary, if not final).
5. Schedule of principal products.
6. Submittal Schedule (preliminary, if not final).
7. List of Contractor's staff assignments.
8. List of Contractor's principal consultants.
9. Copies of building permits.
10. Copies of authorizations and licenses from governing authorities for performance of the Work.
11. Initial progress report.
12. Report of pre-construction meeting.
13. Certificates of insurance and insurance policies.
14. Performance and payment bonds (if required).
15. Data needed to acquire Owner's insurance.
16. Initial settlement survey and damage report, if required.

H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

I. Administrative actions and submittals that shall proceed or coincide with Application for Payment at Substantial Completion include:

1. Occupancy permits and similar approvals.
2. Warranties (guarantees) and maintenance agreements.
3. Test/adjust/balance records.
4. Maintenance instructions.
5. Meter readings.
6. Start-up performance reports.
7. Change over information related to Owner's occupancy, use, operation and maintenance.
8. Final cleaning.
9. Application for reduction of retainage, and consent of surety.
10. Advice on shifting insurance coverages.
11. Final progress photographs.
12. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

J. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final payment Application for Payment include the following:

1. Completion of Project closeout requirements.
2. Completion of items specified for completion after Substantial Completion.
3. Assurance that unsettled claims will be settled.
4. Assurance that Work not complete and accepted will be completed without undue delay.
5. Transmittal of required Project construction records to Owner.
6. Certified property survey.
7. Proof that taxes, fees and similar obligations have been paid.
8. Removal of temporary facilities and services.
9. Removal of surplus materials, rubbish and similar elements.
10. Change of door locks to Owner's access.

## **ARTICLE 109 - MODIFICATION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, are hereby made a part of this Section.

#### **1.2 SUMMARY**

A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.

B. Related Sections: The following sections contain requirements that relate to this section:

1. Division 1 Section "Submittals" for requirements for the Contractor's Construction Schedule.

2. Division 1 Section "Application for Payment" for administrative procedures governing applications for payment.

3. Division 1 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

#### **1.3 MINOR CHANGES IN THE WORK**

A. Supplemental instructions authorizing minor changes in the Work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Architect.

#### **1.4 CHANGE ORDER PROPOSAL REQUESTS**

A. Owner-Initiated Proposal Requests: Proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time will be issued by the Architect, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.

1. Proposal requests issued by the Architect are for information only. Do not consider them an instruction either to stop work in progress, or to execute the proposed change.

2. Unless otherwise indicated in the proposal request, within twenty (20) days of receipt of the proposal request, submit to the Architect for the Owner's review an estimate of cost necessary to execute the proposed change.

a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.

B. Contractor-Initiated Change Order Proposal 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. Include a statement outlining the reasons for the change 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/or the Contract Time.

2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

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

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.

## **1.5 ALLOWANCES**

A. Allowance Adjustment: Base each Change Order Proposal Request for an allowance cost adjustment solely on the difference between the actual purchase amount and the allowance, multiplied by the final measurement of work-in-place, with reasonable allowances, where applicable, for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

1. Include installation costs in the purchase amount only where indicated as part of the allowance.
2. When requested, prepare explanations and documentation to substantiate the margins claimed.
3. The Owner reserves the right to establish the actual quantity of work-in-place by independent quantity survey, measure, or count.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit, within twenty (20) days of receipt of the change order authorizing work to proceed. Claims submitted later than twenty (20) days will be rejected.

1. The Change Order cost amount shall not include the Contractor's or Subcontractor's indirect expense except when it is clearly demonstrated that either the nature or scope of work required was changed from that which could have been foreseen from information in Contract Documents.

2. No change to the Contractor's indirect expense is permitted for selection of higher or lower priced materials or systems of the same scope and nature as originally indicated.

## **1.6 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.

## **1.7 OVERHEAD AND PROFIT**

- A. Overhead and Profit will be as noted elsewhere in these specifications.
- B. In reviewing change orders, the Architect will exercise his right to request a complete breakdown from the Contractor showing exact costs for labor and material, as well as delivery slips and invoices from suppliers and other subcontractors.

## **ARTICLE 110 - PRODUCT SUBSTITUTIONS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, are hereby made a part of this Section.

#### **1.2 SUMMARY**

A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

B. The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals".

C. Standards: Refer to Section "Reference Standards and Definitions" for applicability of industry standards to products specified.

D. Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment".

#### **1.3 DEFINITIONS**

A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.

B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions". The following are not considered substitutions:

1. Specified options of products and construction methods included in Contract Documents.

2. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.



## **1.4 SUBMITTALS**

A. Substitution Request Submittal: Requests for substitution will be considered if received within sixty (60) days after commencement of the Work. Requests received more than sixty (60) days after commencement of the Work may be considered or rejected at the discretion of the Architect.

1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.
2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate.
  - a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
  - b. Samples, where applicable or requested.
  - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect, i.e. color, texture, pattern, etc.
  - d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, that will become necessary to accommodate the proposed substitution.
  - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.

- f. Cost information, including a proposal of the net change, if any, in the Contract Sum.
  - g. Certification by the Contractor that the substitution proposed is equal to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time, that may subsequently become necessary because of the failure of the substitution to perform adequately.
3. Architects' Action: Within one (1) week of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request. Within two (2) weeks of receipt of the request, or one (1) week of receipt of the additional information or documentation, whichever is later, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of a Change Order, when a change in contract cost or time is required; or in the form of Architect's supplemental instructions when no change to contract cost or time is required.

## **PART 2 - PRODUCTS**

### **2.1 SUBSTITUTIONS**

A. Conditions: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record non-compliance with these requirements.

- 1. Extensive revisions to Contract Documents are not required.
- 2. Proposed changes are in keeping with the intent of Contract Documents.
- 3. The request is timely, fully documented and properly submitted.
- 4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.
- 5. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
- 6. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.

7. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
  8. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
  9. Where a proposed substitution involves more than one prime Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.
- B. The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
-

**PREVAILING WAGE RATES**

**&**

**CERTIFIED PAYROLL REPORTING**

**FORMS**

**NOTE:** Successful bidder/contractor shall submit the required certified payroll reporting forms on a weekly basis *via email* to:

**[certifiedpayrollrecords@worcesterma.gov](mailto:certifiedpayrollrecords@worcesterma.gov)**

**City of Worcester – Purchasing Division  
City Hall – Room 201  
455 Main Street  
Worcester, MA 01608**

# MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM



Company's Name:		Address:				Phone No.:				Payroll No.:									
Employer's Signature:		Title:				Contract No:		Tax Payer ID Number		Work Week Ending:									
Awarding Authority's Name:		Public Works Project Name:				Public Works Project Location:				Min. Wage Rate Sheet Number									
General / Prime Contractor's Name:		Subcontractor's Name:						"Employer" Hourly Fringe Benefit Contributions											
												(B+C+D+E)		(A x F)					
Employee Name & Complete Address	Work Classification:	Employee is OSHA 10 certified (?)	Appr. Rate (%)	Hours Worked								Project Hours (A) All Other Hours	Hourly Base Wage (B)	Health & Welfare Insurance (C)	ERISA Pension Plan (D)	Supp. Unemp. (E)	Total Hourly Prev. Wage (F)	Project Gross Wages	Check No. (H)
				Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.	Total Gross Wages								

Are all apprentice employees identified above currently registered with the MA DLS's Division of Apprentices Standards? YES ☐ NO ☐

For all apprentices performing work during the reporting period, attach a copy of the apprentice identification card issued by the Massachusetts Department of Labor Standards / Division of Apprentices Standards. No apprentices are identified above ☐

**NOTE:** Pursuant to MGL c. 149, s. 27B, every contractor and subcontractor is required to submit a true and accurate copy of their certified weekly payroll records to the awarding authority by first-class mail or e-mail. In addition, each weekly payroll must be accompanied by a statement of compliance signed by the employer. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

CITY OF WORCESTER

Monthly Workforce Report

PROJECT NAME \_\_\_\_\_

Construction Manager: \_\_\_\_\_

Project: \_\_\_\_\_ Contract #: \_\_\_\_\_

Period Covered: \_\_\_\_\_ through \_\_\_\_\_

		GOAL - 38%		GOAL - 10%			
PROJECT-TO-DATE:		PEOPLE OF COLOR		FEMALE		MINORITY OWNED	WOMEN OWNED
Contractor/Sub-Contractor	Total Hours	PTD Hours	PTD Percentage	PTD Hours	PTD Percentage		
XX	600		0.0%		0.0%	YES / NO	YES / NO
						YES / NO	YES / NO
						YES / NO	YES / NO
						YES / NO	YES / NO
MONTHLY TOTAL:		600.0	0.00	0.0%	0.0	0.0%	

PROJECT NAME \_\_\_\_\_

Construction Manager: \_\_\_\_\_

Project: \_\_\_\_\_ Contract #: \_\_\_\_\_

Period Covered: \_\_\_\_\_ through \_\_\_\_\_

		GOAL - 38%		GOAL - 10%	
PROJECT-TO-DATE:		PEOPLE OF COLOR		FEMALE	
Trade	Total Hours	PTD Hours	PTD Percentage	PTD Hours	PTD Percentage
Carpenter	600.0	0.0	0.0%	0.0	0.0%
X					
X					
X					
X					
X					
MONTHLY TOTALS	600.0	0.0	0.0%	0.0	0.0%

## WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. For every week in which an apprentice is employed, a photocopy of the apprentice's identification card must be attached to the payroll report. Once collected, the awarding authority is also required to preserve those records for three years.

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

### STATEMENT OF COMPLIANCE

\_\_\_\_\_, 20\_\_\_\_

I, \_\_\_\_\_, \_\_\_\_\_  
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

\_\_\_\_\_ on the \_\_\_\_\_  
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature \_\_\_\_\_

Title \_\_\_\_\_



MAURA HEALEY  
Governor

KIM DRISCOLL  
Lt. Governor

THE COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT  
DEPARTMENT OF LABOR STANDARDS

Prevailing Wage Rates

As determined by the Director under the provisions of the  
Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES  
Secretary

MICHAEL FLANAGAN  
Director

**Awarding Authority:** City of Worcester Purchasing Division  
**Contract Number:** 8134-W4 **City/Town:** WORCESTER  
**Description of Work:** Installation of lighting under the Madison Street Bridge per plans and specifications  
**Job Location:** Madison Street

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Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The annual update requirement is not applicable to 27F "rental of equipment" contracts. **The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.**
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the "Wage Request Number" on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee's name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to <http://www.mass.gov/dols/pw>.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Construction</b>						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$38.95	\$15.07	\$18.67	\$0.00	\$72.69
	06/01/2024	\$39.95	\$15.07	\$18.67	\$0.00	\$73.69
	12/01/2024	\$39.95	\$15.07	\$20.17	\$0.00	\$75.19
	01/01/2025	\$39.95	\$15.57	\$20.17	\$0.00	\$75.69
	06/01/2025	\$40.95	\$15.57	\$20.17	\$0.00	\$76.69
	12/01/2025	\$40.95	\$15.57	\$21.78	\$0.00	\$78.30
	01/01/2026	\$40.95	\$16.17	\$21.78	\$0.00	\$78.90
	06/01/2026	\$41.95	\$16.17	\$21.78	\$0.00	\$79.90
	12/01/2026	\$41.95	\$16.17	\$23.52	\$0.00	\$81.64
	01/01/2027	\$41.95	\$16.77	\$23.52	\$0.00	\$82.24
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.02	\$15.07	\$18.67	\$0.00	\$72.76
	06/01/2024	\$40.02	\$15.07	\$18.67	\$0.00	\$73.76
	12/01/2024	\$40.02	\$15.07	\$20.17	\$0.00	\$75.26
	01/01/2025	\$40.02	\$15.57	\$20.17	\$0.00	\$75.76
	06/01/2025	\$41.02	\$15.57	\$20.17	\$0.00	\$76.76
	12/01/2025	\$41.02	\$15.57	\$21.78	\$0.00	\$78.37
	01/01/2026	\$41.02	\$16.17	\$21.78	\$0.00	\$78.97
	06/01/2026	\$42.02	\$16.17	\$21.78	\$0.00	\$79.97
	12/01/2026	\$42.02	\$16.17	\$23.52	\$0.00	\$81.71
	01/01/2027	\$42.02	\$16.77	\$23.52	\$0.00	\$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.14	\$15.07	\$18.67	\$0.00	\$72.88
	06/01/2024	\$40.14	\$15.07	\$18.67	\$0.00	\$73.88
	12/01/2024	\$40.14	\$15.07	\$20.17	\$0.00	\$75.38
	01/01/2025	\$40.14	\$15.57	\$20.17	\$0.00	\$75.88
	06/01/2025	\$41.14	\$15.57	\$20.17	\$0.00	\$76.88
	12/01/2025	\$41.14	\$15.57	\$21.78	\$0.00	\$78.49
	01/01/2026	\$41.14	\$16.17	\$21.78	\$0.00	\$79.09
	06/01/2026	\$42.14	\$16.17	\$21.78	\$0.00	\$80.09
	12/01/2026	\$42.14	\$16.17	\$23.52	\$0.00	\$81.83
	01/01/2027	\$42.14	\$16.77	\$23.52	\$0.00	\$82.43
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
AIR TRACK OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (WORCESTER)</i>	12/01/2023	\$40.80	\$14.50	\$11.05	\$0.00	\$66.35
	06/01/2024	\$41.80	\$14.50	\$11.05	\$0.00	\$67.35
	12/01/2024	\$42.80	\$14.50	\$11.05	\$0.00	\$68.35
	06/01/2025	\$43.80	\$14.50	\$11.05	\$0.00	\$69.35
	12/01/2025	\$44.80	\$14.50	\$11.05	\$0.00	\$70.35
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
2	65	\$31.28	\$7.07	\$13.22	\$0.00	\$51.57
3	70	\$33.68	\$7.07	\$14.23	\$0.00	\$54.98
4	75	\$36.09	\$7.07	\$15.24	\$0.00	\$58.40
5	80	\$38.50	\$7.07	\$16.25	\$0.00	\$61.82
6	85	\$40.90	\$7.07	\$17.28	\$0.00	\$65.25
7	90	\$43.31	\$7.07	\$18.28	\$0.00	\$68.66
8	95	\$45.71	\$7.07	\$19.32	\$0.00	\$72.10

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	08/01/2023	\$60.26	\$11.49	\$21.65	\$0.00	\$93.40
BRICKLAYERS LOCAL 3 (WORCESTER)	02/01/2024	\$61.51	\$11.49	\$21.65	\$0.00	\$94.65
	08/01/2024	\$63.61	\$11.49	\$21.65	\$0.00	\$96.75
	02/01/2025	\$64.91	\$11.49	\$21.65	\$0.00	\$98.05
	08/01/2025	\$67.06	\$11.49	\$21.65	\$0.00	\$100.20
	02/01/2026	\$68.41	\$11.49	\$21.65	\$0.00	\$101.55
	08/01/2026	\$70.61	\$11.49	\$21.65	\$0.00	\$103.75
	02/01/2027	\$72.01	\$11.49	\$21.65	\$0.00	\$105.15

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Worcester

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.13	\$11.49	\$21.65	\$0.00	\$63.27
2	60	\$36.16	\$11.49	\$21.65	\$0.00	\$69.30
3	70	\$42.18	\$11.49	\$21.65	\$0.00	\$75.32
4	80	\$48.21	\$11.49	\$21.65	\$0.00	\$81.35
5	90	\$54.23	\$11.49	\$21.65	\$0.00	\$87.37

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.76	\$11.49	\$21.65	\$0.00	\$63.90
2	60	\$36.91	\$11.49	\$21.65	\$0.00	\$70.05
3	70	\$43.06	\$11.49	\$21.65	\$0.00	\$76.20
4	80	\$49.21	\$11.49	\$21.65	\$0.00	\$82.35
5	90	\$55.36	\$11.49	\$21.65	\$0.00	\$88.50

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/GRADER/SCRAPER	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CAISSON & UNDERPINNING BOTTOM MAN	12/01/2023	\$45.48	\$9.65	\$18.22	\$0.00	\$73.35
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$46.96	\$9.65	\$18.22	\$0.00	\$74.83
	12/01/2024	\$48.43	\$9.65	\$18.22	\$0.00	\$76.30
	06/01/2025	\$49.93	\$9.65	\$18.22	\$0.00	\$77.80
	12/01/2025	\$51.43	\$9.65	\$18.22	\$0.00	\$79.30
	06/01/2026	\$52.98	\$9.65	\$18.22	\$0.00	\$80.85
	12/01/2026	\$54.48	\$9.65	\$18.22	\$0.00	\$82.35

For apprentice rates see "Apprentice- LABORER"

CAISSON & UNDERPINNING LABORER	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2						
For apprentice rates see "Apprentice- LABORER"						
CARPENTER	03/01/2023	\$45.12	\$9.33	\$19.97	\$0.00	\$74.42
CARPENTERS -ZONE 2 (Eastern Massachusetts)						

**Apprentice - CARPENTER - Zone 2 Eastern MA**

**Effective Date - 03/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.56	\$9.33	\$1.73	\$0.00	\$33.62
2	60	\$27.07	\$9.33	\$1.73	\$0.00	\$38.13
3	70	\$31.58	\$9.33	\$14.78	\$0.00	\$55.69
4	75	\$33.84	\$9.33	\$14.78	\$0.00	\$57.95
5	80	\$36.10	\$9.33	\$16.51	\$0.00	\$61.94
6	80	\$36.10	\$9.33	\$16.51	\$0.00	\$61.94
7	90	\$40.61	\$9.33	\$18.24	\$0.00	\$68.18
8	90	\$40.61	\$9.33	\$18.24	\$0.00	\$68.18

<b>Notes:</b>
% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$30.71/ 3&4 \$36.93/ 5&6 \$56.82/ 7&8 \$63.06

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

CARPENTER WOOD FRAME	04/01/2023	\$24.16	\$7.21	\$4.80	\$0.00	\$36.17
CARPENTERS-ZONE 3 (Wood Frame)						
All Aspects of New Wood Frame Work						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
<b>Apprentice - CARPENTER (Wood Frame) - Zone 3</b>							
<b>Effective Date - 04/01/2023</b>							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71	
2	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71	
3	65	\$15.70	\$7.21	\$0.00	\$0.00	\$22.91	
4	70	\$16.91	\$7.21	\$0.00	\$0.00	\$24.12	
5	75	\$18.12	\$7.21	\$3.80	\$0.00	\$29.13	
6	80	\$19.33	\$7.21	\$3.80	\$0.00	\$30.34	
7	85	\$20.54	\$7.21	\$3.80	\$0.00	\$31.55	
8	90	\$21.74	\$7.21	\$3.80	\$0.00	\$32.75	
<div><b>Notes:</b> % Indentured After 10/1/17; 45/45/55/55/70/70/80/80 Step 1&amp;2 \$17.86/ 3&amp;4 \$20.22/ 5&amp;6 \$27.57/ 7&amp;8 \$29.94</div>							
<b>Apprentice to Journeyworker Ratio:1:5</b>							
CEMENT MASONRY/PLASTERING		01/01/2024	\$49.33	\$13.00	\$23.57	\$1.30	\$87.20
BRICKLAYERS LOCAL 3 (WORCESTER)							
<b>Apprentice - CEMENT MASONRY/PLASTERING - Worcester</b>							
<b>Effective Date - 01/01/2024</b>							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$24.67	\$13.00	\$15.93	\$0.00	\$53.60	
2	60	\$29.60	\$13.00	\$18.57	\$1.30	\$62.47	
3	65	\$32.06	\$13.00	\$19.57	\$1.30	\$65.93	
4	70	\$34.53	\$13.00	\$20.57	\$1.30	\$69.40	
5	75	\$37.00	\$13.00	\$21.57	\$1.30	\$72.87	
6	80	\$39.46	\$13.00	\$22.57	\$1.30	\$76.33	
7	90	\$44.40	\$13.00	\$23.57	\$1.30	\$82.27	
<div><b>Notes:</b> Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.</div>							
<b>Apprentice to Journeyworker Ratio:1:3</b>							
CHAIN SAW OPERATOR		12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2							
For apprentice rates see "Apprentice- LABORER"							
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES		12/01/2023	\$56.13	\$15.00	\$16.40	\$0.00	\$87.53
OPERATING ENGINEERS LOCAL 4		06/01/2024	\$57.45	\$15.00	\$16.40	\$0.00	\$88.85
		12/01/2024	\$58.93	\$15.00	\$16.40	\$0.00	\$90.33
		06/01/2025	\$60.26	\$15.00	\$16.40	\$0.00	\$91.66
		12/01/2025	\$61.73	\$15.00	\$16.40	\$0.00	\$93.13
		06/01/2026	\$63.06	\$15.00	\$16.40	\$0.00	\$94.46
		12/01/2026	\$64.54	\$15.00	\$16.40	\$0.00	\$95.94
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
Issue Date: 01/02/2024		Wage Request Number: 20240102-028		Page 7 of 39			

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

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

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

#### Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN <i>LABORERS - ZONE 2</i>	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
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For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS <i>LABORERS - ZONE 2</i>	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
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Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 2</i>	12/01/2023	\$45.48	\$9.65	\$18.07	\$0.00	\$73.20
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$45.23	\$9.65	\$18.07	\$0.00	\$72.95
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 2</i>	12/01/2023	\$44.48	\$9.65	\$18.07	\$0.00	\$72.20
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$49.07	\$9.40	\$23.12	\$0.00	\$81.59
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$73.60	\$9.40	\$23.12	\$0.00	\$106.12
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER/SLURRY (EFFLUENT) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$103.05	\$9.40	\$23.12	\$0.00	\$135.57
For apprentice rates see "Apprentice- PILE DRIVER"						
DRAWBRIDGE OPERATOR (Construction) <i>DRAWBRIDGE - SEIU LOCAL 888</i>	07/01/2020	\$26.77	\$6.67	\$3.93	\$0.16	\$37.53
ELECTRICIAN <i>ELECTRICIANS LOCAL 96</i>	09/03/2023	\$45.99	\$13.00	\$18.84	\$0.00	\$77.83
	09/01/2024	\$47.05	\$13.99	\$19.22	\$0.00	\$80.26
	09/07/2025	\$48.16	\$14.98	\$19.60	\$0.00	\$82.74
	09/06/2026	\$49.38	\$15.96	\$20.00	\$0.00	\$85.34



Apprentice - *ELECTRICIAN - Local 96*

Effective Date - 09/03/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.40	\$13.00	\$0.55	\$0.00	\$31.95
2	45	\$20.70	\$13.00	\$0.62	\$0.00	\$34.32
3	48	\$22.08	\$13.00	\$15.49	\$0.00	\$50.57
4	55	\$25.29	\$13.00	\$15.94	\$0.00	\$54.23
5	65	\$29.89	\$13.00	\$16.59	\$0.00	\$59.48
6	80	\$36.79	\$13.00	\$17.55	\$0.00	\$67.34

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.82	\$13.99	\$0.56	\$0.00	\$33.37
2	45	\$21.17	\$13.99	\$0.64	\$0.00	\$35.80
3	48	\$22.58	\$13.99	\$15.79	\$0.00	\$52.36
4	55	\$25.88	\$13.99	\$16.26	\$0.00	\$56.13
5	65	\$30.58	\$13.99	\$16.91	\$0.00	\$61.48
6	80	\$37.64	\$13.99	\$17.90	\$0.00	\$69.53

Notes:

Steps 1-2 are 1000 hrs; Steps 3-6 are 1500 hrs.

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

ELEVATOR CONSTRUCTOR	01/01/2024	\$61.98	\$16.18	\$20.96	\$0.00	\$99.12
ELEVATOR CONSTRUCTORS LOCAL 41	01/01/2025	\$62.83	\$16.28	\$21.36	\$0.00	\$100.47
	01/01/2026	\$63.68	\$16.38	\$21.76	\$0.00	\$101.82
	01/01/2027	\$64.53	\$16.48	\$22.16	\$0.00	\$103.17

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
<b>Apprentice - ELEVATOR CONSTRUCTOR - Local 41</b>							
<b>Effective Date - 01/01/2024</b>							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$30.99	\$16.18	\$0.00	\$0.00	\$47.17	
2	55	\$34.09	\$16.18	\$20.96	\$0.00	\$71.23	
3	65	\$40.29	\$16.18	\$20.96	\$0.00	\$77.43	
4	70	\$43.39	\$16.18	\$20.96	\$0.00	\$80.53	
5	80	\$49.58	\$16.18	\$20.96	\$0.00	\$86.72	
<b>Effective Date - 01/01/2025</b>							
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate	
1	50	\$31.42	\$16.28	\$0.00	\$0.00	\$47.70	
2	55	\$34.56	\$16.28	\$21.36	\$0.00	\$72.20	
3	65	\$40.84	\$16.28	\$21.36	\$0.00	\$78.48	
4	70	\$43.98	\$16.28	\$21.36	\$0.00	\$81.62	
5	80	\$50.26	\$16.28	\$21.36	\$0.00	\$87.90	
<div><b>Notes:</b> Steps 1-2 are 6 mos.; Steps 3-5 are 1 year</div>							
<b>Apprentice to Journeyworker Ratio:1:1</b>							
ELEVATOR CONSTRUCTOR HELPER		01/01/2024	\$43.39	\$16.18	\$20.96	\$0.00	\$80.53
ELEVATOR CONSTRUCTORS LOCAL 41		01/01/2025	\$43.98	\$16.28	\$21.36	\$0.00	\$81.62
		01/01/2026	\$44.58	\$16.38	\$21.76	\$0.00	\$82.72
		01/01/2027	\$45.17	\$16.48	\$22.16	\$0.00	\$83.81
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)		12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2 (HEAVY & HIGHWAY)		06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
		12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
		06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
		12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
		06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
		12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY		11/01/2023	\$50.30	\$14.50	\$16.15	\$0.00	\$80.95
OPERATING ENGINEERS LOCAL 4		05/01/2024	\$51.54	\$14.50	\$16.15	\$0.00	\$82.19
		11/01/2024	\$52.83	\$14.50	\$16.15	\$0.00	\$83.48
		05/01/2025	\$54.27	\$14.50	\$16.15	\$0.00	\$84.92
		11/01/2025	\$55.56	\$14.50	\$16.15	\$0.00	\$86.21
		05/01/2026	\$57.00	\$14.50	\$16.15	\$0.00	\$87.65
		11/01/2026	\$58.29	\$14.50	\$16.15	\$0.00	\$88.94
		05/01/2027	\$59.72	\$14.50	\$16.15	\$0.00	\$90.37
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$51.87	\$14.50	\$16.15	\$0.00	\$82.52
	05/01/2024	\$53.12	\$14.50	\$16.15	\$0.00	\$83.77
	11/01/2024	\$54.42	\$14.50	\$16.15	\$0.00	\$85.07
	05/01/2025	\$55.87	\$14.50	\$16.15	\$0.00	\$86.52
	11/01/2025	\$57.17	\$14.50	\$16.15	\$0.00	\$87.82
	05/01/2026	\$58.62	\$14.50	\$16.15	\$0.00	\$89.27
	11/01/2026	\$59.92	\$14.50	\$16.15	\$0.00	\$90.57
	05/01/2027	\$61.37	\$14.50	\$16.15	\$0.00	\$92.02
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2023	\$24.93	\$14.50	\$16.15	\$0.00	\$55.58
	05/01/2024	\$25.66	\$14.50	\$16.15	\$0.00	\$56.31
	11/01/2024	\$26.42	\$14.50	\$16.15	\$0.00	\$57.07
	05/01/2025	\$27.27	\$14.50	\$16.15	\$0.00	\$57.92
	11/01/2025	\$28.03	\$14.50	\$16.15	\$0.00	\$58.68
	05/01/2026	\$28.88	\$14.50	\$16.15	\$0.00	\$59.53
	11/01/2026	\$29.64	\$14.50	\$16.15	\$0.00	\$60.29
	05/01/2027	\$30.49	\$14.50	\$16.15	\$0.00	\$61.14
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 96</i>	09/03/2023	\$45.99	\$13.00	\$18.84	\$0.00	\$77.83
	09/01/2024	\$47.05	\$13.99	\$19.22	\$0.00	\$80.26
	09/07/2025	\$48.16	\$14.98	\$19.60	\$0.00	\$82.74
	09/06/2026	\$49.38	\$15.96	\$20.00	\$0.00	\$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINT/COMMISSIONING <i>ELECTRICIANS LOCAL 96</i>	09/03/2023	\$45.99	\$13.00	\$18.84	\$0.00	\$77.83
	09/01/2024	\$47.05	\$13.99	\$19.22	\$0.00	\$80.26
	09/07/2025	\$48.16	\$14.98	\$19.60	\$0.00	\$82.74
	09/06/2026	\$49.38	\$15.96	\$20.00	\$0.00	\$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$44.47	\$15.00	\$16.40	\$0.00	\$75.87
	06/01/2024	\$45.53	\$15.00	\$16.40	\$0.00	\$76.93
	12/01/2024	\$46.71	\$15.00	\$16.40	\$0.00	\$78.11
	06/01/2025	\$47.77	\$15.00	\$16.40	\$0.00	\$79.17
	12/01/2025	\$48.94	\$15.00	\$16.40	\$0.00	\$80.34
	06/01/2026	\$50.00	\$15.00	\$16.40	\$0.00	\$81.40
	12/01/2026	\$51.18	\$15.00	\$16.40	\$0.00	\$82.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$25.48	\$9.65	\$17.14	\$0.00	\$52.27
	06/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	12/01/2024	\$26.51	\$9.65	\$17.14	\$0.00	\$53.30
	06/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	12/01/2025	\$27.59	\$9.65	\$17.14	\$0.00	\$54.38
	06/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50
	12/01/2026	\$28.71	\$9.65	\$17.14	\$0.00	\$55.50
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE II</i>	03/01/2022	\$47.96	\$9.33	\$20.27	\$0.00	\$77.56

**Apprentice - FLOORCOVERER - Local 2168 Zone II**

**Effective Date -** 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.98	\$9.33	\$1.79	\$0.00	\$35.10
2	55	\$26.38	\$9.33	\$1.79	\$0.00	\$37.50
3	60	\$28.78	\$9.33	\$14.90	\$0.00	\$53.01
4	65	\$31.17	\$9.33	\$14.90	\$0.00	\$55.40
5	70	\$33.57	\$9.33	\$16.69	\$0.00	\$59.59
6	75	\$35.97	\$9.33	\$16.69	\$0.00	\$61.99
7	80	\$38.37	\$9.33	\$18.48	\$0.00	\$66.18
8	85	\$40.77	\$9.33	\$18.48	\$0.00	\$68.58

**Notes:** Steps are 750 hrs.

% After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)

Step 1&2 \$31.90/ 3&4 \$38.39/ 5&6 \$58.70/ 7&8 \$65.26

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

<b>FORK LIFT/CHERRY PICKER</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>GENERATOR/LIGHTING PLANT/HEATERS</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

<b>GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)</b> <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
	07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
	01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86

Apprentice - GLAZIER - Local 35 Zone 2

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$9.95	\$0.00	\$0.00	\$33.33
2	55	\$25.72	\$9.95	\$6.66	\$0.00	\$42.33
3	60	\$28.06	\$9.95	\$7.26	\$0.00	\$45.27
4	65	\$30.39	\$9.95	\$7.87	\$0.00	\$48.21
5	70	\$32.73	\$9.95	\$20.32	\$0.00	\$63.00
6	75	\$35.07	\$9.95	\$20.93	\$0.00	\$65.95
7	80	\$37.41	\$9.95	\$21.53	\$0.00	\$68.89
8	90	\$42.08	\$9.95	\$22.74	\$0.00	\$74.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

Apprentice - OPERATING ENGINEERS - Local 4

Effective Date - 12/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.27	\$15.00	\$0.00	\$0.00	\$45.27
2	60	\$33.02	\$15.00	\$16.40	\$0.00	\$64.42
3	65	\$35.77	\$15.00	\$16.40	\$0.00	\$67.17
4	70	\$38.52	\$15.00	\$16.40	\$0.00	\$69.92
5	75	\$41.27	\$15.00	\$16.40	\$0.00	\$72.67
6	80	\$44.02	\$15.00	\$16.40	\$0.00	\$75.42
7	85	\$46.78	\$15.00	\$16.40	\$0.00	\$78.18
8	90	\$49.53	\$15.00	\$16.40	\$0.00	\$80.93

Effective Date - 06/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$30.98	\$15.00	\$0.00	\$0.00	\$45.98
2	60	\$33.80	\$15.00	\$16.40	\$0.00	\$65.20
3	65	\$36.61	\$15.00	\$16.40	\$0.00	\$68.01
4	70	\$39.43	\$15.00	\$16.40	\$0.00	\$70.83
5	75	\$42.25	\$15.00	\$16.40	\$0.00	\$73.65
6	80	\$45.06	\$15.00	\$16.40	\$0.00	\$76.46
7	85	\$47.88	\$15.00	\$16.40	\$0.00	\$79.28
8	90	\$50.70	\$15.00	\$16.40	\$0.00	\$82.10

Notes:

Apprentice to Journeyworker Ratio:1:6

HVAC (DUCTWORK)	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
SHEETMETAL WORKERS LOCAL 63	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						

HVAC (ELECTRICAL CONTROLS)	09/03/2023	\$45.99	\$13.00	\$18.84	\$0.00	\$77.83
ELECTRICIANS LOCAL 96	09/01/2024	\$47.05	\$13.99	\$19.22	\$0.00	\$80.26
	09/07/2025	\$48.16	\$14.98	\$19.60	\$0.00	\$82.74
	09/06/2026	\$49.38	\$15.96	\$20.00	\$0.00	\$85.34
For apprentice rates see "Apprentice- ELECTRICIAN"						

HVAC (TESTING AND BALANCING - AIR)	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
SHEETMETAL WORKERS LOCAL 63	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING -WATER) <i>PLUMBERS LOCAL 4</i>	09/01/2023	\$52.55	\$9.90	\$17.42	\$0.00	\$79.87
	03/01/2024	\$53.95	\$9.90	\$17.42	\$0.00	\$81.27
	09/01/2024	\$55.35	\$9.90	\$17.42	\$0.00	\$82.67
	03/01/2025	\$56.75	\$9.90	\$17.42	\$0.00	\$84.07
	09/01/2025	\$58.15	\$9.90	\$17.42	\$0.00	\$85.47
	03/01/2026	\$59.55	\$9.90	\$17.42	\$0.00	\$86.87
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PLUMBERS LOCAL 4</i>	09/01/2023	\$52.55	\$9.90	\$17.42	\$0.00	\$79.87
	03/01/2024	\$53.95	\$9.90	\$17.42	\$0.00	\$81.27
	09/01/2024	\$55.35	\$9.90	\$17.42	\$0.00	\$82.67
	03/01/2025	\$56.75	\$9.90	\$17.42	\$0.00	\$84.07
	09/01/2025	\$58.15	\$9.90	\$17.42	\$0.00	\$85.47
	03/01/2026	\$59.55	\$9.90	\$17.42	\$0.00	\$86.87
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
For apprentice rates see "Apprentice- LABORER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.61	\$9.65	\$17.14	\$0.00	\$65.40
	06/01/2024	\$39.94	\$9.65	\$17.14	\$0.00	\$66.73
	12/01/2024	\$41.27	\$9.65	\$17.14	\$0.00	\$68.06
	06/01/2025	\$42.66	\$9.65	\$17.14	\$0.00	\$69.45
	12/01/2025	\$44.04	\$9.65	\$17.14	\$0.00	\$70.83
	06/01/2026	\$45.48	\$9.65	\$17.14	\$0.00	\$72.27
	12/01/2026	\$46.92	\$9.65	\$17.14	\$0.00	\$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (WORCESTER)</i>	09/01/2023	\$48.15	\$14.75	\$19.61	\$0.00	\$82.51
	09/01/2024	\$51.23	\$14.75	\$19.61	\$0.00	\$85.59
	09/01/2025	\$54.31	\$14.75	\$19.61	\$0.00	\$88.67
	09/01/2026	\$57.38	\$14.75	\$19.61	\$0.00	\$91.74

Apprentice - ASBESTOS INSULATOR (Pipes & Tanks) - Local 6 Worcester

Effective Date - 09/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.08	\$14.75	\$14.32	\$0.00	\$53.15
2	60	\$28.89	\$14.75	\$15.37	\$0.00	\$59.01
3	70	\$33.71	\$14.75	\$16.43	\$0.00	\$64.89
4	80	\$38.52	\$14.75	\$17.49	\$0.00	\$70.76

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.62	\$14.75	\$14.32	\$0.00	\$54.69
2	60	\$30.74	\$14.75	\$15.37	\$0.00	\$60.86
3	70	\$35.86	\$14.75	\$16.43	\$0.00	\$67.04
4	80	\$40.98	\$14.75	\$17.49	\$0.00	\$73.22

Notes:

Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER	03/16/2023	\$52.42	\$8.35	\$26.70	\$0.00	\$87.47
IRONWORKERS LOCAL 7 (WORCESTER AREA)	03/16/2024	\$53.67	\$8.35	\$26.70	\$0.00	\$88.72

Apprentice - IRONWORKER - Local 7 Worcester

Effective Date - 03/16/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$31.45	\$8.35	\$26.70	\$0.00	\$66.50
2	70	\$36.69	\$8.35	\$26.70	\$0.00	\$71.74
3	75	\$39.32	\$8.35	\$26.70	\$0.00	\$74.37
4	80	\$41.94	\$8.35	\$26.70	\$0.00	\$76.99
5	85	\$44.56	\$8.35	\$26.70	\$0.00	\$79.61
6	90	\$47.18	\$8.35	\$26.70	\$0.00	\$82.23

Effective Date - 03/16/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$32.20	\$8.35	\$26.70	\$0.00	\$67.25
2	70	\$37.57	\$8.35	\$26.70	\$0.00	\$72.62
3	75	\$40.25	\$8.35	\$26.70	\$0.00	\$75.30
4	80	\$42.94	\$8.35	\$26.70	\$0.00	\$77.99
5	85	\$45.62	\$8.35	\$26.70	\$0.00	\$80.67
6	90	\$48.30	\$8.35	\$26.70	\$0.00	\$83.35

Notes:

Apprentice to Journeyworker Ratio:1:4



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
JACKHAMMER & PAVING BREAKER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65

**Apprentice - *LABORER - Zone 2***

**Effective Date - 12/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.40	\$16.89	\$0.00	\$49.01
2	70	\$26.50	\$9.40	\$16.89	\$0.00	\$52.79
3	80	\$30.29	\$9.40	\$16.89	\$0.00	\$56.58
4	90	\$34.07	\$9.40	\$16.89	\$0.00	\$60.36

**Notes:**

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

LABORER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

**Apprentice - *LABORER (Heavy & Highway) - Zone 2***

**Effective Date - 12/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.72	\$9.65	\$17.14	\$0.00	\$49.51
2	70	\$26.50	\$9.65	\$17.14	\$0.00	\$53.29
3	80	\$30.29	\$9.65	\$17.14	\$0.00	\$57.08
4	90	\$34.07	\$9.65	\$17.14	\$0.00	\$60.86

**Effective Date - 06/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.51	\$9.00	\$16.89	\$0.00	\$49.40
2	70	\$27.43	\$9.00	\$16.89	\$0.00	\$53.32
3	80	\$31.35	\$9.00	\$16.89	\$0.00	\$57.24
4	90	\$35.27	\$9.00	\$16.89	\$0.00	\$61.16

**Notes:**

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.36	\$9.40	\$16.89	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.95	\$9.65	\$17.20	\$0.00	\$64.80
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i>	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	08/01/2023	\$47.89	\$11.49	\$20.37	\$0.00	\$79.75
	02/01/2024	\$48.89	\$11.49	\$20.37	\$0.00	\$80.75
	08/01/2024	\$50.57	\$11.49	\$20.37	\$0.00	\$82.43
	02/01/2025	\$51.61	\$11.49	\$20.37	\$0.00	\$83.47
	08/01/2025	\$53.33	\$11.49	\$20.37	\$0.00	\$85.19
	02/01/2026	\$54.41	\$11.49	\$20.37	\$0.00	\$86.27
	08/01/2026	\$56.17	\$11.49	\$20.37	\$0.00	\$88.03
	02/01/2027	\$57.29	\$11.49	\$20.37	\$0.00	\$89.15

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

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.95	\$11.49	\$20.37	\$0.00	\$55.81
2	60	\$28.73	\$11.49	\$20.37	\$0.00	\$60.59
3	70	\$33.52	\$11.49	\$20.37	\$0.00	\$65.38
4	80	\$38.31	\$11.49	\$20.37	\$0.00	\$70.17
5	90	\$43.10	\$11.49	\$20.37	\$0.00	\$74.96

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.45	\$11.49	\$20.37	\$0.00	\$56.31
2	60	\$29.33	\$11.49	\$20.37	\$0.00	\$61.19
3	70	\$34.22	\$11.49	\$20.37	\$0.00	\$66.08
4	80	\$39.11	\$11.49	\$20.37	\$0.00	\$70.97
5	90	\$44.00	\$11.49	\$20.37	\$0.00	\$75.86

Notes:

Apprentice to Journeyworker Ratio:1:3

MARBLE MASONS,TILELAYERS & TERRAZZO MECH	08/01/2023	\$62.42	\$11.49	\$22.31	\$0.00	\$96.22
BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2024	\$63.67	\$11.49	\$22.31	\$0.00	\$97.47
	08/01/2024	\$65.77	\$11.49	\$22.31	\$0.00	\$99.57
	02/01/2025	\$67.07	\$11.49	\$22.31	\$0.00	\$100.87
	08/01/2025	\$69.22	\$11.49	\$22.31	\$0.00	\$103.02
	02/01/2026	\$70.57	\$11.49	\$22.31	\$0.00	\$104.37
	08/01/2026	\$72.77	\$11.49	\$22.31	\$0.00	\$106.57
	02/01/2027	\$74.17	\$11.49	\$22.31	\$0.00	\$107.97

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

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$22.31	\$0.00	\$65.01
2	60	\$37.45	\$11.49	\$22.31	\$0.00	\$71.25
3	70	\$43.69	\$11.49	\$22.31	\$0.00	\$77.49
4	80	\$49.94	\$11.49	\$22.31	\$0.00	\$83.74
5	90	\$56.18	\$11.49	\$22.31	\$0.00	\$89.98

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.84	\$11.49	\$22.31	\$0.00	\$65.64
2	60	\$38.20	\$11.49	\$22.31	\$0.00	\$72.00
3	70	\$44.57	\$11.49	\$22.31	\$0.00	\$78.37
4	80	\$50.94	\$11.49	\$22.31	\$0.00	\$84.74
5	90	\$57.30	\$11.49	\$22.31	\$0.00	\$91.10

Notes:

Apprentice to Journeyworker Ratio:1:5

MECH. SWEEPER OPERATOR (ON CONST. SITES)	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
OPERATING ENGINEERS LOCAL 4	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 3)	01/02/2023	\$40.16	\$8.58	\$21.57	\$0.00	\$70.31
MILLWRIGHTS LOCAL 1121 - Zone 3						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
<b>Apprentice - MILLWRIGHT - Local 1121 Zone 3</b>						
<b>Effective Date - 01/02/2023</b>						
Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.09	\$8.58	\$5.72	\$0.00	\$36.39
2	65	\$26.10	\$8.58	\$17.93	\$0.00	\$52.61
3	75	\$30.12	\$8.58	\$18.98	\$0.00	\$57.68
4	85	\$34.14	\$8.58	\$20.01	\$0.00	\$62.73
<div> <b>Notes:</b> Step 1&amp;2 Appr. indentured after 1/6/2020 receive no pension,  but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)  Steps are 2,000 hours </div>						
<b>Apprentice to Journeyworker Ratio:1:4</b>						
MORTAR MIXER LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$24.41	\$15.00	\$16.40	\$0.00	\$55.81
	06/01/2024	\$25.01	\$15.00	\$16.40	\$0.00	\$56.41
	12/01/2024	\$25.67	\$15.00	\$16.40	\$0.00	\$57.07
	06/01/2025	\$26.27	\$15.00	\$16.40	\$0.00	\$57.67
	12/01/2025	\$26.93	\$15.00	\$16.40	\$0.00	\$58.33
	06/01/2026	\$27.52	\$15.00	\$16.40	\$0.00	\$58.92
	12/01/2026	\$28.19	\$15.00	\$16.40	\$0.00	\$59.59
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2023	\$29.86	\$15.00	\$16.40	\$0.00	\$61.26
	06/01/2024	\$30.58	\$15.00	\$16.40	\$0.00	\$61.98
	12/01/2024	\$31.38	\$15.00	\$16.40	\$0.00	\$62.78
	06/01/2025	\$32.10	\$15.00	\$16.40	\$0.00	\$63.50
	12/01/2025	\$32.90	\$15.00	\$16.40	\$0.00	\$64.30
	06/01/2026	\$33.62	\$15.00	\$16.40	\$0.00	\$65.02
	12/01/2026	\$34.42	\$15.00	\$16.40	\$0.00	\$65.82
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 2	01/01/2024	\$56.06	\$9.95	\$23.95	\$0.00	\$89.96
	07/01/2024	\$57.26	\$9.95	\$23.95	\$0.00	\$91.16
	01/01/2025	\$58.46	\$9.95	\$23.95	\$0.00	\$92.36

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$9.95	\$0.00	\$0.00	\$37.98
2	55	\$30.83	\$9.95	\$6.66	\$0.00	\$47.44
3	60	\$33.64	\$9.95	\$7.26	\$0.00	\$50.85
4	65	\$36.44	\$9.95	\$7.87	\$0.00	\$54.26
5	70	\$39.24	\$9.95	\$20.32	\$0.00	\$69.51
6	75	\$42.05	\$9.95	\$20.93	\$0.00	\$72.93
7	80	\$44.85	\$9.95	\$21.53	\$0.00	\$76.33
8	90	\$50.45	\$9.95	\$22.74	\$0.00	\$83.14

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$9.95	\$0.00	\$0.00	\$38.58
2	55	\$31.49	\$9.95	\$6.66	\$0.00	\$48.10
3	60	\$34.36	\$9.95	\$7.26	\$0.00	\$51.57
4	65	\$37.22	\$9.95	\$7.87	\$0.00	\$55.04
5	70	\$40.08	\$9.95	\$20.32	\$0.00	\$70.35
6	75	\$42.95	\$9.95	\$20.93	\$0.00	\$73.83
7	80	\$45.81	\$9.95	\$21.53	\$0.00	\$77.29
8	90	\$51.53	\$9.95	\$22.74	\$0.00	\$84.22

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

Painter (Spray or Sandblast, New) *	01/01/2024	\$46.96	\$9.95	\$23.95	\$0.00	\$80.86
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. Painters Local 35 - Zone 2	07/01/2024	\$48.16	\$9.95	\$23.95	\$0.00	\$82.06
	01/01/2025	\$49.36	\$9.95	\$23.95	\$0.00	\$83.26

Classification			Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New								
Effective Date -			01/01/2024					
Step	percent	Apprentice Base Wage		Health	Pension	Supplemental Unemployment		Total Rate
1	50	\$23.48		\$9.95	\$0.00	\$0.00		\$33.43
2	55	\$25.83		\$9.95	\$6.66	\$0.00		\$42.44
3	60	\$28.18		\$9.95	\$7.26	\$0.00		\$45.39
4	65	\$30.52		\$9.95	\$7.87	\$0.00		\$48.34
5	70	\$32.87		\$9.95	\$20.32	\$0.00		\$63.14
6	75	\$35.22		\$9.95	\$20.93	\$0.00		\$66.10
7	80	\$37.57		\$9.95	\$21.53	\$0.00		\$69.05
8	90	\$42.26		\$9.95	\$22.74	\$0.00		\$74.95
Effective Date -			07/01/2024					
Step	percent	Apprentice Base Wage		Health	Pension	Supplemental Unemployment		Total Rate
1	50	\$24.08		\$9.95	\$0.00	\$0.00		\$34.03
2	55	\$26.49		\$9.95	\$6.66	\$0.00		\$43.10
3	60	\$28.90		\$9.95	\$7.26	\$0.00		\$46.11
4	65	\$31.30		\$9.95	\$7.87	\$0.00		\$49.12
5	70	\$33.71		\$9.95	\$20.32	\$0.00		\$63.98
6	75	\$36.12		\$9.95	\$20.93	\$0.00		\$67.00
7	80	\$38.53		\$9.95	\$21.53	\$0.00		\$70.01
8	90	\$43.34		\$9.95	\$22.74	\$0.00		\$76.03
Notes:								
Steps are 750 hrs.								
Apprentice to Journeyworker Ratio:1:1								
PAINTER (SPRAY OR SANDBLAST, REPAINT)			01/01/2024	\$45.02	\$9.95	\$23.95	\$0.00	\$78.92
PAINTERS LOCAL 35 - ZONE 2			07/01/2024	\$46.22	\$9.95	\$23.95	\$0.00	\$80.12
			01/01/2025	\$47.42	\$9.95	\$23.95	\$0.00	\$81.32

Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - Repaint

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.51	\$9.95	\$0.00	\$0.00	\$32.46
2	55	\$24.76	\$9.95	\$6.66	\$0.00	\$41.37
3	60	\$27.01	\$9.95	\$7.26	\$0.00	\$44.22
4	65	\$29.26	\$9.95	\$7.87	\$0.00	\$47.08
5	70	\$31.51	\$9.95	\$20.32	\$0.00	\$61.78
6	75	\$33.77	\$9.95	\$20.93	\$0.00	\$64.65
7	80	\$36.02	\$9.95	\$21.53	\$0.00	\$67.50
8	90	\$40.52	\$9.95	\$22.74	\$0.00	\$73.21

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.11	\$9.95	\$0.00	\$0.00	\$33.06
2	55	\$25.42	\$9.95	\$6.66	\$0.00	\$42.03
3	60	\$27.73	\$9.95	\$7.26	\$0.00	\$44.94
4	65	\$30.04	\$9.95	\$7.87	\$0.00	\$47.86
5	70	\$32.35	\$9.95	\$20.32	\$0.00	\$62.62
6	75	\$34.67	\$9.95	\$20.93	\$0.00	\$65.55
7	80	\$36.98	\$9.95	\$21.53	\$0.00	\$68.46
8	90	\$41.60	\$9.95	\$22.74	\$0.00	\$74.29

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2024	\$45.56	\$9.95	\$23.95	\$0.00	\$79.46
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$46.76	\$9.95	\$23.95	\$0.00	\$80.66
	01/01/2025	\$47.96	\$9.95	\$23.95	\$0.00	\$81.86



Apprentice - PAINTER - Local 35 Zone 2 - BRUSH NEW

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.78	\$9.95	\$0.00	\$0.00	\$32.73
2	55	\$25.06	\$9.95	\$6.66	\$0.00	\$41.67
3	60	\$27.34	\$9.95	\$7.26	\$0.00	\$44.55
4	65	\$29.61	\$9.95	\$7.87	\$0.00	\$47.43
5	70	\$31.89	\$9.95	\$20.32	\$0.00	\$62.16
6	75	\$34.17	\$9.95	\$20.93	\$0.00	\$65.05
7	80	\$36.45	\$9.95	\$21.53	\$0.00	\$67.93
8	90	\$41.00	\$9.95	\$22.74	\$0.00	\$73.69

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.38	\$9.95	\$0.00	\$0.00	\$33.33
2	55	\$25.72	\$9.95	\$6.66	\$0.00	\$42.33
3	60	\$28.06	\$9.95	\$7.26	\$0.00	\$45.27
4	65	\$30.39	\$9.95	\$7.87	\$0.00	\$48.21
5	70	\$32.73	\$9.95	\$20.32	\$0.00	\$63.00
6	75	\$35.07	\$9.95	\$20.93	\$0.00	\$65.95
7	80	\$37.41	\$9.95	\$21.53	\$0.00	\$68.89
8	90	\$42.08	\$9.95	\$22.74	\$0.00	\$74.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2024	\$43.62	\$9.95	\$23.95	\$0.00	\$77.52
PAINTERS LOCAL 35 - ZONE 2	07/01/2024	\$44.82	\$9.95	\$23.95	\$0.00	\$78.72
	01/01/2025	\$46.02	\$9.95	\$23.95	\$0.00	\$79.92

Apprentice - PAINTER Local 35 Zone 2 - BRUSH REPAINT

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.81	\$9.95	\$0.00	\$0.00	\$31.76
2	55	\$23.99	\$9.95	\$6.66	\$0.00	\$40.60
3	60	\$26.17	\$9.95	\$7.26	\$0.00	\$43.38
4	65	\$28.35	\$9.95	\$7.87	\$0.00	\$46.17
5	70	\$30.53	\$9.95	\$20.32	\$0.00	\$60.80
6	75	\$32.72	\$9.95	\$20.93	\$0.00	\$63.60
7	80	\$34.90	\$9.95	\$21.53	\$0.00	\$66.38
8	90	\$39.26	\$9.95	\$22.74	\$0.00	\$71.95

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.41	\$9.95	\$0.00	\$0.00	\$32.36
2	55	\$24.65	\$9.95	\$6.66	\$0.00	\$41.26
3	60	\$26.89	\$9.95	\$7.26	\$0.00	\$44.10
4	65	\$29.13	\$9.95	\$7.87	\$0.00	\$46.95
5	70	\$31.37	\$9.95	\$20.32	\$0.00	\$61.64
6	75	\$33.62	\$9.95	\$20.93	\$0.00	\$64.50
7	80	\$35.86	\$9.95	\$21.53	\$0.00	\$67.34
8	90	\$40.34	\$9.95	\$22.74	\$0.00	\$73.03

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$37.86	\$9.65	\$17.14	\$0.00	\$64.65
	06/01/2024	\$39.19	\$9.65	\$17.14	\$0.00	\$65.98
	12/01/2024	\$40.52	\$9.65	\$17.14	\$0.00	\$67.31
	06/01/2025	\$41.91	\$9.65	\$17.14	\$0.00	\$68.70
	12/01/2025	\$43.29	\$9.65	\$17.14	\$0.00	\$70.08
	06/01/2026	\$44.73	\$9.65	\$17.14	\$0.00	\$71.52
	12/01/2026	\$46.17	\$9.65	\$17.14	\$0.00	\$72.96

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	01/01/2024	\$38.78	\$15.07	\$18.67	\$0.00	\$72.52
	06/01/2024	\$39.78	\$15.07	\$18.67	\$0.00	\$73.52
	12/01/2024	\$39.78	\$15.07	\$20.17	\$0.00	\$75.02
	01/01/2025	\$39.78	\$15.57	\$20.17	\$0.00	\$75.52
	06/01/2025	\$40.78	\$15.57	\$20.17	\$0.00	\$76.52
	12/01/2025	\$40.78	\$15.57	\$21.78	\$0.00	\$78.13
	01/01/2026	\$40.78	\$16.17	\$21.78	\$0.00	\$78.73
	06/01/2026	\$41.78	\$16.17	\$21.78	\$0.00	\$79.73
	12/01/2026	\$41.78	\$16.17	\$23.52	\$0.00	\$81.47
	01/01/2027	\$41.78	\$16.77	\$23.52	\$0.00	\$82.07

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) <i>PILE DRIVER LOCAL 56 (ZONE 2)</i> For apprentice rates see "Apprentice- PILE DRIVER"	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63
PILE DRIVER <i>PILE DRIVER LOCAL 56 (ZONE 2)</i>	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63

**Apprentice - PILE DRIVER - Local 56 Zone 2**

**Effective Date -** 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

**Notes:** Apprentice wages shall be no less than the following Steps;

(Same as set in Zone 1)

1\$57.06/2\$61.96/3\$66.87/4\$69.32/5\$71.78/6\$71.78/7\$76.68/8\$76.68

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

PIPELAYER <i>LABORERS - ZONE 2</i> For apprentice rates see "Apprentice- LABORER"	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PLUMBER & PIPEFITTER <i>PLUMBERS LOCAL 4</i>	09/01/2023	\$52.55	\$9.90	\$17.42	\$0.00	\$79.87
	03/01/2024	\$53.95	\$9.90	\$17.42	\$0.00	\$81.27
	09/01/2024	\$55.35	\$9.90	\$17.42	\$0.00	\$82.67
	03/01/2025	\$56.75	\$9.90	\$17.42	\$0.00	\$84.07
	09/01/2025	\$58.15	\$9.90	\$17.42	\$0.00	\$85.47
	03/01/2026	\$59.55	\$9.90	\$17.42	\$0.00	\$86.87

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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**Apprentice - PLUMBER/PIPEFITTER - Local 4**

**Effective Date - 09/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.02	\$9.90	\$0.00	\$0.00	\$30.92
2	50	\$26.28	\$9.90	\$0.00	\$0.00	\$36.18
3	60	\$31.53	\$9.90	\$0.00	\$0.00	\$41.43
4	70	\$36.79	\$9.90	\$7.71	\$0.00	\$54.40
5	80	\$42.04	\$9.90	\$7.71	\$0.00	\$59.65

**Effective Date - 03/01/2024**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$21.58	\$9.90	\$0.00	\$0.00	\$31.48
2	50	\$26.98	\$9.90	\$0.00	\$0.00	\$36.88
3	60	\$32.37	\$9.90	\$0.00	\$0.00	\$42.27
4	70	\$37.77	\$9.90	\$7.71	\$0.00	\$55.38
5	80	\$43.16	\$9.90	\$7.71	\$0.00	\$60.77

**Notes:**

Steps - 2000 hrs; Step 4 w/lic 75%, Step 5 w/lic 85%  
Step 4 w/lic \$52.59, Step 5 w/lic \$57.44

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

PNEUMATIC CONTROLS (TEMP.)	09/01/2023	\$52.55	\$9.90	\$17.42	\$0.00	\$79.87
PLUMBERS LOCAL 4	03/01/2024	\$53.95	\$9.90	\$17.42	\$0.00	\$81.27
	09/01/2024	\$55.35	\$9.90	\$17.42	\$0.00	\$82.67
	03/01/2025	\$56.75	\$9.90	\$17.42	\$0.00	\$84.07
	09/01/2025	\$58.15	\$9.90	\$17.42	\$0.00	\$85.47
	03/01/2026	\$59.55	\$9.90	\$17.42	\$0.00	\$86.87
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2						
For apprentice rates see "Apprentice- LABORER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER	12/01/2023	\$38.86	\$9.65	\$17.14	\$0.00	\$65.65
LABORERS - ZONE 2						
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2023	\$39.36	\$9.40	\$16.89	\$0.00	\$65.65
	06/01/2024	\$40.69	\$9.40	\$16.89	\$0.00	\$66.98
	12/01/2024	\$42.02	\$9.40	\$16.89	\$0.00	\$68.31
	06/01/2025	\$43.41	\$9.40	\$16.89	\$0.00	\$69.70
	12/01/2025	\$44.79	\$9.40	\$16.89	\$0.00	\$71.08
	06/01/2026	\$46.23	\$9.40	\$16.89	\$0.00	\$72.52
	12/01/2026	\$47.67	\$9.40	\$16.89	\$0.00	\$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$35.62	\$15.00	\$16.40	\$0.00	\$67.02
	06/01/2024	\$36.47	\$15.00	\$16.40	\$0.00	\$67.87
	12/01/2024	\$37.42	\$15.00	\$16.40	\$0.00	\$68.82
	06/01/2025	\$38.27	\$15.00	\$16.40	\$0.00	\$69.67
	12/01/2025	\$39.22	\$15.00	\$16.40	\$0.00	\$70.62
	06/01/2026	\$40.08	\$15.00	\$16.40	\$0.00	\$71.48
	12/01/2026	\$41.03	\$15.00	\$16.40	\$0.00	\$72.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 170 - Dauphinais (Bellingham)</i>	01/01/2024	\$27.00	\$10.76	\$5.45	\$0.00	\$43.21
	12/01/2024	\$27.60	\$11.26	\$6.15	\$0.00	\$45.01
	01/01/2025	\$27.60	\$11.26	\$6.15	\$0.00	\$45.01
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) <i>ROOFERS LOCAL 33</i>	08/01/2023	\$50.03	\$12.78	\$20.20	\$0.00	\$83.01
	02/01/2024	\$51.28	\$12.78	\$20.20	\$0.00	\$84.26
	08/01/2024	\$52.78	\$12.78	\$20.20	\$0.00	\$85.76
	02/01/2025	\$54.03	\$12.78	\$20.20	\$0.00	\$87.01
	08/01/2025	\$55.53	\$12.78	\$20.20	\$0.00	\$88.51
	02/01/2026	\$56.78	\$12.78	\$20.20	\$0.00	\$89.76

#### Apprentice - ROOFER - Local 33

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.02	\$12.78	\$5.59	\$0.00	\$43.39
2	60	\$30.02	\$12.78	\$20.20	\$0.00	\$63.00
3	65	\$32.52	\$12.78	\$20.20	\$0.00	\$65.50
4	75	\$37.52	\$12.78	\$20.20	\$0.00	\$70.50
5	85	\$42.53	\$12.78	\$20.20	\$0.00	\$75.51

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.64	\$12.78	\$5.59	\$0.00	\$44.01
2	60	\$30.77	\$12.78	\$20.20	\$0.00	\$63.75
3	65	\$33.33	\$12.78	\$20.20	\$0.00	\$66.31
4	75	\$38.46	\$12.78	\$20.20	\$0.00	\$71.44
5	85	\$43.59	\$12.78	\$20.20	\$0.00	\$76.57

**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 <i>ROOFERS LOCAL 33</i>	08/01/2023	\$50.28	\$12.78	\$20.20	\$0.00	\$83.26
	02/01/2024	\$51.53	\$12.78	\$20.20	\$0.00	\$84.51
	08/01/2024	\$53.03	\$12.78	\$20.20	\$0.00	\$86.01
	02/01/2025	\$54.28	\$12.78	\$20.20	\$0.00	\$87.26
	08/01/2025	\$55.78	\$12.78	\$20.20	\$0.00	\$88.76
	02/01/2026	\$57.03	\$12.78	\$20.20	\$0.00	\$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53

Apprentice - SHEET METAL WORKER - Local 63

Effective Date - 01/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$19.71	\$4.79	\$4.76	\$0.92	\$30.18
2	50	\$21.90	\$5.32	\$5.29	\$1.03	\$33.54
3	55	\$24.09	\$5.85	\$5.82	\$1.13	\$36.89
4	60	\$26.28	\$6.38	\$6.35	\$1.23	\$40.24
5	65	\$28.47	\$6.92	\$6.88	\$1.33	\$43.60
6	70	\$30.66	\$7.45	\$7.41	\$1.44	\$46.96
7	75	\$32.85	\$7.98	\$7.94	\$1.54	\$50.31
8	80	\$35.04	\$8.51	\$15.42	\$1.64	\$60.61
9	85	\$37.23	\$9.04	\$15.95	\$1.74	\$63.96
10	90	\$39.42	\$9.58	\$16.48	\$1.85	\$67.33

Effective Date - 07/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$20.27	\$4.79	\$4.76	\$0.92	\$30.74
2	50	\$22.53	\$5.32	\$5.29	\$1.03	\$34.17
3	55	\$24.78	\$5.85	\$5.82	\$1.13	\$37.58
4	60	\$27.03	\$6.38	\$6.35	\$1.23	\$40.99
5	65	\$29.28	\$6.92	\$6.88	\$1.33	\$44.41
6	70	\$31.54	\$7.45	\$7.41	\$1.44	\$47.84
7	75	\$33.79	\$7.98	\$7.94	\$1.54	\$51.25
8	80	\$36.04	\$8.51	\$15.42	\$1.64	\$61.61
9	85	\$38.29	\$9.04	\$15.95	\$1.74	\$65.02
10	90	\$40.55	\$9.58	\$16.48	\$1.85	\$68.46

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.53	\$15.07	\$18.67	\$0.00	\$73.27
	06/01/2024	\$40.53	\$15.07	\$18.67	\$0.00	\$74.27
	12/01/2024	\$40.53	\$15.07	\$20.17	\$0.00	\$75.77
	01/01/2025	\$40.53	\$15.57	\$20.17	\$0.00	\$76.27
	06/01/2025	\$41.53	\$15.57	\$20.17	\$0.00	\$77.27
	12/01/2025	\$41.53	\$15.57	\$21.78	\$0.00	\$78.88
	01/01/2026	\$41.53	\$16.17	\$21.78	\$0.00	\$79.48
	06/01/2026	\$42.53	\$16.17	\$21.78	\$0.00	\$80.48
	12/01/2026	\$42.53	\$16.17	\$23.52	\$0.00	\$82.22
	01/01/2027	\$42.53	\$16.77	\$23.52	\$0.00	\$82.82
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i>	04/01/2023	\$47.43	\$11.45	\$16.61	\$0.00	\$75.49

**Apprentice - SPRINKLER FITTER - Local 669**

**Effective Date - 04/01/2023**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.34	\$8.22	\$0.00	\$0.00	\$29.56
2	50	\$23.72	\$8.22	\$0.00	\$0.00	\$31.94
3	55	\$26.09	\$11.45	\$7.20	\$0.00	\$44.74
4	60	\$28.46	\$11.45	\$8.35	\$0.00	\$48.26
5	65	\$30.83	\$11.45	\$8.35	\$0.00	\$50.63
6	70	\$33.20	\$11.45	\$8.60	\$0.00	\$53.25
7	75	\$35.57	\$11.45	\$8.60	\$0.00	\$55.62
8	80	\$37.94	\$11.45	\$8.60	\$0.00	\$57.99
9	85	\$40.32	\$11.45	\$8.60	\$0.00	\$60.37
10	90	\$42.69	\$11.45	\$8.60	\$0.00	\$62.74

**Notes:**

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

STEAM BOILER OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99



Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TERRAZZO FINISHERS	08/01/2023	\$61.34	\$11.49	\$22.34	\$0.00	\$95.17
BRICKLAYERS LOCAL 3 - MARBLE & TILE	02/01/2024	\$62.59	\$11.49	\$22.34	\$0.00	\$96.42
	08/01/2024	\$64.69	\$11.49	\$22.34	\$0.00	\$98.52
	02/01/2025	\$65.99	\$11.49	\$22.34	\$0.00	\$99.82
	08/01/2025	\$68.14	\$11.49	\$22.34	\$0.00	\$101.97
	02/01/2026	\$69.49	\$11.49	\$22.34	\$0.00	\$103.32
	08/01/2026	\$71.69	\$11.49	\$22.34	\$0.00	\$105.52
	02/01/2027	\$73.09	\$11.49	\$22.34	\$0.00	\$106.92

Apprentice - TERRAZZO FINISHER - Local 3 Marble & Tile

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.67	\$11.49	\$22.34	\$0.00	\$64.50
2	60	\$36.80	\$11.49	\$22.34	\$0.00	\$70.63
3	70	\$42.94	\$11.49	\$22.34	\$0.00	\$76.77
4	80	\$49.07	\$11.49	\$22.34	\$0.00	\$82.90
5	90	\$55.21	\$11.49	\$22.34	\$0.00	\$89.04

Effective Date - 02/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.30	\$11.49	\$22.34	\$0.00	\$65.13
2	60	\$37.55	\$11.49	\$22.34	\$0.00	\$71.38
3	70	\$43.81	\$11.49	\$22.34	\$0.00	\$77.64
4	80	\$50.07	\$11.49	\$22.34	\$0.00	\$83.90
5	90	\$56.33	\$11.49	\$22.34	\$0.00	\$90.16

Notes:

Apprentice to Journeyworker Ratio:1:3

TEST BORING DRILLER	12/01/2023	\$48.33	\$9.65	\$18.22	\$0.00	\$76.20
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$49.81	\$9.65	\$18.22	\$0.00	\$77.68
	12/01/2024	\$51.28	\$9.65	\$18.22	\$0.00	\$79.15
	06/01/2025	\$52.78	\$9.65	\$18.22	\$0.00	\$80.65
	12/01/2025	\$54.28	\$9.65	\$18.22	\$0.00	\$82.15
	06/01/2026	\$55.83	\$9.65	\$18.22	\$0.00	\$83.70
	12/01/2026	\$57.33	\$9.65	\$18.22	\$0.00	\$85.20

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER	12/01/2023	\$44.45	\$9.65	\$18.22	\$0.00	\$72.32
LABORERS - FOUNDATION AND MARINE	06/01/2024	\$45.93	\$9.65	\$18.22	\$0.00	\$73.80
	12/01/2024	\$47.40	\$9.65	\$18.22	\$0.00	\$75.27
	06/01/2025	\$48.90	\$9.65	\$18.22	\$0.00	\$76.77
	12/01/2025	\$50.40	\$9.65	\$18.22	\$0.00	\$78.27
	06/01/2026	\$51.95	\$9.65	\$18.22	\$0.00	\$79.82
	12/01/2026	\$53.45	\$9.65	\$18.22	\$0.00	\$81.32

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2023	\$44.33	\$9.65	\$18.22	\$0.00	\$72.20
	06/01/2024	\$45.81	\$9.65	\$18.22	\$0.00	\$73.68
	12/01/2024	\$47.28	\$9.65	\$18.22	\$0.00	\$75.15
	06/01/2025	\$48.78	\$9.65	\$18.22	\$0.00	\$76.65
	12/01/2025	\$50.28	\$9.65	\$18.22	\$0.00	\$78.15
	06/01/2026	\$51.83	\$9.65	\$18.22	\$0.00	\$79.70
	12/01/2026	\$53.33	\$9.65	\$18.22	\$0.00	\$81.20
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2023	\$54.43	\$15.00	\$16.40	\$0.00	\$85.83
	06/01/2024	\$55.71	\$15.00	\$16.40	\$0.00	\$87.11
	12/01/2024	\$57.15	\$15.00	\$16.40	\$0.00	\$88.55
	06/01/2025	\$58.43	\$15.00	\$16.40	\$0.00	\$89.83
	12/01/2025	\$59.87	\$15.00	\$16.40	\$0.00	\$91.27
	06/01/2026	\$61.15	\$15.00	\$16.40	\$0.00	\$92.55
	12/01/2026	\$62.59	\$15.00	\$16.40	\$0.00	\$93.99
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.82	\$15.07	\$18.67	\$0.00	\$73.56
	06/01/2024	\$40.82	\$15.07	\$18.67	\$0.00	\$74.56
	12/01/2024	\$40.82	\$15.07	\$20.17	\$0.00	\$76.06
	01/01/2025	\$40.82	\$15.57	\$20.17	\$0.00	\$76.56
	06/01/2025	\$41.82	\$15.57	\$20.17	\$0.00	\$77.56
	12/01/2025	\$41.82	\$15.57	\$21.78	\$0.00	\$79.17
	01/01/2026	\$41.82	\$16.17	\$21.78	\$0.00	\$79.77
	06/01/2026	\$42.82	\$16.17	\$21.78	\$0.00	\$80.77
	12/01/2026	\$42.82	\$16.17	\$23.52	\$0.00	\$82.51
	01/01/2027	\$42.82	\$16.77	\$23.52	\$0.00	\$83.11
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$56.56	\$9.65	\$18.67	\$0.00	\$84.88
	06/01/2024	\$58.04	\$9.65	\$18.67	\$0.00	\$86.36
	12/01/2024	\$59.51	\$9.65	\$18.67	\$0.00	\$87.83
	06/01/2025	\$61.01	\$9.65	\$18.67	\$0.00	\$89.33
	12/01/2025	\$62.51	\$9.65	\$18.67	\$0.00	\$90.83
	06/01/2026	\$64.06	\$9.65	\$18.67	\$0.00	\$92.38
	12/01/2026	\$65.56	\$9.65	\$18.67	\$0.00	\$93.88
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2023	\$58.56	\$9.65	\$18.67	\$0.00	\$86.88
	06/01/2024	\$60.04	\$9.65	\$18.67	\$0.00	\$88.36
	12/01/2024	\$61.51	\$9.65	\$18.67	\$0.00	\$89.83
	06/01/2025	\$63.01	\$9.65	\$18.67	\$0.00	\$91.33
	12/01/2025	\$64.51	\$9.65	\$18.67	\$0.00	\$92.83
	06/01/2026	\$66.06	\$9.65	\$18.67	\$0.00	\$94.38
	12/01/2026	\$67.56	\$9.65	\$18.67	\$0.00	\$95.88
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$48.63	\$9.65	\$18.67	\$0.00	\$76.95
	06/01/2024	\$50.11	\$9.65	\$18.67	\$0.00	\$78.43
	12/01/2024	\$51.58	\$9.65	\$18.67	\$0.00	\$79.90
	06/01/2025	\$53.08	\$9.65	\$18.67	\$0.00	\$81.40
	12/01/2025	\$54.58	\$9.65	\$18.67	\$0.00	\$82.90
	06/01/2026	\$56.13	\$9.65	\$18.67	\$0.00	\$84.45
	12/01/2026	\$57.63	\$9.65	\$18.67	\$0.00	\$85.95
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2023	\$50.63	\$9.65	\$18.67	\$0.00	\$78.95
	06/01/2024	\$52.11	\$9.65	\$18.67	\$0.00	\$80.43
	12/01/2024	\$53.58	\$9.65	\$18.67	\$0.00	\$81.90
	06/01/2025	\$55.08	\$9.65	\$18.67	\$0.00	\$83.40
	12/01/2025	\$56.58	\$9.65	\$18.67	\$0.00	\$84.90
	06/01/2026	\$58.13	\$9.65	\$18.67	\$0.00	\$86.45
	12/01/2026	\$59.63	\$9.65	\$18.67	\$0.00	\$87.95
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	01/01/2024	\$39.24	\$15.07	\$18.67	\$0.00	\$72.98
	06/01/2024	\$40.24	\$15.07	\$18.67	\$0.00	\$73.98
	12/01/2024	\$40.24	\$15.07	\$20.17	\$0.00	\$75.48
	01/01/2025	\$40.24	\$15.57	\$20.17	\$0.00	\$75.98
	06/01/2025	\$41.24	\$15.57	\$20.17	\$0.00	\$76.98
	12/01/2025	\$41.24	\$15.57	\$21.78	\$0.00	\$78.59
	01/01/2026	\$41.24	\$16.17	\$21.78	\$0.00	\$79.19
	06/01/2026	\$42.24	\$16.17	\$21.78	\$0.00	\$80.19
	12/01/2026	\$42.24	\$16.17	\$23.52	\$0.00	\$81.93
	01/01/2027	\$42.24	\$16.77	\$23.52	\$0.00	\$82.53
VOICE-DATA-VIDEO TECHNICIAN <i>ELECTRICIANS LOCAL 96</i>	09/03/2023	\$34.49	\$13.00	\$17.22	\$0.00	\$64.71
	09/01/2024	\$35.29	\$13.99	\$17.57	\$0.00	\$66.85
	09/07/2025	\$36.12	\$14.98	\$17.91	\$0.00	\$69.01
	09/06/2026	\$37.04	\$15.96	\$18.27	\$0.00	\$71.27

Apprentice - VOICE-DATA-VIDEO TECHNICIAN - Local 96

Effective Date - 09/03/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.25	\$13.00	\$4.31	\$0.00	\$34.56
2	55	\$18.97	\$13.00	\$4.36	\$0.00	\$36.33
3	60	\$20.69	\$13.00	\$16.81	\$0.00	\$50.50
4	65	\$22.42	\$13.00	\$16.86	\$0.00	\$52.28
5	70	\$24.14	\$13.00	\$16.91	\$0.00	\$54.05
6	75	\$25.87	\$13.00	\$16.97	\$0.00	\$55.84
7	80	\$27.59	\$13.00	\$17.02	\$0.00	\$57.61
8	85	\$29.32	\$13.00	\$17.07	\$0.00	\$59.39

Effective Date - 09/01/2024

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.65	\$13.99	\$4.41	\$0.00	\$36.05
2	55	\$19.41	\$13.99	\$4.46	\$0.00	\$37.86
3	60	\$21.17	\$13.99	\$17.15	\$0.00	\$52.31
4	65	\$22.94	\$13.99	\$17.20	\$0.00	\$54.13
5	70	\$24.70	\$13.99	\$17.25	\$0.00	\$55.94
6	75	\$26.47	\$13.99	\$17.30	\$0.00	\$57.76
7	80	\$28.23	\$13.99	\$17.36	\$0.00	\$59.58
8	85	\$30.00	\$13.99	\$17.41	\$0.00	\$61.40

Notes:

Apprentice to Journeyworker Ratio:1:1

WAGON DRILL OPERATOR LABORERS - ZONE 2	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2023	\$38.11	\$9.65	\$17.14	\$0.00	\$64.90
	06/01/2024	\$39.44	\$9.65	\$17.14	\$0.00	\$66.23
	12/01/2024	\$40.77	\$9.65	\$17.14	\$0.00	\$67.56
	06/01/2025	\$42.16	\$9.65	\$17.14	\$0.00	\$68.95
	12/01/2025	\$43.54	\$9.65	\$17.14	\$0.00	\$70.33
	06/01/2026	\$44.98	\$9.65	\$17.14	\$0.00	\$71.77
	12/01/2026	\$46.42	\$9.65	\$17.14	\$0.00	\$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2023	\$55.03	\$15.00	\$16.40	\$0.00	\$86.43
	06/01/2024	\$56.33	\$15.00	\$16.40	\$0.00	\$87.73
	12/01/2024	\$57.78	\$15.00	\$16.40	\$0.00	\$89.18
	06/01/2025	\$59.08	\$15.00	\$16.40	\$0.00	\$90.48
	12/01/2025	\$60.53	\$15.00	\$16.40	\$0.00	\$91.93
	06/01/2026	\$61.83	\$15.00	\$16.40	\$0.00	\$93.23
	12/01/2026	\$63.28	\$15.00	\$16.40	\$0.00	\$94.68

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
WATER METER INSTALLER <i>PLUMBERS LOCAL 4</i>	09/01/2023	\$52.55	\$9.90	\$17.42	\$0.00	\$79.87
	03/01/2024	\$53.95	\$9.90	\$17.42	\$0.00	\$81.27
	09/01/2024	\$55.35	\$9.90	\$17.42	\$0.00	\$82.67
	03/01/2025	\$56.75	\$9.90	\$17.42	\$0.00	\$84.07
	09/01/2025	\$58.15	\$9.90	\$17.42	\$0.00	\$85.47
	03/01/2026	\$59.55	\$9.90	\$17.42	\$0.00	\$86.87
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						
<b>Outside Electrical - East</b>						
CABLE TECHNICIAN (Power Zone) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$29.67	\$9.25	\$1.89	\$0.00	\$40.81
For apprentice rates see "Apprentice- LINEMAN"						
CABLEMAN (Underground Ducts & Cables) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$42.03	\$9.25	\$10.27	\$0.00	\$61.55
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN CDL <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$34.62	\$9.25	\$10.07	\$0.00	\$53.94
For apprentice rates see "Apprentice- LINEMAN"						
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$27.20	\$9.25	\$1.82	\$0.00	\$38.27
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class A CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$42.03	\$9.25	\$14.35	\$0.00	\$65.63
For apprentice rates see "Apprentice- LINEMAN"						
EQUIPMENT OPERATOR (Class B CDL) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$37.09	\$9.25	\$10.87	\$0.00	\$57.21
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$27.20	\$9.25	\$1.82	\$0.00	\$38.27
For apprentice rates see "Apprentice- LINEMAN"						
GROUNDMAN -Inexperienced (<2000 Hrs.) <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$22.25	\$9.25	\$1.82	\$0.00	\$33.32
For apprentice rates see "Apprentice- LINEMAN"						
JOURNEYMAN LINEMAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	08/30/2020	\$49.45	\$9.25	\$17.48	\$0.00	\$76.18

Apprentice - LINEMAN (Outside Electrical) - East Local 104

Effective Date - 08/30/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$29.67	\$9.25	\$3.39	\$0.00	\$42.31
2	65	\$32.14	\$9.25	\$3.46	\$0.00	\$44.85
3	70	\$34.62	\$9.25	\$3.54	\$0.00	\$47.41
4	75	\$37.09	\$9.25	\$5.11	\$0.00	\$51.45
5	80	\$39.56	\$9.25	\$5.19	\$0.00	\$54.00
6	85	\$42.03	\$9.25	\$5.26	\$0.00	\$56.54
7	90	\$44.51	\$9.25	\$7.34	\$0.00	\$61.10

Notes:

Apprentice to Journeyworker Ratio:1:2

TELEDATA CABLE SPLICER OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)  
Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

\*\* Multiple ratios are listed in the comment field.  
\*\*\* APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.  
\*\*\*\* APP to JM; 1:1, 1:2, 2:3, 2:4, 3:5, 4:6, 4:7, 5:8, 6:9, 6:10, 7:11, 8:12, 8:13, 9:14, 10:15, 10:16, etc.

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**MINORITY/WOMEN BUSINESS ENTERPRISE and WORKER UTILIZATION  
PROGRAM**

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**BIDDERS MUST COMPLETE AND SUBMIT FORM E00-101  
WHICH IS PART OF THE BID SUBMISSION**

**INCLUDED IN THIS SECTION ARE COPIES OF THE AGREEMENT BETWEEN THE CITY AND THE MASSACHUSETTS COMMISSION AGAINST DISCRIMINATION WHICH GOVERN THE ACTIVITIES ADDRESSED BY THE E00-101 FORM.**

**Direct any questions about these forms and procedures to:**

**Purchasing Division  
City Hall – Room 201  
455 Main Street  
Worcester, MA 01608  
(508) 799-1220  
[purchasing@worcesterma.gov](mailto:purchasing@worcesterma.gov)**

**CITY OF WORCESTER**

**MINORITY/WOMEN BUSINESS ENTERPRISE AND WORKER UTILIZATION  
PROGRAM**

**AFFIDAVIT OF ACKNOWLEDGEMENT and CERTIFICATE OF COMPLIANCE**

Form E00-101

**TO ALL CONTRACTORS:**

General Bidders and Filed Subbidders shall complete and submit this form as part of their bid. Non-Filed Subcontractors shall complete and submit this form to the General Contractor before beginning work.

**I. THE MINORITY AND WOMEN BUSINESS AND UTILIZATION PROGRAMS**

Pursuant to an agreement between the City of Worcester and the Commonwealth of Massachusetts, during the performance of any contract with the City of Worcester, all Contractors, Filed Subcontractors, and Subcontractors are bound by the obligations of the Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program. **All contractors and subcontractors if subcontracting any portion of the work are obligated to make a good faith effort to engage 10% minority and 15% women owned businesses. Further, each contractor shall make a good faith effort to maintain a workforce that is 38% people of color and 10% women.**

The undersigned hereby certifies that he/she is familiar with the provisions of The Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Programs and agrees to adhere to the provisions therein.

II. This contractor **IS** ☐ **or IS NOT** ☐ certified by the State Office of Minority and Women Business Assistance to be a minority or women owned and operated business; and

III. **WILL** ☐ **or WILL NOT** ☐ subcontract any portion of this contract.

Project Name: \_\_\_\_\_ Bid Number: \_\_\_\_\_

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

\_\_\_\_\_  
Business Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Address

\_\_\_\_\_  
Date



**MINORITY/WOMEN BUSINESS ENTERPRISE AND WORKER UTILIZATION  
PROGRAM**

FORM EOO-D/102

**BIDDERS INFORMATION ON PROCEDURES AND FORMS**

To make all contractors aware of their obligation to follow certain procedures and file appropriate reports pertaining to those procedures, the following is an outline of Minority/Women Business Enterprise and Worker Utilization Program. Also included here is the Affidavit of Acknowledgement and Certification of Compliance, Form E00-101. This form is to be completed and filed as part of your bid.

The following documents are included in this bid:

1. **AFFIDAVIT OF ACKNOWLEDGEMENT AND CERTIFICATION OF COMPLIANCE**, E00-101

This form is to be completed by all General Contractors and Filed Subcontractors and submitted as part of their bid on all City of Worcester construction projects.

2. **SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM** E00-D/3

The agreement between the City of Worcester and the Massachusetts Commission Against Discrimination establishing the goals and procedures for the utilization of minority and women owned businesses and minority and women workers on City Construction projects.

3. **SUCCESSFUL BIDDER'S OBLIGATION TO PROCEDURES AND FORMS**, EE0-D/103

This is a listing of the procedures and forms that will be provided to the successful bidder for use prior to beginning work and at various times throughout the life of the project.

**THE CITY OF WORCESTER**

**SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY ANTI-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM**

**I. AGREEMENT**

During the performance of this contract, the Contractor or Filed Subcontractor and all subcontractors (herein collectively referred to as the Contractor), for himself/herself, his/her assignees, and successors in interest, agree as follows:

1. In conjunction with the performance of work under this contract, the contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, sex, or handicap. The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising; layoff; termination, rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship. The contractor shall post hereafter in a conspicuous place, available to employees and applicants for employment, notices to be provided by the Commission setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (M.G.L. Chapter 151 B).
2. In connection with the performance of work under this contract, the Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, age, sex, or handicap, and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age, sex, or handicap. The purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future City public construction project.

**II. OBLIGATION**

1. As part of the obligation of remedial action under the foregoing section, the Contractor shall maintain goals on this project no less than 38 percent (38%) people of color employee and 10 percent (10%) women employee hours of the total work hours in each job category including but not limited to, bricklayers, carpenters, cement masons, electricians, iron workers, operating engineers, and those “classes of work” enumerated in section 44C of chapter 149 of the Massachusetts General Laws.

In the hiring of minority and women journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the City, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the City.

### **III. REPORTS**

1. Contractor shall prepare projected manning tables on a quarterly basis, **Quarterly Projected Workforce Table, E00-105**. These shall be broken down into projections by week, for workers required in each trade. Copies shall be furnished to the City one week in advance of the commencement of the period covered, and at such time as there is a need to be updated during the period.
2. Records of employment referral orders, prepared by the Contractor, shall be made available to the City on request.
3. The Contractor shall prepare the **Certified Payroll Report on a weekly basis**, which lists the hours worked in each trade by each employee identified as minority, non-minority, male and female. Copies of these shall be provided to the City at the end of each week.

### **IV. SUBCONTRACTING WORK**

If the Contractor shall use any Subcontractor on any work performed under this contract, affirmative action shall be taken to negotiate with qualified minority and women contractors. This affirmative action shall cover both pre-bid and post-bid periods.

### **V. EMPLOYMENT**

In the employment of journeymen, apprentices, trainees, and advanced trainees, 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 to which the employment relates, and , secondly, to citizens of the Commonwealth generally, and, if such cannot be obtained in sufficient numbers, then to citizens of the United States.

### **VI. RIGHT OF ACCESS**

A designee of the City shall have the right of access to the construction site.

### **VII. COMPLIANCE WITH REQUIREMENTS**

The contractor shall comply with the provisions of Executive Order No. 227 amending and revising Executive Order No. 74, as amended by executive Order No. 16 dated May 1, 1975 and of Chapter 151B as amended, of the Massachusetts General Laws, both of which are herein incorporated by reference and made part of this contract.

### **VIII. NON-DISCRIMINATION**

The Contractor, in the performance of all work after the award, and prior to completion of the contract work, will not discriminate on the grounds of race, color, religious creed, national origin, age, sex, or handicap in employment practices, in the selection or retention of other contractors or in the procurement of materials and rentals of equipment.

### **IX. SOLICITATIONS FOR SUBCONTRACTORS, AND FOR THE PROCUREMENT OF MATERIALS AND EQUIPMENT**

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or supplies, each entity solicited shall be notified in writing by the contractor of the

Contractor's obligation under this contract relative to non-discrimination and affirmative action.

**X. CONTRACTOR'S CERTIFICATION**

Contractors bidding as General Contractors or Filed Sub-contractors shall certify that they will comply with the minority and women manpower and business enterprise goals and specific affirmative action steps contained in this Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program by signing and submitting with the bid the **Affidavit of Acknowledgement and Certification of Compliance, Form E00-101**.

If any Contractor subcontracts any portion of the work, the Contractor is required to obtain from each Subcontractor, regardless of tier, an Affidavit of Acknowledgement and Certification of Compliance, Form E00-101 stating that it will comply with the minority and women subcontracting and manpower ratios and specific affirmative action steps contained in this Supplemental Equal Employment Opportunity Anti-Discrimination and Affirmative Action Program by signing this form and submitting it to the Contractor for submission to the awarding authority not later than five working days following the opening of the bids.

**XI. COMPLIANCE – INFORMATION, REPORTS, AND SANCTIONS**

1. The Contractor will provide all information and reports required by the City on instructions issued and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the City to affect the employment of personnel. This provision shall apply only to information pertinent to the City's supplementary affirmative action contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the City and shall set forth what efforts have been made to obtain the information.
2. Whenever the City believes the Contractor may not be operating in compliance with the terms of this Section, the City directly, or through its designated agent, shall conduct an appropriate investigation, and confer with the parties, to determine if such Contractor is operating in compliance with the terms of this Section. If the City or its agent finds the Contractor not in compliance, it shall make a preliminary report of non-compliance and notify such Contractor in writing of such steps as will in the judgment of the City or its agent bring such Contractor into compliance. In the event that such Contractor fails or refuses to fully perform such steps, the City shall make a final report of non-compliance, and recommend the imposition of one or more of the sanctions listed below. If, however, the City believes the Contractor has taken or is taking every possible measure to achieve compliance, it shall not make final a report on non-compliance. 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.
  - a. The recovery by the administering agency from the Contractor of 1/10 of 1% of the contract award price or \$1000.00, 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 Contractor as 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;

- b. The suspension of any payment or part thereof due under the contract until such time as the Contractor or any Subcontractor is able to demonstrate compliance with the terms of the contract;
  - c. The termination, or cancellation, of the contract, in whole or in part, unless the Contractor is able to demonstrate within a specified time his compliance with the terms of the contract;
  - d. The denial to the Contractor of the right to participate in any further contracts awarded by the administering agency for a period of up to three years.
3. If at any time after the imposition of one or more of the above sanctions a Contractor is able to demonstrate that he/she is in compliance with this section, he/she may request the administering agency in consultation with the City, to suspend the sanctions conditionally, pending a final determination by the City as to whether the contractor is in compliance. Upon final determination, based on the recommendations of the adjudicatory body, the City shall either lift the sanctions or reimpose them.
4. Sanctions enumerated under Section XII-2 shall not be imposed except after an adjudicatory proceeding, as that term is used in M.G.L. Chapter 30, has been conducted. No investigation by the City or its agent shall be initiated without prior notice to the Contractor.

## **XII. 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 decisions of such court shall not affect or impair any of the remaining provisions.

## **XIII. WAIVER**

The City of Worcester reserves the right to waive any stipulation in the M/WBE Program when deemed necessary or appropriate for the general good of the City and its programs.

## **DEFINITIONS**

Contractor	Except where otherwise specifically stated the term "Contractor" shall mean any General Contractor, Filed Subcontractor or Non-Filed Subcontractor.
City	is the City of Worcester , Massachusetts
M/WBE	is Minority and Women Business Enterprise as certified by the State Office of Minority and Women Business Assistance to be 51% or more minority or women owned and operated.

**MINORITY/WOMEN BUSINESS ENTERPRISE AND WORKER UTILIZATION  
PROGRAMS**

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FORM E00-D/103

**SUCCESSFUL BIDDER'S OBLIGATION TO PROCEDURES AND FORMS**

All successful bidders on City of Worcester construction projects will receive a package of procedures and forms that are to be used at specific times throughout the life of the project.

The following is a list of the documents that will be sent to successful bidders when this office is notified that a contract has been, or is about to be, executed.

**I. BUILDING TRADES – CONTACT LIST, E00-D/6**

When a contractor cannot fulfill the worker utilization percentages, the appropriate building trades locals may be contacted to request assistance in locating and engaging qualified workers.

**II. AFFIDAVIT OF ACKNOWLEDGEMENT and CERTIFICATION OF COMPLIANCE, (FOR SUBCONTRACTORS), E00-101**

If any portion of a project is to be subcontracted at any tier, each additional subcontractor shall complete this form and send it to the Contract Compliance Office within two business days of contract execution and PRIOR to beginning work on the project.

**III. TABLE OF PROJECTED SUBCONTRACTORS, E00-103**

The use of subcontractors at any tier shall be reported to the Contract Compliance Office on this form prior to the subcontractor beginning work on the project.

**IV. SUBCONTRACTOR'S CERTIFICATE OF INTENT TO PARTICIPATE, E00-104**

Each Non-Filed subcontractor engaged to work on a project shall complete and forward this form to the Contract Compliance Office prior to beginning work on the project.

**V. QUARTERLY PROJECTED WORKFORCE TABLE, E00-105**

Each General Contractor, Filed Subcontractor and Non-Filed Subcontractor, regardless of tier, shall complete and forward this form to the Contract Compliance Office prior to beginning work and again for each additional three month period throughout the life of the project.

## **VI. REQUEST FOR MODIFICATION**

### **E00-106B, MINORITY AND WOMEN BUSINESS UTILIZATION E00-106C, MINORITY AND WOMEN UTILIZATION IN THE WORK FORCE**

Any General Contractor, Filed Subcontractor or Non-Filed Subcontractor, regardless of tier, not meeting the minority and women goals, may file a request for modification after having exhausted all possible sources. Requests for modification are considered **ONLY** after attempts to fulfill these mandates have been documented and submitted to the Contract Compliance Office with the appropriate sections of this form.

A modification or waiver will not be granted because a contractor wishes to use an existing workforce that does not achieve the goals of 38% of total work hours to be worked by people of color and 10% of total work hours to be worked by women; and,

If subcontracting, does not meet the goals of 10% of the contract value for Minority Business Enterprises and 15% of the contract value to Women Business Enterprises.

## **VII. WEEKLY PAYROLL REPORT FORM & STATEMENT OF COMPLIANCE**

At the end of each week of work, all Contractors, Filed Subcontractors, and Non-Filed Subcontractors, regardless of tier, shall complete and submit these forms to the Contract Compliance Office.

The Contract Compliance Office will also accept computer generated payroll reports. However, if the computer payroll does not reflect the prevailing wage, the Contractor must provide a breakdown of the benefits paid to each employee which, when added to the base wage, equals the prevailing wage.

The City of Worcester regards the monitoring of weekly certified payroll reports to be a most important function. Therefore, all certified payroll reports shall be scrutinized by the Contract Compliance Office and any violations of the Commonwealth's prevailing wage law will be vigorously enforced.

## **CORI COMPLIANCE / GENDER IDENTITY & EXPRESSION**

Vendors entering into contracts with the City of Worcester must affirm that their policies regarding CORI information are consistent with the CORI hiring standards set by the City of Worcester. The City's CORI hiring policy may be downloaded from City of Worcester website [www.worcesterma.gov](http://www.worcesterma.gov). Questions pertaining to the City's CORI hiring policy are to be directed to the Equal Employment Opportunity Officer, Executive Office of Human Resources at [hr@worcesterma.gov](mailto:hr@worcesterma.gov)

### **CERTIFICATION**

#### **All Vendors must check one of the three lines below.**

1.        \_\_\_\_\_ CORI checks are not performed on any Applicants.
2.        \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor, by affixing a signature below, affirms under penalties of perjury that its CORI policy is consistent with the standards set forth with the CORI hiring standards set by the City of Worcester.
3.        \_\_\_\_\_ CORI checks are performed on some or all Applicants. The Vendor's CORI policy is not consistent with the standards set forth with the CORI hiring standards set by the City of Worcester. (a copy of the Vendor's written CORI policy must accompany this form).

\_\_\_\_\_  
(Typed or printed name of person  
signing quotation, bid or proposal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Business

A Vendor with a CORI policy that does NOT conform to the City standards must check Line 3. Vendors who check Line 3 will not be permitted to enter into contracts with the City, absent a waiver granted by the City. For any waiver to be granted, a written request should accompany bid submission explaining in detail why the vendor fails or refuses to comply with the City's CORI hiring standards.

#### **Gender Identity Standards Applicable to Vendors**

The city will do business only with vendors that have adopted and employ Gender Identity policies, practices and standards that are consistent with city standards.

The city may review all vendors' Gender Identity policies and practices for consistency with city standards.

By signing this bid, vendor confirms that their Gender Identity policies, practices and standards are consistent with those of the City of Worcester. For further information please refer to the Ordinance Relative to Gender Identity and Expression found at [www.worcesterma.gov](http://www.worcesterma.gov) or call the LGBTQ Liaison/Director of Human Rights & Disabilities at 508-799-8486.



**VENDOR/SERVICE PROVIDER CERTIFICATION**

TO BE AWARDED A VENDOR/SERVICE CONTRACT, ALL PARTS OF THIS FORM THAT APPLY TO YOUR BID MUST BE COMPLETED AND SUBMITTED WITH YOUR BID.

Bidder is a Minority Business Enterprise (MBE) - see reverse for definition Yes \_\_\_\_\_ No \_\_\_\_\_

Bidder is a Woman Business Enterprise (WBE) - see reverse for definition Yes \_\_\_\_\_ No \_\_\_\_\_

IF SUBCONTRACTING any portion of the service covered by this bid, the successful bidder shall demonstrate a good faith effort to seek and use TEN PERCENT (10%) Minority and FIFTEEN PERCENT (15%) Women-owned Businesses.

A. YOUR INTENT TO SUBCONTRACT. CHECK (✓) THE APPROPRIATE BOX:

☐

No work will be subcontracted. Complete Section "C" only.

☐

Some work will be subcontracted. Complete Section "B" and "C"

B. LIST SUBCONTRACTORS Engaged to do any portion of this Bid.

Check (✓) the appropriate box and give complete information.

☐

MBE

☐

WBE

☐

OTHER

\_\_\_\_\_

Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Work subcontracted: \_\_\_\_\_ Dollar Value \$ \_\_\_\_\_

Check (✓) the appropriate box and give complete information.

☐

MBE

☐

WBE

☐

OTHER

\_\_\_\_\_

Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Work subcontracted: \_\_\_\_\_ Dollar Value \$ \_\_\_\_\_

C. ITEM/SERVICE BID ON: \_\_\_\_\_ BID NO.: \_\_\_\_\_

Firm Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City/State/Zip \_\_\_\_\_

**For purposes of the City’s classification and reporting program, the following definitions apply:**

**Minority Business Enterprise (MBE)** – a for profit enterprise, regardless of size, physically located in the United States or its trust territories, which is owned, operated and controlled by minority group members. “Minority group members” are U.S. citizens who are African-American, Latin American, Native American, Asian-Pacific American and Asian-Indian American. “Ownership” by minority individuals means the business is at least 51% owned by such individuals or, in the case of a publicly owned business, at least 51% of the stock is owned by one or more such individuals. Further, those minority group members control the management and daily business operations.

**Women Business Enterprise (WBE)** – a for profit enterprise, regardless of size, physically located in the United States or its trust territories, which is owned, operated and controlled by women group members. “Ownership” by women means the business is at least 51% owned by women or, in the case of a publicly owned business, at least 51% of the stock is owned by one or more women. Further, those women group members control the management and daily business operations.

STATE LAW MANDATES THAT TO DO BUSINESS WITH THE CITY OF WORCESTER the Massachusetts Revenue Enforcement and Protection Program of 1983 requires that the following be supplied with your bid:

DATE: \_\_\_\_\_

Pursuant to Mass. G.L. Ch. 62C, Section 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all Massachusetts State Tax Returns and paid all Massachusetts State and City Taxes required under law.

COMPANY NAME: \_\_\_\_\_

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

CITY OR TOWN: \_\_\_\_\_

STATE: \_\_\_\_\_

ZIP CODE: \_\_\_\_\_

TELEPHONE NO.: \_\_\_\_\_

FAX NO. \_\_\_\_\_

SOCIAL SECURITY OR FEDERAL IDENTIFICATION NO.: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_

**FAILURE TO COMPLETE THIS FORM MAY RESULT IN REJECTION OF BID AND/OR REMOVAL FROM CITY BID LIST.**

#### **RIGHT TO KNOW**

Any vendor who receives an order or orders resulting from this invitation agrees to submit a Material Safety Data Sheet (MSDS) for each toxic or hazardous substance or mixture containing such substance, pursuant to M.G.L. C111f 228, 9 and 10 and the regulations contained in 441 CMR SS21.06 when deliveries are made. The vendor agrees to deliver all containers properly labeled pursuant to M.G.L. C111F S7 and the regulation contained in 441 CMR S21-05. Failure to submit a MSDS and/or labels on each container will place the vendor in noncompliance with the purchase order and/or contract. Failure to furnish MSDS's and/or labels on each container may result in Civil or Criminal penalties, including bid debarment and action to prevent the vendor from selling said substances, or mixtures containing said substances within the Commonwealth. All vendors furnishing substances or mixtures subject to Chapter 1.1F or M.G.L. are cautioned to obtain and read the law and rules and Regulations referenced above. Copies can be obtained from the State House Book Store, Secretary of State, State House, Room 117, Boston, MA (617) 727-2834 for \$2.00 plus \$.65 postage. In addition, copy of "Right to Know" law is available in Purchasing Department for review.

## WAGE THEFT PREVENTION CERTIFICATION

By the Revised Ordinances, Chapter 2, Section 39, the city of Worcester has established requirements for certain contracts in an effort to prevent wage theft. Prospective contractors must provide the following certification and disclosures with their bids/proposals. The City will not award a contract without receipt of this completed certification.

**INSTRUCTIONS:** A prospective contractor shall **(a)** check Box 1 *OR* Box 2, as applicable, **(b)** check Boxes 3-5, **(c)** sign this form certifying compliance with the Wage Theft Prevention Ordinance, and **(d)** submit the completed form with its bid/proposal. For multi-year contracts, the successful bidder/proposer shall submit the completed form annually to the Purchasing Director.

Pursuant to the Wage Theft Prevention Ordinance, successful bidders/proposals shall post in conspicuous places the Mass. Wage and Hour Laws notice informing employees of the protections of G.L. c. 149, Sec. 151, and the Fair Labor Standards Act (FLSA). The notice may be found at <http://www.mass.gov/ago/docs/workplace/wage/wagehourposter.pdf>

ALL BIDDERS/PROPOSERS MUST CERTIFY THAT [check either Box 1 or Box 2, as applicable]

1. ☐ Neither this vendor/contractor nor any prospective subcontractor has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or FLSA, within three (3) years prior to the date of this bid/proposal submission.

**OR**

2. ☐ This vendor/contractor, or a prospective subcontractor, has been subject to a federal or state criminal or civil judgment, administrative citation, final administrative determination, or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or FLSA, within three (3) years prior to the date of this bid/proposal submission. The firm shall provide a copy of the same with the bid/proposal.

ALL BIDDERS/PROPOSERS MUST CERTIFY EACH OF THE FOLLOWING

3. ☐ Within five (5) days of receiving notice, the vendor/contractor shall report and provide a copy of any federal or state criminal or civil judgment, administrative citation, final administrative determination, order or debarment resulting from a violation of G.L. c. 149, G.L. c. 151, or FLSA imposed on this firm or on any prospective subcontractor while any bid/proposal to the City is pending and, if awarded a contract, during the term of the contract provide the same to the Purchasing Director.

4. ☐ A vendor/contractor awarded a contract that has disclosed under paragraph 3 above shall, upon request, furnish monthly certified payrolls for the City contract as the Purchasing Director instructs and shall, at the discretion of the Purchasing Director, obtain a wage/payment bond or other suitable insurance as required by the Wage Theft Prevention Ordinance. Vendors/contractors subject to a state or federal debarment for violation of the above laws or prohibited from contracting with the Commonwealth are prohibited from contracting with the City, and upon a finding or order of debarment or prohibition, the City may terminate the contract.

5. ☐ The contractor shall post notices provided by the City in conspicuous places informing employees of the protections of the Wage Theft Prevention Ordinance, and applicable local, state and federal law.

The undersigned certifies under the pains and penalties of perjury that the contractor is in compliance and agrees to remain in compliance with the provisions of the Wage Theft Prevention Ordinance for the term of its contract with the City.

**Signed:** \_\_\_\_\_

**Print Name & Title**

\_\_\_\_\_  
**Company Name**

\_\_\_\_\_  
**Date**

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END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 00824

### SPECIAL PROJECT REQUIREMENTS

#### PART 1 – GENERAL

##### 1.01 WORK INCLUDED:

A. The scope of work includes construction of but not limited to:

- Schedule
- Permits
- Submittal of all materials for the installation of light fixtures and surrounding site improvements.
- Pedestrian and traffic management
- Site preparation & demolition
- Installation of utility equipment
- Installation of light fixtures
- Installation of steel bollards
- Installation of concrete sidewalk

#### PART 2 - PRODUCTS (NOT APPLICABLE)

#### PART 3 - EXECUTION

##### 3.01 GENERAL:

- A. The Contractor shall be responsible for scheduling its activities and the activities of any subcontractors involved, to meet the completion date, or milestones, established for the contract. Scheduling of the work shall be coordinated with the Owner and Engineer.
- B. The Construction Sequence Requirements shall be used by the Contractor to form a complete schedule for the project, which shall be coordinated with the Owner and Engineer. Prior to performing any work at the site, the Contractor shall submit a detailed plan to the Engineer for review. The plan shall describe the proposed sequence, methods, and timing of the work.
- C. The Contractor shall not commence with any work on site until all materials required to complete the installation of the light fixtures has been submitted and approved by the Engineer and Owner.

The Contractor shall not commence any work until all materials are in hand and ready for installation. The Contractor shall then notify the Engineer and Owner that they are able to commence the work in a continuous period that has been agreed upon by

## MADISON STREET UNDERPASS LIGHTING

the Engineer and Owner. The Contractor shall not mobilize and commence any work without approved materials in hand and labor is available to complete the installation. The Contractor shall only mobilize, commence activities on site including but not limited to site preparation, demolition, installation of new materials and all other necessary work required to complete the work identified herein once all materials and labor are available to commence and complete all work in a single continuous period.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 00890

### PERMITS

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION:

This Section provides specific information and defines specific requirements of the Contractor regarding the preparation and acquisition of permits required to perform the work of this project.

##### 1.02 RELATED WORK:

- A. Section 01110, CONTROL OF WORK AND MATERIALS

##### 1.03 GENERAL REQUIREMENTS:

- A. The Contractor shall obtain and pay for the permits listed below, which are required for this project. The Owner may assist in obtaining certain permits, as indicated. The Contractor shall obtain and pay for all other permits required, as defined under the Permits subsection of Section 00700, GENERAL CONDITIONS.

---

#### Permits by Contractor

\*, \*\*City of Worcester Permits (various)

\*Genesee and Wyoming Railroad Services – Contractor Access / Occupancy on Railroad Property Right of Entry Application

Note:

*\*Contractor shall prepare permit application and obtain the permit after contract is awarded, bearing all expenses.*

*\*\*Owner will pay for and/or waive the permit application fee, if applicable.*

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- B. Contractor Right of Entry License Agreement - The Owner has applied for and received a conditional Contractor Right of Entry License Agreement from Genesee and Wyoming Railroad Services for Contractor Access/Occupancy on Railroad Property. The Contractor shall complete the attached Contractor Right of Entry License Agreement, Permit No. PWRZ230924005 and submit the entire Agreement to the Providence & Worcester Railroad by email to Brittany Lewis [brittany.lewis@gwrr.com](mailto:brittany.lewis@gwrr.com) along with documentation which authorizes the signing party to enter into legally binding agreements on behalf of the CITY OF WORCESTER. **Do not date the agreement prior to returning it, once dated the agreement begins to expire.** The Contractor shall comply with the terms of said Agreement including, but not limited to, insurance requirements and fees as stipulated in the Right of Entry permit prior to the start of construction.



## MADISON STREET UNDERPASS LIGHTING

### C. Insurance Requirements

#### 1. Minimum Requirements

- a. Commercial General Liability coverage - \$2M per occurrence & \$6M aggregate.
- b. Excess or Umbrella liability coverage – This policy can be used to meet the minimum limits for the General Liability coverage.
- c. Auto - \$1M per occurrence.
- d. Workers Compensation - \$1M **Please note** if the limits of Workers Compensation and Employers liability shown on the certificate provided are less than \$1M required by the agreement, please provide confirmation the umbrella or excess liability covers the difference in the amount shown on the on the certificate to bring it to the minimum limit of \$1M as required by the agreement.
- e. **The General Liability certificate is also required to show proof of CG2417 or its equivalent – Contractual Liability Railroads (removes any exclusion for work within 50' of the CGL Policy).** If your policy does not carry this exclusion please note this under Description of Operations on the certificate.

#### 2. Description of Operations

- a. Under Description of operations show the following: The policies shown provides additional insured status to the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder. All policies include a blanket automatic waiver of subrogation endorsement that provides this feature in favor of the certificate holder and any other party(ies) specified in or required by written contract between the named insured and the certificate holder.

#### 3. Certificate Holder

- a. Under Certificate Holder:  
Providence and Worcester Railroad Company its Indemnitees and Shareholders  
Attn: Real Estate  
13901 Sutton Park Dr., S., Suite 270  
Jacksonville, FL 32224

### D. Certificate of Railroad Protective Liability (RPL) insurance

- E. A current Certificate of Railroad Protective Liability insurance (RPL) is required which shows Providence and Worcester Railroad Company its Indemnitees and Shareholders as named Insured. If the Contractor does not carry a policy of Railroad Protective Liability insurance, this coverage can be secured through the railroad at the cost of \$1,150 for 60 days.
- F. All certificates of insurance are required to reference the agreement no. PWRZ230924005.

## MADISON STREET UNDERPASS LIGHTING

### PART 2 - PRODUCTS

Not Used.

### PART 3 – EXECUTION

#### 3.01 PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS:

- A. The Contractor shall perform the work in accordance with the Contract Documents, including the attached permits/order of conditions, and any applicable municipal requirements.
- B. Prior to commencing any construction activities, the Contractor shall demonstrate to the Owner and the Engineer, through on-site inspection and submitting copies of permits or approvals, that it is in full compliance with the terms and conditions of all permits and agreements specified herein. The Contractor shall maintain full compliance with all permits throughout the performance of the work, and upon request, grant access to permitting authorities to inspect the site for the purpose of verifying such compliance.

END OF SECTION

## CONTRACTOR RIGHT OF ENTRY LICENSE AGREEMENT

THIS AGREEMENT (the “Agreement”) is made as of \_\_\_\_\_, 2023, (the “Effective Date”), by and between Providence and Worcester Railroad Company (“Railroad”) and City of Worcester (“Licensee”).

WITNESSETH:

WHEREAS, Licensee has submitted a written request or application to Railroad requesting permission to enter Railroad’s property at or near the location specified in Section 1 below for the limited purpose of performing certain work; and

WHEREAS, Railroad is willing to grant to Licensee the limited right and permission to enter upon such property for the limited purpose of performing such work in accordance with the terms provided herein.

NOW THEREFORE, in consideration of these promises, the Agreement herein, and other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

### Section 1. LOCATION/PAYMENT/WORK PRACTICES:

1.1 Railroad hereby conveys to Licensee the limited right and permission to enter upon the Railroad’s property located at or near Milepost 42.91, MAIN LINE Subdivision, Latitude: 42.257181, Longitude: -71.801742 located in WORCESTER, in the County of WORCESTER, State of MA as reflected on the map attached hereto as Exhibit A and incorporated herein by reference (the “Property”) for the purpose of Licensee, through its employees, agents or contractors to ACCESS TO INSTALL LOW PROFILE DECORATIVE LED LIGHT FIXTURES, MOUNTED AND FIED TO THE CEILING OF TH RR UNDERPASS (the “Work”); and

1.2 Upon payment of a fee referenced in Section 11 herein, Railroad hereby grants to Licensee, the right and permission to enter upon Railroad’s Property for the purpose of performing the Work, subject to the terms, conditions and provisions set forth in this Agreement.

1.3 The Work shall be performed at the entire cost and expense of Licensee, in accordance with good and sound engineering practices, to the satisfaction of Railroad’s Chief Engineer, or his duly authorized representative (the “Representative”), and in a manner to avoid accident, damage or harm to persons or property and delays to or interference with the operations of Railroad.

### Section 2. PRIOR NOTICE/FLAGGING/OTHER CONDITIONS.

2.1 Licensee or Licensee’s contractor shall notify the Representative at least ten (10) business days before proceeding with any phase of the Work on the Property and shall abide by the instructions of the Representative concerning the safety of the Railroad. All persons entering the Property pursuant to the permission granted herein shall comply with and perform the Work in accordance with the following policies:

- a) Genesee & Wyoming Inc.’s Contractor Safety Rules, available at: <https://www.gwrr.com/wp-content/uploads/2021/05/GWI-Contractor-Safety-Rules.pdf>; and
- b) Genesee & Wyoming Inc.’s Code of Ethics and Conduct, available at: [gwrr.com/about\\_us/code-of-ethics](http://gwrr.com/about_us/code-of-ethics)

The following Personal Protective Equipment (“PPE”) must be worn at all times on the Property: Hard hats, safety footwear, certified eye protection with side shields and approved high-visibility work wear. Additional forms of PPE may be required under certain circumstances as specified in the aforesaid Contractor Safety Rules or as required by the Representative.

2.2 Railroad shall furnish such personnel, flagman or watchman which, in Railroad's sole discretion, may be necessary to protect the facilities and traffic of Railroad during the performance of the Work. If flagging or other special protective or safety measures are performed by Railroad, Railroad will invoice Licensee for such expenses incurred by Railroad based on the current fee schedule annexed hereto as Exhibit D. Licensee shall pay such invoices within thirty (30) days of Licensee's receipt of billing. If Railroad performs any flagging, or other special protective or safety measures are performed by Railroad, Licensee agrees that Licensee is not relieved of any of its responsibilities or liabilities set forth in this Agreement. The Licensee or its contractor shall reimburse Railroad promptly for the actual cost of said services, including all applicable surcharges, upon receipt of bill or bills therefor.

2.3 Unless Prior arrangements have been made with the Chief Engineer or his representative, Licensee shall not place or operate equipment at a distance of less than fifty (50) feet from the center of track, nor perform any Work at a distance of less than fifty (50) feet from the center of Railroad's track. Further, no equipment shall be moved across the Railroad's track(s) except at an established public crossing, unless prior arrangements have been made with the Chief Engineer or his Representative. All reasonable precautions must be taken by Licensee to avoid interference with and/or damage to Railroad's facilities during the course of the Work.

2.4 Prior to entering upon the Property, Licensee agrees to comply with **RAILROAD'S ROADWAY WORKER PROTECTION TRAINING POLICY** as set forth in Exhibit B, attached hereto and incorporated herein by reference, if such training is applicable as determined in the sole discretion of Railroad.

2.5 The permission herein granted is subject to all existing leases, licenses and occupancies of the Property by third parties. Licensee acknowledges that, in executing this Agreement, Railroad acts on its own behalf only and has no authority to act, and does not claim to act, on behalf of any other entity or person with respect to any right any such other entity or person may have to object to this Agreement. Licensee shall secure the consent, and protect the facilities, of each such third-party occupier of the Property.

2.6 Licensee shall implement and enforce a safety program conforming to all applicable requirements of federal, state and local laws, rules and regulations.

### Section 3. LEGAL COMPLIANCE.

Licensee expressly agrees, at its own cost and expense, to comply and cause its agents, employees and contractor(s) to comply with all applicable ordinances, rules, regulations, requirements and laws of any governmental authority (state, federal or local) having jurisdiction over the Work or Licensee's activities, including the location, contact, excavation and protection regulations of the Occupational Safety and Health Act and state "One Call" - "Call Before You Dig" or similar requirements. Licensee shall indemnify, defend and save harmless Railroad, its parents, affiliates and subsidiaries, and the respective shareholders, directors, officers and employees of each (hereinafter collectively the "Railroad Indemnitees"), from and against, and shall pay, all expenses, damages, penalties, and claims, including without limitation reasonable counsel fees, that may arise from, or be imposed because of the failure of Licensee to comply with this Section.

### Section 4. LIABILITY/INDEMNITY.

4.1 Licensee hereby assumes risk of and agrees to indemnify, defend, protect and save the Railroad Indemnitees harmless from and against (a) injury to or death of any person or persons whomsoever, including but not limited to the agents, employees or contractor(s) of the parties hereto, and (b) the loss or damage to any property whatsoever, including property claims, demands, suits, judgments or expenses incurred in connection therewith, resulting from or arising out of the acts or omissions of Licensee, its agents, employees or contractor(s), or resulting from, arising out of, or occurring in connection with the entry or presence of Licensee, its agents, employees or contractor(s) on the Property, or resulting from, arising out of, or occurring in connection with the performance or execution of the Work performed under this Agreement or incidental thereto, regardless of any

negligence on the part of Licensee or Railroad. THE INDEMNITY PROVIDED IN THIS SECTION 4 IS SPECIFICALLY MEANT TO INCLUDE INDEMNITY OF THE RAILROAD INDEMNITEES FOR THEIR OWN ORDINARY NEGLIGENCE, EVEN IF THE INJURY OR DAMAGE IS CAUSED ENTIRELY BY THE ORDINARY NEGLIGENCE OF THE RAILROAD INDEMNITEES AND THERE IS NO NEGLIGENCE ON THE PART OF THE LICENSEE. LICENSEE'S INDEMNITY OBLIGATIONS IN THIS SECTION 4 SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS AVAILABLE UNDER WORKERS' OR WORKMEN'S COMPENSATION ACTS, DISABILITY ACTS OR EMPLOYEE BENEFITS ACTS.

4.2 IN NO EVENT UNDER THIS AGREEMENT WILL THE RAILROAD INDEMNITEES HAVE ANY LIABILITY FOR INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES. ADDITIONALLY, THE TERM "RAILROAD INDEMNITEES" AS USED IN THIS SECTION 4 SHALL INCLUDE ANY OTHER RAILROAD COMPANY THAT MAY BE LAWFULLY OPERATING UPON AND OVER THE TRACKS OR THE TRACKS CROSSING OR ADJACENT TO THE TRACKS, AND THE OFFICERS, AGENTS, INVITEES AND EMPLOYEES THEREOF.

#### Section 5. INSURANCE.

Licensee agrees to comply with the **INSURANCE REQUIREMENTS FOR CONTRACTOR RIGHT-OF-ENTRY LICENSE AGREEMENTS** attached hereto as Exhibit C and incorporated herein by reference and shall provide the required Certificate of Insurance to Railroad with return of the signed duplicate original of this Agreement prior to the commencement of the Work.

#### Section 6. NOTIFICATION.

Licensee shall promptly notify the Chief Engineer of any loss, damage, injury or death arising out of or in connection with the Work.

#### Section 7. RESTORATION.

Upon completion of the Work or the termination or expiration of this Agreement, Contractor shall promptly remove from the Property all tools, equipment and materials placed thereon by Contractor. Contractor shall restore the Property to the same state and condition as when Contractor first entered thereon and shall leave the Property in a condition satisfactory to the Chief Engineer or the Representative.

#### Section 8. TERM/TERMINATION.

This Agreement and the permission conferred, and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Work or at midnight 60 calendar days following the Effective Date, whichever occurs first, unless extended in writing by Railroad. Notwithstanding the foregoing, Railroad shall have the right to terminate this Agreement and the license granted hereunder immediately if Licensee defaults on any of the terms and/or conditions set forth herein.

#### Section 9. COMPLIANCE AND DOCUMENTATION.

Licensee agrees, and shall cause its agents, employees and contractor(s), to (a) understand and comply with the terms and conditions of this Agreement, (b) carry a copy of this Agreement at all times while on the Property, and (c) promptly present the copy of this Agreement to any employee of Railroad upon request.

Section 10. RAILROAD CONTACT INFORMATION.

The Railroad's Chief Engineer is:

Brian Cutler  
382 Southbridge St  
Worcester, MA 01610

The Railroad's Representative is:

flagging@ecccorporation.com, John Cartier  
381 Southbridge St.  
Worcester, MA 01608  
401.633.4603

Railroad **EMERGENCY** Phone Number: **(800) 447-2003**

Reference Location: **Providence and Worcester Railroad Company Subdivision MAIN LINE Milepost 42.91**

Section 11. FEE.

Upon execution of this Agreement, Licensee shall pay Railroad the sum of \$1750 toward the cost of preparing this Agreement and for the privileges granted to the Licensee.

Section 12. NON-WAIVER.

If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

Section 13. APPLICABLE LAW.

This Agreement shall be governed by and construed under the laws of the State of MA, without regard to the choice of law provisions thereof.

Section 14. ASSIGNMENT.

Licensee shall not assign this Agreement without the prior written consent of Railroad, which consent may be granted or withheld at Railroad's sole discretion. This Agreement shall be binding upon the parties and their respective successors and permitted assigns.

Section 15. INTERPRETATION/SEVERABILITY.

To the maximum extent possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this Agreement.

Section 16. COUNTERPARTS.

This Agreement may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and counterparts of this Agreement may also be exchanged electronically and any electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.

Section 17. HEADINGS.

The headings of the sections of this Agreement are inserted for convenience only and are not intended to govern, limit or aid in the construction of any term or provision of this Agreement.

Section 18. CONSTRUCTION OF TERMS.

The terms of this Agreement have been arrived at after mutual negotiation and, therefore, it is the intention of the Parties that its terms not be construed against any of the Parties by reason of the fact that it was prepared by one of the Parties.

Section 19. CONFIDENTIALITY.

The parties shall not disclose the terms of this Agreement to a third party (a) other than as required by law so long as such party required to disclose the terms of this Agreement under applicable law provides the other party with prior written notice of such requirement, or (b) as otherwise agreed in writing between the parties. Notwithstanding the foregoing, the parties may disclose the terms and conditions of the Agreement to (1) a parent, subsidiary or affiliated company; or (2) to their lawyers and consultants, including but not limited to its auditors, provided that all such parties agree to maintain the confidentiality of such information in accordance with the terms of this provision. If any party violates this paragraph, any adversely affected party may cancel this Agreement without penalty and exercise any available remedies under applicable law.

*[Signature Page Follows]*

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

RAILROAD:

PROVIDENCE AND WORCESTER RAILROAD COMPANY

LICENSEE:

CITY OF WORCESTER

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

Name:

Its:

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

Name:

Its:



EXHIBIT A  
**DESCRIPTION OF PROPERTY**



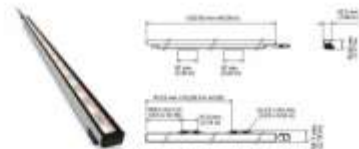
Madison Street Underpass  
Daytime Image Reference



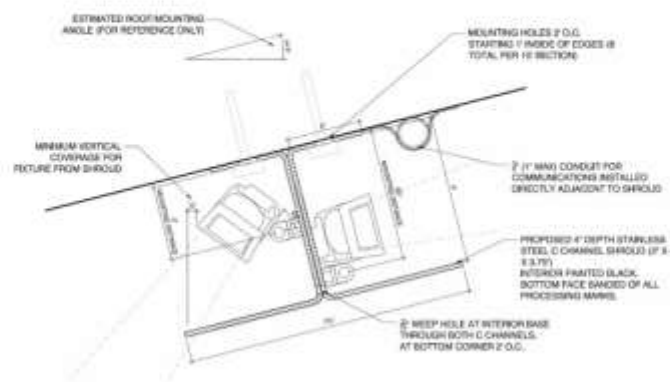
Madison Street Underpass  
Evening Rendered Image Reference



Partial Section  
NTS



Profile Image and Dimensions  
Final Fixture Selection TBD



NOTE: CHANNELS SHALL BE PROVIDED IN 10 SECTIONS. ADJACENT SECTIONS SHALL BE ATTACHED WITH 4" X 8" X 1/2" S/S PLATE AND 3/8" HARDWARE IS TOTAL MIN. SECTIONS SHALL ALIGN VERTICALLY AND HORIZONTALLY.

Section Detail  
NTS

EXHIBIT B**ROADWAY WORKER PROTECTION TRAINING POLICY**

A. In order to maintain the integrity and security of the Property and Railroad's operations, prior to each employee of Licensee and its contractor entering upon the Property (each a "Licensee Applicant"), Licensee shall cause its employees, and shall cause its contractor to require its employees, to successfully complete the Genesee & Wyoming Inc. Roadway Worker Training Program (the "Program") on an annual basis to be administered by Roadway Worker Training, Inc. (the "Program Administer"), at the sole cost and expense of the Licensee or contractor, as the case may be (the current cost of which is \$75.00 USD per Licensee Applicant). The Program shall be available via the internet and instructions to access the Program set forth in Paragraph K.

B. Upon completion of the Program, the Licensee Applicant shall be required to satisfactorily complete a test administered by the Program Administer. The Program Administer shall be responsible for scoring such test and verifying whether the Licensee Applicant satisfies the requirements of Railroad to perform work on the Property. Any Licensee Applicant who fails to achieve a satisfactory score or who refuses to complete such test shall not be permitted to enter the Property.

C. When a satisfactory score is achieved by the Licensee Applicant, the Program Administrator shall furnish a certificate (the "Certificate") to the business address of Licensee or its contractor, as the case may be, for distribution to the Licensee Applicant. Until receipt of the Certificate from the Program Administrator, the Licensee Applicant shall print a temporary certificate authorizing the Licensee Applicant's access to the Property.

D. For the avoidance of doubt, satisfactory completion of the Program as evidenced by receipt of a Certificate does not in itself grant permission to the Licensee Applicant to enter the Property, except as expressly permitted under and in strict compliance with the terms of the Agreement.

E. The Licensee Applicant shall be responsible for carrying the Certificate at all times when on the Property.

F. All communications regarding Licensee Applicants, the Program, or any other matters described in this Exhibit B should be addressed to:

Kyle Baker  
GWI Safety Department  
13901 Sutton Park Drive South, Suite 270  
Jacksonville, FL 32224  
kyle.baker@gwrr.com  
(904) 999-3356

G. Licensee and its contractor shall be responsible for managing and recovering Certificates from their employees who resign, retire or are terminated.

H. Notwithstanding the receipt of a Certificate by a Licensee Applicant, Railroad reserves the right to reject any Licensee Applicant from entering upon the Property in Railroad's sole discretion in accordance with:

- i) Genesee & Wyoming Inc. Code of Ethics and Conduct,
- ii) Genesee & Wyoming Inc. Contractor Safety Rules, or
- iii) upon failure to comply with the terms and conditions of the Agreement and all applicable laws.

I. To the extent that any portion of the requirements set forth in this Exhibit B violates any law, ordinance, statute or regulation that portion shall be ignored and the Licensee or contractor, as the case may be, shall comply with all remaining portions of Railroad's Roadway Protection Training Policy, the Program or the related application process.

J. Licensee or its contractor, as the case may be, shall be primarily responsible for enforcement of the Program; *provided, however*, that both Railroad and the Federal Railroad Administration reserve the right to audit Licensee and its contractor, as the case may be, for compliance with the Program and Railroad's Roadway Protection Training Policy. Should a Licensee or its contractor, as applicable, be found out of compliance, any and all fines or penalties incurred by Railroad due to such non-compliance shall be the sole obligation of the Licensee.

K. To access the G&W Roadway Worker Protection Training for Railroad Contractors Course on the RWT On-Line please follow these instructions:

- Start at website:  
<https://www.bistrainer.com/store/railpros-store/productdetails/genesee-and-wyoming-roadway-worker-protection-for-contractors-training>
- Click on the "On-Line Courses" button
- Select the G&W course by clicking on the course name
- On the right hand side of the page select "New User Registration"
- Fill out all of the fields on the registration page and submit
- You will receive a username and password via email
- After receiving the username and password go back to the On-Line Courses page and select the G&W course again
- Complete the registration process and training.

EXHIBIT C**INSURANCE REQUIREMENTS FOR RIGHT-OF-ENTRY LICENSE AGREEMENT**

(a) The Licensee shall, at its own cost and expense, prior to entry onto the Property or the commencement of any work pursuant to this Agreement, procure and thereafter maintain throughout the term of this Agreement the following types and minimum amounts of insurance:

(i) The Licensee shall maintain Public Liability or Commercial General Liability Insurance ("CGL"), including Contractual Liability Coverage and CG 24 17 "Contractual Liability – Railroads" endorsement, covering all liabilities assumed by the Licensee under this Agreement, without exception or restriction of any kind, with a combined single limit of not less than Two Million Dollars (\$2,000,000) for Bodily Injury and/or Property Damage Liability per occurrence, and an aggregate limit of not less than Six Million Dollars (\$6,000,000) per annual policy period. Such insurance policy shall be endorsed to provide a **Waiver of Subrogation in favor of the Railroad Indemnitees** and shall name the **Railroad Indemnitees as Additional Insureds**. An Umbrella or Excess policy may be utilized to satisfy the required limits of liability under this section but must "follow form" and afford no less coverage than the primary policy.

(ii) The Licensee shall maintain Commercial Automobile Insurance for all owned, non-owned and hired vehicles with a combined single limit of not less than One Million Dollars (\$1,000,000) for Bodily Injury and/or Property Damage Liability per occurrence. Such insurance policy shall be endorsed to provide a **Waiver of Subrogation in favor of the Railroad Indemnitees** and shall name the **Railroad Indemnitees as Additional Insureds**.

(iii) The Licensee shall maintain Statutory Workers' Compensation and Employers' Liability Insurance for its employees (if any) with minimum limits of not less than One Million Dollars (\$1,000,000) for Bodily Injury by Accident, Each Accident; One Million Dollars (\$1,000,000) for Bodily Injury by Disease, Policy Limit; One Million Dollars (\$1,000,000) for Bodily Injury by Disease, Each Employee. Such insurance policy shall be endorsed to provide a **Waiver of Subrogation in favor of the Railroad Indemnitees**.

(iv) **Prior to construction within 50' of the railroad tracks**, the Licensee shall purchase Railroad Protective Liability Insurance naming the Railroad Indemnitees as the named insured with limits of Two Million Dollars (\$2,000,000) each occurrence and Six Million Dollars (\$6,000,000) aggregate limit. The policy shall be issued on a standard ISO form CG 00 35 12 03 or, if available, obtain such coverage from the Railroad.

(b) The following general insurance requirements shall apply:

(i) The specified insurance policies must be affected under standard form policies underwritten by insurers licensed in the state where work is to be performed and carry a minimum Best's rating of "A-" and size "Class VII" or better. The Railroad reserves the right to reject as inadequate any insurance coverage provided by an insurer that is rated less than the ratings specified in this section.

(ii) All coverages shall be **primary and non-contributory to any insurance coverages maintained by the Railroad Indemnitees**.

(iii) All insurance policies shall be endorsed to provide the Railroad with thirty (30) days prior written notice of cancellation, non-renewal or material changes.

(iv) The Licensee shall provide the Railroad with certificates of insurance evidencing the insurance coverages, terms and conditions required prior to commencement of any activities on or about the Property. Said certificates should reference this Contractor Right of Entry License Agreement by agreement date and description and shall be furnished to the Railroad at the following address, or to such other address as the Railroad may hereafter specify:

Providence and Worcester Railroad Company  
C/O Genesee & Wyoming Railroad Services, Inc.  
13901 Sutton Park Drive South, Suite 270  
Jacksonville, FL 32224

(v) If any policies providing the required coverages are written on a Claims-Made basis, the following shall apply:

- (1) The retroactive date shall be prior to the commencement of the work;
- (2) The Licensee shall maintain such policies on a continuous basis;
- (3) If there is a change in insurer or policies are canceled or not renewed, the Licensee shall purchase an extended reporting period of not less than three (3) years after the contract completion date; and
- (4) Licensee shall arrange for adequate time for reporting of any loss under this Agreement.

(c) The Railroad may require the Licensee to purchase additional insurance if the Railroad reasonably determines that the amount of insurance then being maintained by the Licensee is insufficient in light of all relevant factors. If the Licensee is required to purchase additional insurance, the Railroad will notify the Licensee. Failure of the Licensee to comply within thirty (30) days shall be considered a default subject to termination of the Agreement.

(d) Furnishing of insurance by the Licensee shall not limit the Licensee's liability under this Agreement but shall be additional security therefor.

(e) The above indicated insurance coverages shall be enforceable by any legitimate claimant after the termination or cancellation of this Agreement, or any amendment hereto, whether by expiration of time, by operation of law or otherwise, so long as the basis of the claim against the insurance company occurred during the period of time when the Agreement was in effect and the insurance was in force.

(f) Failure to provide the required insurance coverages or endorsements (including contractual liability endorsement) or adequate reporting time shall be at Licensee's sole risk.

(g) If contractors are utilized, the Licensee agrees to require all such contractors to comply with the insurance requirements of this Exhibit C.

EXHIBIT D

**Providence and Worcester Railroad Company  
Flagman Request Form**

**THIS SECTION TO BE COMPLETED BY REQUESTOR**

The completed form should be transmitted directly to the desired flagging contractor above:

Company Name:		Job Site Contact:	
Billing Address:		Job Site Contact Cell:	
Requester Name:		Dates Requested:	
Requester Email:		Report Time:	
Requester Phone:		Specific railroad location and cross street:	
Right of Entry Permit #: PWRZ-		Hyrail Vehicle Use: <input type="checkbox"/> YES* <input checked="" type="checkbox"/> NO	
Effective Date:		*If yes please include current hyrail inspection form	
Expiration Date:		<input type="checkbox"/> Work is on a Massachusetts Chapter 634 Bridge	
Right of entry permits are valid for 60 days from note date			
The undersigned agrees to the flagging terms and conditions and agrees to reimburse P&W and its approved flagging contractors at the rates listed above to fulfill this request. Submission of this request does not guarantee availability.			
Authorized Signature		Date:	
Attachments (check if included): <input type="checkbox"/> Hyrail inspection form			

**INTERNAL USE ONLY:**

Flagging Contractor:		Flagman Name:	
Dates Scheduled:		Cell Phone:	
Branch:		Other Notes or Information:	
Milepost:		<input type="checkbox"/> ROE Permit Verified	<input type="checkbox"/> Hyrail Inspection Reviewed

Providence and Worcester Railroad Company, 75 Hammond Street, Worcester, MA 01610

# MADISON STREET UNDERPASS LIGHTING

## SECTION 01110

### CONTROL OF WORK AND MATERIALS

#### PART 1 – GENERAL

Not Used.

#### PART 2 – PRODUCTS

Not Used

#### PART 3 - EXECUTION

##### 3.01 HAULING, HANDLING AND STORAGE OF MATERIALS:

- A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.
- B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by it that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.
- C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.
- D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

##### 3.02 OPEN EXCAVATIONS:

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.
- B. Bridges provided for access to private property during construction shall be removed when no longer required.

## MADISON STREET UNDERPASS LIGHTING

- C. The length of open trench will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Engineer.
- D. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stocking excavated material in the street.
- E. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

### 3.03 MAINTENANCE OF TRAFFIC:

- A. Unless permission to close the street is received in writing from the proper authority, all excavated materials and equipment shall be placed so that vehicular and pedestrian traffic may be safely maintained at all times.
- B. Should the Chief of Police deem it necessary, uniformed officers will be assigned to direct traffic. The Contractor shall make all arrangements in obtaining uniformed officers required.
- C. The Contractor shall at its own expense, as directed by the Police Traffic Control/Safety Officer, provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals. The Contractor shall provide sufficient temporary lighting such as lanterns/flashers (electric battery operated) or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public, at no additional cost to the Owner.
- D. The Contractor shall furnish all construction signs that are deemed necessary by and in accordance with Part VI of the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation. In addition, the Contractor may be required to furnish up to 128 square feet of additional special construction warning signs. Size and exact wording of signs shall be determined by the Engineer during construction.
- E. The intent of policing is to ensure public safety by direction of traffic. Police officers are not to serve as watchmen to protect the Contractor's equipment and materials.
- F. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

### 3.04 CARE AND PROTECTION OF PROPERTY:

The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at its expense, to



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a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.

### 3.05 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. All existing buildings, utilities, pipes, poles, wires fences, curbing, property line markers and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from damage by the contractor. Should such property be damaged, it shall be restored by the Contractor, at no additional cost to the Owner.
- B. The Contractor shall determine the location of all underground structures and utilities (including existing water services, drain lines, electrical lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by Contractor.
- C. On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels which are shaped to cut or otherwise damage such surfaces.
- D. All property damaged by the Contractor's operations shall be restored to a condition at least equal to that in which it was found immediately before work was begun. Suitable materials and methods shall be used for such restoration.
- E. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.

### 3.06 MAINTENANCE OF FLOW:

- A. The Contractor shall at its own cost, provide for the flow of sewers and drains interrupted during the progress of the work, and shall immediately cart away and dispose of all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.
- B. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. If the Contractor damages or impairs any of the aforesaid drainage facilities, it shall repair the same within the same day.
- C. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by its operations as described in Section 01740, CLEANING UP.

### 3.07 REJECTED MATERIALS AND DEFECTIVE WORK:

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- A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor and shall not be made use of elsewhere in the work.
- B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.
- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or its employees, as determined by the Engineer, occurring previous to the final payment.

### 3.08 SANITARY REGULATIONS:

Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

### 3.09 SAFETY AND HEALTH REGULATIONS:

This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et. seq.)." The Contractor shall be familiar with the requirements of these regulations.

### 3.10 SITE INVESTIGATION:

The Contractor acknowledges that it has satisfied itself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint itself with available information will not relieve it from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner.

### 3.11 ELECTRIC SERVICE:

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

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 01550

### SIGNAGE (TRAFFIC CONTROL)

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

This Section covers furnishing and installing traffic control signs and other devices.

##### 1.02 SYSTEM DESCRIPTION:

The Contractor shall furnish and install all construction signs deemed necessary by and in accordance with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices(MUTCD) as published by the U.S. Department of Transportation.

#### PART 2 - PRODUCTS

##### 2.01 TRAFFIC WARNING AND REGULATING DEVICES:

Contractor shall provide warning signs, barricades and other devices in accordance with the specifications provided in the MUTCD. Size of signs, lettering, colors, method of support and other factors prescribed in the MUTCD shall be adhered to.

#### PART 3 - EXECUTION

##### 3.01 INSTALLATION:

- A. Contractor shall erect barricades, barrier fences, traffic signs, and other traffic control devices as required by the MUTCD, or as required by the Engineer, to protect the work area from traffic, pedestrians, and animals.
- B. Contractor shall relocate barricades, signs and other devices as necessary as the work progresses.
- C. Unless extended protection is required for specific areas, when the work has been completed, all temporary warning and regulatory devices used by the Contractor shall be removed so that traffic can move unimpeded through the area.

END OF SECTION

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## SECTION 01570

### ENVIRONMENTAL PROTECTION

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION:

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.
- B. All work under this Contract shall be in accordance with any conditional requirements applied, all of which are attached to Section 00890, PERMITS.
- C. Prior to commencement of work, the Contractor shall meet with representatives of the Engineer to develop mutual understandings relative to compliance of the environmental protection program.

##### 1.02 RELATED WORK:

- A. Section 00890 – PERMITS

##### 1.03 SUBMITTALS:

- A. The Contractor shall submit for approval six sets of details and literature fully describing environmental protection methods.

#### PART 2 - PRODUCTS

##### 2.01 CATCH BASIN PROTECTION:

- A. To trap sediment and to prevent sediment from clogging drainage systems, catch basin protection in the form of a siltation sack (Silsack as manufactured by ACF Environmental, Inc. or approved equal) shall be provided as approved by the Engineer.

#### PART 3- EXECUTION

##### 3.01 NOTIFICATION AND STOPPAGE OF WORK:

- A. The Engineer will notify the Contractor in writing of any non-compliance with the provisions of the Order of Conditions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work through the Engineer until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time

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lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

### 3.02 AREA OF CONSTRUCTION ACTIVITY:

- A. Insofar as possible, the Contractor shall confine his construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

### 3.03 PROTECTING AND MINIMIZING EXPOSED AREAS:

- A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to ensure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.

### 3.04 CATCH BASIN PROTECTION:

- A. Catch basin protection shall be used for every catch basin, shown on the plans or as required by the Engineer, to trap sediment and prevent it from clogging drainage systems and entering wetlands. Siltation sacks shall be securely installed under the catch basin grate. Care shall be taken to keep the siltation sacks from breaking apart or clogging. All deposited sediment shall be removed periodically and at times prior to predicted precipitation to allow free drainage flow. Prior to working in areas where catch basins are to be protected, each catch basin sump shall be cleaned of all debris and protected. The contractor shall properly dispose of all debris at no additional cost to the Owner.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 01740

### CLEANING UP

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION:

The Contractor must employ at all times during the progress of its work adequate cleanup measures and safety precautions to prevent injuries to persons or damage to property. The Contractor shall immediately, upon request by the Engineer provide adequate material, equipment and labor to cleanup and make safe any and all areas deemed necessary by the Engineer.

##### 1.02 RELATED WORK:

- A. Section 01110 CONTROL OF WORK AND MATERIALS
- B. Section 01570 ENVIRONMENTAL PROTECTION

#### PART 2 - PRODUCTS

Not applicable

#### PART 3 - EXECUTION

##### 3.01 DAILY CLEANUP:

- A. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.
- B. Upon written notification by the Engineer, the Contractor shall within 24 hours clean up those areas, which in the Engineer's opinion are in violation of this section and the above referenced sections of the specifications.
- C. If in the opinion of the Engineer, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

##### 3.02 MATERIAL OR DEBRIS IN DRAINAGE FACILITIES:

- A. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, gutters, drains, pipes, structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches,

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channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

### 3.03 REMOVAL OF TEMPORARY BUILDINGS, STRUCTURES AND EQUIPMENT:

- A. On or before completion of the work, the Contractor shall, unless otherwise specifically required or permitted in writing, tear down and remove all temporary buildings and structures it built; shall remove all temporary works, tools and machinery or other construction equipment it furnished; shall remove all rubbish from any grounds which it has occupied; shall remove silt fences and hay bales used for trapping sediment; and shall leave the roads and all parts of the property and adjacent property affected by its operations in a neat and satisfactory condition.

### 3.04 RESTORATION OF DAMAGED PROPERTY:

- A. The Contractor shall restore or replace, when and as required, any property damaged by its work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk and landscaping work. Materials, equipment, and methods for such restoration shall be as approved by the Engineer.

### 3.05 FINAL CLEANUP:

- A. Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Engineer shall approve the condition of the site.

END OF SECTION



# MADISON STREET UNDERPASS LIGHTING

## SECTION 01765

### PROJECT AS-BUILT RECORD DRAWINGS

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

This Section covers the Contractors As-Built Record drawings for the project. The As-Built Record drawings for the project shall include, but are not limited to:

- A. The Contractors construction coordination drawings for all the project disciplines. The Contractors construction coordination drawings for the project disciplines shall be submitted to the Engineer prior to Construction of the said discipline. The Contractors construction coordination drawings for the project disciplines shall include but are not limited to the following:

- 1. Electrical
- 2. Process
- 3. Instrumentation

- B. Draft Record Documents Review

Upon completion of the project construction the Contractor shall submit a complete copy of 24- by 36-inch Record Drawings to the Owner and the Engineer for review. The Owner and the Engineer shall jointly review the Record Drawings and provide comments to the Contractor. The Contractor shall modify the Record Drawings as necessary based on the comments provided by the Owner and the Engineer.

- C. Final Record Documents

Upon incorporation and acceptance of the Draft Record Drawings comments from the Owner and the Engineer, the Contractor shall submit the Final Record Drawings and documentation. The Contractor shall submit two sets of 24- by 36-inch Record Drawings to the Owner and an additional two sets of 24- by 36-inch Record Drawings to the Engineer for their records. The Contractor shall also submit to the Engineer a minimum 20 gigabyte flash drive with the electronic Record Drawing files. The electronic Record Drawing files shall be obtained from the Owner (the Engineer shall provide on behalf of the Owner if the Engineer was the project designer) and developed in AutoCAD 2010/Revit 2017 (or later) and the submittal shall include the Final AutoCAD DWG/Revit RVT file documents, drawing line types, blocks, etc. The actual version of AutoCAD/Revit shall be coordinated with the Engineer.

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### 1.02 RELATED WORK:

- A. General Requirements in their entirety.
- B. Division 2 through Division 16.

### 1.03 AS-BUILT DOCUMENTS:

- A. Contractor shall maintain on site, separate from the documents used for construction, one complete set of the documents listed below, and as construction progresses, shall legibly record on these documents all changes made during construction.
  - 1. Contract Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other Modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
  - 6. Written interpretations and clarifications.
  - 7. Field Orders.
  - 8. Field test reports properly verified.
- B. The completed set of documents shall include but are not limited to:
  - 1. Significant deviations of any nature made during construction.
- C. The completed set of as-built documents shall be submitted to the Engineer with the final Application for Payment.

## PART 2 - MATERIALS

Not Used

## PART 3 - EXECUTION

Not Used

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 01770

### PROJECT CLOSEOUT

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

- A. This Section covers administrative and procedural requirements for closing out the project, including, but not limited to:
  - 1. Project as-built documents
  - 2. Final Cleaning
  - 3. Substantial Completion
  - 4. Final Completion
  - 5. Correction/Warranty Period
- B. Closeout checklist to be completed by the Engineer.

##### 1.02 RELATED WORK:

- A. General Requirements in their entirety.
- B. Section 01740, CLEANING UP
- C. Division 2 through Division 16.

##### 1.03 AS-BUILT DOCUMENTS:

- A. Contractor shall maintain on site, separate from the documents used for construction, one set of the documents listed below, and as construction progresses, shall legibly record on these documents all changes made during construction.
  - 1. Contract Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other Modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.

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6. Written interpretations and clarifications.
7. Field Orders.
8. Field test reports properly verified.

- B. The completed set of as-built documents shall be submitted to the Engineer with the final Application for Payment.

### 1.04 CHECKOUT AND CERTIFICATIONS:

- A. Prior to checkout and certifications, the following tasks shall be completed:
  1. Construction shall be complete. For this purpose, completion of construction is defined as follows:
    - a. The Contractor has completed construction and erection of the work in conformance with the Contract Drawings and Specifications.
    - b. The Contractor has installed and adjusted operating equipment, systems, or facilities, as applicable, as defined by the manufacturers' erection, installation, operation and maintenance instructions.
  2. All shop drawings shall have final approval.
  3. All shop tests shall be complete and approved test results submitted to the Engineer.

### 1.05 START-UP AND TESTING:

- A. Prior to start-up the following tasks shall be complete:
  1. All checkout and certifications shall be satisfactorily completed,
  2. All operations and maintenance manuals shall be approved,
  3. All preliminary training by the manufacturer's representative shall be completed,
  5. An approved start-up procedure shall be in place.

### 1.06 FINAL CLEANING:

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.

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1. Clean the site, including landscape development areas of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to smooth, even textured surfaces.
2. Remove waste and surplus materials, rubbish, fencing equipment, temporary utilities and construction facilities from the site, unless otherwise required by the Engineer.
3. Comply with requirements of Section 01740 CLEANING UP.

### 1.07 SUBSTANTIAL COMPLETION:

- A. Substantial Completion is officially defined in the General and Supplementary Conditions. The date of substantial completion will be certified by the Engineer. This date will not be certified until the following requirements have been satisfied by the Contractor:
  1. All Contract requirements are coordinated into a fully operational system. All individual units of equipment and treatment are fully operative and performing at specified efficiencies. Where efficiencies are not specified, performance shall meet acceptable standards for the particular unit.
  2. All field tests have been satisfactorily completed and reports forwarded to the Engineer.
  3. All final training has been completed by the manufacturers' representatives.
  4. All spare parts have been satisfactorily delivered to the Owner. Spare parts are for the exclusive use of the Owner when the facility has been turned over. Contractor is responsible for all maintenance and repair materials required until the facility is accepted by the Owner.

### 1.08 CLOSEOUT PROCEDURES:

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and is complete in accordance with Contract Documents and ready for Engineer's and Owner's inspection.
- B. Accompany Engineer and Owner on inspection to verify conformance with the Contract Documents. Prepare a punch list of work items that have been determined by inspection to not conform to Contract Documents. Punch list items shall include work items that are missing, incomplete, damaged, incorrect items, or improperly installed or constructed. The Contractor shall correct the punch list deficiencies by re-work, modifications, or replacement, as appropriate, until the items conform to the Contract Documents. The initial punch list shall be produced by the Contractor, with copies to the Engineer and

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Owner. When the Contractor has reduced the number of deficient items to a reasonable level, the Engineer will develop a definitive punch list for the use of the Contractor.

- C. Provide submittals to Engineer that are required by governing or other authorities.

### 1.09 FINAL COMPLETION:

- A. Prior to final completion, the following tasks shall be completed:
  - 1. All items in the punch list shall be completed.
  - 2. All Contract closeout documentation shall be submitted to and accepted by the Engineer.
- B. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment: Set of as-built documents, Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, warranties/guarantees, and all other data required by the Contract Documents.

### 1.10 CORRECTION/WARRANTY PERIOD:

- A. During the correction period, the Contractor shall correct all deficiencies in equipment and materials.
- B. During the warranty period, the Contractor shall perform all corrective work on warranty deficiencies.
- C. Corrective work will be identified by the Engineer or Owner, as appropriate. The Contractor will be notified of the item(s) requiring corrective work.
- D. The Contractor shall begin work on all corrective work within ten days of being notified of the deficiency by the Engineer and shall then work continuously until the deficiency is

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corrected. Upon completion of the corrective work, the Contractor shall submit a letter report to the Engineer describing the deficiency and the corrective action that was taken.

- E. The Contractor shall coordinate all corrective work with the Engineer and/or the Owner.

### 1.11 COMPLETION CHECKLIST:

- A. **The Project Completion Checklist, which follows, and shall be completed as the project nears completion.** When the project has been fully completed, Final Payment can be approved.

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### PROJECT COMPLETION CHECKLIST

Owner \_\_\_\_\_ Job No. \_\_\_\_\_

Project \_\_\_\_\_

As part of the project closeout, all items listed below must be checked off as being complete or otherwise accounted for. The person verifying completion of the item shall list the completion date and his/her initials.

Project Closeout Checklist		
	Date Completion Verified	Verified by
<b>AS-BUILT DOCUMENTS HANDED OVER</b>		
1. Contract Drawings		
2. Specifications		
3. Addenda		
4. Change Orders/Contract Modifications		
5. Reviewed Shop Drawings, Product Data and Samples		
6. Written Interpretations/Clarifications		
7. Field Orders		
8. Field Test Reports		
<b>EQUIPMENT CHECKOUT AND CERTIFICATIONS</b>		
1. Construction Complete per Drawings/Specifications		
2. Equipment Installed and Adjusted		
3. All Shop Drawings have Final Approval		
4. All Shop Tests Complete and Results Submitted		



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<b>Project Closeout Checklist</b>		
	Date Completion Verified	Verified By
<b>FINAL CLEANING</b>		
1. All Construction Facilities Removed		
2. All Construction Debris Removed		
3. All Areas Swept/Cleared		
<b>SUBSTANTIAL COMPLETION</b>		
1. All Items Coordinated Into a Fully Operational System		
2. All Equipment Units Operational		
3. All Field Tests Completed and Reports Submitted		
4. All Final Training by Manufacturer's Rep. Completed		
5. All Spare Parts Provided		
<b>CLOSEOUT PROCEDURES</b>		
1. Written Certification Submitted that Work is Ready for Owner & Engineer Inspector		
2. Inspection by Owner, Engineer, Contractor completed		
3. Punch List of Nonconforming Items Prepared		
4. Documents Required by Governing or Other Authorities Submitted		
5. Final Application for Payment Received		
6. Contract Completion and Acceptance Certificate Submittal		
7. Consent of Surety to Final Payment Submittal		
8. Release and Waiver of Liens and Claims Submitted		
9. Affidavit of Payment of Debts and Claims Submitted		
10. Warranties/Guarantees Submitted		
11. Other Required Releases and Waivers Submitted (List Them)		
12. Permits Submitted (List Them)		
13. Weekly Payrolls Submitted as Required by Law		
<b>FINAL COMPLETION</b>		
1. All Items in Punch List Completed		

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<b>Project Closeout Checklist</b>		
	<b>Date Completion Verified</b>	<b>Verified By</b>
2. All Other Required Documentation Submitted (List It)		
<b>CORRECTION/WARRANTY PERIOD</b>		
1. Correction Period Start Date: _____  End Date: _____		
2. Specific Warranties Provided		
<div style="display: flex; justify-content: space-between;"> <span><u>Item</u></span> <span><u>Warranty Duration</u></span> </div>		

MADISON STREET UNDERPASS LIGHTING

Full name of persons signing their initials on this checklist:

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END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 02223

### SELECTIVE SITE DEMOLITION

#### PART 1 - GENERAL

##### 1.01 SCOPE OF WORK:

- A. Work under this Section shall consist of the careful removal, storage for reuse, transportation off-site, or demolition, of all structures and site features encountered or noted to be removed or abandoned to a minimum of three feet below finished grade, and the removal and disposal of all materials not called for to be reused or salvaged, in accordance with the contract drawings, these specifications, and Engineer's requirements. Provide all labor, equipment, materials and transportation necessary to complete the work.
- B. Items plan referenced to be removed and stored shall be carefully removed and stored on site in a manner and location designated by the Engineer for reinstallation later as shown on the plans or as indicated by the Engineer.
- C. Items plan referenced, or as indicated by the Engineer to be removed and disposed of shall be removed from the site and properly and legally disposed of by the Contractor.
- D. Items indicated on the contract drawings or in the specifications to be removed and salvaged, or other items required to be removed by the Engineer, shall be transported to a municipal storage facility, located within the City confines, and unloaded and stacked as required by the Engineer.
- E. Items indicated on the contract drawings or in the specification to be removed and reset shall be carefully removed and reset in the same location as existing according to the specification and details.
- F. The following scope describes the general work/demolition requirements of this Section.
  - 1. Cement concrete and bituminous concrete pavements.
  - 2. All other features as indicated on the drawings or as required to complete the project as indicated in the plans and specifications

##### 1.02 PROTECTION OF EXISTING STRUCTURES AND UTILITIES:

- A. The Contractor shall assume complete responsibility and liability for the safety and structural integrity of all work and utilities to remain during demolition.

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- B. Provide safeguards including, but not limited to, warning signs, barricades, temporary fences, warning lights and other items required for protection of personnel and the general public during performance of all work.
- C. All features related to protection shall be maintained until that work has been completed to the point when such safeguards are no longer required.

### 1.03 SPECIAL REQUIREMENTS:

- A. Where items to be demolished are located within or adjacent to pavements, fences, and features to remain, the Contractor shall make provisions to protect those items to remain. Cut concrete pavement back to score line and cut bituminous concrete pavement back far enough so as not to allow disturbance to base course materials. Pavements damaged as a result of Contractor activities shall be replaced to the extent determined by the Engineer at no additional cost to the Owner.

### 1.04 REFERENCES:

- A. Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges – latest edition.

## PART 2 - PRODUCTS

### 2.01 BACKFILL:

- A. The Contractor shall provide suitable backfill as specified under Section 02300 of these Specifications, to fill voids left by removal or abandonment of site features, and shall provide all pipe cap ends, mortar, brick and other material needed to cap off or plug pipes of various sizes and kinds.
- B. Suitable materials shall be used as base course fill and topsoil to the depth as specified herein. Restore disturbed areas with similar materials blended to match the line and grades of adjacent surfaces.

### 2.02 TEMPORARY FENCE:

- A. The work under these Items shall conform to the relevant provisions of section 644 of the MassDOT Standard Specifications.
- B. The work shall include temporary installation of chain link fence around the perimeter of the work limits where shown on the plans, and as required by the Engineer, and as Contractor sees fit to protect work.
- C. Temporary fence shall consist of 6 foot high chain link fence anchored into a base that is both stable and movable to allow access and adjustment as needed. Reclaimed existing fence fabric and materials may be used with the approval of the Engineer.

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The Contractor shall submit a shop drawing to the Engineer for approval prior to installation.

### PART 3 - EXECUTION

#### 3.01 ABANDONED PIPES OR CONDUITS:

- A. Plug previously abandoned drainpipes encountered with masonry brick at least eight (8) inches in thickness.
- B. Abandon discontinued water supplies that are encountered during the execution of this contract in accordance with Owner requirements.
- C. Electrical conduits encountered and previously abandoned shall be capped or plugged.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 02300

### EARTHWORK

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

The Contractor shall make excavations of normal depth in earth for trenches and structures, shall backfill and compact such excavations to the extent necessary, shall furnish the necessary material and construct embankments and fills, and shall make miscellaneous earth excavations and do miscellaneous grading.

##### 1.02 RELATED WORK:

- A. Section 01110, CONTROL OF WORK AND MATERIALS
- B. Section 01570, ENVIRONMENTAL PROTECTION
- C. Section 02775, CONCRETE SIDEWALKS
- D. Section 02801, SITE IMPROVEMENTS

##### 1.03 REFERENCES:

###### ASTM International (ASTM)

ASTM	C131	Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
ASTM	C136	Method for Sieve Analysis of Fine and Coarse Aggregates.
ASTM	C330	Specification for Lightweight Aggregate for Structural Concrete.
ASTM	D1556	Test Method for Density of Soil in Place by the Sand Cone Method.
ASTM	D1557	Test Methods for Moisture-density Relations of Soils and Soil Aggregate Mixtures Using Ten-pound (10 Lb.) Hammer and Eighteen-inch (18") Drop.
ASTM	D2922	Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges.

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Code of Massachusetts Regulations (CMR) 310.40.0032 Contaminated Media and Contaminated Debris

Code of Massachusetts Regulations (CMR) 520 CMR 14.00 Excavation & Trench Safety Regulation

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

Samples of all materials proposed for the project shall be submitted to the Engineer for review. Size of the samples shall be as approved by the Engineer.

1.05 PROTECTION OF EXISTING PROPERTY:

- A. The work shall be executed in such manner as to prevent any damage to facilities at the site and adjacent property and existing improvements, such as but not limited to streets, curbs, paving, service utility lines, structures, monuments, benchmarks, observation wells, and other public or private property. Protect existing improvements from damage caused by settlement, lateral movements, undermining, washout and other hazards created by earthwork operations.
- B. In case of any damage or injury caused in the performance of the work, the Contractor shall, at its own expense, make good such damage or injury to the satisfaction of, and without cost to, the Owner. Existing roads, sidewalks, and curbs damaged during the project work shall be repaired or replaced to at least the condition that existed at the start of operations. The Contractor shall replace, at its own cost, existing benchmarks, observation wells, monuments, and other reference points, which are disturbed or destroyed.
- C. Buried drainage structures and pipes, observation wells and piezometers, including those which project less than eighteen inches (18") above grade, which are subject to damage from construction equipment shall be clearly marked to indicate the hazard. Markers shall indicate limits of danger areas, by means which will be clearly visible to operators of trucks and other construction equipment and shall be maintained at all times until completion of project.

1.06 DRAINAGE:

- A. The Contractor shall provide, at its own expense, adequate drainage facilities to complete all work items in an acceptable manner. Drainage shall be done in a manner so that runoff will not adversely affect construction procedures or cause excessive disturbance of underlying natural ground or abutting properties.

1.07 FROST PROTECTION AND SNOW REMOVAL:

- A. The Contractor shall, at its own expense, keep earthwork operations clear and free of accumulations of snow as required to carry out the work.



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- B. The Contractor shall protect the subgrade beneath new structures and pipes from frost penetration when freezing temperatures are expected.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS:

##### A. GRAVEL BORROW:

Gravel Borrow shall satisfy the requirements listed in MassDOT Specification Section M1.03.0, Type b.

##### B. DENSE GRADED CRUSHED STONE

1. Dense Graded Crushed Stone shall satisfy the requirements listed in MassDOT Specification Section M2.01.7.

##### C. CRUSHED STONE

1. Material shall be compacted and free draining  $\frac{3}{4}$ " angular crushed stone. Crushed stone shall be uniformly blended and conform to MassDOT Crushed Stone M2.01.0.
2. Where crushed stone is used as a stone pad below concrete foundations, the stone pad should extend a minimum of 6" beyond footing in all directions.
3. Provide Tencate Mirafi® S-Series Non-woven Filter Fabric or approved equal between undisturbed native soil and stone pads.

##### D. BACKFILL MATERIALS:

###### 1. Common Fill:

Common Fill shall consist of a mineral soil substantially free from cinders, ashes, organic materials, loam, wood, trash and other objectionable materials that may be compressible or that cannot be properly compacted. It shall have no stone larger than six (6) inches in greatest dimension. The fill shall not contain granite blocks, broken concrete, masonry rubble or other similar materials. It shall have physical properties such that it can be readily compacted during backfilling. The material shall have a maximum unit dry weight per cubic foot greater than 90 lbs., as determined by ASTM D698 and have a liquid limit less than 55. Snow, ice and frozen soil shall not be permitted.

###### 2. Class B Backfill:

Class B backfill shall be granular, well graded friable soil; free of rubbish, ice, snow, tree stumps, roots, clay and organic matter; with 30 percent or less passing the No. 200 sieve; no stone greater than two-third ( $\frac{2}{3}$ ) loose lift thickness, or six inches, whichever is smaller.

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### 3. Select Backfill:

Select backfill shall be granular, well graded friable soil, free of rubbish, ice, snow, tree stumps, roots, clay and organic matter, and other deleterious or organic material; graded within the following limits:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
3"	100
No. 10	30-95
No. 40	10-70
No. 200	0-10

### PART 3 - EXECUTION

#### 3.01 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION:

- A. Contractor shall take the necessary steps to avoid disturbance of subgrade during excavation and filling operations, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials, dewatering and other acceptable control measures.
- B. All excavated or filled areas disturbed during construction, all loose or saturated soil, and other areas that will not meet compaction requirements as specified herein shall be removed and replaced with a minimum 12-inch layer of compacted crushed stone wrapped all around in non-woven filter fabric. Costs of removal and replacement shall be borne by the Contractor.
- C. The Contractor shall place a minimum of 12-inch layer of special bedding materials and crushed stone wrapped in filter fabric over the natural underlying soil to stabilize areas which may become disturbed as a result of rain, surface water runoff or groundwater seepage pressures, all at no additional cost to the Owner. The Contractor also has the option of drying materials in-place and compacting to specified densities.

#### 3.02 EXCAVATION:

##### A. GENERAL:

- 1. The Contractor shall perform all work of any nature and description required to accomplish the work as shown on the Drawings and as specified.
- 2. Excavations, unless otherwise required by the Engineer, shall be carried only to the depths and limits shown on the Drawings. If unauthorized excavation is carried out below required subgrade and/or beyond minimum lateral limits shown on Drawings, it shall be backfilled with gravel borrow and compacted at the Contractor's expense as specified below, except as otherwise indicated.

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Excavations shall be kept in dry and good conditions at all times, and all voids shall be filled to the satisfaction of the Engineer.

3. In excavation in paved areas, the Contractor shall first cut pavement as specified in paragraph 3.02 B.1 of this specification, strip pavement and pavement subbase separately from underlying soils. All excavated materials shall be stockpiled separately from each other within the limits of work.
4. The Contractor shall follow a construction procedure, which permits visual identification of stable natural ground. Where groundwater is encountered, the size of the open excavation shall be limited to that which can be handled by the Contractor's chosen method of dewatering, and which will allow visual observation of the bottom and backfill in the dry.
5. The Contractor shall excavate unsuitable materials to stable natural ground where encountered at proposed excavation subgrade, as required by the Engineer. Unsuitable material includes topsoil, loam, peat, other organic materials, snow, ice, and trash. Unless specified elsewhere or otherwise required by the Engineer, areas where unsuitable materials have been excavated to stable ground shall be backfilled with compacted special bedding materials or crushed stone wrapped all around in non-woven filter fabric.

### B. TRENCHES:

1. Prior to excavation, trenches in pavement shall have the traveled way surface cut in a straight line by a concrete saw or equivalent method, to the full depth of pavement. Excavation shall only be between these cuts. Excavation support shall be provided as required to avoid undermining of pavement. Cutting operations shall not be done by ripping equipment.
3. Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes, and depths of cover indicated on the Drawings. Trench widths shall be as shown on the Drawings or as specified.
4. Where pipe is to be laid in bedding material, the trench may be excavated by machinery to, or just below, the designated subgrade provided that the material remaining in the bottom of the trench is not disturbed.
5. If pipe is to be laid in embankments or other recently filled areas, the fill material shall first be placed to a height of at least 12-inches above the top of the pipe before excavation.
6. Pipe trenches shall be made as narrow as practicable and shall not be widened by scraping or loosening materials from the sides. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed.
7. If, in the opinion of the Engineer, the subgrade, during trench excavation, has been disturbed as a result of rain, surface water runoff or groundwater seepage pressures,

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the Contractor shall remove such disturbed subgrade to a minimum of 12 inches and replace with crushed stone wrapped in filter fabric. Cost of removal and replacement shall be borne by the Contractor.

8. The Contractor shall obtain a trench permit from the municipality where the trench is located prior to making any excavations of trenches (any subsurface excavation greater than three (3) feet in depth and fifteen (15) feet or less between soil walls as measured from the bottom).
9. All trenches required to be permitted must be attended, covered, barricaded, or backfilled. Covers must be road plates at least  $\frac{3}{4}$ -inch thick or equivalent, barricades must be fences at least 6-feet high with no openings greater than 4-inches between vertical supports and all horizontal supports required to be located on the trench-side of the fencing.

### C. EXCAVATION NEAR EXISTING STRUCTURES:

1. Attention is directed to the fact that there are pipes, manholes, drains, and other utilities in certain locations. An attempt has been made to locate all utilities on the drawings, but the completeness or accuracy of the given information is not guaranteed.
2. As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and excavation shall be done by means of hand tools, as required. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.
3. Where determination of the exact location of a pipe or other underground structure is necessary for properly performing the work, the Contractor shall excavate test pits to determine the locations.

### 3.03 BACKFILL PLACEMENT AND COMPACTION:

#### A. GENERAL:

1. Prior to backfilling, the Contractor shall compact the exposed natural subgrade to the densities as specified herein.
2. After approval of subgrade by the Engineer, the Contractor shall backfill areas to required contours and elevations with specified materials.
3. The Contractor shall place and compact materials to the specified density in continuous horizontal layers, not to exceed nine (9) inches in uncompacted lifts. The degree of compaction shall be based on maximum dry density as determined by ASTM Test D1557, Method C. The minimum degree of compaction for fill placed shall be as follows:

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<u>Location</u>	<u>Percent of Maximum Density</u>
Below pipe centerline	95
Above pipe centerline	92
Below pavement (upper 3 ft.)	95
Embankments	95
Below pipe in embankments	95
Adjacent to structures	92
Below structures	95

4. The Engineer reserves the right to test backfill for conformance to the specifications and the Contractor shall assist as required to obtain the information. Compaction testing will be performed by the Engineer or by an inspection laboratory designated by the Engineer, engaged and paid for by the Owner. If test results indicate work does not conform to specification requirements, the Contractor shall remove or correct the defective Work by recompacting where appropriate or replacing as necessary and approved by the Engineer, to bring the work into compliance, at no additional cost to the Owner. All backfilled materials under structures and buildings shall be field tested for compliance with the requirements of this specification.
5. If the material removed from the excavation is suitable for backfill with the exception that it contains stones larger than permitted, the Contractor has the option to remove the oversized stones and use the material for backfill or to provide replacement backfill at no additional cost to the Owner.

### B. TRENCHES:

1. Bedding as detailed and specified shall be furnished and installed beneath the pipeline prior to placement of the pipeline. A minimum bedding thickness shall be maintained between the pipe and undisturbed material, as shown on the Drawings.
2. As soon as practicable after pipes have been laid, backfilling shall be started.
3. Unless otherwise indicated on the Drawings, select backfill shall be placed by hand shovel in 6-inch thick lifts up to a minimum level of 12-inches above the top of pipe. This area of backfill is considered the zone around the pipe and shall be thoroughly compacted before the remainder of the trench is backfilled. Compaction of each lift in the zone around the pipe shall be done by use of power-driven tampers weighing at least 20 pounds or by vibratory compactors. Care shall be taken that material close to the bank, as well as in all other portions of the trench, is thoroughly compacted to densities required.
4. Class B backfill shall be placed from the top of the select backfill to the specified material at grade (loam, pavement subbase, etc.). Fill compaction shall meet the density requirements of this specification.

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### 5. Water Jetting:

- a. Water jetting may be used when the backfill material contains less than 10 percent passing the number 200 sieve but shall be used only if approved by the Engineer.
  - b. Contractor shall submit a detailed plan describing the procedures it intends to use for water jetting to the Engineer for approval prior to any water jetting taking place.
  - c. Compaction of backfill placed by water jetting shall conform to the requirements of this specification.
6. If the materials above the trench bottom are unsuitable for backfill, the Contractor shall furnish and place backfill materials meeting the requirements for trench backfill, as shown on the drawings or specified herein.
  7. Should the Engineer order crushed stone for utility support or for other purposes, the Contractor shall furnish and install the crushed stone as directed.
  8. In shoulders of streets and road, the top 12-inch layer of trench backfill shall consist of processed gravel for sub-base, satisfying the requirements listed in MassDOT standard specification M1.03.1.

### C. BACKFILLING ADJACENT TO STRUCTURES:

1. The Contractor shall not place backfill against or on structures until they have attained sufficient strength to support the loads to which they will be subjected. Excavated material approved by the Engineer may be used in backfilling around structures. Backfill material shall be thoroughly compacted to meet the requirements of this specification.
2. Contractor shall use extra care when compacting adjacent to pipes and drainage structures. Backfill and compaction shall proceed along sides of drainage structures so that the difference in top of fill level on any side of the structure shall not exceed two feet (2') at any stage of construction.
3. Where backfill is to be placed on only one side of a structural wall, only hand-operated roller or plate compactors shall be used within a lateral distance of five feet (5') of the wall for walls less than fifteen feet (15') high and within ten feet (10') of the wall for walls more than fifteen feet (15') high.

### 3.04 DISPOSAL OF SURPLUS MATERIALS:

- A. Surplus excavated materials, which are acceptable to the Engineer, shall be used to backfill normal excavations in rock or to replace other materials unacceptable for use as backfill. Upon written approval of the Engineer, surplus excavated materials shall be neatly deposited and graded so as to make or widen fills, flatten side slopes, or fill

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depressions; or shall be neatly deposited for other purposes as indicated by the Owner, within its jurisdictional limits; all at no additional cost to the Owner.

- B. Surplus excavated material not needed as specified above shall be hauled away and disposed of by the Contractor at no additional cost to the Owner, at appropriate locations, and in accordance with arrangements made by it. Disposal of all rubble shall be in accordance with all applicable local, state and federal regulations.
- C. No excavated material shall be removed from the site of the work or disposed of by the Contractor unless approved by the Engineer.
- D. The Contractor shall comply with Massachusetts regulations (310 CMR 40.0032) that govern the removal and disposal of surplus excavated materials. Materials, including contaminated soils, having concentrations of oil or hazardous materials less than an otherwise Reportable Concentration and that are not a hazardous waste, may not be disposed of at locations where concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and /or hazardous materials present in the soil being disposed or reused.

END OF SECTION

Document1

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## SECTION 02518

### TRACER TAPE

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

This section covers the furnishing, handling and installation of tracer tape, as called for on the drawings.

##### 1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature on the materials, colors and printing specified herein, shall be submitted to the Engineer for review.
- B. Tape samples shall also be submitted to the Engineer for review.

#### PART 2 - PRODUCTS

##### 2.01 ACCEPTABLE MANUFACTURERS:

Tracer tape shall be by Reef Industries, Houston, TX; Empire Level, Mukwonago, WI; Pro-Line Safety Products Co., W. Chicago, IL; or approved equal.

##### 2.02 TRACER TAPE:

- A. Tracer tape shall be at least 3-inches wide.
- B. Tracer tape for non-ferrous pipe or conduit shall be constructed of a metallic core bonded to plastic layers. The metallic tracer tape shall be a minimum 5-mil thick and must be locatable at a depth of 18-inches with ordinary pipe locaters.
- C. Tracer tape for ferrous pipe or conduit shall consist of multiple bonded plastic layers. The non-metallic tracer tape shall elongate at least 500% before breaking.
- D. The tape shall bear the wording: "ELECTRICAL", continuously repeated every 30-inches to identify the pipe.
- E. Tape colors shall be as follows, as recommended by the American Public Works Association (APWA):

Electric

Red



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### PART 3 - EXECUTION

#### 3.01 INSTALLATION:

- A. Tracer tape shall be installed directly above the pipe or conduit it is to identify, approximately 12-inches below the proposed ground surface.
- B. The Contractor shall follow the manufacturer's recommendations for installation of the tape, as approved by the Engineer.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 02775

### SIDEWALK CONSTRUCTION AND REPLACEMENT

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

The Contractor shall furnish all labor, materials, equipment and incidentals required to restore gravel sidewalks and/or construct new or replacement hot mix asphalt or cement concrete sidewalks where required or where existing sidewalks are disturbed by the Contractor, as shown on the drawings and described herein. The Contractor shall also furnish all materials and install wheelchair ramps where shown on the drawings or as required by the Engineer.

##### 1.02 RELATED WORK:

- A. Section 02300, EARTHWORK

##### 1.03 REFERENCES:

The following standards form a part of these specifications, as referenced:

Massachusetts Department of Transportation (MassDOT)  
Standard Specifications for Highways and Bridges

##### 1.04 SUBMITTALS:

- A. The Contractor shall submit shop drawings and/or materials specifications for each component of the work to be performed under this section of the Specifications.

##### 1.05 SYSTEM DESCRIPTION:

###### A. CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS:

1. Except as otherwise indicated, cement concrete sidewalks and wheelchair ramps shall be constructed in accordance with the requirements of Section 701, Sidewalks, Wheelchair Ramps and Driveways, of the latest edition of the MassDOT Standard Specifications for Highways and Bridges, and all amendments thereto.
2. Wheelchair ramps shall be installed in new sidewalks at intersections in accordance with 521 CMR. When curbs or sidewalks are constructed or reconstructed on one side of the street, curb cuts shall also be installed on the opposite sides of the street, where there is a pedestrian path of travel. Curb cuts shall be located within the crosswalk and/or the pedestrian path of travel.

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3. Water boxes, manhole frames, and all other castings shall be carefully set to the proposed finished grade.
4. Sidewalks shall not be less than 48-inches in width, excluding curbing. An unobstructed path of travel shall be provided which is at least 36-inches clear, excluding curbing.

### PART 2 - PRODUCTS

#### 2.01 CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS:

- A. Cement concrete sidewalks shall be constructed with air entrained Cement Concrete with a minimum compressive strength of 4000 psi at 28 days.
- B. Cement concrete shall conform to the requirements of MassDOT M4.02.

#### 2.02 JOINT FILLER:

- A. Preformed joint filler strip shall conform to ASTM D1751 or D1752, having a thickness as indicated on the drawings.
- B. Fillers shall be provided in pieces of the full thickness required. Use of multiple layers of thin pieces to make-up the full thickness will not be permitted.

#### 2.03 JOINT SEALANT:

- A. Joint sealant for expansion joints shall be a two-part polysulfide base sealant conforming to Thiokol's Building Trade Performance Specification, Class A (self-leveling), Type II (hardness: 35-45 Shore A).

### PART 3 - EXECUTION:

#### 3.01 CEMENT CONCRETE SIDEWALKS AND WHEELCHAIR RAMPS:

- A. Concrete for sidewalks and wheelchair ramps shall be a minimum of 4-inches thick. At driveways, the sidewalks shall be 6-inches thick.
- B. The subgrade for the walk or driveway shall be shaped to a true surface conforming to the proposed slope of the walk, thoroughly rolled at optimum moisture content and tamped with a power roller weighing not less than one ton and not more than 5 tons. All depressions occurring shall be filled with suitable material and again rolled or tamped until the surface is smooth and hard.
- C. After the subgrade has been prepared as hereinbefore specified, a subbase of gravel borrow at optimum moisture content shall be placed, thoroughly rolled by a power roller, and tamped. The gravel borrow shall be a minimum of 8-inches in thickness.

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- D. The forms for sidewalks shall be smooth, free from warp, strong enough to resist springing out of shape, and deep enough to conform to the thickness of the proposed walk. All mortar or dirt shall be completely removed from forms that have been previously used. The forms shall be well staked, thoroughly braced, and set to the established lines with their upper edge conforming to the grade of the finished walk. The finished walk shall have sufficient pitch from the outside to the edge of the walk to provide for surface drainage. This pitch shall be 1.5% Maximum unless otherwise required by the Engineer. Before the concrete is placed, the subbase for sidewalks shall be thoroughly dampened until it is moist throughout but without puddles of water.
- E. Concrete shall be conveyed from the place of mixing to the place of deposit in such a manner that no mortar will be lost, and the composition of the mix shall be uniform, showing neither excess nor lack of mortar in any one place. The consistency shall be such that water will float to the surface under heavy tamping. The concrete shall be placed as close to its final position as practicable and thoroughly consolidated, with precautions taken not to overwork it while it is still plastic. The concrete shall be thoroughly spaded along the forms or screeds to eliminate voids and honeycombs at the edges. Retempering of concrete will not be permitted.
- F. Concrete shall be placed in alternate slabs not exceeding 30 feet in length. Slabs shall be separated by transverse preformed expansion joint filler ½-inch thick. The surface of all concrete sidewalks shall be uniformly scored into block units of not more than 40 square feet. The depth of the scoring shall be at least one quarter of the thickness of the sidewalk.
- G. When concrete sidewalks are constructed adjacent to curbing, building foundations, retaining walls, light pole bases or fixed structures, ½-inch thick premolded joint filler shall be used between the newly constructed sidewalk and the structure.
- H. Finishing of the concrete surface shall be done by experienced and competent cement finishers as soon as is practicable. Finishing shall be delayed until all bleed water and water sheen has left the surface and the concrete has begun to stiffen. The concrete surface shall be finished as directed with a steel trowel or wood float to give a smooth, uniform and attractive surface finish and uniformly scored into block units or areas of not more than 36 square feet. Following this, the Contractor shall draw a nylon push broom lightly over the surface to produce a non-slip surface. Application of neat cement to the surface to hasten hardening is prohibited.
- I. The Contractor shall protect the newly placed concrete surface against vandalism and marking or defacing and must stand ready to replace any blocks which, in the opinion of the Engineer, are excessively marked or defaced, at no additional cost to the Owner. When completed the walks shall be kept moist and protected from traffic and weather for at least 3 days.
- J. Adequate protection shall be provided where temperatures of 40°F or lower occur during placing of concrete and during the early curing period. The minimum temperature of fresh concrete after placing and for the first 3 days shall be maintained above 55°F. In addition

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to the above requirements, an additional 3 days of protection from freezing shall be maintained.

END OF SECTION

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## SECTION 02801

### SITE IMPROVEMENTS

#### PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS: Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- 1.02 WORK INCLUDED:
- A. Provide site improvements in the locations shown or as described herein, complete with anchorages and associated site work.
- 1.03 RELATED SECTIONS:
- Section 02300 "Earthwork" for excavation and grading related to site improvements.  
Section 02775 "Concrete Sidewalk"
- 1.04 SUBMITTALS:
- A. Contractor shall submit catalog information on all site improvements for review by Architect.

#### PART 2 - PRODUCTS

- 2.02 Site Furnishings
- A. EMBEDDED BOLLARDS:
1. Bollards shall conform to the Standard 6 Inch Steel Bollard as described in the current City of Worcester Department of Public Works & Parks Standard Specifications and Details. Bollards shall be a 6 inch diameter galvanized steel pipe filled with concrete. Exposed length shall not be less than 4 feet from final grade, and shall be buried for not less than 4 feet. The base around the indicator post will be secured and centered in poured concrete no less than 12 inches in diameter. The bollard shall be painted according to the Engineer's instructions, typically black or yellow.

#### PART 3 - EXECUTION

- 3.01 The installer shall examine previous work, related work, and conditions under which this work is to be performed and notify the Contractor in writing of all deficiencies and conditions detrimental to the proper completion of this work. Beginning work means installer accepts substrates, subgrades, previous work, and conditions.

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- 3.02 The Contractor shall be responsible for timing the delivery of all site improvement elements so as to minimize on-site storage time prior to installation. All stored materials must be protected from weather, careless handling and vandalism.
- 3.03 Contractor shall anchor all site element stanchions to cement concrete pad using approved bolts and/or anchoring devices.

END OF SECTION

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## SECTION 05500

### MISCELLANEOUS METALS

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

- A. This section of the specification covers all miscellaneous metal items required for the work, except as specified elsewhere.
- B. All miscellaneous metalwork shall be fabricated as detailed or approved and shall be installed complete with all necessary anchors, anchor bolts, eye bolts, guides, bolts and other accessories.
- C. In general, site and shop fabricated items are included under this section, and factory fabricated items excluded. This section includes but is not limited to: channels, frames and covers, edgings, protective frames, and all other site or shop fabricated metals.

##### 1.02 RELATED WORK:

- A. Section 09900, PAINTING

##### 1.03 QUALITY ASSURANCE:

- A. The drawings show the character and extent of the work required, but do not attempt to show all methods, materials, and details of construction, fastening, etc. Supplementary parts customarily necessary to complete an item, though such parts are not definitely shown or specified, shall be included as part of the item.
- B. Details of construction of the various items shall be submitted on the shop drawings. High quality construction with a neat, finished, and workmanlike appearance will be required.
- C. The size and spacing of screws, connectors, anchors, and similar items, and the size and dimensions of metal items stated herein shall apply in general; specific sizes and spacing of fasteners and dimensions of metal items listed on the drawings shall take precedence.
- D. Items supplied hereunder which are required to be built into the concrete, masonry, etc., shall be delivered to the site at locations as required by the Owner or Engineer, and as required by the overall construction schedule.
- E. Manufacturers of other products comparable in quality and type to those specified will be acceptable if satisfactory data on past performance and other required information is furnished by the Contractor, and if approved by the Engineer.
- F. Stainless steel system shall be guaranteed by manufacturer for 20 years.



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- G. Contractor shall submit an affidavit to Engineer that materials used are protected from or will not be subject to galvanic action.

### 1.04 REFERENCES:

- A. The following standards from a part of these specifications, and indicate the minimum standards required:

#### American Institute of Steel Construction (AISC)

AISC Specification for Structural Steel Buildings

#### American Society for Testing and Materials (ASTM)

ASTM A36 Structural Steel

ASTM A53 Pipe, Steel, Black and Hot-Dipped Zinc-Coated Welded and Seamless

ASTM A123 Zinc (Hot-Dip-Galvanized) Coatings on Iron and Steel Products

ASTM A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware

ASTM A239 Test for Uniformity of Coating by the Preece Test (Copper Sulfate Dip) on Zinc-Coated (Galvanized) Iron or Steel Articles

ASTM A307 Carbon Steel Externally and Internally Threaded Standard Fasteners

ASTM A366 Steel, Carbon, Cold-Rolled Sheet, Commercial Quality

ASTM A525 Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements

ASTM A569 Steel Carbon (0.15 Maximum Percent) Hot-Rolled Sheet and Strip, Commercial Quality

AWS D1.1 Structural Welding Code Steel

### 1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

- A. Samples: Before fabricating or assembling any stainless steel items, samples indicating full range of finish, color, and texture to be supplied shall be submitted to the Engineer for review.
- B. Shop drawings: Shop drawings for all metalwork included in this section shall be submitted to the Engineer for review.

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1. The shop drawings shall be complete and checked, showing sizes, layout, method of assembly, fastenings, anchorage or connection with other work, finish, and coatings, etc. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths. Shop drawings for stainless steel work shall indicate Type and finish to be used.
- C. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
1. Build mockups for the following types of metalwork:
    - a. One Min 6" length of Shroud with specified finish and required hardware.
    - b. One Min 6" length of Bridging Shroud with specified finish and required hardware.
  2. If mockup is rejected by Engineer, continue to build mockups until approved.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS:

##### A. STEEL:

1. Materials, fabrication, and erection of miscellaneous steel sections shall conform to the applicable requirements of the AISC Specification.
2. Steel shapes, plates and bars shall conform to ASTM A36.
3. Stainless steel shall be Type 304 unless otherwise indicated or specified.

##### B. FASTENERS:

1. Metalwork shall be complete, with all bolts, anchors, plates, washers, clamps, screws, studs and other such devices for proper securing and anchoring. Where positions of anchorages can be predetermined, they shall be shop-installed on the item; otherwise the material or equipment to be fastened shall be expansion bolted, toggle bolted, screwed, or otherwise fastened as shown on the drawings or called for herein.
2. Bolts and nuts for general anchorage and for miscellaneous ferrous metal assemblies and fasteners shall be galvanized, unfinished bolts conforming to ASTM A307 unless otherwise noted on the drawings.
3. Expansion bolts for use in concrete and masonry shall be of one manufacturer and shall be approved. Bolts shall be Kwik Bolt concrete anchors manufactured by Hilti Corp.; Trubolt+ manufactured by Red Head Concrete Anchoring Specialists; Wej-it manufactured by Wej-it Fastening Systems; or an approved equal product.

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4. The centerline of expansion shields shall not be closer than 3-inches to the edge of any concrete or masonry in which they are placed.
5. Material for fasteners shall match or be galvanically compatible with the materials fastened. Washers, nuts and other accessories shall match the bolts.
6. Where the specific type, material, size and spacing of fasteners has not been called for on the drawings or in specifications, the fasteners proposed by the Contractor shall be reviewed by the Engineer. If, in the opinion of the Engineer, they are not in accordance with good safety practices, the contractor shall revise and resubmit appropriate fasteners.

### C. STEEL CHANNEL AND ANGLE:

1. Steel channel and angle shall be made in accordance with industry standards. The channel and angle shall be made from stainless steel conforming to ASTM A36. The channels, angles and supports shall be welded together prior to installation and the completed channel and angle shall be free from imperfections or irregularities, which would cause warping or camber when the channel and angle are in use.
2. Loading and structural requirements shall be checked by the channel and angle manufacturer to determine their stability. Unless otherwise indicated, the channel and angle shall be designed for a static load of 100 pounds.
3. The steel channel and angle shall have positive anchorage when in place, such as bolting, or clipping.

## PART 3 - EXECUTION

### 3.01 WELDING OF STEEL:

Welding of steel shall be done in accordance with the AWS Code. Welds shall be continuous along entire line of contact, except where plug or tack welding is noted. Exposed welds shall be ground smooth.

### 3.02 FABRICATION AND ERECTION:

- A. Metalwork shall be complete, with all necessary bolts, nuts, washers, anchors, plates, fastenings, and other fittings. To the extent possible, holes for attachment of blocking, clip angles, etc. shall be shop punched. Where shop punching is impracticable, holes shall be field drilled. Burned holes will not be permitted.
- B. Material shall be straight, accurately fabricated with joints neatly framed, square, and well-riveted, bolted, or welded.
- C. Metalwork to receive hardware shall have all cutouts and attachments accurately made using the hardware itself or templates where necessary.

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- D. Metalwork shall be accurately set and secured in position, with lines plumb and level and surfaces flush and square, or as otherwise required to conform to the structure as shown on the drawings.
- E. Wherever possible, all metalwork shall be built into the masonry work and shall have sufficient anchors, well- fastened. Anchors shall be welded to steelwork and shall be staggered where attached to structural shapes. Metal- work impracticable to set before masonry is built shall be anchored to it with approved expansion bolts set in solid masonry units or in concrete.
- F. Miscellaneous metalwork shall be plainly marked to indicate its location in the structure.

END OF SECTION

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## SECTION 09900

### PAINTING

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

- A. This Section covers field painting and coating of surfaces, complete. Shop painting of metal items is specified under the applicable item.
- B. A schedule listing the various types of surfaces to be painted and the types of paints to be applied is included herein.
- C. Unless otherwise indicated, the following items shall not be painted:
  - 1. Labels on equipment, such as Underwriters' Laboratories and Factory Mutual, equipment identification, performance rating, and name or nomenclature plates.
  - 2. Moving parts of operating units, exposed bolt threads, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts.
  - 3. Electrical conduit unless mounted on painted or finished surfaces or exposed..
  - 5. Stainless steel EXCLUDING the fixture shroud..
  - 6. Concrete.
  - \* 10. Factory prefinished architectural components.
  - \* 11. Electrical panels and cabinets factory finish painted.

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\* Except for touch-up painting when required

##### 1.02 RELATED WORK:

##### 1.03 SYSTEM DESCRIPTION:

- A. The term "paint" as used herein includes emulsions, enamels, paints, stains, varnishes, sealers, and other coatings, organic or inorganic, whether used as prime, intermediate, or finish coats.
- B. The Contractor shall do a complete painting job throughout the work in accordance with generally approved modern practices for work of high quality. Unless otherwise

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specified, all materials and surfaces customarily painted shall be given not less than one shop coat and two field coats or one prime coat and two finish coats, regardless of whether or not the surface to be painted is specifically mentioned.

- C. Paints containing lead shall not be used.
- D. To ensure a satisfactory painting job it is essential that the paints applied in the shop and in the field be mutually compatible. The Contractor shall determine what shop paints have been used and shall verify that field applied paints are compatible therewith.
- E. The colors of finish coatings shall be selected by the Engineer from color chips submitted by the Contractor for review. The color selection shall be in the form of a schedule indicating the colors to be used on the various surfaces. The colors used in the final work shall be in accordance with the color schedule and shall match the selected color chips.
- F. All coating systems used for potable water applications shall be previously approved by the National Sanitation Foundation (N.S.F.) in accordance with Standard 61. Evidence of such approval shall be an approval letter from N.S.F. listing the submitted materials.
- G. Paints submitted shall meet all Federal and State E.P.A. regulations pertaining to volatile organic compounds (VOC) compliance.

### 1.04 REFERENCES:

- A. The following standards form a part of these specifications, and indicate the minimum standards required:

American Society for Testing and Materials (ASTM)

ASTM      F1869      Moisture Vapor Emission Rate Using Anhydrous Calcium Chloride

### 1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature of proposed paints.
- B. Painting schedule.
- C. **Three (3)** sets of color chips for selection of colors.

### 1.06 DELIVERY AND STORAGE:

- A. Paint shall be delivered to the site in the manufacturer's sealed containers. Each container shall bear the manufacturer's label, listing the brand name, type and color of paint, and instructions for thinning. Thinning shall be done only in accordance with directions of

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the manufacturer. Job mixing or job tinting may be done when approved by the Engineer and for preparing sample colors.

- B. Painting materials shall be stored and mixed in a single location designated by the Engineer for this purpose. The Contractor shall not use any plumbing fixture or pipe for mixing or for disposal of any refuse. It shall carry all necessary water to its mixing room, and shall dispose of all waste outside of the building in a suitable receptacle. The Contractor will be held responsible for any damage done due to failure to observe these precautions.
- C. The paint storage area shall be kept clean at all times, and any damage thereto or to its surroundings shall be repaired. Any oily rags, waste, etc., shall be removed from the building every night, and every precaution shall be taken to avoid danger of fire.
- D. Heat must be provided in the storage area if paints are to be stored during winter months. The temperature shall be maintained above 40 degrees F. at all times.

### PART 2 - PRODUCTS

#### 2.01 MATERIALS:

##### A. PAINT SCHEDULE:

Except as otherwise indicated, all paint used shall be of the type listed in the schedule below, by Tnemec Company, Inc., or equivalent paints by Sherwin-Williams Company, International Paints, or other approved paint fully equal to paint manufactured by the above named companies. No brand other than those named will be considered for approval unless the brand and type of paint proposed for each item in the following painting schedule are submitted in writing to the Engineer, along with sufficient data supported by certified tests.

#### PAINT SCHEDULE

<u>Key</u>		<u>Tnemec</u>	<u>Note 1</u>
AGE	Acryli Gloss Enamel	1029 Enduratone	3.5
APE	Acrylic Polyurethane	73 Endura-Shield Enamel	3.0
ABF	Cementitious Block Filler	130 Envirofill	80-100 s.f./gal
BO	Bleaching Oil	Note 5	
CEE	Catalyzed Epoxy	L69F Epoxoline II	4.0
CEM	Catalyzed Epoxy Mastic	27 WB Typoxy	Note 3

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<u>Key</u>		<u>Tnemec</u>	<u>Note 1</u>
CEP	Catalyzed Epoxy Primer	L69F Epoxoline	3.0
EMC	Epoxy Modified Cement	218 Mortar-Clad	Fill/Surface
EP	Epoxy-Polyamide (thinned 30% #4 thinner)	FC 22 Pota-pox	25-30
EPW	Water-based Epoxy Primer	151 Elasto-Grip	1.0-1.5
HGV	High Gloss Varnish		Note 2
HSE	High Solids Epoxy (Minimum 69%)	L69 Epoxy	6.0
MA	Modified Acrylic	115 Uni-bond	3.0
MAE	Modified Acrylic Elastomer	156 Envirocrete	6.0-8.0
MCU	Moisture Cured Urethane	Series 1 - Omnithane	2.5-3.0
MPE	Modified Polyamine Epoxy	Series 435 - Permaglaze	15-20 mils
NE	Novolac Epoxy	282 Tneme-Glaze	7.5
PEF	Polyamine Epoxy Finish	280 Tneme-Glaze	6.0-8.0
PEP	Polyamine Epoxy Primer	201 Epoxoprime	6.0-8.0
PVA	PVA Sealer	151 Elasto Grip	0.75-1.5
PWC	Potable Water Coating	Series FC 22 Pota Pox	25-30
SA	Silicone Aluminum	39-1261 (Note 4)	1.5
VB	Vapor Barrier	262 Elasto Shield	50-100
WP	Wood Primer	151 Elasto-Grip	1.0-1.5
WS	Wood Sealer	Note 2	-
Z	Zinc-Rich Primer	90G-1K97 Tneme-Zinc	2.5
Notes	1: Minimum Dry Film Thickness/Coat (mils) 2: Furnished by reputable manufacturer and acceptable to the Engineer. 3: Shall be used as a tie-coat between incompatible paints @ 3.0-4.0 mils. 4: This paint is suitable for temperatures up to 1200°F and must be final cured at 400°F for one hour. 5: Bleaching oil is a translucent gray paint stain with a chemical additive to enhance the natural bleaching tendencies of cedar shingles.		

### B. PAINTING SCHEDULE:



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Paint shall be applied in accordance with the paint key listed on the following schedule and defined in the preceding Paint Schedule:

<u>Item</u>	<u>Field Coats</u>		
	1st	2nd	3 <sup>rd</sup>
<u>Metals:</u>			
Exposed exterior stainless structural steel channel	*Z	CEE	APE
Exterior miscellaneous galvanized and nonferrous metals and piping (SP7 required)	CEE	APE	--
Exposed electrical conduit, conduit fittings, outlet boxes	See Electrical Specifications		

\* Spot Prime

### B. SPARE PAINT:

1. Furnish to the Owner one unopened gallon of each type and color of paint used on the work.
2. Furnish both components for each type and color of epoxy paints used on the work.

## PART 3 - EXECUTION

### 3.01 SURFACE PREPARATION:

- A. Before any surface is painted, it shall be cleaned carefully of all dust, dirt, grease, loose rust, mill scale, old weathered paint, efflorescence, etc. All necessary special preparatory treatment shall then be applied. Where required, imperfections and holes in surfaces to be painted shall be filled in an approved manner.
- B. Cleaning and painting shall be so programmed that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surfaces which have been cleaned, pretreated, or otherwise prepared for painting, shall be painted with the first field coat as soon as practicable after such preparation has been completed, but in any event prior to any deterioration of the prepared surface.
- H. All nonferrous metal surfaces to be painted shall be cleaned of all dirt, grease, oil and other foreign substances uniformly profiled per SSPC SP 7.
- I. All galvanized and stainless steel surfaces to be painted shall be brush blasted to create a uniform surface profile per SSPC SP7.

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- J. Before application of the first full field coat, abraded areas of all non-galvanized ferrous metal items having shop coats shall be touched up with paint of the type indicated on the Painting Schedule.
- K. All items of equipment such as motors, pumps, instrumentation panels, electrical switchgear, and similar items, that have been given shop coats, paint filler, enamel or other treatment customary with the manufacturer, shall have, after installation, all scratches and blemishes touch up prior to application of the first field coat. Factory prefinished items not to be field painted shall be touched up with matching paint to repair any areas damaged during installation.
- N. Hardware accessories, machine surfaces, plates, lighting fixtures, and similar items in place prior to cleaning and painting, and not intended to be painted, shall be removed during painting operations and repositioned upon completion of each area or shall otherwise be protected.

### 3.02 APPLICATION:

- A. Paint shall be used and applied as recommended by the manufacturer without being extended or modified, and with particular attention to the correct preparation and condition of surfaces to be painted.
- B. Paint shall be applied only within the temperature range recommended by the manufacturer. Painting of surfaces when they are exposed to the sun shall be avoided.
- C. Paint shall not be applied to wet or damp surfaces and shall not be applied in rain, snow, fog, or mist, or when the relative humidity exceeds 85 percent.
- D. No paint shall be applied when it is expected that the relative humidity will exceed 85 percent or that the air temperature will drop below 40°F within 18 hours after the application of paint. Dew or moisture condensation should be anticipated and if such conditions are prevalent, painting shall be delayed until midmorning to be certain that the surfaces are dry. Further, the days painting should be completed well in advance of the probable time of day when condensation will occur, in order to permit the film an appreciable drying time prior to the formation of moisture.
- E. All paint shall be applied under favorable conditions by skilled painters and shall be brushed out carefully to a smooth, even coating without run or sags. Enamel shall be applied evenly and smoothly. Each coat of paint shall be allowed to dry thoroughly, not only on the surface but also throughout the thickness of the paint film before the next coat is applied. Finish surfaces shall be uniform in finish and color, and free from flash spots and brush marks. In all cases, the paint film produced shall be satisfactory in all respects to the Engineer.
- F. Exposed fasteners and other ferrous metal or surfaces to be painted with water-thinned paints shall be spot primed with aluminum paints.

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- G. In order to provide contrast between successive coats, each coat shall be of such tint as will distinguish it from preceding coats.
- H. The Contractor shall not only protect its work at all times, but shall also protect all adjacent work and materials by the use of sufficient drop cloths during the progress of the work. Upon completion of the work, it shall clean up all paint, spots, oil, and stains from floors, glass, hardware, and similar finished items.
- I. Paint shall be applied so as to obtain coverage per gallon and the dry film thickness recommended by the manufacturer. Dry film thickness readings shall be taken to insure that required thicknesses have been achieved. The Contractor shall record in a manner satisfactory to the Engineer, the quantities of paint used for successive coats on the various parts of the work.
- J. Spraying with adequate apparatus may be substituted for brush application of those paints and in those locations for which spraying is suitable.
- K. If paints are thinned for spraying, the film thickness after application shall be the same as though the unthinned paint were applied by brush. That is, the addition of a thinner shall not be used as a means of extending the coverage of the paint, but the area covered shall be no greater than the area that would have been covered with the same quantity of unthinned paint.
- L. Blast cleaned metal surfaces shall be coated immediately after cleaning, before any rusting or other deterioration or contamination of the surface occurs. Blast cleaned surfaces shall be coated not later than 8 hours after cleaning under ideal conditions or sooner if conditions are not ideal.
- M. The use of carbon dioxide or carbon monoxide emitting heaters is not permitted during the painting operation. Only indirect hot-air systems shall be permitted.

### 3.03 CLEANUP:

- A. The Contractor shall at all times keep the premises free from accumulation of waste material and rubbish caused by ITS employees or work. At the completion of the painting, IT shall remove all tools, scaffolding, surplus materials, rubbish from and about the buildings and shall leave its work "broom clean" unless more exactly specified.
- B. The Contractor shall also, upon completion, remove all paint where it has been spilled, splashed, or splattered on all surfaces, including floors, fixtures, equipment, furniture, glass, hardware, etc., leaving the work ready for inspection.

END OF SECTION

## MADISON STREET UNDERPASS LIGHTING

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## SECTION 16010

### ELECTRICAL WORK - GENERAL PROVISIONS

#### PART 1 - GENERAL

##### 1.01 WORK INCLUDED:

- A. The work covered by this section of the specifications consists of furnishing all labor, equipment, appliances, materials and incidentals in connection with the installation of the complete electrical systems as herein specified and as shown on the drawings.
- B. It is not the intent that the drawings shall show every junction box, conduit, wire, fitting, device, accessory, etc., but the Contractor shall be required to furnish without additional expense all transportation, labor and materials necessary to complete the electrical systems in accordance with the best practice of the trade.
- C. Unless otherwise specified, materials of the same classifications, used for the same purpose shall be the product of the same manufacturer.
- D. The work shall include furnishing and installing the following items:
  - 1. Underground Secondary Services
  - 2. Grounding System
  - 3. Panelboards
  - 4. Raceways
  - 5. Handholes
  - 6. Lighting fixtures
  - 7. Cabinets
  - 8. Feeder and Branch Circuit Conductors
  - 9. Hangers and Supports
  - 10. Solderless Lugs and Connectors
  - 11. Conduit and wire for equipment and controls.

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### E. Electric Service and Metering

1. Electric service shall be an extension from the existing equipment as indicated on the contract drawings.

### F. Interpretation of Drawings

1. The Drawings are diagrammatic only and are not intended to show exact locations of outlets and conduit runs.
2. All three-phase circuits shall be run in separate conduits unless otherwise shown on the Drawings.
3. The Contractor shall verify with the Engineer the exact locations and mounting heights of lighting fixtures, switches and receptacles prior to installation.
4. Any work installed contrary to Contract Documents, or without approval by the Engineer, shall be changed or replaced as required by the Engineer and no extra compensation will be allowed the Contractor for making these changes.
5. The locations of equipment, fixtures, and similar devices shown on the Drawings are approximate only. Exact locations shall be as approved by the Engineer during construction. The Contractor shall obtain in the field all information relevant to the placing of electrical work and in case of any interference with other work, shall proceed as required by the Engineer and shall furnish all labor and materials necessary to complete the work in an approved manner.
6. Surface mounted panel boxes, junction boxes, conduit, etc., shall be supported by spacers to provide a clearance between wall and equipment.
7. The number of conductors shown on the Drawings are not necessarily the correct number required. As many conductors as are required in each case shall be installed.
8. The ratings of motors and other electrically operated devices together with the size shown for their branch circuit conductors and conduits are approximate only and are indicative of the probable power requirements insofar as can be determined in advance of the purchase of equipment. The ratings shown for motor branch circuit protective devices are the maximum ratings permitted. Lower ratings may be used where approved as being proper for the dynamic characteristics of the motor and its connected load.

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9. Unless otherwise specified, all conduits, wires, and cables and the support systems for the conduits and cables that are required to make the electrical connections to equipment shall be furnished and installed. All connections to equipment shall be made as shown, specified, and required and in accordance with the approved shop and setting drawings.
10. The Contractor shall verify, in the field, all measurements necessary for his work and shall assume responsibility for their accuracy.

### 1.02 LOCAL CONDITIONS:

- A. The Contractor shall provide and place all sleeves for conduits penetrating floors, walls, partitions, etc. The Contractor shall locate all necessary slots for his work and these shall be formed before concrete is poured.
- B. All cutting and patching shall be done in a thoroughly workmanlike manner.
- C. Before submitting proposals, the Contractor is expected to inspect the site and survey the conditions to be encountered in the performance of the work. Failure to familiarize himself with the conditions shall not relieve the Contractor's responsibility for full completion of the work in accordance with the provisions of the Contract.

### 1.03 PERMITS AND INSPECTION:

- A. Permits, fees and notices shall be in accordance with the General Conditions.
- B. All work shall meet or exceed the latest requirements of all national, state, county, municipal and other authorities exercising jurisdiction over electrical construction at this project.
- C. All required permit and inspection certificates shall be obtained, paid for, and given to the Owner at the completion of the work.

### 1.04 CODES AND STANDARDS:

- A. Unless indicated or specified otherwise, materials and workmanship shall conform with the latest editions of the following codes, standards and specifications.
  1. Massachusetts Electrical Code
  2. National Bureau of Standards Handbook H-30 National Electrical Safety Code
  3. State and Local Codes, and all other authorities having jurisdiction

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4. Underwriter's Laboratories, Inc. (UL)
5. American National Standards Institute, Inc.
6. Institute of Electrical and Electronic Engineers (IEEE)
7. National Electrical Manufacturers Association (NEMA)
8. National Board of Fire Underwriters
9. International Municipal Signal Association (IMSA)
10. Insulated Power Cable Engineers Associated Specifications
11. American Society for Testing Materials Specifications

### 1.05 REVIEW OF MATERIALS:

- A. Material and Equipment Schedules. As soon as practicable and within thirty days after the date of notice to proceed and before commencement of installation of any materials or equipment, the Contractor shall submit to the Engineer six (6) complete Brochures for approval of materials, fixtures, and equipment to be incorporated in the work. The list shall include manufacturer's name, catalog numbers, cuts, diagrams, drawings, and such other descriptive data as may be required. No consideration will be given to a partial submittal from time to time. Approval of materials will be based on manufacturer's published ratings. Any materials, fixtures and equipment listed that are not in accordance with the specification requirements will be rejected.
- B. Substitutions: Substitution of material or equipment shall be in accordance with the General Conditions.
- C. Shop Drawings. Shop drawings shall be submitted to the Engineer for review in accordance with the Division 1. Shop drawings shall be submitted for, but not limited to the following:
  1. Panelboards
  2. Wire and Cable
  3. Hangers and Supports
  4. Raceways
  5. Lighting fixtures



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6. Handholes

7. Cabinets

D. Submit the following information with all equipment shop drawings.

1. Manufacturer's certified scale drawings, cuts, or catalogs, including installation details and manufacturer's name.
2. Manufacturer's specifications, including certified performance characteristics and capacity ratings.
3. Electrical wiring diagrams and controls, where applicable.
4. Certificate of compliance with Code, where applicable.
5. Detail of all conduit stub-up with conduit size and dimensions from columns or walls.

E. Equipment shop drawings and wiring diagrams must be prepared specifically for this installation. Standard factory wiring diagrams with a revision marked in ink for this installation will be accepted.

F. All control and wiring diagrams shall be complete with the following description:

1. Sequence of operation
2. Sequence of interlocking
3. Operation of alarms
4. Legend
5. Wiring Numbers

G. All equipment shop drawings shall be properly identified and indicate the Article number of the specifications or the Drawing number which applies to the submitted item.

H. Shop drawings for the items listed above shall be submitted for approval in accordance with the preceding paragraphs. The Engineer, however, reserves the right to require submittal of shop drawings on any other material or equipment to be installed under this Section not specifically listed above.

1.06 MINOR DEVIATIONS:

## MADISON STREET UNDERPASS LIGHTING

- A. The work as shown on the drawings is diagrammatic and is intended to show the work included and the arrangement of the various systems.
- B. It is not intended that the accompanying plans and specifications cover every detail of the required installation. Furnish and install equipment, materials and labor as shown or specified, as are usually furnished, or as are needed to make a complete and satisfactory operating installation, whether mentioned or not, omitting only those items which are specifically excluded.
- C. Locations and mounting heights of equipment and/or devices as shown are approximately correct. The Engineer reserves the right to relocate any equipment or device prior to actual installation at no extra cost to the Owner.
- D. No deviation from layout shall be made without written approval from the Engineer.

### 1.07 TEMPORARY LIGHT AND POWER:

- A. The Contractor shall provide temporary light and power and pay all energy charges as described in Division 1.

### 1.08 ELECTRICAL REFERENCE SYMBOLS:

- A. Symbols shown on the drawings shall approximate location of fixtures, outlet boxes, and conduit runs, and other equipment, unless otherwise detailed. The exact location shall be governed by structural conditions and obstructions. This is not to be construed to permit redesigning systems. All outlets shall be interconnected as shown on the drawings. Locate and install all boxes and equipment where they will be readily accessible.

### 1.09 PHASE IDENTIFICATION:

- A. The entire system of wiring shall be phased by color code as follows:
  - 1. Wires No. 6 AWG and smaller shall have a continuous colored outer covering.
  - 2. Wires larger than No. 6 AWG shall be identified at all points of termination by gummed tape, plastic tape, etc., applied to the wire.
  - 3. Bus bars in motor control centers and panelboards shall be properly identified by color as herein specified.
  - 4. Code colors for 120/208 volt systems shall be:
    - a. Phase A - Black

## MADISON STREET UNDERPASS LIGHTING

- b. Phase B - Red
  - c. Phase C - Blue
5. Code colors for 277/480 volt systems shall be:
- a. Phase A - Brown
  - b. Phase B - Orange
  - c. Phase C - Yellow
6. Neutral wires shall be white or grey.
7. Equipment ground wires shall be green.
8. The same colors shall be used for the same phases throughout the entire project.

### 1.10 PROTECTION AND CLEANING OF EQUIPMENT:

- A. All electrical equipment, upon receipt, shall be adequately stored and protected from damage.
- B. After installation, all electrical equipment shall be protected to prevent damage during the construction period. Openings in conduits and boxes shall be closed to prevent entrance of foreign materials.
- C. The interior of boxes and cabinets shall be left clean. Exposed surfaces shall be cleaned and plate surfaces polished.

### 1.11 OPERATION AND MAINTENANCE MANUALS:

- A. The Contractor shall furnish the Owner with three (3) copies of complete operating and maintenance manuals. Manuals shall include all equipment, maintenance instruction, parts list, warranties, schematic diagrams of control systems, and lubrication charts.
- B. Manuals shall contain only that information which specifically applies to this project, and all unrelated material shall be deleted. During the instruction period, herein specified, this manual shall be used and explained. Each copy of manual shall be clearly indexed and include a directory of all subcontractors and maintenance contractors, indicate the area of their responsibility, and list the name and telephone numbers of the responsible member of each organization. This material shall have a clear plastic protective shield over each sheet of data.

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- C. Each manual shall be bound in an expandable plastic covered hard bound binder. Binders shall be three (3) straight post type or ring type binders. The manual's front cover and side cover shall be stamped "Operation and Maintenance Manual -- Electrical Systems" along with the project title.

### 1.12 OPERATING AND MAINTENANCE INSTRUCTIONS:

- A. A competent Engineer shall be provided by the Contractor to instruct operating personnel in the operation and maintenance of equipment and systems.

### 1.13 SPARE PARTS DATA:

- A. The Contractor shall furnish a complete list of recommended spare parts and supplies for the equipment furnished with current unit prices and source of supply.

### 1.14 TESTS:

- A. The Electrical Subcontractor shall perform all tests at the completion of the work and the results furnished to the Owner and Engineer in writing. Tests shall include, but not be limited to: all systems test free of shorts or grounds, proper neutral connections, ground system resistance, secondary voltages at main distribution panel, power panels and lighting panels, all lighting fixtures with lamps in place for 10 hours.
- B. Upon completion of all work, the Electrical Subcontractor shall furnish, in duplicate, certificates of inspections from all inspectors and authorities having jurisdiction, notarized letters from the manufacturers stating that authorized Factory Engineers or agents have inspected and tested the installation of their respective systems and found same to be in satisfactory operating condition.
- C. Furnish all labor, material, instruments, supplies and services and bear all costs for the accomplishment of the tests.

### 1.15 GUARANTEE:

- A. The Contractor shall guarantee equipment and performance of the installation and equipment in accordance with the GENERAL CONDITIONS.
- B. Lamps shall be furnished and installed in each lighting fixture as soon as fixtures are properly hung. Replace all lamps that fail within one year after final acceptance at no additional cost. If the Contractor fails to replace lamps during the guarantee period, after a second request the Owner may replace lamps and back-charge Contractor.

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### PART 2 - PRODUCTS

#### 2.01 MATERIALS:

- A. The materials used in all systems shall be new, unused and as hereinafter specified. All materials where not specified shall be of the very best of their respective kinds. Samples of materials or manufacturer's specification shall be submitted for approval as required by the Engineer.
- B. Materials and equipment used shall be U.L. listed wherever such approved materials and equipment is available.
- C. Electrical equipment shall at all times during construction be adequately protected against mechanical injury or damage by water. If any apparatus has been damaged, such damage shall be repaired by the Contractor at his cost and expense. If any apparatus has been subject to possible damage by water, it shall be thoroughly dried out and put through such special tests as required by the Engineer, at the cost and expense of the Contractor, or shall be replaced by the Contractor at his own expense.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

- A. All work shall be executed in full accordance with the National Electrical Code and local rulings. Should any work be performed contrary to said rulings, ordinances and regulations, this Contractor shall bear full responsibility for such violations and assume all costs arising therefrom.
- B. Load Balance. Check the load balance on the phases of the various systems and reconnect where necessary as approved by the Engineer to provide equal division of the loads between the phases of the various systems.
- C. Before starting the work, confer with all other trades relative to the location of pipes, and apparatus or fixtures to be installed by them and select locations for the work which will avoid possible conflicts with the work of other trades involved. All differences or conflicting conditions concerning the work shall be called to the attention of the Engineer for adjustment before starting work. For such work performed or materials installed in violation of the above clause the work shall be readjusted to the complete satisfaction of the Engineer at the sole expense of the Electrical Subcontractor.
- D. A concrete housekeeping pad shall be furnished and installed for all floor-mounted equipment. The pad shall be 4-inches high and sized to extend 4-inches beyond the equipment. The pad shall be poured dead level and the top scored

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from front to back on 18-inch centers with a parting tool. All edges shall be finished with an edging tool. The Contractor should refer to Division 3, Cast-In-Place Concrete for additional requirements.

### E. Cleanup

1. This Contractor shall cooperate with other workmen and with the General Contractor in the daily removal of debris from the work site.
2. This Contractor shall leave "broom clean" all areas where he has interrupted or completed his work.
3. He shall cooperate with the General Contractor in good housekeeping procedures.
4. At the completion of his work, prior to the final inspection, this Contractor shall clean all devices, plates, fixtures, glassware, switches, cabinets, exposed conduits, fittings, etc. and shall have the premises in a thoroughly clean condition.

END OF SECTION

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## SECTION 16050

### BASIC ELECTRICAL MATERIALS AND METHODS

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes the following:
  - 1. Raceways.
  - 2. Building wire and connectors.
  - 3. Supporting devices for electrical components.
  - 4. Electrical identification.
  - 5. Concrete equipment bases.
  - 6. Cutting and patching for electrical construction.
  - 7. Touchup painting.

##### 1.03 DEFINITIONS

- A. EMT: Electrical metallic tubing.
- B. FMC: Flexible metal conduit.
- C. IMC: Intermediate metal conduit.
- D. LFMC: Liquidtight flexible metal conduit.
- E. RNC: Rigid nonmetallic conduit.
- F. RSC: Rigid Steel Conduit galvanized

##### 1.04 SUBMITTALS

- A. Product Data: For electricity-metering equipment.

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- B. Shop Drawings: Dimensioned plans and sections or elevation layouts of electricity-metering equipment.
- C. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.

### 1.05 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

### 1.06 COORDINATION

- A. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work.
- B. Coordinate electrical service connections to components furnished by utility companies.
  - 1. Coordinate installation and connection of exterior underground and overhead utilities and services, including provision for electricity-metering components.
  - 2. Comply with requirements of authorities having jurisdiction and of utility company providing electrical power and other services.
- C. Where electrical identification devices are applied to field-finished surfaces, coordinate installation of identification devices with completion of finished surface.

## PART 2 - PRODUCTS

### 2.01 RACEWAYS

- A. EMT: ANSI C80.3, zinc-coated steel, with set-screw or compression fittings.
- B. FMC: Zinc-coated steel.
- C. IMC: ANSI C80.6, zinc-coated steel, with threaded fittings.
- D. RSC: Zinc-coated steel.
- E. LFMC: Zinc-coated steel with sunlight-resistant and mineral-oil-resistant plastic jacket.



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- F. RNC: NEMA TC 2, Schedule 40 PVC, with NEMA TC3 fittings.
- G. Raceway Fittings: Specifically designed for the raceway type with which used.

### 2.02 CONDUCTORS

- A. Conductors, No. 10 AWG and Smaller: Solid or stranded copper.
- B. Conductors, Larger Than No. 10 AWG: Stranded copper.
- C. Insulation: Thermoplastic, rated at 75 deg C minimum.
- D. Wire Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated.

### 2.03 SUPPORTING DEVICES

- A. Material: Cold-formed steel, with corrosion-resistant coating acceptable to authorities having jurisdiction.
- B. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel.
- C. Raceway and Cable Supports: Manufactured clevis hangers, riser clamps, straps, threaded C-clamps with retainers, ceiling trapeze hangers, wall brackets, and spring-steel clamps or click-type hangers.
- D. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
- E. Cable Supports for Vertical Conduit: Factory-fabricated assembly consisting of threaded body and insulating wedging plug for nonarmored electrical cables in riser conduits. Plugs have number and size of conductor gripping holes as required to suit individual risers. Body constructed of malleable-iron casting with hot-dip galvanized finish.
- F. Expansion Anchors: Carbon-steel wedge or sleeve type.
- G. Toggle Bolts: All-steel springhead type.
- H. Powder-Driven Threaded Studs: Heat-treated steel.

### 2.04 ELECTRICAL IDENTIFICATION

- A. Identification Devices: A single type of identification product for each application category. Use colors prescribed by ANSI A13.1, NFPA 70, and these Specifications.

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- B. Raceway and Cable Labels: Comply with ANSI A13.1, Table 3, for minimum size of letters for legend and minimum length of color field for each raceway and cable size.
  - 1. Type: Pretensioned, wraparound plastic sleeves. Flexible, preprinted, color-coded, acrylic band sized to suit the diameter of the item it identifies.
  - 2. Type: Preprinted, flexible, self-adhesive, vinyl. Legend is over-laminated with a clear, weather- and chemical-resistant coating.
  - 3. Color: Black letters on orange background.
  - 4. Legend: Indicates voltage.
- C. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape, not less than 1 inch wide by 3 mils thick.
- D. Underground Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape with the following features:
  - 1. Not less than 6 inches wide by 4 mils thick.
  - 2. Compounded for permanent direct-burial service.
  - 3. Embedded continuous metallic strip or core.
  - 4. Printed legend that indicates type of underground line.
- E. Tape Markers for Wire: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
- F. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- G. Engraved-Plastic Labels, Signs, and Instruction Plates: Engraving stock, melamine plastic laminate punched or drilled for mechanical fasteners 1/16-inch minimum thickness for signs up to 20 sq. in. and 1/8-inch minimum thickness for larger sizes. Engraved legend in black letters on white background.
- H. Interior Warning and Caution Signs: Comply with 29 CFR, Chapter XVII, Part 1910.145. Preprinted, aluminum, baked-enamel-finish signs, punched or drilled for mechanical fasteners, with colors, legend, and size appropriate to the application.
- I. Exterior Warning and Caution Signs: Comply with 29 CFR, Chapter XVII, Part 1910.145. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs with 0.0396-inch, galvanized-steel backing, with colors, legend, and size appropriate to the application. 1/4-inch grommets in corners for mounting.
- J. Fasteners for Nameplates and Signs: Self-tapping, stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.

### 2.05 CONCRETE BASES

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- A. Concrete Forms and Reinforcement Materials: As specified in Division 3 Section "Cast-in-Place Concrete."
- B. Concrete: 3000-psi, 28-day compressive strength as specified in Division 3 Section "Cast-in-Place Concrete."

### 2.06 TOUCHUP PAINT

- A. For Equipment: Equipment manufacturer's paint selected to match installed equipment finish.
- B. Galvanized Surfaces: Zinc-rich paint recommended by item manufacturer.

## PART 3 - EXECUTION

### 3.01 ELECTRICAL EQUIPMENT INSTALLATION

- A. Headroom Maintenance: If mounting heights or other location criteria are not indicated, arrange and install components and equipment to provide the maximum possible headroom.
- B. Materials and Components: Install level, plumb, and parallel and perpendicular to other building systems and components, unless otherwise indicated.
- C. Equipment: Install to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- D. Right of Way: Give to raceways and piping systems installed at a required slope.

### 3.02 RACEWAY APPLICATION

- A. Use the following raceways for outdoor installations:
  - 1. Exposed: RSC.
  - 2. Concealed: RSC.
  - 3. Underground, Single Run: RNC.
  - 4. Underground, Grouped: RNC.
  - 5. Connection to Vibrating Equipment: LFMC.
  - 6. Boxes and Enclosures: NEMA 250, Type 3R or Type 4.
- B. Use the following raceways for indoor installations:
  - 1. Exposed: EMT.
  - 2. Concealed: EMT.

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3. Connection to Vibrating Equipment: FMC; except in wet or damp locations, use LFMC.
4. Damp or Wet Locations: RSC.
5. Boxes and Enclosures: NEMA 250, Type 1, unless otherwise indicated.

### 3.03 RACEWAY AND CABLE INSTALLATION

- A. Install raceways and cables at least 6 inches away from heat generating equipment.
- B. Use temporary raceway caps to prevent foreign matter from entering.
- C. Make conduit bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.
- D. Use raceway and cable fittings compatible with raceways and cables and suitable for use and location.
- E. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of the pull wire.
- F. Install signal system raceways, 2-inch trade size and smaller, in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements, in addition to requirements above.
- G. Connect motors and equipment subject to vibration, noise transmission, or movement with a maximum of 72-inch flexible conduit. Install LFMC in wet or damp locations. Install separate ground conductor across flexible connections.

### 3.04 WIRING METHODS FOR POWER, LIGHTING, AND CONTROL CIRCUITS

- A. Feeders: Type THHN/THWN insulated conductors in raceway.
- B. Underground Feeders and Branch Circuits: Type THWN or single-wire, Type UF insulated conductors in raceway.
- C. Branch Circuits: Type THHN/THWN insulated conductors in raceway.
- D. Branch Circuits: Type THW or THHN/THWN insulated conductors in raceway where exposed.
- E. Branch Circuits: Type THHN/THWN insulated conductors in raceway where exposed.
- F. Remote-Control Signaling and Power-Limited Circuits: Type THHN/THWN insulated conductors in raceway for Classes 1, 2, and 3, unless otherwise indicated.

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### 3.05 WIRING INSTALLATION

- A. Install splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than un-spliced conductors.
- B. Install wiring at outlets with at least 12 inches of slack conductor at each outlet.
- C. Connect outlet and component connections to wiring systems and to ground. Tighten electrical connectors and terminals, according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.

### 3.06 ELECTRICAL SUPPORTING DEVICE APPLICATION

- A. Damp Locations and Outdoors: Hot-dip galvanized materials or nonmetallic, U-channel system components.
- B. Dry Locations: Steel materials.
- C. Support Clamps for PVC Raceways: Click-type clamp system.
- D. Selection of Supports: Comply with manufacturer's written instructions.
- E. Strength of Supports: Adequate to carry present and future loads, times a safety factor of at least four; minimum of 200-lb design load.

### 3.07 SUPPORT INSTALLATION

- A. Install support devices to securely and permanently fasten and support electrical components.
- B. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U-bolts, clamps, attachments, and other hardware necessary for hanger assemblies and for securing hanger rods and conduits.
- C. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
- D. Size supports for multiple raceway installations so capacity can be increased by a 25 percent minimum in the future.
- E. Support individual horizontal raceways with separate, malleable-iron pipe hangers or clamps.
- F. Install 1/4-inch diameter or larger threaded steel hanger rods, unless otherwise indicated.

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- G. Arrange supports in vertical runs so the weight of raceways and enclosed conductors is carried entirely by raceway supports, with no weight load on raceway terminals.
- H. Simultaneously install vertical conductor supports with conductors.
- I. Install metal channel racks for mounting cabinets, panelboards, disconnect switches, control enclosures, pull and junction boxes, transformers, and other devices unless components are mounted directly to structural elements of adequate strength.
- J. Install sleeves for cable and raceway penetrations of concrete slabs and walls unless core-drilled holes are used. Install sleeves for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.
- K. Securely fasten electrical items and their supports to the building structure, unless otherwise indicated. Perform fastening according to the following unless other fastening methods are indicated:
  - 1. New Concrete: Concrete inserts with machine screws and bolts.
  - 2. Instead of expansion bolts, threaded studs driven by a powder charge and provided with lock washers may be used in existing concrete.
  - 3. Steel: Welded threaded studs or spring-tension clamps on steel.
    - a. Field Welding: Comply with AWS D1.1.
  - 4. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or other items.
  - 5. Light Steel: Sheet-metal screws.
  - 6. Fasteners: Select so the load applied to each fastener does not exceed 25 percent of its proof-test load.

### 3.08 IDENTIFICATION MATERIALS AND DEVICES

- A. Install at locations for most convenient viewing without interference with operation and maintenance of equipment.
- B. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated in the Contract Documents or required by codes and standards. Use consistent designations throughout Project.
- C. Self-Adhesive Identification Products: Clean surfaces before applying.
- D. Identify raceways and cables with color banding as follows:
  - 1. Bands: Pretensioned, snap-around, colored plastic sleeves or colored adhesive marking tape. Make each color band 2 inches wide, completely encircling conduit, and place adjacent bands of two-color markings in contact, side by side.

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2. Band Locations: At changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
3. Colors: As follows:
  - a. Telecommunication System: Green and yellow.
- E. Tag and label circuits designated to be extended in the future. Identify source and circuit numbers in each cabinet, pull and junction box, and outlet box. Color-coding may be used for voltage and phase identification.
- F. Install continuous underground plastic markers during trench backfilling, for exterior underground power, control, signal, and communication lines located directly above power and communication lines. Locate 6 to 8 inches below finished grade. If width of multiple lines installed in a common trench or concrete envelope does not exceed 16 inches, overall, use a single line marker.
- G. Color-code 208/120-V system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:
  1. Phase A: Black.
  2. Phase B: Red.
  3. Phase C: Blue.
- H. Color-code 480/277-V system secondary service, feeder, and branch-circuit conductors throughout the secondary electrical system as follows:
  1. Phase A: Brown.
  2. Phase B: Orange.
  3. Phase C: Yellow.
- I. Install warning, caution, and instruction signs where required to comply with 29 CFR, Chapter XVII, Part 1910.145, and where needed to ensure safe operation and maintenance of electrical systems and of items to which they connect. Install engraved plastic-laminated instruction signs with approved legend where instructions are needed for system or equipment operation. Install metal-backed butyrate signs for outdoor items.

### 3.09 CONCRETE BASES

- A. Construct concrete bases of dimensions indicated, but not less than 4 inches larger, in both directions, than supported unit. Follow supported equipment manufacturer's anchorage recommendations and setting templates for anchor-bolt and tie locations, unless otherwise indicated. Use 3000-psi, 28-day compressive-strength concrete and reinforcement as specified in Division 3 Section "Cast-in-Place Concrete."

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### 3.10 FIELD QUALITY CONTROL

- A. Inspect installed components for damage and faulty work, including the following:
  - 1. Raceways.
  - 2. Building wire and connectors.
  - 3. Supporting devices for electrical components.
  - 4. Electrical identification.
  - 5. Concrete bases.
  - 6. Cutting and patching for electrical construction.
  - 7. Touchup painting.

### 3.11 REFINISHING AND TOUCHUP PAINTING

- A. Refinish and touch up paint. Paint materials and application requirements as recommended by manufacturers.
  - 1. Clean damaged and disturbed areas and apply primer, intermediate, and finish coats to suit the degree of damage at each location.
  - 2. Follow paint manufacturer's written instructions for surface preparation and for timing and application of successive coats.
  - 3. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
  - 4. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

### 3.12 CLEANING AND PROTECTION

- A. On completion of installation, including outlets, fittings, and devices, inspect exposed finish. Remove burrs, dirt, paint spots, and construction debris.
- B. Protect equipment and installations and maintain conditions to ensure that coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

END OF SECTION



# MADISON STREET UNDERPASS LIGHTING

## SECTION 16123

### CONDUCTORS AND CABLES

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes building wires and cables and associated connectors, splices, and terminations for wiring systems rated 600 V and less.

##### 1.03 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Qualification Data: For testing agency.
- C. Field Quality-Control Test Reports: From a qualified testing and inspecting agency engaged by Contractor.

##### 1.04 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Testing agency as defined by OSHA in 29 CFR 1910.7 or a member company of the International Electrical Testing Association and that is acceptable to authorities having jurisdiction.
  - 1. Testing Agency's Field Supervisor: Person currently certified by the International Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- C. Comply with NFPA 70.

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### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
  - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

#### 2.02 CONDUCTORS AND CABLES

- A. Available Manufacturers:
  - 1. Alcan Aluminum Corporation; Alcan Cable Div.
  - 2. American Insulated Wire Corp.; a Leviton Company.
  - 3. General Cable Corporation.
  - 4. Senator Wire & Cable Company.
  - 5. Southwire Company.
- B. Refer to Part 3 "Conductor and Insulation Applications" Article for insulation type, cable construction, and ratings.
- C. Conductor Material: Copper, solid conductor for No. 10 AWG and smaller, stranded for No. 8 AWG and larger.
- D. Conductor Insulation Types: Type THHN-THWN, XHHW, UF complying with NEMA WC 5 or 7.

#### 2.03 CONNECTORS AND SPLICES

- A. Available Manufacturers:
  - 1. AFC Cable Systems, Inc.
  - 2. AMP Incorporated/Tyco International.
  - 3. Hubbell/Anderson.
  - 4. O-Z/Gedney; EGS Electrical Group LLC.
  - 5. 3M Company; Electrical Products Division.

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- B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

### PART 3 - EXECUTION

#### 3.01 CONDUCTOR AND INSULATION APPLICATIONS

- A. Exposed Feeders: Type THHN-THWN, single conductors in raceway
- B. Exposed Branch Circuit: Type THHN-THWN, single conductors in raceway.
- A. Underground Feeders and Branch Circuits: Type THHN-THWN, single conductors in raceway.

#### 3.02 INSTALLATION

- A. Conceal cables in finished walls, ceilings, and floors, unless otherwise indicated.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means; including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.
- D. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.
- E. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."
- F. Identify and color-code conductors and cables according to Division 16 Section Basic Electrical Materials and Methods.

#### 3.03 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.

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1. Use oxide inhibitor in each splice and tap conductor for connections to existing aluminum conductors if encountered.

C. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches of slack.

### 3.04 FIELD QUALITY CONTROL

D. Testing: Perform the following field quality-control testing:

1. After installing conductors and cables and before electrical circuitry has been energized, test for compliance with requirements.
2. Perform each electrical test and visual and mechanical inspection stated in NETA ATS, Section 7.3.1. Certify compliance with test parameters.

E. Test Reports: Prepare a written report to record the following:

1. Test procedures used.
2. Test results that comply with requirements.
3. Test results that do not comply with requirements and corrective action taken to achieve compliance with requirements.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 16130

### RACEWAYS AND BOXES

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.
- B. Related Sections include the following:
  - 1. Division 16 Section "Basic Electrical Materials and Methods" for supports, anchors, and identification products.

##### 1.03 DEFINITIONS

- A. EMT: Electrical metallic tubing.
- B. ENT: Electrical nonmetallic tubing.
- C. FMC: Flexible metal conduit.
- D. IMC: Intermediate metal conduit.
- E. LFMC: Liquidtight flexible metal conduit.
- F. LFNC: Liquidtight flexible nonmetallic conduit.
- G. RNC: Rigid nonmetallic conduit.
- H. RSC: Rigid Steel Conduit.

##### 1.04 SUBMITTALS

## MADISON STREET UNDERPASS LIGHTING

- A. Product Data: For surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Shop Drawings: Show fabrication and installation details of components for raceways, fittings, boxes, enclosures, and cabinets.
- C. Shop Drawings: Signed and sealed by a qualified professional engineer.
  - 1. Design Calculations: Calculate requirements for selecting seismic restraints.
  - 2. Detail assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

### 1.05 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with NFPA 70.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
  - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.
  - 2. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

### 2.02 METAL CONDUIT AND TUBING

- A. Available Manufacturers:
  - 1. AFC Cable Systems, Inc.
  - 2. Alflec Inc.
  - 3. Grinnell Co./Tyco International; Allied Tube and Conduit Div.
  - 4. LTV Steel Tubular Products Company.
  - 5. Manhattan/CDT/Cole-Flex.
  - 6. O-Z Gedney; Unit of General Signal.
  - 7. Wheatland Tube Co.

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- B. Rigid Steel Conduit: ANSI C80.1.
- C. Aluminum Rigid Conduit: ANSI C80.5.
- D. IMC: ANSI C80.6.
- E. Plastic-Coated Steel Conduit and Fittings: NEMA RN 1.
- F. Plastic-Coated IMC and Fittings: NEMA RN 1.
- G. EMT and Fittings: ANSI C80.3.
  - 1. Fittings: Compression type.
- H. FMC: Zinc-coated steel.
- I. LFMC: Flexible steel conduit with PVC jacket.
- J. Fittings: NEMA FB 1; compatible with conduit and tubing materials.

### 2.03 NONMETALLIC CONDUIT AND TUBING

- A. Available Manufacturers:
  - 1. American International.
  - 2. Anamet Electrical, Inc.; Anaconda Metal Hose.
  - 3. Certainteed Corp.; Pipe & Plastics Group.
  - 4. Condux International.
  - 5. Electri-Flex Co.
  - 6. RACO; Division of Hubbell, Inc.
  - 7. Spiraldut, Inc./AFC Cable Systems, Inc.
  - 8. Thomas & Betts Corporation.
- B. ENT: NEMA TC 13.
- C. RNC: NEMA TC 2, Schedule 40 and Schedule 80 PVC.
- D. ENT and RNC Fittings: NEMA TC 3; match to conduit or tubing type and material.
- E. LFNC: UL 1660.

### 2.04 BOXES, ENCLOSURES, AND CABINETS

- A. Available Manufacturers:
  - 1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
  - 2. Emerson/General Signal; Appleton Electric Company.

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3. Hoffman.
4. Hubbell, Inc.; Killark Electric Manufacturing Co.
5. O-Z/Gedney; Unit of General Signal.
6. RACO; Division of Hubbell, Inc.
7. Robroy Industries, Inc.; Enclosure Division.
8. Spring City Electrical Manufacturing Co.
9. Thomas & Betts Corporation.

- B. Sheet Metal Outlet and Device Boxes: NEMA OS 1.
- C. Cast-Metal Outlet and Device Boxes: NEMA FB 1, Type FD, with gasketed cover.
- D. Nonmetallic Outlet and Device Boxes: NEMA OS 2.
- E. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- F. Cast-Metal Pull and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- G. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous hinge cover and flush latch.
  1. Metal Enclosures: Steel, finished inside and out with manufacturer's standard enamel.
  2. Nonmetallic Enclosures: Plastic, finished inside with radio-frequency-resistant paint.

### 2.05 FACTORY FINISHES

- A. Finish: For raceway, enclosure, or cabinet components, provide manufacturer's standard paint applied to factory-assembled surface raceways, enclosures, and cabinets before shipping.

## PART 3 - EXECUTION

### 3.01 RACEWAY APPLICATION

- A. Outdoors:
  1. Exposed: RSC.
  2. Concealed: RSC.
  3. Underground, Single Run: RNC.
  4. Underground, Grouped: RNC.
  5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
  6. Boxes and Enclosures: NEMA 250, Type 3R or 4.



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### B. Indoors:

1. Exposed: IMC.
2. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except use LFMC in damp or wet locations.
3. Damp or Wet Locations: Rigid steel conduit.
4. Boxes and Enclosures: NEMA 250, Type 1, except as follows:
  - a. Damp or Wet Locations: NEMA 250, Type 4.

### C. Minimum Raceway Size: 1/2-inch trade size.

### D. Raceway Fittings: Compatible with raceways and suitable for use and location.

1. Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.

### E. Install nonferrous conduit or tubing for circuits operating above 60 Hz. Where aluminum raceways are installed for such circuits and pass through concrete, install in nonmetallic sleeve.

### F. Do not install aluminum conduits embedded in or in contact with concrete.

## 3.02 INSTALLATION

### A. Complete raceway installation before starting conductor installation.

### B. Support raceways as specified in Division 16 Section "Basic Electrical Materials and Methods."

### C. Install temporary closures to prevent foreign matter from entering raceways.

### D. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portions of bends are not visible above the finished slab.

### E. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and keep straight legs of offsets parallel, unless otherwise indicated.

### F. Install exposed raceways parallel or at right angles to nearby surfaces or structural members and follow surface contours as much as possible.

1. Run parallel or banked raceways together on common supports.

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2. Make parallel bends in parallel or banked runs. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.
- G. Join raceways with fittings designed and approved for that purpose and make joints tight.
1. Use insulating bushings to protect conductors.
- H. Tighten set screws of threadless fittings with suitable tools.
- I. Terminations:
1. Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against box. Use two locknuts, one inside and one outside box.
  2. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used, align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.
- K. Signal System Raceways, 2-Inch Trade Size and Smaller: In addition to above requirements, install raceways in maximum lengths of 150 feet and with a maximum of two 90-degree bends or equivalent. Separate lengths with pull or junction boxes where necessary to comply with these requirements.
- L. Install raceway sealing fittings at suitable, approved, and accessible locations and fill them with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings at the following points:
1. Where conduits pass from warm to cold locations.
  2. Where otherwise required by NFPA 70.
- M. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment. Install with an adjustable top or coupling threaded inside for plugs set flush with finished floor. Extend conductors to equipment with rigid steel conduit; FMC may be used 6 inches above the floor. Install screwdriver-operated, threaded plugs flush with floor for future equipment connections.
- N. Flexible Connections: Use maximum of 72 inches of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for all motors. Use LFMC in damp or wet locations. Install separate ground conductor across flexible connections.

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- O. Surface Raceways: Install a separate, green, ground conductor in raceways from junction box supplying raceways to receptacle or fixture ground terminals.
- P. Install hinged-cover enclosures and cabinets plumb. Support at each corner.

### 3.03 PROTECTION

- A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.
  - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
  - 2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.

### 3.04 CLEANING

- A. After completing installation of exposed, factory-finished raceways and boxes, inspect exposed finishes and repair damaged finishes.

END OF SECTION

# MADISON STREET UNDERPASS LIGHTING

## SECTION 16442

### PANELBOARDS

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### 1.02 SUMMARY

- A. This Section includes load centers and panelboards, overcurrent protective devices, and associated auxiliary equipment rated 600 V and less for the following types:
  - 1. Lighting and appliance branch-circuit panelboards.

##### 1.03 DEFINITIONS

- A. EMI: Electromagnetic interference.
- B. GFCI: Ground-fault circuit interrupter.
- C. RFI: Radio-frequency interference.
- D. RMS: Root mean square.
- E. SPDT: Single pole, double throw.
- F. TVSS: Transient voltage surge suppressor.

##### 1.04 SUBMITTALS

- A. Product Data: For each type of panelboard, overcurrent protective device, TVSS device, accessory, and component indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.
- B. Shop Drawings: For each panelboard and related equipment.
  - 1. Dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings. Include the following:

## MADISON STREET UNDERPASS LIGHTING

- a. Enclosure types and details for types other than NEMA 250, Type 1.
    - b. Bus configuration, current, and voltage ratings.
    - c. Short-circuit current rating of panelboards and overcurrent protective devices.
    - d. UL listing for series rating of installed devices.
    - e. Features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
  2. Wiring Diagrams: Diagram power, signal, and control wiring and differentiate between manufacturer-installed and field-installed wiring.
  - C. Qualification Data: Submit data for testing agencies indicating that they comply with qualifications specified in "Quality Assurance" Article.
  - D. Field Test Reports: Submit written test reports and include the following:
    1. Test procedures used.
    2. Test results that comply with requirements.
    3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
  - E. Panelboard Schedules: For installation in panelboards. Submit final versions after load balancing.
  - F. Maintenance Data: For panelboards and components to include in maintenance manuals specified in Division 1. In addition to requirements specified in Division 1 Section "Contract Closeout," include the following:
    1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
    2. Time-current curves, including selectable ranges for each type of overcurrent protective device.
- 1.05 QUALITY ASSURANCE
- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
  - B. Comply with NEMA PB 1.
  - C. Comply with NFPA 70.
- 1.06 COORDINATION

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- A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, and encumbrances to workspace clearance requirements.

### 1.07 EXTRA MATERIALS

- A. Keys: Six spares of each type of panelboard cabinet lock.

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Panelboards, Overcurrent Protective Devices, Controllers, Contactors, and Accessories:
    - a. Eaton Corp.; Cutler-Hammer Products.
    - b. General Electric Co.; Electrical Distribution & Control Div.
    - c. Siemens Energy & Automation, Inc.
    - d. Square D Co.
  - 2. TVSS Panelboards:
    - a. Current Technology, Inc.
    - b. Liebert Corporation.

### 2.02 FABRICATION AND FEATURES

- A. Enclosures: Surface mounted cabinets. NEMA PB 1, Type 1, to meet environmental conditions at installed location.
  - 1. Other Wet or Damp Indoor Locations: NEMA 250, Type 4.
- B. Front: Secured to box with concealed trim clamps. For surface-mounted fronts, match box dimensions; for flush-mounted fronts, overlap box.
- C. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover.
- D. Finish: Manufacturer's standard enamel finish over corrosion-resistant treatment or primer coat.

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- E. Directory Card: With transparent protective cover, mounted inside metal frame, inside panelboard door.
- F. Bus: Hard-drawn copper, 98 percent conductivity.
- G. Main and Neutral Lugs: Compression type suitable for use with conductor material.
- H. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors; bonded to box.
- I. Service Equipment Label: UL labeled for use as service equipment for panelboards with main service disconnect switches.
- J. Future Devices: Mounting brackets, bus connections, and necessary appurtenances required for future installation of devices.
- K. Skirt for Surface-Mounted Panelboards: Same gage and finish as panelboard front with flanges for attachment to panelboard, wall, and ceiling or floor.
- L. Gutter Barrier: Arrange to isolate individual panel sections.
- M. Feed-through Lugs: Compression type suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.

### 2.03 PANELBOARD SHORT-CIRCUIT RATING

- A. UL label indicating series-connected rating with integral or remote upstream devices. Include size and type of upstream device allowable, branch devices allowable, and UL series-connected short-circuit rating.
- B. Fully rated to interrupt symmetrical short-circuit current available at terminals.

### 2.04 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

- A. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- B. Doors: Front mounted with concealed hinges; secured with flush latch with tumbler lock; keyed alike.

### 2.05 OVERCURRENT PROTECTIVE DEVICES

- C. Molded-Case Circuit-Breaker Features and Accessories. Standard frame sizes, trip ratings, and number of poles.

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1. Lugs: Mechanical or Compression style, suitable for number, size, trip ratings, and material of conductors.
2. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HACR for heating, air-conditioning, and refrigerating equipment.

### 2.06 ACCESSORY COMPONENTS ACCESSORY COMPONENTS AND FEATURES

- A. Fungus Proofing: Permanent fungicidal treatment for panelboard interior, including overcurrent protective devices and other components.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. Install panelboards and accessories according to NEMA PB 1.1.
- B. Mounting Heights: Top of trim 74 inches above finished floor, unless otherwise indicated.
- C. Mounting: Plumb and rigid without distortion of box. Mount recessed panelboards with fronts uniformly flush with wall finish.
- D. Circuit Directory: Create a directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing. Use a computer or typewriter to create directory; handwritten directories are not acceptable.
- E. Install filler plates in unused spaces.
- F. Wiring in Panelboard Gutters: Arrange conductors into groups and bundle and wrap with wire ties after completing load balancing.

### 3.02 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Division 16 Section Basic Electrical Materials and Methods.
- B. Panelboard Nameplates: Label each panelboard with engraved metal or laminated-plastic nameplate mounted with corrosion-resistant screws.

### 3.03 CONNECTIONS



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- A. Install equipment grounding connections for panelboards with ground continuity to main electrical ground bus.
- B. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

### 3.04 FIELD QUALITY CONTROL

- A. Prepare for acceptance tests as follows:
  - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
  - 2. Test continuity of each circuit.
- B. Testing: After installing panelboards and after electrical circuitry has been energized, demonstrate product capability and compliance with requirements.
  - 1. Procedures: Perform each visual and mechanical inspection and electrical test indicated in NETA ATS, Section 7.5 for switches and Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
  - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- C. Balancing Loads: After Substantial Completion, but not more than 60 days after Final Acceptance, measure load balancing and make circuit changes as follows:
  - 1. Measure as directed during period of normal system loading.
  - 2. Perform load-balancing circuit changes outside normal occupancy/working schedule of the facility and at time directed. Avoid disrupting critical 24-hour services such as fax machines and on-line data-processing, computing, transmitting, and receiving equipment.
  - 3. After circuit changes, recheck loads during normal load period. Record all load readings before and after changes and submit test records.
  - 4. Tolerance: Difference exceeding 20 percent between phase loads, within a panelboard, is not acceptable. Rebalance and recheck as necessary to meet this minimum requirement.

### 3.05 ADJUSTING

- A. Set field-adjustable switches and circuit-breaker trip ranges.

### 3.06 CLEANING

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- A. On completion of installation, inspect interior and exterior of panelboards. Remove paint splatters and other spots. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair exposed surfaces to match original finish.

END OF SECTION