

DHCD FISH  
# 097129

# PROJECT MANUAL

## MODERNIZATION OF STATE AIDED PUBLIC HOUSING

# GARAGE ROOF REPLACEMENT

STATE-AIDED DEVELOPMENT: Canton Valley Development 705-2  
FITCHBURG, MASSACHUSETTS

**Massachusetts Department of**  
*Housing and Community Development*



<b>FITCHBURG HOUSING AUTHORITY</b> 50 Day Street Fitchburg, MA 01420 Phone: (978) 342-5222 FAX: (978) 343-4148	<b>PROJECT ADDRESS:</b> Canton Valley Canton Street & Valley Street Fitchburg, MA 01420
Linda Bryne, Chairman Mary Giannetti, Vice Chair David Rousseau, Treasurer David Basilio, Assistant Treasurer Adam Goodwin, Member	Doug Bushman, Executive Director

**Architect**

Next Phase Studios, Inc.  
344 Boylston Street  
Boston, MA 02116  
Phone: (617) 375-9300  
Fax: (617) 375-9398  
Email: nshull@nps-architects.com

**DATE: 3/10/21**

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## PUBLIC NOTIFICATION FOR WRITTEN QUOTES

The **Fitchburg** Housing Authority, the Awarding Authority, invites written quotes from Contractors for the **702-2** Development for the **Fitchburg** Housing Authority in **Fitchburg** Massachusetts, in accordance with the documents prepared by **Next Phase Studios**.

The Project consists of: **Removal and existing asphalt shingle roof and skylights, provide new structural wood framing infill and asphalt shingle roof for garage maintenance building. Alternate to remove all existing roof framing and replace.**

The work is estimated to cost \$ **28,594.00**

Quotes are subject to M.G.L. c.149 §44A (2)(B) & to state prevailing wage rates as required by M.G.L. c.149 §§26 to 27H inclusive.

Written Quotes will be received until 2:00 p.m., **Wednesday, April 7, 2021**.

All Quotes should be delivered to: **50 Day Street, Fitchburg MA 01420**. and received no later than the date & time specified above. Quotes may be hand delivered, mailed, faxed or emailed. Faxed quotes should be sent to **978-343-4148** or emailed to **jlopez@fitchburgha.org**

Contract Documents will be available at:

**50 Day Street, Fitchburg, MA 01420**. Digital Contract Documents are also available and can be obtained by any interested contractors by contacting **Jose Lopez (jlopez@fitchburgha.org)** at the Fitchburg Housing Authority.)

Contractors requesting Contract Documents to be mailed to them shall include a separate check for \$0.00 per set, payable to the Awarding Authority, to cover mail handling costs.

The job site and/or existing building will be available for inspection between **1:00 P.M.** and **2:00 P.M.** on **Tuesday, March 23, 2021**.

For an appointment call **Jose Lopez, (978) 342-5222 ext. 104**.

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## INSTRUCTIONS TO BIDDER'S

### ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each Bidder (hereinafter called the "**Bidder**") by making a Quote (hereinafter called "**Quote**") represents that:
1. The Bidder has read and understands the Contract Documents and the Quote is made in accordance therewith.
  2. The Bidder has visited the site and is familiar with the local conditions under which the Work has to be performed.
- 1.2 Failure to so examine the Contract Documents and site will not relieve any Bidder from any obligation under the Quote as submitted.

### ARTICLE 2 - BIDDER CERTIFICATIONS – OSHA & LEAD TRAINING

- 2.1 Massachusetts law requires all workers on this project construction site must have no less than 10 hours of OSHA-approved safety and health training.
- 2.2 The Contractor shall comply with requirements of EPA Regulation 40 CFR 745 including but not limited to Company, supervisor, and worker training.

### ARTICLE 3 - MBE/WBE PARTICIPATION GOALS – NO REQUIREMENTS

### ARTICLE 4 - REQUESTS FOR INTERPRETATION

- 4.1 Bidders shall promptly notify the Owner of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 4.2 Bidders requiring clarification or interpretation of the Contract Documents shall make such request to the Owner.

### ARTICLE 5 - PREPARATION AND SUBMISSION OF QUOTES

- 5.1 Quotes should be submitted on the "Form for Quotes" as appropriate, furnished at no cost by the Owner.
- 5.1.1 All entries on the Form for Quotes shall be made by typewriter or in ink.
- 5.1.2 Where so indicated on the Form for Quotes sums shall be expressed in both words and figures. Where there is a discrepancy between the Bid sum expressed in words and the Bid sum expressed in figures, the words shall control.
- 5.2 **Bid Deposits – No Requirements**
- 5.3 **Delivery of Quotes**
- 5.3.1 The Quote shall be submitted with the following clearly marked on the envelope, fax cover sheet, or email:
- QUOTE FOR:**
- **NAME OF HOUSING AUTHORITY AND PROJECT NUMBER**
  - **BIDDER'S NAME AND BUSINESS ADDRESS**
  - **PHONE NUMBER & CONTACT PERSON**
- 5.3.2 Date and time for receipt of Quotes is set forth in the Public Notification.
- 5.3.3 Timely delivery of a Quote at the location designated shall be the full responsibility of the Bidders.

### ARTICLE 6 - ALTERNATES

- 6.1 Each General Bidder shall acknowledge Alternates in Section C on the Form for Quotes. Each General Bidder shall

acknowledge Alternates by listing the individual Alternate number in Section C on the Form for Quotes and enter the dollar amount of addition or subtraction necessitated by each Alternate listed in the corresponding space.

- 6.2 General Bidders shall enter on the Form for Quotes a single amount for each Alternate, the amount for work performed by the General Contractor.
- 6.3 In the event an Alternate does not involve a change in dollar value, the Bidder shall so indicate by listing the individual Alternate number and acknowledge the Alternate by inserting "No Change", "No Charge", "N/C" or "0" in the corresponding space provided for the dollar value of that Alternate.
- 6.4 The Low Bidder will be determined on the basis of the sum of the quote and the accepted alternates.

**ARTICLE 7 - WITHDRAWAL OF QUOTES**

**7.1 Before Opening of Quotes**

7.1.1 Any quote may be withdrawn prior to the time designated for receipt of quotes upon written request. Withdrawal of Quotes must be confirmed over the Bidder's signature by written notice post-marked or sent by email on or before the date and time set for receipt of Quotes.

7.1.2 Withdrawn quotes may be resubmitted up to the time designated for the receipt of Quotes.

**7.2 After Opening of Quotes**

7.2.1 Bidders may withdraw Quotes, without penalty, any time up to the time of Award as defined in paragraph 8.1, and upon demonstrating, to the satisfaction of the Housing Authority, that a bona fide clerical error was made during the preparation of the Quote.

7.3 In the event of a Quotes Withdrawal after Opening of Quotes, the Housing Authority shall consider the Quote from next lowest eligible and responsible bidder.

**ARTICLE 8 - CONTRACT AWARD**

8.1 **Award** means both the determination and selection of shall be awarded to the responsible person offering to perform the contract at the lowest price by the Owner.

8.2 As used herein, the term "responsible" shall mean the person:

8.2.1 Who demonstrably possessing the skill, ability and integrity necessary to faithfully perform the work called for by a particular contract, based upon a determination of competent workmanship and financial soundness in accordance with the provisions of M.G.L. c.149 (44)(d)

8.2.2 who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; and

8.2.3 who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work, and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and

8.2.4 who, where the provisions of section 8B of chapter 29 apply, shall have been determined to be qualified thereunder; and

8.2.5 who is not debarred from bidding under M.G.L. c.149 §44C.

8.3 The Housing Authority reserves the right to waive any informalities in or to reject any or all Quotes if it be in the public interest to do so.

8.4 The Owner will award the contract to the lowest responsible within thirty days, Saturdays, Sundays, and legal holidays excluded, after the opening of quotes.



- 8.5** Bidder's Attention is directed to 01.11.30 for any additional criteria that may be a condition of Award of this project.

**ARTICLE 9 - FORMS REQUIRED AT CONTRACT APPROVAL**

- 9.1** Upon award, the Bidder shall complete the following forms to ensure prompt contract validation. These forms will be provided to the Bidder by Owner, and three (3) originals must be submitted.
- .1 Owner-Contractor Agreement.**
  - .2 Form of Certificate of Vote of Authorization (If Applicable)**
  - .3 Form of Contractor's Equal Employment Certification** in accordance with Section 00.73.36 of the General Conditions.
  - .4 FOR PROJECTS with a bid/contract cost exceeding \$25,000: Form of Performance Bond and Form (00.61.13) and Form of Payment Bond (00.61.16)** must be submitted by the General Contractor on DHCD's form, in accordance with the General Conditions. The dates on the bonds must coincide with the contract date, and a current Power-of-Attorney must be attached to each bond.
- 9.2 Insurance Certificates** for the coverage required by Article 9 of the General Provisions must be submitted prior to contract validation.
- General Contractors must indicate on Builders Risk insurance Certificate or installation floater if stored materials are covered.
- 9.3** Contractor's Company Certification with EPA Regulation 40 CFR 745 must be submitted prior to contract validation.

**ARTICLE 10 - CONTRACT VALIDATION**

- 10.1** The Notice to Proceed for construction shall not be issued until the Owner/Contractor Agreement has been executed by the Contractor and the Awarding Authority.
- 10.2** Incomplete or unacceptable submissions of forms required by paragraphs **9.1 - 9.2** will delay the execution of the Owner/Contractor Agreement by the Awarding Authority.

**END OF SECTION INSTRUCTIONS TO BIDDERS  
00.21.10**

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# FORM FOR QUOTES

**TO THE AWARDING AUTHORITY:** Fitchburg Housing Authority & DHCD FISH #(097129)

A. The undersigned proposes to comply with all terms and conditions and furnish all labor and materials required to successfully complete the attached scope of work for the contract price specified below, subject to additions and deductions according to the terms of the specifications for the proposed contract price of:

\_\_\_\_\_ dollars (\$ \_\_\_\_\_ )

For Alternates: No. \_\_\_\_ Add \$ \_\_\_\_\_  
No. \_\_\_\_ Add\$ \_\_\_\_\_  
No. \_\_\_\_ Add\$ \_\_\_\_\_  
No. \_\_\_\_ Add\$ \_\_\_\_\_  
No. \_\_\_\_ Add\$ \_\_\_\_\_

B. This Quote includes Addendum No(s). \_\_\_\_\_

C. The undersigned hereby certifies that they are able to furnish labor that can work in harmony with all the 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 they will comply fully with all laws and regulations applicable to awards made subject to MGL. c.149 sec.44A-J.

D. The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean 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 debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any other rule or regulation promulgated thereunder.

E. Pursuant to M.G.L. c.62(c) §49(a), the individual signing this document on behalf of the Contractor, hereby certifies, under the penalties of perjury, that to the best of their knowledge and belief the Contractor has complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

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

By:

\_\_\_\_\_  
Signature + Title of person signing Quote

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

Date: \_

\_\_\_\_\_  
City and State.

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# BIDDER'S CHECKLIST

**THIS CHECK LIST IS NOT PART OF THE FORM FOR QUOTE!  
THIS FORM DOES NOT HAVE TO BE SUBMITTED WITH A QUOTE!**

To ensure that your bids are acceptable to the awarding authority and DHCD, and are not rejected due to mistakes, we are providing this Checklist for your convenience. It does not have to be included with a quote. If this checklist is submitted it is an informality that will not void the bid.

## 4.6. ALL BIDDERS

- 1. Have you used the appropriate quote form provided for this specific development?
- 2. Have you properly identified the development, architect (engineer), etc., on your quote form?
- 3. Do your quote amounts, as expressed in figures and words, coincide? The amount expressed in words shall control.
- 4. Have you added any information not called for, or acknowledged an addendum or alternate that does not exist, which would make your bid conditional or obscure, and lead to a bid protest?
- 5. Is your Quote Form **SIGNED** and dated?
- 6. **Bid Deposits are not required.**
- 7. **For BIDS/CONTRACTS exceeding \$25,000: 100% Performance and Payment Bonds are REQUIRED**
- 8. Have you acknowledged every alternate if applicable to this project?
- 9. If an alternate price is requested and you estimate that there is no change in price, did you indicate by writing "no change", "N/C" or "0"?

**Leaving this space blank, on your quote form, when alternates are requested,  
may lead to rejection of your quote.**

- 10. Have you acknowledged all addenda issued, and followed the instructions contained therein?

**This checklist is provided as guidance and assistance to bidders to avoid technical mistakes resulting in rejection of a quote. The full comprehensive instructions are located in section 00.21.30 Instructions to Bidders.**

**This in no way changes, affects, or supersedes the provisions set-forth in MGL c.149 §44A-J or c.30 §39m or any other sections or provisions contained in the contract documents.**

**THIS FORM DOES NOT HAVE TO BE SUBMITTED**

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# BIDDER'S REFERENCE FORM

Provide with Form for Quotes

Bidders Name \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

LHA/Project Title: \_\_\_\_\_ Email: \_\_\_\_\_

The bidder must provide five (5) business references for projects performed & completed within the past five (5) years. Attach additional pages if necessary.

(1) Reference Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Description and date(s) of work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(2) Reference Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Description and date(s) of work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(3) Reference Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Description and date(s) of work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(4) Reference Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Description and date(s) of work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(5) Reference Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

Description and date(s) of work: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

References will be contacted to confirm the bidder's skills, abilities and qualifications to faithfully perform the work as specified. The Authority reserves the right to contact references not listed above. The Bidder will be given the opportunity to explain any unfavorable references received from such outreach.

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# OWNER-CONTRACTOR AGREEMENT

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

This agreement made the **NN**th day of **Month 20**\_\_by and between \_\_\_\_\_ **Housing Authority** hereinafter called the "Owner", and \_\_\_\_\_ hereinafter called the "Contractor".  
**Contractor's Name**

*WITNESSETH, THAT THE OWNER AND THE CONTRACTOR, FOR THE CONSIDERATION HEREINUNDER NAMED, AGREE AS FOLLOWS:*

## **ARTICLE 1. SCOPE OF WORK:**

The Contractor shall perform all Work required by the Contract Documents for

**The garage roof replacement** prepared by **Next Phase Studios** acting as and referred to in the Contract Documents as the "Architect/Engineer".

## **ARTICLE 2. TIME OF COMPLETION:**

The Contractor shall commence work under this Contract on the date specified in the written "Notice to Proceed" and shall bring the Work to Substantial Completion within **30** calendar days of said date.

## **ARTICLE 3. CONTRACT SUM:**

The Owner shall pay the Contractor, in current funds, for the performance of the Work, subject to additions and deductions by Change Order, of the Contract Sum of:

\_\_\_\_\_ **Dollars** \_\_\_\_\_  
CONTRACT SUM IN WORDS CONTRACT SUM IN NUMBERS

## **ARTICLE 4. ALTERNATES:**

The following Alternates have been accepted and their costs are included in the Contract Sum stated in Article 3 of this Agreement: Alternate No(s): \_\_\_\_\_ and total cost for accepted Alternates \$ \_\_\_\_

## **ARTICLE 5. THE CONTRACT DOCUMENTS:**

The following, together with this Agreement, form the Contract and all are as fully a part of the contract as if attached to this Agreement or repeated herein: The Advertisement, Bidding Documents, Contract Forms, Conditions of the Contract, and Specifications as enumerated in the Table of Contents, the drawings as enumerated in the List of Contract Drawings, DHCD publication known as the Construction Handbook, and all Modifications issued after execution of the Contract. Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.

## **ARTICLE 6. REAP CERTIFICATION:**

Pursuant to M.G.L. c.62(c) §49(a), the individual signing this Contract on behalf of the Contractor, hereby certifies, under the penalties of perjury, that to the best of their knowledge and belief the Contractor has complied with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support

**ARTICLE 7. WORKER DOCUMENTATION CERTIFICATION:**

In accordance with Executive Order 481 the undersigned further certifies under the penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of this contract; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to such contract without engaging in unlawful discrimination; and that it shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the contract period may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

**ARTICLE 8. CONFLICT OF INTEREST:**

The Contractor covenants, that (1) presently, there is no financial interest and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement or which would violate M.G.L. c.268A, as amended; (2) in the performance of this Contract, no person having any such interest shall be employed by the Contractor or engaged as a subcontractor by the contractor; and (3) no partner or employee of the firm is related by blood or marriage to any Board Member or employee of the Awarding Authority."

*IN WITNESS WHEREOF, THE PARTIES HERETO HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED UNDER SEAL.*

**<sup>1</sup> CONTRACTOR**

**<sup>2</sup> AWARDING AUTHORITY**

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

\_\_\_\_\_  
Street

\_\_\_\_\_  
City State Zip

By: \_\_\_\_\_  
Signature and Seal

**Witness** \_\_\_\_\_

\_\_\_\_\_  
Name of Housing Authority

\_\_\_\_\_  
Address

\_\_\_\_\_  
Signature and Seal

\_\_\_\_\_  
Title

**Attest:** \_\_\_\_\_

<sup>1</sup> If a Corporation, attach a notarized copy of the Corporate Vote authorizing signatory to sign Contract.

<sup>2</sup> If signed by someone other than a Housing Authority Board member, attach a copy of Certified Board Vote authorizing the signatory to sign Contract.

# CERTIFICATE OF CORPORATE VOTE OF AUTHORIZATION

Date: \_\_\_\_\_ 20\_\_

I hereby certify that a meeting of the Board of Directors of the:

\_\_\_\_\_  
NAME OF CORPORATION

duly called and held at \_\_\_\_\_ on the \_\_\_ day of \_\_\_\_\_ 20\_\_

at which a quorum was present and acting, it was voted that \_\_\_\_\_

NAME OF CORPORATE OFFICER

of the \_\_\_\_\_, be and hereby is authorized to execute and deliver

NAME OF CORPORATION

for and on behalf of the Corporation, a Contract with \_\_\_\_\_ Housing Authority, for

work to be done at State-Aided Housing Development No. \_\_\_\_\_ in the City/Town of \_\_\_\_\_

And to act as principal to execute bonds in connection therewith, which Contract and Bonds were presented to and made part of the records of said meeting.

I further certify that \_\_\_\_\_ is duly qualified and acting

NAME OF CORPORATE OFFICER

\_\_\_\_\_ of the Corporation and that said vote has not been repealed,

TITLE

rescinded or amended.

**A true copy of the record,**

**ATTEST:** \_\_\_\_\_

(CORPORATE SEAL)

On this \_\_\_ day of \_\_\_\_\_ 20\_\_, before me, the undersigned Notary Public, personally appeared \_\_\_\_\_, duly designated by the board of directors and proved to me, through satisfactory evidence of identification, which was \_\_\_\_\_, that s/he is the person whose name is signed on the foregoing documents, and acknowledged to me that s/he signed it voluntarily for its stated purpose and that it was her/his free act and deed.

\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_

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BOND NO. \_\_\_\_\_

## PERFORMANCE BOND

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

**KNOW ALL MEN BY THESE PRESENTS:**

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

**WHEREAS**, the said **Principal** has made a contract with the **Obligee**, bearing the date of \_\_\_\_\_, **20\_\_**  
for the \_\_\_\_\_ in \_\_\_\_\_, Massachusetts.  
**PROJECT TITLE**

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

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

**IN WITNESS WHEREOF**, the **Principal** and **Surety** have hereunto set their hands and seals this:

\_\_\_\_\_ Day of \_\_\_\_\_ 20\_\_\_\_

**PRINCIPAL** \_\_\_\_\_

**SURETY** \_\_\_\_\_

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

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

SEAL

ATTORNEY-IN FACT

**Attest:** \_\_\_\_\_

**Attest:** \_\_\_\_\_

The rate for this bond is \_\_\_\_\_% for the first \$\_\_\_\_\_ and \_\_\_\_\_% for the next \$\_\_\_\_\_

The total premium for this bond is \$\_\_\_\_\_

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BOND NO. \_\_\_\_\_

## PAYMENT BOND

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

**KNOW ALL MEN BY THESE PRESENTS:**

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

**WHEREAS**, the said **Principal** has made a contract with the **Obligee**, bearing the date of \_\_\_\_\_, **20\_\_**  
for the \_\_\_\_\_ in \_\_\_\_\_, Massachusetts.  
**PROJECT TITLE**

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

**IN WITNESS WHEREOF**, the **Principal** and **Surety** have hereunto set their hands and seals this:  
\_\_\_\_\_ Day of \_\_\_\_\_ 20\_\_

**PRINCIPAL** \_\_\_\_\_

**SURETY** \_\_\_\_\_

By: \_\_\_\_\_  
**SEAL**

By: \_\_\_\_\_  
**ATTORNEY-IN FACT**

**Attest:** \_\_\_\_\_

**Attest:** \_\_\_\_\_

The rate for this bond is \_\_\_\_\_% for the first \$\_\_\_\_\_ and \_\_\_\_\_% for the next \$\_\_\_\_\_

The total premium for this bond is \$\_\_\_\_\_

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# **GENERAL CONDITIONS OF THE CONTRACT**

## **for c.149 sec. 44A (2)(B) PROJECTS BETWEEN \$10,000 - \$50,000**

### **ARTICLE 1      GENERAL PROVISIONS**

#### **1.1      THE CONTRACT DOCUMENTS**

The Contract for Construction consists of the Contract Documents which include the Owner-Contractor Agreement, Public Notification, Bid Form, Contract Forms, Conditions of the Contract, Specifications, Drawings, all addenda issued prior to execution of the Contract, DHCD publication known as the [Construction Handbook](#), and other documents listed in the Agreement and Modifications issued after execution of the Contract.

#### **1.2      THE WORK**

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligation.

#### **1.3      THE CONSTRUCTION HANDBOOK**

The [Construction Handbook](#) is published by and available, free of charge, from the Department. It outlines the procedures that the Contractor, Owner, Architect/Engineer, and Department shall follow during the construction of the Work. The most recent version, at the time of bid opening, of the [Construction Handbook](#) is incorporated by reference into the Contract Documents.

### **ARTICLE 2      OWNER**

#### **2.1      OWNER**

The term "Owner" sometimes also referred to as the "Awarding Authority" or "Authority" means the Housing Authority identified in the Owner-Contractor Agreement, organized and existing under the provisions of M.G.L. c.121B.

#### **2.2      BIDDER**

The terms "Quote(s)", "Bid(s)" or "Bidder(s)" shall mean the person or firm from which prices have been submitted to the Owner for the work identified in these documents.

### **ARTICLE 3      DEPARTMENT**

**3.1**      The term "Department" means the Commonwealth of Massachusetts, Department of Housing and Community Development.

**3.2**      The term "Construction Advisor" means the person who may be designated by the Administrator to assist the Owner with the Administration of the Contract.

#### **3.3      PROJECT FUNDING**

The Work under this Contract is funded wholly or in part by the Commonwealth of Massachusetts through the Department pursuant to a Contract for Financial Assistance between the Department and the Owner.

### **ARTICLE 4      CONTRACTOR**

**4.1**      The Contractor, sometimes referred to as the General Contractor, is the person or entity identified as such throughout the Contract Documents as if singular in number. The term Contractor means the Contractor or its authorized representative.

**4.2.1**    The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work under the Contract.

**4.2.2**    Unless otherwise required by the Contract Documents, or directed in writing by the Owner, Work shall be done during regular working hours. However, if the Contractor desires to carry on the Work outside of regular working hours or on Saturdays, Sundays, or Massachusetts holidays it shall allow ample time to enable satisfactory arrangements to be

made for inspecting Work in progress and shall bear the costs of such inspection. The Owner shall bill the Contractor directly for such costs.

#### **4.2.3 SUPERINTENDENT**

**4.2.3.1** The Contractor shall employ a Superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The Superintendent shall represent the Contractor, and 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 similarly confirmed on written request in each case. The Superintendent shall attend each job meeting.

**4.2.3.2** The Superintendent shall be a competent and responsible employee, satisfactory to the Owner, who is regularly employed by the Contractor and is designated by the Contractor as its representative to be in full time attendance at the Project site throughout the construction of the Work. The Superintendent shall be responsible for coordinating all the Work of the Contractor and the Subcontractors. The Superintendent shall be licensed consistent with the Massachusetts Building Code. The Superintendent's resume shall be submitted to the Owner prior to commencement of construction and must demonstrate to the Owner's reasonable satisfaction that the Superintendent has performed similar duties on previous construction projects similar to the Project.

#### **4.3 SALES TAX EXEMPTION AND OTHER TAXES**

**4.3.1** To the extent that materials and supplies are used or incorporated in the performance of this Contract, the Contractor is considered an exempt purchaser under the Massachusetts Sales Act, Chapter 14 of the Acts of 1966.

**4.3.2** The Contractor shall be responsible for paying all other taxes and tariffs of any sort, related to the work.

#### **4.4 PERMITS, FEES, AND NOTICES**

**4.4.1** The Contractor shall secure and the Owner shall pay for any and all permits. The Contractor shall secure and pay for all licenses, and other fees required for the proper execution of the Work. The Contractor shall coordinate all efforts required to obtain these permits including having the permit issued in the name of the Contractor.

**4.4.2** The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work.

**4.4.3** If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Owner, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs.

#### **4.5 SAFETY REQUIREMENTS**

The Contractor must comply with all Federal, State, and local safety laws and regulations applicable to work performed under this Contract.

#### **4.6 PREVAILING WAGE RATES AND LABOR REGULATIONS**

**4.6.1** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of the Massachusetts Department of Labor Division of Occupational Safety. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. Any questions relative to the applicability of any wage rate shall be directed to the Division of Occupational Safety.

**4.6.2** Keep a legible copy of said schedule posted on the site at all times. Provide the Owner, on a weekly basis by first class mail or by email, and keep an on-site file of the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Department, Architect, or any agency having jurisdiction.

**4.6.3** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by MGL c149 § 34B, as amended. Such police officers shall be covered by Worker's Compensation Insurance and Employers Liability Insurance provided by the Contractor.

**4.6.4** The Contractor shall not have any claim for extra compensation from the Owner if the actual wages paid to employees on the Contract exceeds the rates listed on the Schedule.

#### **4.6.5 WAGE RATE REPORTING**

- .1 The Contractor and all subcontractors shall provide certified payroll affidavits verifying compliance with MGL c.149 §§26 - 27H.
- .2 The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.

#### **4.6.6 APPRENTICE REQUIREMENTS**

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

#### **4.6.7 EMPLOYEE OSHA SAFETY TRAINING**

- .1 All employees who work on this construction site must have no less than 10 hours of OSHA-approved safety and health training.
- .2 The Contractor and all Subcontractors shall furnish to the Owner, with the certified payroll reports, documentation indicating that each employee has successfully completed 10 hours of a course in construction safety and health. This course must be approved by the United States Occupational Health and Safety Administration (OSHA).

### **ARTICLE 5 CONTRACT ADMINISTRATION**

#### **5.1 PRECONSTRUCTION CONFERENCE**

Prior to commencement of the Work, the Contractor shall meet in conference with representatives of the Owner, to discuss and develop mutual understandings relative to administration of the quality assurance program, safety program, labor provisions, the schedule of work, and other Contract procedures.

#### **5.2 REJECTION OF DEFECTIVE MATERIALS AND WORK**

The Owner's inspection of the Work shall not relieve the Contractor of any of its responsibilities to fulfill the Contract obligations, and defective work shall be corrected. Unsuitable work may be rejected by the Owner, notwithstanding that such work and materials have been previously overlooked or misjudged by the Owner and accepted for payment. If the Work or any part thereof shall be found defective at any time before the final acceptance of the whole Work, the Contractor shall forthwith correct such defect in a manner satisfactory to the Owner, and if any material brought upon the site for use in the Work, or selected for the same, shall be rejected by the Owner as unsuitable or not in conformity with the Contract requirements, the Contractor shall forthwith remove such materials from the vicinity of the Work.

### **ARTICLE 6 CHANGES IN THE WORK**

**6.1** Changes in the Contract Sum shall be calculated in accordance with one or a combination of the following methods, as determined by the Architect:

- .1 Lump sum basis, provided the lump sum amount shall include the estimated cost of the change, broken down by Items a through i in the following Subparagraph .3.
- .2 Unit price basis, to be adjusted in accordance with contract unit prices, or other agreed upon unit prices provided that the unit prices shall be inclusive of all costs related to such equitable adjustment.
- .3 Time and materials basis, on a not-to-exceed predetermined upset amount determined by the Architect, to be subsequently adjusted on the basis of the Contractor's actual costs based on the following items a through i:
  - a. Cost of labor at the rates found elsewhere in this document, including foremen;
  - b. Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
  - c. Rental cost of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others.
  - d. A percent of the net increase or decrease of Item a to cover Worker's Compensation, F.I.C.A., and unemployment contributions.
  - e. The percentage for Worker's Compensation in Item d above shall not exceed the standard manual rate for the involved trade, as set by the Worker's Compensation Rating and Inspection Bureau of Massachusetts. This rate shall not include any surcharges such as experience modifications and all risk factor adjustment programs, etc.

- f. For work performed by the Contractor's own forces, there shall be added an amount of 15% of items **a - d** for overhead, superintendence, and profit.
  - g. For work performed by any Subcontractor, there shall be added an amount of 15% of the Subcontractor's costs for Items **a - d** for the Subcontractor's overhead, superintendence and profit. The Contractor shall be entitled to an additional 10% mark-up on the total amount of the Subcontractor's price as compensation for assuming full responsibility and supervision for the Subcontractor's work.
  - h. Actual increases in the premium costs for performance and payment bonds required of the Contractor, provided there will be an appropriate credit for reduced premiums for a credit change order.
  - i. On any change in the Contract Sum that involves a credit, the amount of the credit will not include an overhead and profit factor, however, the credit will include an amount for item **d**. which shall not be less than 25% of item **a**.
- 6.2** The method provided in Subparagraph 8.3.1, for compensating the Contractor and Subcontractors for changes in the Work, shall be considered to adequately compensate the Contractor and Subcontractors for any and all costs directly, indirectly, or consequentially related to, or caused by, such change in the work.

## **ARTICLE 7 PAYMENTS**

### **7.1 CONTRACT SUM**

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

### **7.2 APPLICATIONS FOR PAYMENT**

**7.2.1** Once each month, on a date established at the beginning of the Work, the Contractor shall deliver to the Owner an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner may require, and reflecting a minimum of 5% retainage until the final acceptance and payment by the Owner.

**7.2.2** The Owner shall make payment to the Contractor within 30 days of receipt of said application, less any applicable retainage.

**7.2.3** The Owner may make changes in any application for payment submitted by the Contractor for:

- .1 Retention based on the value of its claims against the Contractor,
- .2 Retention of 5% of the approved amount of the Application for Payment.

### **7.3 FINAL PAYMENT**

The acceptance by the Contractor of the last payment due under this Contract or the execution of the Final Certificate of Completion, shall operate as a release to the Owner from all claims and liability related to this Contract.

## **ARTICLE 8 GUARANTY AND WARRANTY**

### **8.1 WARRANTY**

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment furnished. The Owner reserves the right to reject said substituted materials even after requesting evidence.

### **8.2 GENERAL GUARANTY**

If at any time during the period of one (1) year from the date of the Substantial Completion the Work to be performed under this Contract, or any part of the Work shall, in the reasonable determination of the Owner, require replacing or repairing due to the fact that it is broken, defective, or otherwise does not conform to the Contract Documents, the Owner will notify the Contractor to make the required repairs or replacement. If the Contractor shall neglect to commence such repairs or replacement to the satisfaction of the Owner within ten (10) days from the date of giving or mailing such notice, then the Owner may employ other persons to make said repairs or replacements. The Contractor agrees, upon demand, to pay to the Owner all amounts which the Owner expends for such repairs or replacements. During this one year guarantee period any corrective work shall be performed in accordance with the applicable terms of

this Contract. For items of work completed after substantial completion, the one year guarantee shall commence at the time the Owner accepts such items. This one year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

**ARTICLE 9 INSURANCE REQUIREMENTS**

The Contractor shall provide insurance coverage as listed in subparagraphs 9.1 - 9.7. This insurance shall be provided at the Contractor's expense and shall be in full force and effect during the full term of this contract.

**9.1 WORKERS' COMPENSATION and EMPLOYERS LIABILITY**

Workers' Compensation:	Coverage A	Per G.L. c149 §34 and c152, as amended.
Employer's liability:	Coverage B	\$500,000 Bodily Injury by Accident each accident
		\$500,000 Bodily Injury by Disease each employee
		\$500,000 Bodily Injury by Disease policy limit

**9.2 COMMERCIAL GENERAL LIABILITY**

Contractor shall provide to the Owner the "Commercial General Liability" policy form CG0001, or the exact equivalent with the limits of no less than:

Each Occurrence	\$1,000,000
General Aggregate	\$1,000,000
Products-Completed Operations Aggregate	\$1,000,000
Personal Injury & Advertising Injury	\$1,000,000
Damages to Premises Rented by You-	
Not Specified Medical Expenses	\$5,000

Additional insured coverage for the Commercial General Liability policy should apply to both ongoing and completed operations with endorsements at least as broad as forms CG2010 0413, CG2038 0423 and CG2037 0412.

**9.3 AUTOMOBILE LIABILITY**

Contractor shall provide automobile liability coverage for owned, non-owned, and hired autos using ISO Business Auto Coverage form CA0001, or the exact equivalent. If contractor owns no vehicles, this requirement may be met through a non-owned endorsement to the Commercial General Liability.

Bodily Injury	\$500,000 each person
	\$1,000,000 each accident
Property Damage	\$500,000 each accident
	or
	\$1,000,000 combined single limit

**9.4 POLLUTION/ABATEMENT CONTRACTORS**

The policy shall:

- .1 Be written on a "true" occurrence basis without any "sunset" clause;
- .2 Have the pollution exclusion amended to add back coverage for all pollution claims;
- .3 Include separate products and completed operations coverage, which shall be maintained for (2) years after Substantial Completion, as defined by G.L 30 §39G; and
- .4 Provide the following limits of insurance:

Each occurrence	\$1,000,000
General Aggregate	\$2,000,000
Products-Completed Operations Aggregate	\$2,000,000
Personal Injury & Advertising Injury	\$1,000,000
Damage to Premises Rented by You	\$50,000
Medical Expense	\$5,000

## **9.5 OWNER AS CO-INSURED**

The Owner, the Department and where applicable, the Owner's Regional Capital Assistance Team (RCAT) as described in G.L. 121B, §26C or other agent, shall be named as additional insureds on the Contractor's liability policies. Coverage should apply on a primary and non-contributory basis.

## **9.6 CERTIFICATES OF INSURANCE, POLICIES**

**9.6.1** The Contractor shall not commence work on this contract until proof of compliance with this article has been furnished to the Owner by submitting one copy of a properly endorsed insurance certificate issued by a company authorized to write insurance in the Commonwealth. This certificate shall indicate that the Contractual Liability Coverage is in force.

**9.6.2** The Contractor shall file the original and one certified copy of all policies with the Owner within sixty days after Contract award. If the Owner is damaged by the Contractor's failure to maintain such insurance and to so notify the Owner, then the Contractor shall be responsible for all reasonable costs attributable thereto.

## **9.7 CANCELLATION**

Cancellation of any insurance required by this contract, whether by the insurer or the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the Owner at least thirty days prior to the effective date thereof, which shall be expressed in said notice.

## **ARTICLE 10 INDEMNIFICATION**

**10.1** The Contractor shall take all responsibility for the Work and take all precautions for preventing injuries to persons and property in or about the Work and shall bear all losses resulting to or on account of the amount or character of the Work. The Contractor shall pay or cause payment to be made for all labor performed or furnished and for all materials used or employed in carrying out this Contract.

**10.2** The Contractor shall assume the defense of, and indemnify and save harmless the Owner, the Department, the Owner's Regional Capital Assistance Team (RCAT) as described in M.G.L. 121B, §26C or other agent, from all claims:

- .1 relating to labor performed or furnished and materials used or employed for the Work;
- .2 to inventions, patents and patent rights used in and in doing the Work unless such patent infringement is due to a product or process specified by the Owner;
- .3 to injuries to any person or corporation received or sustained by or from the Contractor and any employees, and subcontractors and employees, in doing the Work, or in consequence of any improper materials, implements or labor used or employed therein;
- .4 and to any act, omission or neglect of the Contractor and any employees therein.

## **ARTICLE 11 PERFORMANCE AND PAYMENT BONDS**

### **11.1 CONTRACTOR BONDS**

**11.1.1** For Contracts exceeding \$25,000, the Contractor shall provide the Owner with a 100% performance and payment (labor and materials) bonds in the form provided by the Department, executed by a surety licensed by the Commonwealth's Division of Insurance. Each such bond shall be in the amount of the Contract Sum.

**11.1.2** If at any time prior to final payment to the Contractor, the Surety:

- .1 is adjudged bankrupt or has made a general assignment for the benefit of its creditors;
- .2 has liquidated all assets and has made a general assignment for the benefit of its creditors;
- .3 is placed in receivership;
- .4 otherwise petitions a state or federal court for protection from its creditors; or
- .5 allows its license to do business in Massachusetts to lapse or be revoked;

the Contractor shall, within 21 days of any such action listed above, provide the Owner with new performance and payment bonds as described in Paragraph 11.1.1. Such bonds shall be provided solely at the Contractor's expense.

## **ARTICLE 12 MISCELLANEOUS REQUIREMENTS AND EXECUTIVE ORDERS**

**12.1** The Contractor shall comply with the provisions of EPA Regulation 40 CFR 745; M.G.L. c.151B; Executive Order 526, Order regarding Non-Discrimination, Diversity, Equal Opportunity, and Affirmative Action; pertaining to minority and women owned business enterprises; Executive Order 527 establishing the Office of Access and Opportunity and Executive

Order 481, prohibiting the use of undocumented workers on state contracts and all regulations promulgated pursuant thereto. The aforementioned law, executive orders, regulations and any amendments are incorporated herein by reference and made a part of this Contract.

**12.2 CONFLICT OF INTEREST**

The Contractor covenants, that:

- .1 presently, there is no financial interest and shall not acquire any such interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement or which would violate M.G.L. c.268A, as amended;
- .2 in the performance of this Contract, no person having any such interest shall be employed by the Contractor or engaged as a subcontractor by the contractor; and
- .3 no partner or employee of the firm is related by blood or marriage to any Board Member or employee of the Awarding Authority."

**ARTICLE 13 TERMINATION**

**13.1 TERMINATION FOR CAUSE**

**13.1.1** The Owner may terminate this contract for cause if it determines that any of the following circumstances have occurred:

- .1 The Contractor is adjudged bankrupt or has made a general assignment for the benefit of its creditors.
- .2 A receiver has been appointed of the Contractor's property.
- .3 All or a part of the Work has been abandoned.
- .4 The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Owner, except as provided in the Contract Documents.
- .5 The Owner has determined that the rate of progress required on the project is not being met.
- .6 The Contractor has substantially violated any provisions of this Contract.

**13.1.2** The Owner may complete the work, or any part thereof, and charge its expense of so completing the work or part thereof, to the Contractor.

**13.1.3** The Owner may take possession of and use any materials, machinery, implements and tools found upon the site of said Work. The Owner shall not be liable for any depreciation, loss or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Project site after the Owner has no further use for them.

**13.3 TERMINATION - NO FAULT**

**13.3.1** In the event that this Contract is terminated by the Owner, prior to the completion of construction and termination is not based on a reason listed in Paragraph 13.1, the Contractor shall be compensated for its costs incurred, including reasonable costs of de-mobilization, calculated on a percent completion basis covering the period of time between the last approved application for payment and the date of termination.

**13.3.2** Payment by the Owner pursuant to Subparagraph 13.3.1 shall be considered to fully compensate the Contractor for all claims and expenses and those of any consultants, subcontractors, and suppliers, directly or indirectly attributable to the termination, including any claims for lost profits.

**END OF GENERAL CONDITIONS**

**00.72.10**

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## **SECTION 00.73.36**

### **EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS**

#### **1. DEFINITIONS**

For purposes of this Section 00.73.36, the following additional definitions shall apply:

- A.** "Minority" means a person who meets one or more of the following definitions:
  - (1.)** American Indian or Native American means: all persons having origins in any of the original peoples of North America and who are recognized as an Indian by a tribe or tribal organization.
  - (2.)** Asian means: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands, including, but Not limited to China, Japan, Korea, Samoa, India, and the Philippine Islands.
  - (3.)** Black means: All persons having origins in any of the Black racial groups of Africa, including, but not limited to, African-Americans, and all persons having origins in any of the original peoples of the Cape Verdean Islands.
  - (4.)** Eskimo or Aleut means: All persons having origins in any of the peoples of Northern Canada, Greenland, Alaska, and Eastern Siberia.
  - (5.)** Hispanic means: All persons having their origins in any of the Spanish-speaking peoples of Mexico, Puerto Rico, Cuba, Central or South America, or the Caribbean Islands.
- B.** "Commission" or "MCAD" means the Massachusetts Commission against Discrimination.
- C.** "E.E.O. Officer" or Equal Employment Opportunity Officer means those persons designated by the Contractor, the Owner, or any other agency or party having jurisdiction under this contract, that serve in a capacity to implement this Section.

#### **2. CONDITIONS**

- A.** The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, handicap, or sex. The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion or transfer; recruitment advertising; recruitment layoff; termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship.
- B.** The Contractor shall post notices provided by the Commission, in conspicuous places, setting forth the provisions of the Fair Employment Practices Law of the Commonwealth.
- C.** 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, handicap, or sex, 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 hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or 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 or sex.
- D.** The Contractor shall not discriminate on grounds of race, color, religious creed, national origin, age, or sex in employment practices, in the selection or retention of Subcontractors, or in the procurement of materials and rentals of equipment.
- E.** The Commission and a designee of the Owner shall have access to the construction site and all applicable records of the Contractor and Subcontractors.

- F. The Contractor's EEO Certificate must be signed by the low general and all filed sub-bidders as a condition of Contract validation by the Department.

### 3. MINORITY GOAL      MINIMUM MINORITY PERCENTAGES

- A. Pursuant to his/her obligations under the preceding section, the Contractor shall strive to achieve on this project the labor participation goals contained herein

The participation goals for this project shall be 15.3% for minorities and 6.9% for women.

- B. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program. Additionally, the participation goals contained herein should not be seen or treated as a floor or as a ceiling for the employment of particular individuals or group of individuals.
- C. Such job categories shall include but not be limited to those "Classes of Work" enumerated in M.G.L. c.149 §44F and for trades covered by Item 1 of the Contractor's bid.
- D. These percentages shall apply to the Contractor and to all Subcontractors, regardless of tier, for all on-site Work.

### 4. REFERRALS

- A. In the hiring of minority journeymen, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Department or the Commission; and traditional referral methods utilized by the construction industry, where such referrals are needed to meet minority hiring requirements. The Contractor shall keep accurate records of such requests for referrals.
- B. Records of employment referral orders, prepared by the Contractor, shall be made available to the Owner and to the Department upon request.

### 5. EEO WORK FORCE REPORTING PROCEDURES

- A. The Contractor shall provide the following information to the Owner on copies of the forms found at the end of this Section.

**(1.) Weekly Manpower Reports 00.73.36.04:** The Contractor shall prepare a report after each week of activity, reflecting the actual working hours of all personnel identified as minority or non-minority.

- (a) This report shall be received by the Owner no later than the Friday following the week reported.
- (b) Failure to provide information shall result in sanctions as provided in this section.

### 6. COMPLIANCE - REPORTS AND INFORMATION

- A. The Contractor shall provide all information and reports required by the Owner or the Department and will permit access to its facilities and to any books, records, accounts and other sources of information which may be determined by the Owner or the Department to affect the employment of personnel. 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 Owner or the Department as appropriate and shall set forth what efforts have been made to obtain the information.

## **7. COMPLIANCE - INVESTIGATIONS**

- A.** Whenever the Owner's EEO Officer, the MCAD, or the Department believes the Contractor may not be operating in compliance with the terms of these requirements, the Department shall conduct an investigation, and may confer with the parties, to verify such allegations. The Department shall not initiate an investigation without prior notice to the Contractor.
- B.** If the Department finds the Contractor in non-compliance, it shall make a preliminary report, and notify the Contractor in writing of the steps necessary to bring such Contractor into compliance. A copy of this report shall be sent to the Department's Affirmative Action Officer.

## **8. COMPLIANCE - DEPARTMENT - AFFIRMATIVE ACTION INVESTIGATION**

- A.** If the Contractor fails or refuses to fully perform the steps necessary to achieve compliance, the Department shall make a report of non-compliance to the Department's Affirmative Action Officer, who will then conduct an investigation.
- B.** Should the Department's Affirmative Action Officer find the Contractor in non-compliance a final report recommending the imposition of one or more of the sanctions listed below shall be issued.
- C.** Within fifteen (15) days of said report the Department shall, after due notice and giving the Contractor an opportunity to respond, move to impose one or more of the following sanctions to attain compliance.
- D.** If the Department's Affirmative Action Office believes the Contractor has taken or is taking every possible measure to achieve compliance, a report shall show the Contractor is in compliance.

## **9. SANCTIONS**

- A.** For each week that the Contractor fails or refuses to comply, the Department may recover from the Contractor, 1/100 of 1% of the original Contract Sum or \$1000 whichever sum is greater, in the nature of liquidated damages.
- B.** If a Subcontractor is in non-compliance, the Department may recover from the Contractor, 1/10 of 1% of the Subcontract Sum, or \$400 whichever sum is greater, in the nature of liquidated damages, to be assessed by the Contractor as a back charge against the Subcontractor for each week that Subcontractor fails or refuses to comply.
- C.** The Owner may suspend part or all of any payment due under the contract until such time as the Contractor or any Subcontractor is able to demonstrate compliance with the terms of the Contract;
- D.** The Owner may terminate, or cancel part or all of the Contract, in accordance with the provisions of Article 19 of the General Conditions, unless the Contractor or any Subcontractor is able to demonstrate, within a specified time, compliance with the terms of the Contract.
- E.** The Contractor may request the Department and Owner to suspend the sanctions conditionally. Whereupon the Department shall investigate corrective measures taken by the Contractor and shall either lift or re-impose the sanctions.

## **10. SEVERABILITY**

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

### **END OF EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS**

**00.73.36**

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# FORM OF CONTRACTOR'S EQUAL EMPLOYMENT CERTIFICATION

Commonwealth of Massachusetts  
Department of Housing and Community Development

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**This form must be completed and submitted by the Contractor prior to the signing of the Owner-Contractor Agreement.**

**This certifies that:**

\_\_\_\_\_  
**Contractor**

\_\_\_\_\_  
**Street Address**

\_\_\_\_\_  
**4.6. City/State/Zip Code**

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

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

2. Will comply with the minority manpower ratio and specific affirmative action steps contained in Section 00.73.36 of this Contract; and
3. Will obtain similar certifications from each of its subcontractors and submit to the Owner prior to the award of any subcontract under this contract the subcontractor's certification.

\_\_\_\_\_  
**SIGNATURE OF AUTHORIZED REPRESENTATIVE OF CONTRACTOR**

\_\_\_\_\_  
**NAME AND TITLE**

\_\_\_\_\_  
**DATE**

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**Massachusetts Department of Housing and Community Development**



**EEO CONTRACTOR'S WEEKLY MANPOWER REPORT**

Housing Authority \_\_\_\_\_ Development No. \_\_\_\_\_ Contract Amount \$ \_\_\_\_\_

Minority Participation Goal **15.3%**  
 Women Participation Goal **6.9%**

General Contractor: \_\_\_\_\_

Name of Contractor Filing Report: \_\_\_\_\_ Trade(s): \_\_\_\_\_

Week Ending: \_\_\_\_\_ Report No.: \_\_\_\_\_  Check Here if you are a non-filed Subcontractor

Check Here if this is a Final Report Date Work Began: \_\_\_\_\_ Date Work Completed: \_\_\_\_\_

Job Category	# of Employees	Weekly Total Manhours	Total Manhours to Date	# of Minorities	Weekly Total Minority Manhours	Weekly % Minority Manhours	# of Women	Weekly Total Women Manhours	Weekly % Women Manhours	Total Manhours to Date	Total Minority Manhours to Date	% of Minority Manhours to Date	Total Women Manhours to Date	% of Women Manhours to Date

Mail Reports to: \_\_\_\_\_ Awarding Authority \_\_\_\_\_ Prepared by: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_ 20\_\_\_\_

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## **SECTION 00.73.43 PREVAILING WAGES and LABOR REGULATIONS**

### **4.1 PREVAILING WAGE RATES**

- 4.6.1** The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of the Massachusetts Department of Labor Division of Occupational Safety. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. Any questions relative to the applicability of any wage rate shall be directed to the Division of Occupational Safety.
- 4.6.1** Keep a legible copy of said schedule posted on the site at all times. Provide the Owner, on a weekly basis, and keep an on-site file of the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Department, Architect, or any agency having jurisdiction.
- 4.6.1** Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by MGL c149 § 34B, as amended. Such police officers shall be covered by Worker's Compensation Insurance and Employers Liability Insurance provided by the Contractor.

### **4.2 WAGE RATE REPORTING**

- 4.6.1** The Contractor and all subcontractors shall provide certified payroll affidavits verifying compliance with MGL c.149 §§26 - 27H.
- 4.6.1** The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- 4.6.1** [Weekly Payroll Form](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf
- 4.6.1** [Statement of Compliance](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf

### **4.3 APPRENTICE REQUIREMENTS**

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

### **4.4 EMPLOYEE OSHA SAFETY TRAINING**

- 4.6.1** All employees who work on this construction site must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004.
- 4.6.1** The Contractor and all Subcontractors shall furnish to the Owner, with the certified payroll reports, documentation indicating that each employee has successfully completed 10 hours of a course in construction safety and health. This course must be approved by the United States Occupational Health and Safety Administration (OSHA).

**INSERT WAGE RATES OBTAINED FROM  
Department of Labor, Division of Occupational Safety**

**END OF PREVAILING WAGE AND LABOR REGULATION  
00.73.43**



CHARLES D. BAKER  
Governor

KARYN E. POLITO  
Lt. Governor

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

Prevailing Wage Rates

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

ROSALIN ACOSTA  
Secretary  
MICHAEL FLANAGAN  
Director

**Awarding Authority:** Fitchburg Housing Authority  
**Contract Number:** DHCD#097129 **City/Town:** FITCHBURG  
**Description of Work:** Canton Valley Development - Removal of existing asphalt shingle roof and skylights, provide new structural wood framing infill and asphalt shingle roof for garage maintenance building.  
**Job Location:** Canton Valley Development, Fitchburg MA

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Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
  - An Awarding Authority must request an updated wage schedule from the Department of Labor Standards (“DLS”) if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
  - The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or any sub-contractor.
  - All apprentices working on the project are required to be registered with the Massachusetts Department of Labor Standards, Division of Apprentice Standards (DLS/DAS). Apprentice must keep his/her apprentice identification card on his/her person during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DLS/DAS regardless of whether or not they are registered with any other federal, state, local, or private agency must be paid the journeyworker's rate for the trade.**
  - The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule. Awarding authorities are required to request these updates no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. Contractors are required to obtain the wage schedules from awarding authorities, and to pay no less than these rates to covered workers. The annual update requirement is not applicable to 27F “rental of equipment” contracts.
  - Every contractor or subcontractor which performs construction work on the project is required to submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. A sample of a payroll reporting form may be obtained at <http://www.mass.gov/dols/pw>.
  - Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
  - Employees not receiving the prevailing wage rate set forth on the wage schedule may report the violation to the Fair Labor Division of the office of the Attorney General at (617) 727-3465.
  - Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
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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>	12/01/2020	\$35.15	\$12.91	\$14.82	\$0.00	\$62.88
	06/01/2021	\$35.95	\$12.91	\$14.82	\$0.00	\$63.68
	08/01/2021	\$35.95	\$13.41	\$14.82	\$0.00	\$64.18
	12/01/2021	\$35.95	\$13.41	\$16.01	\$0.00	\$65.37
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$35.22	\$12.91	\$14.82	\$0.00	\$62.95
	06/01/2021	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	08/01/2021	\$36.02	\$13.41	\$14.82	\$0.00	\$64.25
	12/01/2021	\$36.02	\$13.41	\$16.01	\$0.00	\$65.44
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$35.34	\$12.91	\$14.82	\$0.00	\$63.07
	06/01/2021	\$36.14	\$12.91	\$14.82	\$0.00	\$63.87
	08/01/2021	\$36.14	\$13.41	\$14.82	\$0.00	\$64.37
	12/01/2021	\$36.14	\$13.41	\$16.01	\$0.00	\$65.56
ADS/SUBMERSIBLE PILOT <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>	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90
	06/01/2022	\$38.14	\$8.60	\$16.06	\$0.00	\$62.80
	12/01/2022	\$38.99	\$8.60	\$16.06	\$0.00	\$63.65
	06/01/2023	\$39.89	\$8.60	\$16.06	\$0.00	\$64.55
	12/01/2023	\$40.79	\$8.60	\$16.06	\$0.00	\$65.45
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT &amp; FROST INSULATORS LOCAL 6 (WORCESTER)</i>	12/01/2020	\$38.10	\$12.80	\$9.45	\$0.00	\$60.35
ASPHALT RAKER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 2</i>	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90
	06/01/2022	\$38.14	\$8.60	\$16.06	\$0.00	\$62.80
	12/01/2022	\$38.99	\$8.60	\$16.06	\$0.00	\$63.65
	06/01/2023	\$39.89	\$8.60	\$16.06	\$0.00	\$64.55
	12/01/2023	\$40.79	\$8.60	\$16.06	\$0.00	\$65.45
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2020	\$46.10	\$7.07	\$17.98	\$0.00	\$71.15

**Apprentice - BOILERMAKER - Local 29**

**Effective Date - 01/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
2	65	\$29.97	\$7.07	\$11.69	\$0.00	\$48.73
3	70	\$32.27	\$7.07	\$12.59	\$0.00	\$51.93
4	75	\$34.58	\$7.07	\$13.49	\$0.00	\$55.14
5	80	\$36.88	\$7.07	\$14.38	\$0.00	\$58.33
6	85	\$39.19	\$7.07	\$15.29	\$0.00	\$61.55
7	90	\$41.49	\$7.07	\$16.18	\$0.00	\$64.74
8	95	\$43.80	\$7.07	\$17.09	\$0.00	\$67.96

**Notes:**

**Apprentice to Journeyworker Ratio:1:4**

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING) <i>BRICKLAYERS LOCAL 3 (LOWELL)</i>	02/01/2021	\$53.61	\$11.39	\$21.41	\$0.00	\$86.41
	08/01/2021	\$55.01	\$11.39	\$21.57	\$0.00	\$87.97
	02/01/2022	\$55.59	\$11.39	\$21.57	\$0.00	\$88.55

**Classification**

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

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

**Effective Date - 02/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.81	\$11.39	\$21.41	\$0.00	\$59.61
2	60	\$32.17	\$11.39	\$21.41	\$0.00	\$64.97
3	70	\$37.53	\$11.39	\$21.41	\$0.00	\$70.33
4	80	\$42.89	\$11.39	\$21.41	\$0.00	\$75.69
5	90	\$48.25	\$11.39	\$21.41	\$0.00	\$81.05

**Effective Date - 08/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.51	\$11.39	\$21.57	\$0.00	\$60.47
2	60	\$33.01	\$11.39	\$21.57	\$0.00	\$65.97
3	70	\$38.51	\$11.39	\$21.57	\$0.00	\$71.47
4	80	\$44.01	\$11.39	\$21.57	\$0.00	\$76.97
5	90	\$49.51	\$11.39	\$21.57	\$0.00	\$82.47

**Notes:**

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

<b>BULLDOZER/GRADER/SCRAPER</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
<b>CAISSON &amp; UNDERPINNING BOTTOM MAN</b> <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$41.05	\$8.60	\$17.47	\$0.00	\$67.12
	06/01/2021	\$42.07	\$8.60	\$17.47	\$0.00	\$68.14
	12/01/2021	\$43.08	\$8.60	\$17.47	\$0.00	\$69.15
For apprentice rates see "Apprentice- LABORER"						
<b>CAISSON &amp; UNDERPINNING LABORER</b> <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$39.90	\$8.60	\$17.47	\$0.00	\$65.97
	06/01/2021	\$40.92	\$8.60	\$17.47	\$0.00	\$66.99
	12/01/2021	\$41.93	\$8.60	\$17.47	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
<b>CAISSON &amp; UNDERPINNING TOP MAN</b> <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$39.90	\$8.60	\$17.47	\$0.00	\$65.97
	06/01/2021	\$40.92	\$8.60	\$17.47	\$0.00	\$66.99
	12/01/2021	\$41.93	\$8.60	\$17.47	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
<b>CARBIDE CORE DRILL OPERATOR</b> <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CARPENTER <i>CARPENTERS -ZONE 2 (Eastern Massachusetts)</i>	09/01/2020	\$42.94	\$9.40	\$18.95	\$0.00	\$71.29
	03/01/2021	\$43.54	\$9.40	\$18.95	\$0.00	\$71.89
	09/01/2021	\$44.19	\$9.40	\$18.95	\$0.00	\$72.54
	03/01/2022	\$44.79	\$9.40	\$18.95	\$0.00	\$73.14
	09/01/2022	\$45.44	\$9.40	\$18.95	\$0.00	\$73.79
	03/01/2023	\$46.04	\$9.40	\$18.95	\$0.00	\$74.39

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

**Effective Date - 09/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.47	\$9.40	\$1.73	\$0.00	\$32.60
2	60	\$25.76	\$9.40	\$1.73	\$0.00	\$36.89
3	70	\$30.06	\$9.40	\$13.76	\$0.00	\$53.22
4	75	\$32.21	\$9.40	\$13.76	\$0.00	\$55.37
5	80	\$34.35	\$9.40	\$15.49	\$0.00	\$59.24
6	80	\$34.35	\$9.40	\$15.49	\$0.00	\$59.24
7	90	\$38.65	\$9.40	\$17.22	\$0.00	\$65.27
8	90	\$38.65	\$9.40	\$17.22	\$0.00	\$65.27

**Effective Date - 03/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.77	\$9.40	\$1.73	\$0.00	\$32.90
2	60	\$26.12	\$9.40	\$1.73	\$0.00	\$37.25
3	70	\$30.48	\$9.40	\$13.76	\$0.00	\$53.64
4	75	\$32.66	\$9.40	\$13.76	\$0.00	\$55.82
5	80	\$34.83	\$9.40	\$15.49	\$0.00	\$59.72
6	80	\$34.83	\$9.40	\$15.49	\$0.00	\$59.72
7	90	\$39.19	\$9.40	\$17.22	\$0.00	\$65.81
8	90	\$39.19	\$9.40	\$17.22	\$0.00	\$65.81

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
Step 1&2 \$30.45/ 3&4 \$36.42/ 5&6 \$54.95/ 7&8 \$60.97

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

CARPENTER WOOD FRAME <i>CARPENTERS-ZONE 3 (Wood Frame)</i>	04/01/2020	\$22.66	\$7.21	\$4.80	\$0.00	\$34.67
	04/01/2021	\$23.16	\$7.21	\$4.80	\$0.00	\$35.17
	04/01/2022	\$23.66	\$7.21	\$4.80	\$0.00	\$35.67
	04/01/2023	\$24.16	\$7.21	\$4.80	\$0.00	\$36.17

All Aspects of New Wood Frame Work

**Classification**

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

**Apprentice - CARPENTER (Wood Frame) - Zone 3**

**Effective Date - 04/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$13.60	\$7.21	\$0.00	\$0.00	\$20.81
2	60	\$13.60	\$7.21	\$0.00	\$0.00	\$20.81
3	65	\$14.73	\$7.21	\$0.00	\$0.00	\$21.94
4	70	\$15.86	\$7.21	\$0.00	\$0.00	\$23.07
5	75	\$17.00	\$7.21	\$3.80	\$0.00	\$28.01
6	80	\$18.13	\$7.21	\$3.80	\$0.00	\$29.14
7	85	\$19.26	\$7.21	\$3.80	\$0.00	\$30.27
8	90	\$20.39	\$7.21	\$3.80	\$0.00	\$31.40

**Effective Date - 04/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$13.90	\$7.21	\$0.00	\$0.00	\$21.11
2	60	\$13.90	\$7.21	\$0.00	\$0.00	\$21.11
3	65	\$15.05	\$7.21	\$0.00	\$0.00	\$22.26
4	70	\$16.21	\$7.21	\$0.00	\$0.00	\$23.42
5	75	\$17.37	\$7.21	\$3.80	\$0.00	\$28.38
6	80	\$18.53	\$7.21	\$3.80	\$0.00	\$29.54
7	85	\$19.69	\$7.21	\$3.80	\$0.00	\$30.70
8	90	\$20.84	\$7.21	\$3.80	\$0.00	\$31.85

**Notes:**

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80  
 Step 1&2 \$17.41/ 3&4 \$19.67/ 5&6 \$26.87/ 7&8 \$29.14

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

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 (LOWELL)	01/01/2020	\$45.23	\$12.75	\$22.41	\$0.62	\$81.01
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**Apprentice - CEMENT MASONRY/PLASTERING - Lowell**

**Effective Date - 01/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.62	\$12.75	\$15.41	\$0.00	\$50.78
2	60	\$27.14	\$12.75	\$17.41	\$0.62	\$57.92
3	65	\$29.40	\$12.75	\$18.41	\$0.62	\$61.18
4	70	\$31.66	\$12.75	\$19.41	\$0.62	\$64.44
5	75	\$33.92	\$12.75	\$20.41	\$0.62	\$67.70
6	80	\$36.18	\$12.75	\$21.41	\$0.62	\$70.96
7	90	\$40.71	\$12.75	\$22.41	\$0.62	\$76.49

**Notes:**

Steps 3,4 are 500 hrs. All other steps are 1,000 hrs.

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CHAIN SAW OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$50.98	\$13.50	\$15.70	\$0.00	\$80.18
	06/01/2021	\$52.08	\$13.50	\$15.70	\$0.00	\$81.28
	12/01/2021	\$53.23	\$13.50	\$15.70	\$0.00	\$82.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$33.00	\$13.50	\$15.70	\$0.00	\$62.20
	06/01/2021	\$33.75	\$13.50	\$15.70	\$0.00	\$62.95
	12/01/2021	\$34.54	\$13.50	\$15.70	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 2</i>	01/01/2021	\$52.06	\$8.25	\$22.75	\$0.00	\$83.06

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

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.03	\$8.25	\$0.00	\$0.00	\$34.28
2	55	\$28.63	\$8.25	\$6.16	\$0.00	\$43.04
3	60	\$31.24	\$8.25	\$6.72	\$0.00	\$46.21
4	65	\$33.84	\$8.25	\$7.28	\$0.00	\$49.37
5	70	\$36.44	\$8.25	\$19.39	\$0.00	\$64.08
6	75	\$39.05	\$8.25	\$19.95	\$0.00	\$67.25
7	80	\$41.65	\$8.25	\$20.51	\$0.00	\$70.41
8	90	\$46.85	\$8.25	\$21.63	\$0.00	\$76.73

**Notes:**

Steps are 750 hrs.

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

DEMO: ADZEMAN <i>LABORERS - ZONE 2</i>	12/01/2020	\$40.05	\$8.60	\$17.32	\$0.00	\$65.97
	06/01/2021	\$41.07	\$8.60	\$17.32	\$0.00	\$66.99
	12/01/2021	\$42.08	\$8.60	\$17.32	\$0.00	\$68.00
	06/01/2022	\$43.08	\$8.60	\$17.32	\$0.00	\$69.00
	12/01/2022	\$44.08	\$8.60	\$17.32	\$0.00	\$70.00
	06/01/2023	\$45.08	\$8.60	\$17.32	\$0.00	\$71.00
	12/01/2023	\$46.33	\$8.60	\$17.32	\$0.00	\$72.25

For apprentice rates see "Apprentice- LABORER"



<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
DEMO: BACKHOE/LOADER/HAMMER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$41.05	\$8.60	\$17.32	\$0.00	\$66.97
	06/01/2021	\$42.07	\$8.60	\$17.32	\$0.00	\$67.99
	12/01/2021	\$43.08	\$8.60	\$17.32	\$0.00	\$69.00
	06/01/2022	\$44.08	\$8.60	\$17.32	\$0.00	\$70.00
	12/01/2022	\$45.08	\$8.60	\$17.32	\$0.00	\$71.00
	06/01/2023	\$46.08	\$8.60	\$17.32	\$0.00	\$72.00
	12/01/2023	\$47.33	\$8.60	\$17.32	\$0.00	\$73.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: BURNERS <i>LABORERS - ZONE 2</i>	12/01/2020	\$40.80	\$8.60	\$17.32	\$0.00	\$66.72
	06/01/2021	\$41.82	\$8.60	\$17.32	\$0.00	\$67.74
	12/01/2021	\$42.83	\$8.60	\$17.32	\$0.00	\$68.75
	06/01/2022	\$43.83	\$8.60	\$17.32	\$0.00	\$69.75
	12/01/2022	\$44.83	\$8.60	\$17.32	\$0.00	\$70.75
	06/01/2023	\$45.83	\$8.60	\$17.32	\$0.00	\$71.75
	12/01/2023	\$47.08	\$8.60	\$17.32	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: CONCRETE CUTTER/SAWYER <i>LABORERS - ZONE 2</i>	12/01/2020	\$41.05	\$8.60	\$17.32	\$0.00	\$66.97
	06/01/2021	\$42.07	\$8.60	\$17.32	\$0.00	\$67.99
	12/01/2021	\$43.08	\$8.60	\$17.32	\$0.00	\$69.00
	06/01/2022	\$44.08	\$8.60	\$17.32	\$0.00	\$70.00
	12/01/2022	\$45.08	\$8.60	\$17.32	\$0.00	\$71.00
	06/01/2023	\$46.08	\$8.60	\$17.32	\$0.00	\$72.00
	12/01/2023	\$47.33	\$8.60	\$17.32	\$0.00	\$73.25
For apprentice rates see "Apprentice- LABORER"						
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$40.80	\$8.60	\$17.32	\$0.00	\$66.72
	06/01/2021	\$41.82	\$8.60	\$17.32	\$0.00	\$67.74
	12/01/2021	\$42.83	\$8.60	\$17.32	\$0.00	\$68.75
	06/01/2022	\$43.83	\$8.60	\$17.32	\$0.00	\$69.75
	12/01/2022	\$44.83	\$8.60	\$17.32	\$0.00	\$70.75
	06/01/2023	\$45.83	\$8.60	\$17.32	\$0.00	\$71.75
	12/01/2023	\$47.08	\$8.60	\$17.32	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 2</i>	12/01/2020	\$40.05	\$8.60	\$17.32	\$0.00	\$65.97
	06/01/2021	\$41.07	\$8.60	\$17.32	\$0.00	\$66.99
	12/01/2021	\$42.08	\$8.60	\$17.32	\$0.00	\$68.00
	06/01/2022	\$43.08	\$8.60	\$17.32	\$0.00	\$69.00
	12/01/2022	\$44.08	\$8.60	\$17.32	\$0.00	\$70.00
	06/01/2023	\$45.08	\$8.60	\$17.32	\$0.00	\$71.00
	12/01/2023	\$46.33	\$8.60	\$17.32	\$0.00	\$72.25
For apprentice rates see "Apprentice- LABORER"						
DIRECTIONAL DRILL MACHINE OPERATOR <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
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"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
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>	09/06/2020	\$44.42	\$11.13	\$17.34	\$0.00	\$72.89
	09/05/2021	\$45.01	\$11.57	\$17.42	\$0.00	\$74.00
	09/04/2022	\$45.59	\$12.20	\$17.50	\$0.00	\$75.29

**Apprentice - ELECTRICIAN - Local 96**

**Effective Date - 09/06/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$17.77	\$11.13	\$0.53	\$0.00	\$29.43
2	43	\$19.10	\$11.13	\$0.57	\$0.00	\$30.80
3	48	\$21.32	\$11.13	\$14.11	\$0.00	\$46.56
4	55	\$24.43	\$11.13	\$14.54	\$0.00	\$50.10
5	65	\$28.87	\$11.13	\$15.17	\$0.00	\$55.17
6	80	\$35.54	\$11.13	\$16.10	\$0.00	\$62.77

**Effective Date - 09/05/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.00	\$11.57	\$0.54	\$0.00	\$30.11
2	43	\$19.35	\$11.57	\$0.58	\$0.00	\$31.50
3	48	\$21.60	\$11.57	\$14.15	\$0.00	\$47.32
4	55	\$24.76	\$11.57	\$14.58	\$0.00	\$50.91
5	65	\$29.26	\$11.57	\$15.22	\$0.00	\$56.05
6	80	\$36.01	\$11.57	\$16.16	\$0.00	\$63.74

**Notes:**

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

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

ELEVATOR CONSTRUCTOR <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2021	\$56.69	\$15.88	\$19.31	\$0.00	\$91.88
	01/01/2022	\$58.62	\$16.03	\$20.21	\$0.00	\$94.86

**Apprentice - ELEVATOR CONSTRUCTOR - Local 41**

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.35	\$15.88	\$0.00	\$0.00	\$44.23
2	55	\$31.18	\$15.88	\$19.31	\$0.00	\$66.37
3	65	\$36.85	\$15.88	\$19.31	\$0.00	\$72.04
4	70	\$39.68	\$15.88	\$19.31	\$0.00	\$74.87
5	80	\$45.35	\$15.88	\$19.31	\$0.00	\$80.54

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

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$29.31	\$16.03	\$0.00	\$0.00	\$45.34
2	55	\$32.24	\$16.03	\$20.21	\$0.00	\$68.48
3	65	\$38.10	\$16.03	\$20.21	\$0.00	\$74.34
4	70	\$41.03	\$16.03	\$20.21	\$0.00	\$77.27
5	80	\$46.90	\$16.03	\$20.21	\$0.00	\$83.14

**Notes:**

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

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

ELEVATOR CONSTRUCTOR HELPER <i>ELEVATOR CONSTRUCTORS LOCAL 41</i>	01/01/2021	\$39.68	\$15.88	\$19.31	\$0.00	\$74.87
	01/01/2022	\$41.03	\$16.03	\$20.21	\$0.00	\$77.27
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2020	\$45.23	\$13.00	\$15.70	\$0.00	\$73.93
	05/01/2021	\$46.38	\$13.00	\$15.70	\$0.00	\$75.08
	11/01/2021	\$47.38	\$13.00	\$15.70	\$0.00	\$76.08
	05/01/2022	\$48.53	\$13.00	\$15.70	\$0.00	\$77.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2020	\$46.74	\$13.00	\$15.70	\$0.00	\$75.44
	05/01/2021	\$47.90	\$13.00	\$15.70	\$0.00	\$76.60
	11/01/2021	\$48.91	\$13.00	\$15.70	\$0.00	\$77.61
	05/01/2022	\$50.07	\$13.00	\$15.70	\$0.00	\$78.77
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 4</i>	11/01/2020	\$22.73	\$13.00	\$15.70	\$0.00	\$51.43
	05/01/2021	\$23.41	\$13.00	\$15.70	\$0.00	\$52.11
	11/01/2021	\$24.01	\$13.00	\$15.70	\$0.00	\$52.71
	05/01/2022	\$24.68	\$13.00	\$15.70	\$0.00	\$53.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 96</i>	09/06/2020	\$44.42	\$11.13	\$17.34	\$0.00	\$72.89
	09/05/2021	\$45.01	\$11.57	\$17.42	\$0.00	\$74.00
	09/04/2022	\$45.59	\$12.20	\$17.50	\$0.00	\$75.29
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINT/COMMISSIONING <i>ELECTRICIANS LOCAL 96</i>	09/06/2020	\$44.42	\$11.13	\$17.34	\$0.00	\$72.89
	09/05/2021	\$45.01	\$11.57	\$17.42	\$0.00	\$74.00
	09/04/2022	\$45.59	\$12.20	\$17.50	\$0.00	\$75.29
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIREMAN (ASST. ENGINEER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$40.75	\$13.50	\$15.70	\$0.00	\$69.95
	06/01/2021	\$41.66	\$13.50	\$15.70	\$0.00	\$70.86
	12/01/2021	\$42.61	\$13.50	\$15.70	\$0.00	\$71.81
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
FLAGGER & SIGNALER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$24.50	\$8.60	\$16.06	\$0.00	\$49.16
	06/01/2021	\$24.50	\$8.60	\$16.06	\$0.00	\$49.16
	12/01/2021	\$24.50	\$8.60	\$16.06	\$0.00	\$49.16
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FLOORCOVERER <i>FLOORCOVERERS LOCAL 2168 ZONE II</i>	09/01/2020	\$45.48	\$9.40	\$19.25	\$0.00	\$74.13
	03/01/2021	\$46.28	\$9.40	\$19.25	\$0.00	\$74.93
	09/01/2021	\$47.08	\$9.40	\$19.25	\$0.00	\$75.73
	03/01/2022	\$47.88	\$9.40	\$19.25	\$0.00	\$76.53

**Classification**

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

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

**Effective Date - 09/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.74	\$9.40	\$1.79	\$0.00	\$33.93
2	55	\$25.01	\$9.40	\$1.79	\$0.00	\$36.20
3	60	\$27.29	\$9.40	\$13.88	\$0.00	\$50.57
4	65	\$29.56	\$9.40	\$13.88	\$0.00	\$52.84
5	70	\$31.84	\$9.40	\$15.67	\$0.00	\$56.91
6	75	\$34.11	\$9.40	\$15.67	\$0.00	\$59.18
7	80	\$36.38	\$9.40	\$17.46	\$0.00	\$63.24
8	85	\$38.66	\$9.40	\$17.46	\$0.00	\$65.52

**Effective Date - 03/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.14	\$9.40	\$1.79	\$0.00	\$34.33
2	55	\$25.45	\$9.40	\$1.79	\$0.00	\$36.64
3	60	\$27.77	\$9.40	\$13.88	\$0.00	\$51.05
4	65	\$30.08	\$9.40	\$13.88	\$0.00	\$53.36
5	70	\$32.40	\$9.40	\$15.67	\$0.00	\$57.47
6	75	\$34.71	\$9.40	\$15.67	\$0.00	\$59.78
7	80	\$37.02	\$9.40	\$17.46	\$0.00	\$63.88
8	85	\$39.34	\$9.40	\$17.46	\$0.00	\$66.20

**Notes:** Steps are 750 hrs.  
 % After 09/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)  
 Step 1&2 \$31.66/ 3&4 \$37.93/ 5&6 \$56.91/ 7&8 \$63.24

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

FORK LIFT/CHERRY PICKER <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GENERATOR/LIGHTING PLANT/HEATERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$33.00	\$13.50	\$15.70	\$0.00	\$62.20
	06/01/2021	\$33.75	\$13.50	\$15.70	\$0.00	\$62.95
	12/01/2021	\$34.54	\$13.50	\$15.70	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 35 (ZONE 2)</i>	01/01/2021	\$41.56	\$8.25	\$22.75	\$0.00	\$72.56

**Classification**

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

**Apprentice - GLAZIER - Local 35 Zone 2**

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.78	\$8.25	\$0.00	\$0.00	\$29.03
2	55	\$22.86	\$8.25	\$6.16	\$0.00	\$37.27
3	60	\$24.94	\$8.25	\$6.72	\$0.00	\$39.91
4	65	\$27.01	\$8.25	\$7.28	\$0.00	\$42.54
5	70	\$29.09	\$8.25	\$19.39	\$0.00	\$56.73
6	75	\$31.17	\$8.25	\$19.95	\$0.00	\$59.37
7	80	\$33.25	\$8.25	\$20.51	\$0.00	\$62.01
8	90	\$37.40	\$8.25	\$21.63	\$0.00	\$67.28

**Notes:**  
Steps are 750 hrs.

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

HOISTING ENGINEER/CRANES/GRADALLS	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
OPERATING ENGINEERS LOCAL 4	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43

**Classification**

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

**Apprentice - OPERATING ENGINEERS - Local 4**

**Effective Date - 12/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$27.49	\$13.50	\$0.00	\$0.00	\$40.99
2	60	\$29.99	\$13.50	\$15.70	\$0.00	\$59.19
3	65	\$32.49	\$13.50	\$15.70	\$0.00	\$61.69
4	70	\$34.99	\$13.50	\$15.70	\$0.00	\$64.19
5	75	\$37.49	\$13.50	\$15.70	\$0.00	\$66.69
6	80	\$39.98	\$13.50	\$15.70	\$0.00	\$69.18
7	85	\$42.48	\$13.50	\$15.70	\$0.00	\$71.68
8	90	\$44.98	\$13.50	\$15.70	\$0.00	\$74.18

**Effective Date - 06/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$28.09	\$13.50	\$0.00	\$0.00	\$41.59
2	60	\$30.65	\$13.50	\$15.70	\$0.00	\$59.85
3	65	\$33.20	\$13.50	\$15.70	\$0.00	\$62.40
4	70	\$35.76	\$13.50	\$15.70	\$0.00	\$64.96
5	75	\$38.31	\$13.50	\$15.70	\$0.00	\$67.51
6	80	\$40.86	\$13.50	\$15.70	\$0.00	\$70.06
7	85	\$43.42	\$13.50	\$15.70	\$0.00	\$72.62
8	90	\$45.97	\$13.50	\$15.70	\$0.00	\$75.17

**Notes:**

**Apprentice to Journeyworker Ratio:1:6**

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 63	01/01/2021	\$37.24	\$10.64	\$17.33	\$1.96	\$67.17
	07/01/2021	\$38.29	\$10.64	\$17.33	\$1.99	\$68.25
	01/01/2022	\$39.29	\$10.64	\$17.33	\$2.02	\$69.28

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 96	09/06/2020	\$44.42	\$11.13	\$17.34	\$0.00	\$72.89
	09/05/2021	\$45.01	\$11.57	\$17.42	\$0.00	\$74.00
	09/04/2022	\$45.59	\$12.20	\$17.50	\$0.00	\$75.29

For apprentice rates see "Apprentice- ELECTRICIAN"

HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 63	01/01/2021	\$37.24	\$10.64	\$17.33	\$1.96	\$67.17
	07/01/2021	\$38.29	\$10.64	\$17.33	\$1.99	\$68.25
	01/01/2022	\$39.29	\$10.64	\$17.33	\$2.02	\$69.28

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (TESTING AND BALANCING - WATER) PLUMBERS LOCAL 4	09/01/2020	\$46.91	\$9.80	\$15.71	\$0.00	\$72.42
	03/01/2021	\$47.85	\$9.80	\$15.77	\$0.00	\$73.42
	09/01/2021	\$48.85	\$9.80	\$15.77	\$0.00	\$74.42
	03/01/2022	\$49.85	\$9.80	\$15.77	\$0.00	\$75.42

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
HVAC MECHANIC PLUMBERS LOCAL 4	09/01/2020	\$46.91	\$9.80	\$15.71	\$0.00	\$72.42
	03/01/2021	\$47.85	\$9.80	\$15.77	\$0.00	\$73.42
	09/01/2021	\$48.85	\$9.80	\$15.77	\$0.00	\$74.42
	03/01/2022	\$49.85	\$9.80	\$15.77	\$0.00	\$75.42

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

HYDRAULIC DRILLS LABORERS - ZONE 2	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90
	06/01/2022	\$38.14	\$8.60	\$16.06	\$0.00	\$62.80
	12/01/2022	\$38.99	\$8.60	\$16.06	\$0.00	\$63.65
	06/01/2023	\$39.89	\$8.60	\$16.06	\$0.00	\$64.55
	12/01/2023	\$40.79	\$8.60	\$16.06	\$0.00	\$65.45

For apprentice rates see "Apprentice- LABORER"

HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2020	\$35.41	\$8.60	\$16.06	\$0.00	\$60.07
	06/01/2021	\$36.33	\$8.60	\$16.06	\$0.00	\$60.99
	12/01/2021	\$37.24	\$8.60	\$16.06	\$0.00	\$61.90

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 (WORCESTER)	09/01/2020	\$44.10	\$13.80	\$17.14	\$0.00	\$75.04
	09/01/2021	\$46.50	\$13.80	\$17.14	\$0.00	\$77.44
	09/01/2022	\$48.95	\$13.80	\$17.14	\$0.00	\$79.89

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

**Effective Date - 09/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.05	\$13.80	\$12.42	\$0.00	\$48.27
2	60	\$26.46	\$13.80	\$13.36	\$0.00	\$53.62
3	70	\$30.87	\$13.80	\$14.31	\$0.00	\$58.98
4	80	\$35.28	\$13.80	\$15.25	\$0.00	\$64.33

**Effective Date - 09/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.25	\$13.80	\$12.42	\$0.00	\$49.47
2	60	\$27.90	\$13.80	\$13.36	\$0.00	\$55.06
3	70	\$32.55	\$13.80	\$14.31	\$0.00	\$60.66
4	80	\$37.20	\$13.80	\$15.25	\$0.00	\$66.25

**Notes:**

Steps are 1 year

**Apprentice to Journeyworker Ratio:1:4**

IRONWORKER/WELDER IRONWORKERS LOCAL 7 (WORCESTER AREA)	09/16/2020	\$48.36	\$8.10	\$25.10	\$0.00	\$81.56
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**Classification**

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

**Apprentice - IRONWORKER - Local 7 Worcester**

**Effective Date - 09/16/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$29.02	\$8.10	\$25.10	\$0.00	\$62.22
2	70	\$33.85	\$8.10	\$25.10	\$0.00	\$67.05
3	75	\$36.27	\$8.10	\$25.10	\$0.00	\$69.47
4	80	\$38.69	\$8.10	\$25.10	\$0.00	\$71.89
5	85	\$41.11	\$8.10	\$25.10	\$0.00	\$74.31
6	90	\$43.52	\$8.10	\$25.10	\$0.00	\$76.72

**Notes:**  
Structural 1:6; Ornamental 1:4

**Apprentice to Journeyworker Ratio:**

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 2	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS - ZONE 2	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15
	06/01/2022	\$37.39	\$8.60	\$16.06	\$0.00	\$62.05
	12/01/2022	\$38.24	\$8.60	\$16.06	\$0.00	\$62.90
	06/01/2023	\$39.14	\$8.60	\$16.06	\$0.00	\$63.80
	12/01/2023	\$40.04	\$8.60	\$16.06	\$0.00	\$64.70

**Classification**

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

**Apprentice - LABORER - Zone 2**

**Effective Date - 12/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.80	\$8.60	\$16.06	\$0.00	\$45.46
2	70	\$24.26	\$8.60	\$16.06	\$0.00	\$48.92
3	80	\$27.73	\$8.60	\$16.06	\$0.00	\$52.39
4	90	\$31.19	\$8.60	\$16.06	\$0.00	\$55.85

**Effective Date - 06/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.35	\$8.60	\$16.06	\$0.00	\$46.01
2	70	\$24.91	\$8.60	\$16.06	\$0.00	\$49.57
3	80	\$28.46	\$8.60	\$16.06	\$0.00	\$53.12
4	90	\$32.02	\$8.60	\$16.06	\$0.00	\$56.68

**Notes:**

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

LABORER (HEAVY & HIGHWAY)	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15

**Apprentice - LABORER (Heavy & Highway) - Zone 2**

**Effective Date - 12/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.80	\$8.60	\$16.06	\$0.00	\$45.46
2	70	\$24.26	\$8.60	\$16.06	\$0.00	\$48.92
3	80	\$27.73	\$8.60	\$16.06	\$0.00	\$52.39
4	90	\$31.19	\$8.60	\$16.06	\$0.00	\$55.85

**Effective Date - 06/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$21.35	\$8.60	\$16.06	\$0.00	\$46.01
2	70	\$24.91	\$8.60	\$16.06	\$0.00	\$49.57
3	80	\$28.46	\$8.60	\$16.06	\$0.00	\$53.12
4	90	\$32.02	\$8.60	\$16.06	\$0.00	\$56.68

**Notes:**

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

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
LABORER: CARPENTER TENDER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15
	06/01/2022	\$37.39	\$8.60	\$16.06	\$0.00	\$62.05
	12/01/2022	\$38.24	\$8.60	\$16.06	\$0.00	\$62.90
	06/01/2023	\$39.14	\$8.60	\$16.06	\$0.00	\$63.80
	12/01/2023	\$40.04	\$8.60	\$16.06	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						
LABORER: CEMENT FINISHER TENDER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15
	06/01/2022	\$37.39	\$8.60	\$16.06	\$0.00	\$62.05
	12/01/2022	\$38.24	\$8.60	\$16.06	\$0.00	\$62.90
	06/01/2023	\$39.14	\$8.60	\$16.06	\$0.00	\$63.80
	12/01/2023	\$40.04	\$8.60	\$16.06	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.75	\$8.60	\$16.12	\$0.00	\$59.47
	06/01/2021	\$35.67	\$8.60	\$16.12	\$0.00	\$60.39
	12/01/2021	\$36.58	\$8.60	\$16.12	\$0.00	\$61.30
	06/01/2022	\$37.48	\$8.60	\$16.12	\$0.00	\$62.20
	12/01/2022	\$38.33	\$8.60	\$16.12	\$0.00	\$63.05
	06/01/2023	\$39.23	\$8.60	\$16.12	\$0.00	\$63.95
	12/01/2023	\$40.13	\$8.60	\$16.12	\$0.00	\$64.85
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
LABORER: MASON TENDER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15
	06/01/2022	\$37.39	\$8.60	\$16.06	\$0.00	\$62.05
	12/01/2022	\$38.24	\$8.60	\$16.06	\$0.00	\$62.90
	06/01/2023	\$39.14	\$8.60	\$16.06	\$0.00	\$63.80
	12/01/2023	\$40.04	\$8.60	\$16.06	\$0.00	\$64.70
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: TREE REMOVER <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15
	06/01/2022	\$37.39	\$8.60	\$16.06	\$0.00	\$62.05
	12/01/2022	\$38.24	\$8.60	\$16.06	\$0.00	\$62.90
	06/01/2023	\$39.14	\$8.60	\$16.06	\$0.00	\$63.80
	12/01/2023	\$40.04	\$8.60	\$16.06	\$0.00	\$64.70
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance incidental to construction . For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	02/01/2021	\$42.57	\$11.39	\$20.14	\$0.00	\$74.10
	08/01/2021	\$43.69	\$11.39	\$20.30	\$0.00	\$75.38
	02/01/2022	\$44.16	\$11.39	\$20.30	\$0.00	\$75.85

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

**Effective Date - 02/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.29	\$11.39	\$20.14	\$0.00	\$52.82
2	60	\$25.54	\$11.39	\$20.14	\$0.00	\$57.07
3	70	\$29.80	\$11.39	\$20.14	\$0.00	\$61.33
4	80	\$34.06	\$11.39	\$20.14	\$0.00	\$65.59
5	90	\$38.31	\$11.39	\$20.14	\$0.00	\$69.84

**Effective Date - 08/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.85	\$11.39	\$20.30	\$0.00	\$53.54
2	60	\$26.21	\$11.39	\$20.30	\$0.00	\$57.90
3	70	\$30.58	\$11.39	\$20.30	\$0.00	\$62.27
4	80	\$34.95	\$11.39	\$20.30	\$0.00	\$66.64
5	90	\$39.32	\$11.39	\$20.30	\$0.00	\$71.01

**Notes:**

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
MARBLE MASONS, TILELAYERS & TERRAZZO MECH <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	02/01/2021	\$55.77	\$11.39	\$22.08	\$0.00	\$89.24
	08/01/2021	\$57.17	\$11.39	\$22.24	\$0.00	\$90.80
	02/01/2022	\$57.74	\$11.39	\$22.24	\$0.00	\$91.37

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

**Effective Date - 02/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.89	\$11.39	\$22.08	\$0.00	\$61.36
2	60	\$33.46	\$11.39	\$22.08	\$0.00	\$66.93
3	70	\$39.04	\$11.39	\$22.08	\$0.00	\$72.51
4	80	\$44.62	\$11.39	\$22.08	\$0.00	\$78.09
5	90	\$50.19	\$11.39	\$22.08	\$0.00	\$83.66

**Effective Date - 08/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.59	\$11.39	\$22.24	\$0.00	\$62.22
2	60	\$34.30	\$11.39	\$22.24	\$0.00	\$67.93
3	70	\$40.02	\$11.39	\$22.24	\$0.00	\$73.65
4	80	\$45.74	\$11.39	\$22.24	\$0.00	\$79.37
5	90	\$51.45	\$11.39	\$22.24	\$0.00	\$85.08

**Notes:**

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

MECH. SWEEPER OPERATOR (ON CONST. SITES) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANICS MAINTENANCE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 3) <i>MILLWRIGHTS LOCAL 1121 - Zone 3</i>	01/04/2021	\$37.96	\$9.40	\$20.45	\$0.00	\$67.81
	01/03/2022	\$39.21	\$9.40	\$20.45	\$0.00	\$69.06
	01/02/2023	\$40.46	\$9.40	\$20.45	\$0.00	\$70.31

**Apprentice - MILLWRIGHT - Local 1121 Zone 3**

**Effective Date - 01/04/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$20.88	\$9.40	\$5.58	\$0.00	\$35.86
2	65	\$24.67	\$9.40	\$16.90	\$0.00	\$50.97
3	75	\$28.47	\$9.40	\$17.92	\$0.00	\$55.79
4	85	\$32.27	\$9.40	\$18.93	\$0.00	\$60.60

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

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$21.57	\$9.40	\$5.58	\$0.00	\$36.55
2	65	\$25.49	\$9.40	\$16.90	\$0.00	\$51.79
3	75	\$29.41	\$9.40	\$17.92	\$0.00	\$56.73
4	85	\$33.33	\$9.40	\$18.93	\$0.00	\$61.66

**Notes:** Step 1&2 Appr. indentured after 1/1/2020 receive no pension, but do receive annuity. (Step 1 \$5.58, Step 2 \$6.50)  
Steps are 2,000 hours

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

MORTAR MIXER LABORERS - ZONE 2	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

OILER (OTHER THAN TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2020	\$23.20	\$13.50	\$15.70	\$0.00	\$52.40
	06/01/2021	\$23.75	\$13.50	\$15.70	\$0.00	\$52.95
	12/01/2021	\$24.33	\$13.50	\$15.70	\$0.00	\$53.53

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4	12/01/2020	\$27.97	\$13.50	\$15.70	\$0.00	\$57.17
	06/01/2021	\$28.61	\$13.50	\$15.70	\$0.00	\$57.81
	12/01/2021	\$29.29	\$13.50	\$15.70	\$0.00	\$58.49

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 - ZONE 2	01/01/2021	\$52.06	\$8.25	\$22.75	\$0.00	\$83.06
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**Classification**

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

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

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$26.03	\$8.25	\$0.00	\$0.00	\$34.28
2	55	\$28.63	\$8.25	\$6.16	\$0.00	\$43.04
3	60	\$31.24	\$8.25	\$6.72	\$0.00	\$46.21
4	65	\$33.84	\$8.25	\$7.28	\$0.00	\$49.37
5	70	\$36.44	\$8.25	\$19.39	\$0.00	\$64.08
6	75	\$39.05	\$8.25	\$19.95	\$0.00	\$67.25
7	80	\$41.65	\$8.25	\$20.51	\$0.00	\$70.41
8	90	\$46.85	\$8.25	\$21.63	\$0.00	\$76.73

**Notes:**  
Steps are 750 hrs.

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

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2021	\$42.96	\$8.25	\$22.75	\$0.00	\$73.96
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\* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 2

**Apprentice - PAINTER Local 35 Zone 2 - Spray/Sandblast - New**

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$21.48	\$8.25	\$0.00	\$0.00	\$29.73
2	55	\$23.63	\$8.25	\$6.16	\$0.00	\$38.04
3	60	\$25.78	\$8.25	\$6.72	\$0.00	\$40.75
4	65	\$27.92	\$8.25	\$7.28	\$0.00	\$43.45
5	70	\$30.07	\$8.25	\$19.39	\$0.00	\$57.71
6	75	\$32.22	\$8.25	\$19.95	\$0.00	\$60.42
7	80	\$34.37	\$8.25	\$20.51	\$0.00	\$63.13
8	90	\$38.66	\$8.25	\$21.63	\$0.00	\$68.54

**Notes:**  
Steps are 750 hrs.

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

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2021	\$41.02	\$8.25	\$22.75	\$0.00	\$72.02
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PAINTERS LOCAL 35 - ZONE 2





**Classification**

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

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

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.81	\$8.25	\$0.00	\$0.00	\$28.06
2	55	\$21.79	\$8.25	\$6.16	\$0.00	\$36.20
3	60	\$23.77	\$8.25	\$6.72	\$0.00	\$38.74
4	65	\$25.75	\$8.25	\$7.28	\$0.00	\$41.28
5	70	\$27.73	\$8.25	\$19.39	\$0.00	\$55.37
6	75	\$29.72	\$8.25	\$19.95	\$0.00	\$57.92
7	80	\$31.70	\$8.25	\$20.51	\$0.00	\$60.46
8	90	\$35.66	\$8.25	\$21.63	\$0.00	\$65.54

**Notes:**

Steps are 750 hrs.

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

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/01/2020	\$34.66	\$8.60	\$16.06	\$0.00	\$59.32
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	06/01/2021	\$35.58	\$8.60	\$16.06	\$0.00	\$60.24
	12/01/2021	\$36.49	\$8.60	\$16.06	\$0.00	\$61.15

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

PANEL & PICKUP TRUCKS DRIVER	12/01/2020	\$34.98	\$12.91	\$14.82	\$0.00	\$62.71
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	06/01/2021	\$35.78	\$12.91	\$14.82	\$0.00	\$63.51
	08/01/2021	\$35.78	\$13.41	\$14.82	\$0.00	\$64.01
	12/01/2021	\$35.78	\$13.41	\$16.01	\$0.00	\$65.20

PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63
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PILE DRIVER LOCAL 56 (ZONE 2)

For apprentice rates see "Apprentice- PILE DRIVER"

PILE DRIVER	08/01/2020	\$46.11	\$9.40	\$23.12	\$0.00	\$78.63
PILE DRIVER LOCAL 56 (ZONE 2)						

**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**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PIPELAYER LABORERS - ZONE 2	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

PLUMBER & PIPEFITTER PLUMBERS LOCAL 4	09/01/2020	\$46.91	\$9.80	\$15.71	\$0.00	\$72.42
	03/01/2021	\$47.85	\$9.80	\$15.77	\$0.00	\$73.42
	09/01/2021	\$48.85	\$9.80	\$15.77	\$0.00	\$74.42
	03/01/2022	\$49.85	\$9.80	\$15.77	\$0.00	\$75.42

**Apprentice - PLUMBER/PIPEFITTER - Local 4**

**Effective Date - 09/01/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.76	\$9.80	\$0.00	\$0.00	\$28.56
2	50	\$23.46	\$9.80	\$0.00	\$0.00	\$33.26
3	60	\$28.15	\$9.80	\$0.00	\$0.00	\$37.95
4	70	\$32.84	\$9.80	\$6.00	\$0.00	\$48.64
5	80	\$37.53	\$9.80	\$6.00	\$0.00	\$53.33

**Effective Date - 03/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$19.14	\$9.80	\$0.00	\$0.00	\$28.94
2	50	\$23.93	\$9.80	\$0.00	\$0.00	\$33.73
3	60	\$28.71	\$9.80	\$0.00	\$0.00	\$38.51
4	70	\$33.50	\$9.80	\$6.06	\$0.00	\$49.36
5	80	\$38.28	\$9.80	\$6.06	\$0.00	\$54.14

**Notes:**

Steps - 2000 hrs; Step 4 w/lic 75%, Step 5 w/lic 85%  
Step 4 w/lic \$50.98, Step 5 w/lic \$55.67

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

PNEUMATIC CONTROLS (TEMP.) PLUMBERS LOCAL 4	09/01/2020	\$46.91	\$9.80	\$15.71	\$0.00	\$72.42
	03/01/2021	\$47.85	\$9.80	\$15.77	\$0.00	\$73.42
	09/01/2021	\$48.85	\$9.80	\$15.77	\$0.00	\$74.42
	03/01/2022	\$49.85	\$9.80	\$15.77	\$0.00	\$75.42

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC DRILL/TOOL OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWDERMAN & BLASTER <i>LABORERS - ZONE 2</i>	12/01/2020	\$35.66	\$8.60	\$16.06	\$0.00	\$60.32
	06/01/2021	\$36.58	\$8.60	\$16.06	\$0.00	\$61.24
	12/01/2021	\$37.49	\$8.60	\$16.06	\$0.00	\$62.15
	06/01/2022	\$38.39	\$8.60	\$16.06	\$0.00	\$63.05
	12/01/2022	\$39.24	\$8.60	\$16.06	\$0.00	\$63.90
	06/01/2023	\$40.14	\$8.60	\$16.06	\$0.00	\$64.80
	12/01/2023	\$41.04	\$8.60	\$16.06	\$0.00	\$65.70
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 2 (HEAVY &amp; HIGHWAY)</i>	12/01/2020	\$35.66	\$8.60	\$16.06	\$0.00	\$60.32
	06/01/2021	\$36.58	\$8.60	\$16.06	\$0.00	\$61.24
	12/01/2021	\$37.49	\$8.60	\$16.06	\$0.00	\$62.15
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
POWER SHOVEL/DERRICK/TRENCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$33.00	\$13.50	\$15.70	\$0.00	\$62.20
	06/01/2021	\$33.75	\$13.50	\$15.70	\$0.00	\$62.95
	12/01/2021	\$34.54	\$13.50	\$15.70	\$0.00	\$63.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 170 -J.G.MacLellan (Lunenburg)</i>	02/02/2021	\$24.84	\$10.01	\$8.00	\$0.00	\$42.85
	01/01/2022	\$24.84	\$10.37	\$8.00	\$0.00	\$43.21
	02/02/2022	\$25.04	\$10.37	\$8.00	\$0.00	\$43.41
	01/01/2023	\$25.04	\$10.77	\$8.00	\$0.00	\$43.81
	02/02/2023	\$25.29	\$10.77	\$8.00	\$0.00	\$44.06
	01/01/2024	\$25.29	\$11.17	\$0.00	\$0.00	\$36.46
RECLAIMERS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 2</i>	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER"						
ROLLER/SPREADER/MULCHING MACHINE <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofg) <i>ROOFERS LOCAL 33</i>	02/01/2021	\$46.60	\$12.28	\$17.15	\$0.00	\$76.03
	08/01/2021	\$48.03	\$12.28	\$17.15	\$0.00	\$77.46
	02/01/2022	\$49.46	\$12.28	\$17.15	\$0.00	\$78.89

**Apprentice - ROOFER - Local 33**

**Effective Date - 02/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$23.30	\$12.28	\$4.31	\$0.00	\$39.89
2	60	\$27.96	\$12.28	\$17.15	\$0.00	\$57.39
3	65	\$30.29	\$12.28	\$17.15	\$0.00	\$59.72
4	75	\$34.95	\$12.28	\$17.15	\$0.00	\$64.38
5	85	\$39.61	\$12.28	\$17.15	\$0.00	\$69.04

**Effective Date - 08/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.02	\$12.28	\$4.31	\$0.00	\$40.61
2	60	\$28.82	\$12.28	\$17.15	\$0.00	\$58.25
3	65	\$31.22	\$12.28	\$17.15	\$0.00	\$60.65
4	75	\$36.02	\$12.28	\$17.15	\$0.00	\$65.45
5	85	\$40.83	\$12.28	\$17.15	\$0.00	\$70.26

**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>	02/01/2021	\$46.85	\$12.28	\$17.15	\$0.00	\$76.28
	08/01/2021	\$48.28	\$12.28	\$17.15	\$0.00	\$77.71
	02/01/2022	\$49.71	\$12.28	\$17.15	\$0.00	\$79.14
For apprentice rates see "Apprentice- ROOFER"						
SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 23</i>	01/01/2021	\$37.24	\$10.64	\$17.33	\$1.96	\$67.17
	07/01/2021	\$38.29	\$10.64	\$17.33	\$1.99	\$68.25
	01/01/2022	\$39.29	\$10.64	\$17.33	\$2.02	\$69.28

**Classification**

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

**Apprentice - SHEET METAL WORKER - Local 63**

**Effective Date - 01/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$16.76	\$4.79	\$4.67	\$0.79	\$27.01
2	50	\$18.62	\$5.32	\$5.19	\$0.87	\$30.00
3	55	\$20.48	\$5.85	\$9.33	\$1.07	\$36.73
4	60	\$22.34	\$6.38	\$9.33	\$1.14	\$39.19
5	65	\$24.21	\$6.92	\$9.33	\$1.21	\$41.67
6	70	\$26.07	\$7.45	\$9.33	\$1.29	\$44.14
7	75	\$27.93	\$7.98	\$9.33	\$1.36	\$46.60
8	80	\$29.79	\$8.51	\$16.29	\$1.64	\$56.23
9	85	\$31.65	\$9.04	\$16.29	\$1.71	\$58.69
10	90	\$33.52	\$9.58	\$16.29	\$1.78	\$61.17

**Notes:**

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

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
SPECIALIZED EARTH MOVING EQUIP > 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$35.73	\$12.91	\$14.82	\$0.00	\$63.46
	06/01/2021	\$36.53	\$12.91	\$14.82	\$0.00	\$64.26
	08/01/2021	\$36.53	\$13.41	\$14.82	\$0.00	\$64.76
	12/01/2021	\$36.53	\$13.41	\$16.01	\$0.00	\$65.95
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i>	01/01/2019	\$41.51	\$10.02	\$13.08	\$0.00	\$64.61

**Classification**

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

**Apprentice - SPRINKLER FITTER - Local 669**

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

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.68	\$7.75	\$0.00	\$0.00	\$26.43
2	50	\$20.76	\$7.75	\$0.00	\$0.00	\$28.51
3	55	\$22.83	\$10.02	\$7.25	\$0.00	\$40.10
4	60	\$24.91	\$10.02	\$7.25	\$0.00	\$42.18
5	65	\$26.98	\$10.02	\$7.50	\$0.00	\$44.50
6	70	\$29.06	\$10.02	\$7.50	\$0.00	\$46.58
7	75	\$31.13	\$10.02	\$7.50	\$0.00	\$48.65
8	80	\$33.21	\$10.02	\$7.50	\$0.00	\$50.73
9	85	\$35.28	\$10.02	\$7.50	\$0.00	\$52.80
10	90	\$37.36	\$10.02	\$7.50	\$0.00	\$54.88

**Notes:**

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

<b>STEAM BOILER OPERATOR</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
<b>TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN</b> <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
<b>TERRAZZO FINISHERS</b> <i>BRICKLAYERS LOCAL 3 - MARBLE &amp; TILE</i>	02/01/2021	\$54.69	\$11.39	\$22.09	\$0.00	\$88.17
	08/01/2021	\$56.09	\$11.39	\$22.25	\$0.00	\$89.73
	02/01/2022	\$56.68	\$11.39	\$22.25	\$0.00	\$90.32

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

**Effective Date - 02/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$27.35	\$11.39	\$22.09	\$0.00	\$60.83
2	60	\$32.81	\$11.39	\$22.09	\$0.00	\$66.29
3	70	\$38.28	\$11.39	\$22.09	\$0.00	\$71.76
4	80	\$43.75	\$11.39	\$22.09	\$0.00	\$77.23
5	90	\$49.22	\$11.39	\$22.09	\$0.00	\$82.70

**Effective Date - 08/01/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.05	\$11.39	\$22.25	\$0.00	\$61.69
2	60	\$33.65	\$11.39	\$22.25	\$0.00	\$67.29
3	70	\$39.26	\$11.39	\$22.25	\$0.00	\$72.90
4	80	\$44.87	\$11.39	\$22.25	\$0.00	\$78.51
5	90	\$50.48	\$11.39	\$22.25	\$0.00	\$84.12

**Notes:**

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

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$41.30	\$8.60	\$17.47	\$0.00	\$67.37
	06/01/2021	\$42.32	\$8.60	\$17.47	\$0.00	\$68.39
	12/01/2021	\$43.33	\$8.60	\$17.47	\$0.00	\$69.40
For apprentice rates see "Apprentice- LABORER"						
TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$40.02	\$8.60	\$17.47	\$0.00	\$66.09
	06/01/2021	\$41.04	\$8.60	\$17.47	\$0.00	\$67.11
	12/01/2021	\$42.05	\$8.60	\$17.47	\$0.00	\$68.12
For apprentice rates see "Apprentice- LABORER"						
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2020	\$39.90	\$8.60	\$17.47	\$0.00	\$65.97
	06/01/2021	\$40.92	\$8.60	\$17.47	\$0.00	\$66.99
	12/01/2021	\$41.93	\$8.60	\$17.47	\$0.00	\$68.00
For apprentice rates see "Apprentice- LABORER"						
TRACTORS/PORTABLE STEAM GENERATORS <i>OPERATING ENGINEERS LOCAL 4</i>	12/01/2020	\$49.45	\$13.50	\$15.70	\$0.00	\$78.65
	06/01/2021	\$50.54	\$13.50	\$15.70	\$0.00	\$79.74
	12/01/2021	\$51.68	\$13.50	\$15.70	\$0.00	\$80.88
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$36.02	\$12.91	\$14.82	\$0.00	\$63.75
	06/01/2021	\$36.82	\$12.91	\$14.82	\$0.00	\$64.55
	08/01/2021	\$36.82	\$13.41	\$14.82	\$0.00	\$65.05
	12/01/2021	\$36.82	\$13.41	\$16.01	\$0.00	\$66.24
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2020	\$52.13	\$8.60	\$17.92	\$0.00	\$78.65
	06/01/2021	\$53.15	\$8.60	\$17.92	\$0.00	\$79.67
	12/01/2021	\$54.16	\$8.60	\$17.92	\$0.00	\$80.68
For apprentice rates see "Apprentice- LABORER"						

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2020	\$54.13	\$8.60	\$17.92	\$0.00	\$80.65
	06/01/2021	\$55.15	\$8.60	\$17.92	\$0.00	\$81.67
	12/01/2021	\$56.16	\$8.60	\$17.92	\$0.00	\$82.68
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2020	\$44.20	\$8.60	\$17.92	\$0.00	\$70.72
	06/01/2021	\$45.22	\$8.60	\$17.92	\$0.00	\$71.74
	12/01/2021	\$46.23	\$8.60	\$17.92	\$0.00	\$72.75
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2020	\$46.20	\$8.60	\$17.92	\$0.00	\$72.72
	06/01/2021	\$47.22	\$8.60	\$17.92	\$0.00	\$73.74
	12/01/2021	\$48.23	\$8.60	\$17.92	\$0.00	\$74.75
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2020	\$35.44	\$12.91	\$14.82	\$0.00	\$63.17
	06/01/2021	\$36.24	\$12.91	\$14.82	\$0.00	\$63.97
	08/01/2021	\$36.24	\$13.41	\$14.82	\$0.00	\$64.47
	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
VOICE-DATA-VIDEO TECHNICIAN <i>ELECTRICIANS LOCAL 96</i>	09/06/2020	\$31.54	\$11.13	\$15.54	\$0.00	\$58.21
	09/05/2021	\$32.86	\$11.57	\$15.72	\$0.00	\$60.15
	09/04/2022	\$34.19	\$12.20	\$15.91	\$0.00	\$62.30



**Classification**

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

**Apprentice - VOICE-DATA-VIDEO TECHNICIAN - Local 96**

**Effective Date - 09/06/2020**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$15.77	\$11.13	\$3.94	\$0.00	\$30.84
2	55	\$17.35	\$11.13	\$3.99	\$0.00	\$32.47
3	60	\$18.92	\$11.13	\$15.16	\$0.00	\$45.21
4	65	\$20.50	\$11.13	\$15.21	\$0.00	\$46.84
5	70	\$22.08	\$11.13	\$15.25	\$0.00	\$48.46
6	75	\$23.66	\$11.13	\$15.30	\$0.00	\$50.09
7	80	\$25.23	\$11.13	\$15.35	\$0.00	\$51.71
8	85	\$26.81	\$11.13	\$15.39	\$0.00	\$53.33

**Effective Date - 09/05/2021**

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$16.43	\$11.57	\$4.10	\$0.00	\$32.10
2	55	\$18.07	\$11.57	\$4.15	\$0.00	\$33.79
3	60	\$19.72	\$11.57	\$15.32	\$0.00	\$46.61
4	65	\$21.36	\$11.57	\$15.37	\$0.00	\$48.30
5	70	\$23.00	\$11.57	\$15.42	\$0.00	\$49.99
6	75	\$24.65	\$11.57	\$15.47	\$0.00	\$51.69
7	80	\$26.29	\$11.57	\$15.35	\$0.00	\$53.21
8	85	\$27.93	\$11.57	\$15.39	\$0.00	\$54.89

**Notes:**

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

WAGON DRILL OPERATOR LABORERS - ZONE 2	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40
	06/01/2022	\$37.64	\$8.60	\$16.06	\$0.00	\$62.30
	12/01/2022	\$38.49	\$8.60	\$16.06	\$0.00	\$63.15
	06/01/2023	\$39.39	\$8.60	\$16.06	\$0.00	\$64.05
	12/01/2023	\$40.29	\$8.60	\$16.06	\$0.00	\$64.95

For apprentice rates see "Apprentice- LABORER"

WAGON DRILL OPERATOR (HEAVY & HIGHWAY) LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/01/2020	\$34.91	\$8.60	\$16.06	\$0.00	\$59.57
	06/01/2021	\$35.83	\$8.60	\$16.06	\$0.00	\$60.49
	12/01/2021	\$36.74	\$8.60	\$16.06	\$0.00	\$61.40

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"

WASTE WATER PUMP OPERATOR OPERATING ENGINEERS LOCAL 4	12/01/2020	\$49.98	\$13.50	\$15.70	\$0.00	\$79.18
	06/01/2021	\$51.08	\$13.50	\$15.70	\$0.00	\$80.28
	12/01/2021	\$52.23	\$13.50	\$15.70	\$0.00	\$81.43

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
WATER METER INSTALLER <i>PLUMBERS LOCAL 4</i>	09/01/2020	\$46.91	\$9.80	\$15.71	\$0.00	\$72.42
	03/01/2021	\$47.85	\$9.80	\$15.77	\$0.00	\$73.42
	09/01/2021	\$48.85	\$9.80	\$15.77	\$0.00	\$74.42
	03/01/2022	\$49.85	\$9.80	\$15.77	\$0.00	\$75.42
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**

<b>Classification</b>	<b>Effective Date</b>	<b>Base Wage</b>	<b>Health</b>	<b>Pension</b>	<b>Supplemental Unemployment</b>	<b>Total Rate</b>
TELEDATA CABLE SPLICER <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$30.73	\$4.70	\$3.17	\$0.00	\$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN <i>OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104</i>	02/04/2019	\$28.93	\$4.70	\$3.14	\$0.00	\$36.77

Additional Apprentice Information:

Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the M.G.L. c. 149, ss. 26-27D. Apprentice ratios are established by the Division of Apprenticeship Training pursuant to M.G.L. c. 23, ss. 11E-11L.

All apprentices must be registered with the Division of Apprenticeship Training in accordance with M.G.L. c. 23, ss. 11E-11L.

All steps are six months (1000 hours.)

Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified.

\*\* Multiple ratios are listed in the comment field.

\*\*\* APP to JM; 1:1, 2:2, 2:3, 3:4, 4:4, 4:5, 4:6, 5:7, 6:7, 6:8, 6:9, 7:10, 8:10, 8:11, 8:12, 9:13, 10:13, 10:14, etc.

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

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## **SECTION 01.11.10 SUMMARY OF WORK**

### **1.01 GENERAL SCOPE OF THE WORK**

- A. The Work of the Contract consists of:
  - 1. Removal of existing asphalt roof and skylights, infilling roof structure with new wood frame and installation of new asphalt roof.
  - 2. Work either shown on the Drawings or included in the specifications unless specifically indicated not to be done.
  - 3. Work outside the Project Site as called for in the Contract Documents and as required for the performance of the Work.
  - 4. Providing and restoring, where appropriate, all temporary facilities.
- B. Execution of Work: Work to be performed in timely and workmanlike fashion. Site must be cleaned up daily with access needed for overnight.
- C. Warranties/Guaranties:
  - 1. **Roof warranty**

### **1.02 TIME OF COMPLETION**

- A. The Work shall be commenced at the time stated in the Owner's Notice to Proceed and shall be completed within 30 consecutive calendar days thereafter.

### **1.03 SELECTION CRITERIA**

- A. In addition to any provisions of the General Conditions, the Contractor will be selected based on the lowest base quote and upon demonstrating successful completion of the following criteria:

### **1.04 OSHA SAFETY TRAINING**

- A. The Contractor shall certify that all employees working on this project have successfully completed a 10 Hour Safety and Health Training Course approved by the United State Occupational Health and Safety Administration (OSHA). This certification must be submitted with the payroll certifications require by Section 00.73.43 Prevailing Wages and Labor Regulations.

### **1.05 COORDINATION OF WORK**

- A. The Owner will remove all materials will be removed from the garage prior to work commencing.
- B. Building to remain protected & watertight during construction.

### **1.06 SAMPLES AND SUBMITTALS**

- A. The Contractor shall provide samples (or submittal of manufacturer's literature) for the Owner's approval prior to installation:
  - i. **Asphalt shingles**
  - ii. **Gutters & downspouts**
  - iii. **Framing materials**
  - iv. **Water & damp proofing materials**

#### **1.07 CONDUCT OF THE WORK**

- A. Existing Buildings. All units will be occupied during construction. The Contractor shall take all necessary precautions to ensure the public safety and convenience of the occupants during construction.
- B. Unless specifically authorized by the Owner, the Work must be conducted between the hours of 8:00 A.M. and 4:30 P.M. on Monday through Friday. No work is to be done on holidays, Saturdays, or Sundays other than for emergencies.

#### **1.08 SHUTDOWN OF SERVICES**

- A. The Contractor's attention is especially called to the fact that the continuous operation of services for this housing development is mandatory. If any unit is to be left without heat, hot water, domestic water, electricity, gas, sanitary facilities, or any other services for more than an eight hour period, the Contractor shall submit a letter and obtain written authority from the Owner before proceeding.

If such a shutdown is unacceptable to the Owner, the Contractor shall make, and pay for, alternative arrangements to insure that services are provided.

#### **1.09 PROTECTION AND ACCESS**

- A. The Contractor shall, at all times, leave an unobstructed way along walks and roadways, and shall maintain barriers and lights for the protection of all persons and property in all locations where materials are stored or work is in progress.
- B. The Contractor shall take special measures to protect the tenants from noise, dust, and other disturbances.
- C. The Contractor shall take necessary precautions to insure against fire during construction. The Contractor shall be responsible to ensure that the area within the contract limits is kept orderly and clean and that combustible rubbish and construction debris is promptly removed from the site.
- D. All structural materials (sheathing & framing) with visible mold to be cleaned with cleaning agent prior to installing new framing.

#### **1.10 TEMPORARY FACILITIES**

- A. Temporary Water - The Contractor may make use of the available water supply at the site for construction purposes, provided the permission of the Owner is obtained beforehand, water is verified at the source and only as long as the water is not used wastefully.
- B. Temporary Electricity - The Contractor may make use of the electricity available at the site, metered and paid for by the Owner, provided that the Contractor shall supply the proper adapters and extension cords. Where heavy duty electric equipment drawing a current in excess of 15 amps is involved, the Contractor shall provide temporary electric work to supply this power.
- C. Temporary Toilets – Contractor shall provide and service an adequate number of toilet booths with chemical type toilets erected in a location approved by the Owner.

**1.11 CLEANING UP**

- A. Conduct cleaning and disposal operations to comply with all Federal, State, and local laws, ordinances, and regulations.
- B. Provide on-site containers for collection of waste materials and rubbish, to be located with the approval of the Owner.
- C. At the end of each day's work, remove, and legally dispose, all waste materials and rubbish from the site.

**END OF SECTION OF SUMMARY OF WORK  
01.11.50**

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## **SECTION 01.23.00 ALTERNATES**

### **1.01 SCOPE OF THE WORK**

- A.** This Section lists the Alternates which appear in the Contract Documents. Consult the individual sections of the detailed requirements of each Alternate.
- B.** Bid prices for each Alternate shall include overhead, profit, and all other expenses incidental to the Work under each Alternate.
- C.** The Contractor and Subcontractors shall be responsible for examining the scope of each Alternate generally defined herein and for recognizing modifications to the Work caused by the Alternates and including the cost thereof in the bid price.
- D.** The Contractor's alternate amount shall include the net change in cost to perform all of the work described in the Alternate.

### **1.02 ALTERNATE NO. 1**

- A.** Remove all existing asphalt shingles, skylights and roof structure and provide new roof structure and asphalt shingle roof. See Alternate drawings for full scope of work.

**END OF ALTERNATES  
01.23.00**

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SECTION 02 41 00

DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. General: The work described in this Section consists of selective demolition, cleaning, removal and legal disposal of all structures, equipment and materials indicated for demolition, or careful removal and temporary storage of materials and equipment indicated for salvage and re-use, or salvage and delivery to Owner. No attempt is made in this Section to list the entire scope of selective demolition required on this project or to describe each element to be removed. Drawings indicate both existing construction and final construction. It is the responsibility of the Contractor to determine for itself the scope and nature of the existing materials, equipment and finished required for removal or salvage, based on the information provide in the full set of Contract Documents.
- B. Selective demolition and removal work includes the following at indicated locations but is not limited to:
  - 1. Remove skylights located on garage maintenance building
  - 2. Remove asphalt roof shingles, flashing, gutters and accessories on garage maintenance building down to original roof sheathing.
  - 3. Provide all patching and repairs to items scheduled to remain.

1.2 QUALITY ASSURANCE

- A. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.
- B. Obtain and pay for necessary permits, licenses and certificates and give notices as required during the performance of the demolition work.

1.3 PROJECT CONDITIONS

- A. Occupancy: Immediate areas of work will be occupied during selective demolition. The public, including children, may occupy adjacent areas outside of Work limit.
- B. Existing Conditions: No responsibility for buildings and structures to be demolished will be assumed by the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 PREPARATION AND PROTECTION

- A. General: Site will be occupied during this contract. Provide necessary protection of non-work areas during demolition operations. Provide, erect and maintain temporary barriers as required to protect non-construction related pedestrian and vehicular traffic using the adjacent portions of the site and building.
  - 1. Erect and maintain temporary partitions to prevent spread of dust, odors, and noise to permit continued Owner occupancy of adjacent facility.

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2. All buildings/apartments must have at least one unobstructed means of egress at all times.
- B. Protect existing structures which are not to be demolished. Protect designated materials and equipment to be removed and retained by Owner.
    1. Cover or otherwise protect as necessary existing equipment, furniture and furnishing located beyond the immediate demolition work.
    2. Protect existing landscaping materials, structures, and appurtenances which are not to be demolished.
  - C. Prevent movement of structure; provide required bracing and shoring.
    1. Protect existing active utility services and structures from damage during selective demolition work including during installation of bracing and removal of same. Repair or replace damages to satisfaction of Owner.
  - D. Provide fire protection in accordance with local fire department requirements.

### 3.2 GENERAL REQUIREMENTS FOR SELECTIVE DEMOLITION

- A. Conduct demolition to minimize interference with adjacent and occupied building areas, in compliance with governing laws and buildings, with prime consideration given to the safety, protection and convenience of the public and Owner's personnel.
  1. Site to be occupied at all times. Maintain protected egress and access to the Work at all times.
- B. Perform selective demolition in an orderly and careful manner. Carefully cut materials to be removed to eliminate damage to portions to remain. Protect existing structure designated to remain.
  1. Do not demolish building elements beyond what is indicated on Drawings without Architect's approval.
  2. Except as otherwise required by Project phasing requirements, proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  3. Locate equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  4. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent. Do not throw trash from windows or from roof.
  5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  6. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  7. Pull nails and fasteners which remain after removal of attached material. Remove lath, strapping and other substructures associated with finishes to be removed.
  8. Where existing finishes are indicated to be removed, remove down to bare subsurface without causing damage to the subsurface.
    - a. After removal of non-asbestos finish flooring materials, remove underlying mastic and prepare substrate to receive new flooring materials by Shot Blasting method. Create a uniform 20 mil profile. Mechanically scarify areas which cannot be profiled by shot blast method. Thoroughly wash all flooring substrate and leave clean and dry ready for application of new flooring materials.

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9. Cutting openings and holes: Neatly cut openings and holes plumb, square, and true to dimensions required. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces.
  - a. All penetrations in floors and roof shall be framed with miscellaneous metal work prior to cutting and demolition of deck and concrete.
  - b. Repair damage done to existing elements of building to remain, except repairs specified to be provided under other Sections. Repairs shall be done in such manner as to closely match construction, appearance and quality of original work.

C. Use of cutting torches:

1. Do not use cutting torches until work area is cleared of flammable materials.
2. Maintain adequate ventilation when using cutting torches.
3. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations.
4. Maintain fire watch and portable fire-suppression devices during flame-cutting operations. Comply with fire prevention measures specified under Section

D. Carefully observe existing structure during demolition operations, cease operations immediately if structure appears to be in danger. Immediately notify both Architect and Owner's Project Representative. Do not resume demolition operations until directed.

E. BRACING

1. Locate bracing to clear columns, floor framing construction, and other permanent work. If necessary to move a brace, install new bracing prior to removal of original brace. Provide suitable bracing materials which will support loads imposed
2. Do not place bracing where it will be cast into or included in permanent concrete work, except as otherwise acceptable to Architect.
3. Install internal bracing, if required, to prevent spreading or distortion to braced frames.
4. Maintain bracing until structural elements are rebraced by other bracing or until permanent construction is able to withstand designed live and dead loads.
5. Remove bracing in stages to avoid disturbance or damage to existing structure.
6. Repair or replace adjacent work damaged or displaced through installation or removal of bracing work.

### 3.3 GENERAL DUST CONTROL

A. Contractor shall employ dust and pollution prevention procedures at all times. Compliance with requirements for dust protection and air quality control is required for work areas which abut Owner occupied areas. Dust removal and periodic cleaning requirements apply to all work. Contractor shall employ dust and pollution prevention procedures so that a healthy Owner's environment is fully maintained at all times. Compliance with the requirements in Division One for dust control is mandatory and may not be compromised at any point during construction.

1. Clean up loose debris daily, or more frequently as required, to prevent the wind spreading debris. Keep dumpsters covered when not in use.
2. Cover handcarts carrying debris being transported through Owner occupied areas.
3. Wet down debris (as appropriate) to prevent air pollution by dust rising from demolition work. Wet down dumpsters to prevent fires caused by vandals.
4. Employ tarpaulins on all trucks carrying debris.

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### 3.4 CLEANING

1. Daily cleaning: Sweep all street and roads affected by demolition operations.
2. Upon completion of the work of this Section; remove unused tools and equipment, surplus materials, rubbish, debris, and dust. Leave area in raked or broom-clean condition, as appropriate.
3. Upon completion of the work of this Section; clean adjacent structures and facilities of dust, dirt and debris caused by demolition work to the satisfaction of Owner, owner(s) of adjacent properties, and authorities having jurisdiction.

END OF SECTION

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SECTION 06 10 00  
ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

- A. General: The work of this Section consists of rough carpentry as specified herein, where shown on the Drawings, and as additionally required for a complete and proper installation.
- B. Furnish and install the following:
  - 1. Wood framing at areas of new construction and to supplement existing framing.
  - 2. Plywood underlayment.
  - 3. Blocking in openings in roof sheathing.
  - 4. Various wood blockings, edgings, nailers, curbs, cants, grounds, furring, sheathing, framing members including wood preservative, as required for receipt of various finishes and surfacing materials, not described herein above.
  - 5. Rough installation hardware, including bolts, screws, spikes, nails, clips, and connection assemblies, as need for installation of rough carpentry work.
- C. Coordinate work of this Section with the work of the various trades responsible for applying finish materials and other items to rough carpentry work. Furnish and install furring, blocking, and shims, and other usual items of normal rough carpentry work as required by the various trades for the proper completion of the project.
  - 1. The applicable requirements specified in Part 1 - GENERAL and Part 3 - EXECUTION of the individual specification sections furnishing materials to be installed under this Section, shall be included in and made a part of this Section.
- D. No attempt is made in this Section to list all elements of rough carpentry required on this project or to describe how each element will be installed. It is the responsibility of the Contractor to determine for itself the scope and nature of the work required for a complete installation from the information provided herein and in the Drawings.

1.2 RELATED REQUIREMENTS

- A. Section 06 20 00 - FINISH CARPENTRY: Wood trim.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

1.4 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers.
- B. Lumber Standards and Grade Stamps: DOC PS 20, American Softwood Lumber Standard and inspection agency grade stamps.
- C. Construction Panel Standards: DOC PS 1, U.S. Product Standard for Construction and Industrial Plywood; APA PRP-108.

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- D. Wood Framing Standards: NFPA House Framing Manual.
- E. Preservative Treatment: AWPA C2 for lumber and AWPA C9 for plywood; waterborne pressure treatment. Provide for wood in contact with soil, concrete, masonry, roofing, flashing, dampproofing and waterproofing.
- F. Fire-Retardant Treatment: AWPA C20 for lumber and AWPA C27 for plywood; noncorrosive type. Provide at building interior where required by code.
- G. Sustainable Design:
  - 1. Recycled content wood fiber.
  - 2. FSC Certified Lumber.
  - 3. Low-emitting materials, adhesives.
  - 4. Low-emitting materials, field-applied paints and coatings.
  - 5. Low-emitting materials, no added urea-formaldehyde.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Store all materials in an elevated dry location, protected by waterproof coverings. No kiln dried materials shall be placed in the building until concrete and masonry work have been completed, and are sufficiently dry.

### PART 2 PRODUCTS

#### 2.1 BOARD AND SHEET MATERIALS

- A. Lumber shall be of sound stock, new, straight, of consistent size, free of stains and mildew, and kiln dried to a moisture content of not more than 19 percent by weight. Where exposed or semi-exposed, wood members shall be selected for best possible appearance from the grade of stock specified.
  - a. Lumber shall be surface four sides (S4S) and shall bear the grade and trademark of the association under whose rules it is produce, and a mark of mill identification.
  - b. Lumber shall be furnished in longest practical lengths with respect to each intended use, and single length pieces shall be used wherever possible.
- B. Lumber:
  - 1. Grading rules: NELMA., NLGA., RIS., SPIB., WCLIB., WWPA.
  - 2. Species: Southern or Pine, Hem-Fir
  - 3. Grade: No. 2 Structural or better
  - 4. Surfacing: Surfaced four sides (S4S) unless otherwise indicated.
  - 5. Maximum moisture content: 19 percent.
  - 6. Certified to FSC STD-04-004.
- C. Structural Framing Lumber:
  - 1. Grading rules: NELMA., NLGA., RIS., SPIB., WCLIB., WWPA.
  - 2. Species: Southern Pine, Hem-Fir, or Douglas Fir
  - 3. Grade: No. 1 with "Fb" of 1200 psi or better
  - 4. Surfacing: Surfaced four sides (S4S) unless otherwise indicated.
  - 5. Maximum moisture content: 19 percent.
  - 6. Certified to FSC STD-04-004.
- D. Panel Products:



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1. Type: APA Plywood.
2. Thickness: To match existing.
3. Panel grade: USDC PS 1, APA CDX, exterior glue
4. Species: Group 1 Species
5. Exposure:
  - a. Exterior applications: Exterior.
  - b. Interior applications: Exposure 1.
6. Maximum moisture content: 19 percent.

## 2.1 ACCESSORIES

- A. Blocking, Shims, and Nailers: Softwood lumber, kiln dried to less than 15 percent moisture content.
- B. Screws: Select material, type, size and finish required for each use, nonferrous metal or hot-dip galvanized, unless otherwise indicated. Comply with ASME B18.6.1 for applicable requirements.
- C. Nails: Select material, type, size and finish required for each use. Comply with Fed. Spec. FF-N-105 for applicable requirements.
  1. For nailing or fastening to pressure treated lumber, use stainless steel nails.
- D. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous metal or hot-dip galvanized anchors and inserts, unless otherwise indicated. Provide toothed steel or lead expansion bolt devices for drilled-in-place anchors.

## 2.2 FABRICATION

1. Preservative Treatment:
  1. Treat lumber and panel products in accordance with AWPA U1:
    - a. Interior locations protected from moisture sources: Category UC1 - Interior/Dry.
    - b. Interior locations subject to sources of moisture: Category UC2 - Interior/Damp.
    - c. Exterior locations above ground: Category UC3A - Above Ground/Protected and UC3B - Above Ground/Exposed.
    - d. Exterior locations in contact with ground: Category UC4A - Ground Contact/General Use.
  2. Treatment process: Type CCA - Chromated Copper Arsenate.
- E. Fire Retardant Treatment; treat lumber and panel products in accordance with AWPA U1:
  1. Interior locations: Category UCFA – Fire Retardant/Interior.
  2. Exterior locations: Category UCFB – Fire Retardant/Exterior.

## 2.2 ROUGH HARDWARE

- A. Provide all rough hardware required to complete this Work and to attach this Work in a secure and rigid manner to work of this and other trades, including all inserts, anchors, anchor bolts, lag bolts, screws, washers, nuts, nails, and other rough hardware. Assist other trades as necessary in the placement of inserts and anchor bolts in concrete and masonry and furnish full instructions regarding locations, sizes and other requirements of the items in order that they may properly prepare their work to receive same. Rough hardware shall comply in all respects with requirements of the governing laws and codes.
- B. Rough hardware items for use at roof framing, blocking, nailers, etc., and other exterior

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used, and to be exposed in the finished interior work, shall be hot-dip galvanized zinc or cadmium-plated steel, or stainless steel in accordance with ASTM A153, or non-ferrous, as indicated or as approved by Architect. Galvanizing shall conform to ASTM A153. Concealed interior nails shall be bright. Other concealed items shall be cadmium plated or zinc chromate plated. Rough hardware items shall be of appropriate type and of proper capacity and size as required for each specific application.

- C. Unless otherwise called out, wood framing, blockings, nailers, etc., of 2 inch nominal thickness or greater shall be bolted to back-up material with 1/2 –inch bolts (galvanized at exterior locations and at roofs) located 4-inches from ends and splices, and spaced not greater than 32-inches on center along lengths of the members, to develop positive and secure anchorage to the back-up material. Nails shall be of sufficient length to penetrate the receiving member a minimum of 1-1/2 inches.
- D. Fasteners for securing wood framing, blocking or plywood into brick masonry if required, shall be hammer drive anchors of sufficient length to penetrate the receiving member a minimum of 1-1/2 inches.
- E. Unless otherwise called out, wood framing, nailers, furring, etc., less than 2-inch nominal thickness shall be secured to back-up material by use of appropriate fasteners located 4-inches from ends and spaced not greater than 16-inches on center along lengths of members. Type and length of fastening devices shall be such as to develop positive and secure anchorage to the back-up material.
- F. Adhesives:
  - 1. General: Provide adhesives approved which are Low-VOC or non-VOC, non-flammable, water-proof after cured, odor free.
  - 2. Adhesive for lamination and fabrication of wood and plywood items: Exterior adhesives containing no urea formaldehydes, having a VOC limit of 70 g/L.
  - 3. Adhesive for subfloors and underlayment: High strength, waterproof and non- freezing adhesive complying with AFG-01 “Frozen Lumber Test” and ASTM 3498, and having a VOC limit of 50 g/L.

### PART 3 EXECUTION

#### 3.1 PREPARATION

- A. All materials shall be inspected before use, with all checked, split and otherwise deficient stock rejected, or used only for miscellaneous blocking, furring or other incidental use. The Contractor shall be responsible for replacing all lumber which, due to warpage, twist, splitting, or checking, results in unsatisfactory work. Such replacement shall be required at any time, whether before or after application of finish material under other Sections.

#### 3.2 INSTALLATION - GENERAL

- A. Closely coordinate the installation of the rough carpentry work with the work of other trades responsible for the installation of interfacing or overlaying materials, so as not to delay the work of the related trades.
- B. Erect all rough carpentry work plumb, level, and true with tight, close fitting joints, securely attached and braced to surrounding construction, all in a first class workmanlike manner. Counterbore for bolt heads, nuts, and washers where required to avoid interference with other materials. Bear complete responsibility for structural integrity, connections, and anchorage of all

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rough carpentry work.

- C. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- D. Use as long lengths as practicable for wood nailers, blockings, and curbs, to minimize number of joints, and attach the members with the types, and spacing, of fasteners specified herein.
- E. Install blocking, grounds and furring, as required for proper attachment of the work of other trades, in accordance with the requirements provided by the respective related trades.
- F. Spacing for furring and strapping shall not exceed 16 inches on center.
- G. Field cuts of fire retardant treated lumber: Do not rip or mill fire retardant treated lumber. Only end cuts, drilling holes and joining cuts are permitted.
- H. Field cuts of ACQ pressure-treated lumber: Apply solution of copper naphthenate containing a minimum of 2 percent metallic copper in-solution, in accordance with AWPA standard M4. Brush liberally all cuts and holes.
- I. Install concealed from view plywood with specified fasteners spaced not more than 10 inches on centers.
- J. Install fire-treated plywood backer boards with counter-sunk galvanized fasteners, of specified sizes, spaced not more than 12 inches on centers.

### 3.3 FRAMING

- A. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- B. Place horizontal members flat, crown side up.
- C. Construct framing and curb members full length without splices.
- D. Double members at openings over 24 inches wide. Space jack studs over and under opening to stud spacing.
- E. Construct double joint headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joints.
- F. Bridge joists which span in excess of 8 feet; fit bridging at midspan of joists. Provide solid blocking between framing which vertically spans in excess of 10 feet.
- G. Curb roof openings, except where prefabricated curbs are provided. Form corners by alternating lapping side members. Coordinate curb installation with installation of interfacing work of other Sections.

### 3.4 INSTALLATION - UNDERLAYMENT

- A. Install plywood underlayment, in accordance with APA installation standards, using Number 8 screws or 8d ring shank nails, spaced 6 inches on centers around panel edges, and 12 inches on centers throughout the remainder of the panel. Spacing at panel edge joints shall be as follows; provide staggered panel end joints.

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1. Beneath asphalt shingles: 1/16 inch (minimum) to 1/8 inch (maximum) spacing all edge and end joints.

### 3.5 TOLERANCES

- A. Framing members: Maximum deviation more than 1/4 inch in 10 feet from true or plumb position.

### 3.6 CLEANING

- A. Daily clean work areas by sweeping and disposing of scraps and sawdust.
- B. Upon completion of the work of this Section in any given area, remove tools, equipment and all rubbish and debris from the work area; leave area in broom- clean condition.

### 3.7 SCHEDULES

- A. Wood treatment schedule:
  1. Pressure preservative treat all concealed or exposed-to-view:
    - a. Lumber and plywood which comes in contact with concrete, masonry, or earth.
    - b. Fire retardant treat all equipment backer boards, additionally provide fire retardant treated lumber and plywood where indicated or noted on Drawings.

END OF SECTION

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SECTION 06 20 00  
FINISH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

- A. General: The work of this Section consists of finish carpentry as specified herein, where shown on the Drawings, and as additionally required for a complete and proper installation.
- B. Furnish and install:
  - 1. Exterior trim, including replacement or repair of missing, damaged existing trim.
  - 2. Cellular PVC exterior trim.
- C. No attempt is made in this Section to list all elements of finish carpentry required on this project or to describe how each element will be installed. It is the responsibility of the Contractor to determine for itself the scope and nature of the work required for a complete installation from the information provided herein and in the Drawings.

1.2 RELATED REQUIREMENTS

- 1. Section 06 10 00 - ROUGH CARPENTRY: Wood blocking, framing, curbs, nailers, and backer boards.
- 2. Section 07 92 00 - JOINT SEALANTS: Sealant and backing materials, for joints between abutting surfaces.

1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01 42 00 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
  - 1. APA - applicable grades and specifications.
  - 2. FS MM-L-736 - Lumber; Hardwood
  - 3. PS-1 - Construction and Industrial Plywood.
  - 4. PS-20 - American Softwood Lumber Standard.
  - 5. SPIB Grading Rules, current edition.
  - 6. U.S. Department of Commerce Simplified Practice Recommendation R-16, for sizes and use classifications of lumber
  - 7. American Lumber Standards Committee, National Lumber Grades Authority for Canadian Lumber, and applicable grading rules and standards of the various lumber associations whose species are being used for grades specified.
  - 8. AWPA C-20 - Structural Lumber Fire Retardant Treatment by Pressure Processes.
  - 9. AWPA C-27 - Plywood, Fire Retardant Treatment by Pressure Processes.
  - 10. MIL L1914OE - Lumber and Plywood, Fire Retardant Treated.
  - 11. UL Building Materials Directory.
- B. Inclusionary References: The following reference materials are hereby made a part of this Section by reference thereto:
  - 1. AWI/AWMAC/WI joint publication: *North America Architectural Woodwork Standards*, version 3.1, as amended by published errata, referenced herein as NAAWS.

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C. Definitions:

1. AWI: American Woodwork Institute
2. AWMAC: Architectural Woodwork Manufacturers Association of Canada, Alberta, Canada
3. WI: Woodwork Institute.

D. NAUF: No added Urea Formaldehyde.

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

1.5 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- C. Quality Standards: All materials, workmanship and finishes shall meet AWI/AWMAC/WI *Architectural Woodwork Standards*, 2<sup>nd</sup>. Edition, as amended by published errata, for the following Quality Grades:
  1. All work to receive transparent finishes: *Architectural Woodwork Standards*, Premium Grade.
  2. All work to receive shop-applied opaque finishes: *Architectural Woodwork Standards*, Premium Grade.
  3. All work to receive field-applied painted (opaque) finishes: *Architectural Woodwork Standards*, Custom Grade.
  4. All plastic laminated work: Premium grade.
- D. Discard lengths of material which are unsound, warped, bowed, twisted, improperly treated, not adequately seasoned or too small to fabricate work with minimum of joints or optimum jointing arrangements, or which are of defective manufacture with respect to surfaces, sizes or patterns.
- E. Sustainable Design:
  1. Recycled content wood fiber.
  2. FSC Certified Lumber.
  3. Low-emitting materials, adhesives.
  4. Low-emitting materials, field-applied paints and coatings.
  5. Low-emitting materials, no added urea-formaldehyde.
- F. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship of each type of finish carpentry.

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#### 1.6 DELIVERY STORAGE AND HANDLING

- A. Do not deliver interior finish carpentry materials to the project until all concrete, masonry, plaster, and other wet work has been completed and dry.
- B. Ship and handle all materials and fabricated items in a manner which will prevent damage thereto, and store all materials and fabricated items at a dry, elevated, ventilated, and protected interior location maintaining 60 degrees Fahrenheit and a maximum relative humidity of 55 percent.

#### 1.7 SEQUENCING AND SCHEDULING

- A. Coordinate the work of this Section with the respective trades responsible for installing interfacing work, and ensure that the work performed hereunder is acceptable to such trades for the installation of their work.

### PART 2 PRODUCTS

#### 2.1 WOOD MATERIALS – GENERAL REQUIREMENTS

- A. General: Materials, as fabricated and installed, shall comply with specified quality grades of AWI/AWMAC/WI *Architectural Woodwork Standards*.
  - 1. All board products shall be S4S, except as otherwise specified.
- B. Panel Products: Composite panel products and plywood shall be “no added urea-formaldehyde”, including all concealed components.
  - 1. Composite panel products include but are not limited to particle board (PB), Medium Density Fiberboard (MDF), wheat board and strawboard and similar manufactured products.
- C. Moisture content:
  - 1. Wood for interior use shall have a moisture content between 5 and 10 percent, when delivered to the project.
  - 2. Wood for exterior use shall have a moisture content between 9 to 15 percent, when delivered to the project.

#### 2.2 CELLULAR PVC TRIM

- A. Expanded rigid poly vinyl chloride with a small-cell microstructure, in profiles indicated, and complying with the following:
  - 1. Density: Minimum of 0.50 g/cc per ASTM D792.
  - 2. Water absorption: Less than 1 per cent per ASTM D570.
  - 3. Hardness: At least 50 per ASTM D2240 (Shore D).
  - 4. Flexural strength: At least 3,300 psi per ASTM D790.
  - 5. Tensile strength: At least 2,200 psi per ASTM D638.
- B. Acceptable manufacturers include the following:
  - 1. New England Specialty Lumber Inc, W. Springfield MA, product: “Nels-Tek 600”.
  - 2. Vycom Corporation, Moosic PA, product: “Azek”.
  - 3. CertainTeed Corp., Valley Forge, PA, product “Restoration Millwork”.
  - 4. Jen-Weld Corporation, Dubuque, IO., product “Miratec.”

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5. Wolfpac Technologies, Inc., Aliquippa, PA, product: "Versatex".
6. Fypon, LLC., Maumee OH., product "Cellular PVC Trim".
7. PVC Sheets and Trim: "Celtec550" as distributed by New England Lumber Specialties, Inc., West Springfield, MA.
8. Kleer, Wixom, MI, product: "TruEdgeTechnology"
9. Or approved equals

### 2.3 ACCESSORIES AND HARDWARE

- A. Glue for lamination and fabrication of wood, plywood and particle board items: Exterior Grade, phenolic resin glue.
- B. Nails:
  1. Nails for interior trim items: 6d and 8d coated or galvanized finish nails, except as otherwise specified herein.
  2. Nails for exterior trim items: 6d and 8d epoxy coated or hot dipped galvanized finish nails. Electro-plated nails are not acceptable as equal.
- C. Screws: Flat-head wood screws of the appropriate sizes, galvanized finish for interior use and stainless steel for exterior use.
- D. Bolts, nuts, washers, blind fasteners, lags: Galvanized, of size and type to suite application as indicated in the drawings.
  1. Paint for back-priming:
    - a. Products which may be considered as equal include the following, or approved equal:
    - b. California: "Wipe-Out 100% Acrylic Latex Stain Block", N° 52500.
    - c. Glidden: Wall and Woodwork Primer Sealer, N° 1020.
    - d. Moore: "Alkyd Enamel Underbody", N°. 217.
    - e. Pittsburgh: "Speedhide Alkyd Interior Quick-Drying Enamel Undercoater", 6-6 Series.
    - f. Sherwin-Williams: "Wall and Wood VOC Primer", B49 WZ2 Series.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify adequacy of blocking, backing and support framing for all finish carpentry work.
- B. Beginning of installation means acceptance of existing substrate and site conditions.

### 3.2 PREPARATION

- A. Back prime with specified primer all exterior wood trim prior to installation.
- B. Prime all wood surfaces of items or assemblies to be in contact with cementitious and masonry materials, prior to installation.

### 3.3 INSTALLATION – GENERAL CARPENTRY

- A. Install work in accordance with AWI/AWMAC/MI "*Architectural Woodwork Standards* for specified quality grades, except that all standing and running trim joints shall be field mitered and fitted. Dress and sand woodwork until free from machine and tool marks, abrasions, raised grain, or other defects that will show through the finish on surfaces exposed to view. Wherever possible, carry out sanding on a shop belt sander, not in the field. Sandpaper field joints and leave in perfect condition for finishing.



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- B. Make all joints tight, and form to conceal shrinkage. Glue all miters having a dimension of 4 inches or more from heel to point. Joints shall be glued tight and so formed as to conceal shrinkage. Cope trim at returns and miter at corners to produce tight-fitting joints with full surface contact throughout length of joint.
- C. Make a minimum of splices and joints in running trim, and where such splices and joints occur, fasten securely, with all exposed surfaces having smooth, continuous planes. Stagger joints in adjacent or relate members. Use scarf joints for end-to- end joints.
- D. Scribe and cut work to fit adjoining work closely. Refinish cut surfaces in prefinished items.
- E. All nails in interior finished work shall be blind nailed wherever possible. Nail trim with finish nails only, set using appropriate nail punch and fill with matching wood filler. Sand smooth wood filler. Do not fasten trim with screws or bolts unless otherwise directed, or is to be subsequently covered with smaller trim.
- F. Woodwork shall be properly framed, closely fitted and accurately set to the required lines and levels and shall be rigidly secured in place. Shim as required using concealed shims to achieve specified tolerances.

#### 3.4 INSTALLATION - PREFABRICATED PRODUCTS INSTALLED UNDER THIS SECTION

- A. Do not commence installation of products until immediately adjacent surfaces have been completely installed and finished.
- B. Perform installation work in accordance with the approved shop drawings and the manufacturer's installation instructions.
- C. Install products absolutely level and in true line, with units securely anchored to the surrounding construction.
- D. Remove all tape and other packing materials; thoroughly clean and polish all exterior and interior surfaces.
- E. Touch-up all scratches and other surface defects, using same materials and colors as shop finish.

#### 3.5 TOLERANCES

- 1. Maximum variation for wood work from true position of 1/8 inch in 8 feet for plumb and level and with a maximum of 1/16 inch offsets in adjoining surfaces intended to be flush.

#### 3.6 CLEANING

- 1. Daily clean work areas by sweeping and disposing of scraps and sawdust.
- 2. Upon completion of the work of this Section in any given area, remove tools, equipment and all rubbish and debris from the work area; leave area in broom- clean condition.

#### 3.7 PROTECTION

- A. During the operation of finish carpentry, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

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END OF SECTION

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SECTION 07 28 00  
MOISTURE BARRIERS

PART 1 GENERAL

1.1 SUMMARY

- A. General: The work of this Section consists of moisture barriers as specified herein, where shown of the Drawings, and as additionally required for a complete and proper installation.
- B. Furnish and install the following:
  - 1. Sheet materials for controlling moisture movement at exterior roof assemblies

1.2 RELATED WORK

- A. Examine Contract Documents for requirements that affect Work of this Section. Other Specification Sections that directly relate to Work of this Section include, but are not limited to:
  - 1.

1.3 REFERENCES

- A. ASTM International (ASTM):
  - 1. D41 - Standard Test Method for Rubber Properties in Tension.
  - 2. D226 - Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.
  - 3. D412 - Standard Test Method for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension.
  - 4. D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
  - 5. E96/E96M - Standard Test Method for Water Vapor Transmission of Materials.
  - 6. E2178 - Standard Test Method for Air Permeance of Building Materials.
  - 7. E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.

1.4 QUALITY ASSURANCE

- A. Provide continuous barrier to moisture infiltration, air infiltration and exfiltration, and water vapor infiltration, flashed to discharge incidental condensation and water penetration.

1.5 SUBMITTALS

- A. Submittals for Review:
  - 1. Product Data: Manufacturer's descriptive data.
  - 2. Samples: 12 x 12 inch moisture barrier samples.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers - Sheet Moisture Barriers:

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1. DuPont. ([www.tyvek.com](http://www.tyvek.com))
2. Griffolyn, Division of Reef Industries. ([www.reefindustries.com](http://www.reefindustries.com))
3. Raven Industries. ([www.rufco.com](http://www.rufco.com))
4. GAF. ([www.gaf.com](http://www.gaf.com))
5. Or approved equals.

B. Acceptable Manufacturers - Rubberized Sheet Moisture Barriers:

1. Grace Construction Products. ([www.graceconstruction.com](http://www.graceconstruction.com))
2. W.R. Meadows, Inc. ([www.wrmeadows.com](http://www.wrmeadows.com))
3. Polyguard Products, Inc. ([www.polyguardproducts.com](http://www.polyguardproducts.com))
4. GAF. ([www.gaf.com](http://www.gaf.com))
5. Or approved equals.

C. Substitutions: Under provisions of Division 01.

## 2.2 MATERIALS

A. Sheet Moisture Barrier: Asphalt impregnated felt, ASTM D226, No. 30, non-perforated.

1. Source: GAF – Deck Armor roofing felt or approved equals

B. Rubberized Sheet Moisture Barrier:

1. Source: StormGuard Leak Barrier by GAF or approved equals.
2. Description: ASTM D1970; aggressive rubberized asphalt laminated to polyethylene film, self-adhering, with release paper facing.
3. Thickness: 40-mil
4. Elongation: Minimum 250 percent, tested to ASTM D412.
5. Tensile strength: Minimum 250 PSI, tested to ASTM D412.
6. Water vapor transmission: Maximum 0.05 perms per square foot, tested to ASTM E96.

## 2.3 ACCESSORIES

- A. Fasteners: Hot-dip galvanized or fluoropolymer coated steel nails with 1 inch diameter plastic washers, minimum 5/8 inch penetration into framing.
- B. Joint Tape: Minimum 2 inches wide, pressure sensitive, waterproof, of type recommended by moisture barrier manufacturer.
- C. Flashing Sheet: Type recommended by moisture barrier manufacturer.
- D. Primer: Type recommended by moisture barrier manufacturer.
- E. Patching Compound: Type recommended by moisture barrier manufacturer.

## PART 3 EXECUTION

### 3.1 PREPARATION

- A. Clean surfaces to receive moisture barrier; remove loose and foreign matter that could impair adhesion or performance.
- B. Protect adjacent and underlying surfaces.
- C. Fill voids, holes, and cracks over 1/16 inch in width with patching compound; finish flush

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with adjacent surfaces. Apply one coat of moisture barrier over patched areas and allow to dry.

### 3.2 INSTALLATION - SHEET MOISTURE BARRIERS

- A. Provide complete and continuous barrier.
- B. Apply primer when required by moisture barrier manufacturer.
- C. Install moisture barrier without tears, voids, and holes.
- D. Begin application at low point; weatherlap succeeding courses minimum 4 inches.
- E. Lap ends 6 inches minimum.
- F. Fasten at maximum 12 inches on center.

### 3.3 FIELD QUALITY CONTROL

- A. Inspect moisture barrier for damage just prior to covering.
- B. Clean damaged areas and cover with additional moisture barrier material minimum 6 inches larger than damaged area on all sides.

END OF SECTION

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SECTION 07 31 00  
ASPHALT SHINGLES

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this Section consists of asphalt shingles where shown on the Drawings, as specified herein, and as required for a complete and proper installation. Work includes, but is not limited to the following scope.
  - 1. Furnish and install the following:
    - a. Asphalt shingle roofing system including but not limited to asphalt roof shingles, and other sheet metal flashings, starter strips, nails and other fasteners, and plastic cement and other items required for a complete watertight installation.

1.2 RELATED REQUIREMENTS

- A. Section 02 41 19 - SELECTIVE DEMOLITION: Removal of existing roof as shown on drawings
- B. Section 06 10 00 - ROUGH CARPENTRY: Wood blocking, nailers.
- C. Section 07 28 00 – MOISTURE BARRIERS:
- D. Section 07 62 00 – SHEET METAL FLASHING AND TRIM

1.3 REFERENCES

- A. ASTM International (ASTM):
  - 1. C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
  - 2. D225 - Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules.
  - 3. D226 - Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.
  - 4. D412 - Standard Test Method for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension.
  - 5. D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
  - 6. D3018 - Standard Specification for Class A Asphalt Shingles Surfaced with Mineral Granules.
  - 7. D3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
  - 8. D3462 - Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
  - 9. D4586 - Standard Specification for Asphalt Roof Cement, Asbestos Free.
  - 10. D4869 - Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing.
  - 11. D6757 - Standard Specification for Underlayment Felt Containing Inorganic Fibers Used in Steep-Slope Roofing.
  - 12. D6380 - Standard Specification for Asphalt Roll Roofing (Organic Felt).
  - 13. D6381 - Standard Test Method for Measurement of Asphalt Shingle Mechanical Uplift Resistance.

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14. D7158 - Standard Test Method for Wind Resistance of Sealed Asphalt Shingles (Uplift Force/Uplift Resistance Method).

1. E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low- Sloped Opaque Surfaces.

B. National Roofing Contractors Association (NRCA) - Steep Roofing Manual.

C. Underwriters Laboratories (UL):

1. 790 - Standard for Standard Test Methods for Tests of Roof Coverings.
2. 997 - Standard for Wind Resistance of Prepared Roof Covering Materials.
3. 2390 - Standard for Tests for Wind Resistant Asphalt Shingles with Sealed Tabs.

#### 1.4 SUBMITTALS

A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

C. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.

1. In addition to those Guarantees and Warrantees required by the General Conditions the Contractor shall provide:

A. The manufacturer's standard warranty shall be for a period of Twenty (20) years from date of substantial completion.

B. The Contractor shall provide the Owner with a copy of the Bill of Sale for the Shingles clearly indicating the product, quantity, purchase date, and a note indicating the project for which the product is intended. Maintain one (1) copy of manufacturer's application instructions on site.

C. Warranty Supplement - Shingle Manufacturer shall provide supplemental leak warranty covering labor and materials for a period of ten (10) years from the date of substantial completion against roof leaks.

D. Satisfactory delivery of warrantees shall be precedent to final payment.

#### 1.5 QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

1. Provide certificate of compliance from shingle manufacturer for ASTM and UL Standards, indicating conformance to Contract requirements.
2. All shingles shall have same Lot Number.

B. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship.

C. Installer Qualifications: Minimum 5 years experience in work on this Section.



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## 1.6 REGULATORY REQUIREMENTS

- A. Provide a roofing system achieving an Underwriters Laboratories (UL) Class A fire classification.
- B. Install all roofing products in accordance with all federal, state and local building codes.
- C. All work shall be performed in a manner consistent with current OSHA guidelines.

## 1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's unopened, labeled bundles, rolls or containers.
- B. Store materials to avoid water damage and store rolled goods on end. Comply with manufacturer's recommendations for job-site storage and protection.
- C. Store and dispose of solvent based materials in accordance with all federal, state and local regulations.

## 1.8 JOB CONDITIONS

- A. Substrate: Proceed with shingle work only after substrate construction and penetrating work have been completed.
- B. Weather Conditions: Proceed with shingle work only when weather conditions are in compliance with manufacturer's recommendations and when substrate is completely dry.
- C. Absolutely no work is to be completed in the rain, when air temperature is below 32 degrees Fahrenheit.
- A. All construction to be watertight when work stops at the end of each workday.

## 1.9 MAINTENANCE

- A. Extra Materials: 10 square feet of extra shingles.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
  - 1. CertainTeed Corp. ([www.certainteed.com](http://www.certainteed.com))
  - 2. GAF Materials Corp. ([www.gaf.com](http://www.gaf.com))
  - 3. Owens Corning ([www.owenscorning.com](http://www.owenscorning.com))
  - 4. Tamko Roofing Products, Inc. ([www.tamko.com](http://www.tamko.com))
  - 5. Or approved equals.
- B. Substitutions: Under provisions of Division 01.

### 2.2 MATERIALS

- A. Asphalt Shingles: Self sealing, granule surfaced, asphalt shingle. Coordinate with Housing Authority to match existing asphalt shingle of adjacent buildings.
  - 1. ASTM D3462, glass fiber mat base, mineral granule surfaced, self-sealing, fungus and algae resistant.
  - 2. Product: GAF Timberline American Harvest Lifetime Shingles, or approved equal.
  - 3. Type: Architectural laminate styling 5-5/8 inch exposure.

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4. Size (overall): 12 x 36 inches.
  5. Color: Golden Harvest – Coordinate with Housing Authority to match adjacent buildings.
  6. Provide matching hip and ridge shingles.
  7. Energy Star certified.
- B. Roll Roofing: ASTM D6380, 83 pounds per square, asphalt saturated roofing felt surfaced one side with mineral granules, same color as shingles.
- C. Starter Strip:
1. Self sealing starter shingle designed for premium roof shingles. WeatherBlocker Eave/Rake Starter Strip by GAF or approved equals.
- D. Hip and Ridge Shingles:
1. High profile self sealing hip and ridge cap shingle matching the color of the selected roof shingle, coordinate with Housing Authority. GAF Timbertex Premium Ridge Cap Shingles or approved equals.

## 2.3 ACCESSORIES

- A. Ice Dam Protection:
1. Description: ASTM D1970; minimum 40-mil thick polymer modified asphalt laminated to slip-resistant polyethylene film, self-adhering with release paper facing.
  2. Elongation: Minimum 250 percent, tested to ASTM D412.
  3. Tensile strength: Minimum 250 PSI, tested to ASTM D412.
  4. Source: StormGuard Leak Barrier by GAF or approved equals.
- B. Fasteners: Standard round wire, zinc-coated steel or aluminum nails, minimum 3/8-inch head diameter, 10 to 12 gage barbed shank, length to penetrate minimum 3/4 inch into solid wood or through sheathing by at least 1/8-inch.
- C. Plastic Cement: ASTM D4586, Type I, non-running, heavy body material composed of asphalt and other mineral ingredients.
- D. Metal Flashings: Specified in Section 07 62 00.

## PART 3 EXECUTION

### 3.1 INSTALLATION OF ICE DAM PROTECTION

- A. Verify that the deck is dry, sound, clean and smooth. It shall be free of any depressions, waves and protections.
- B. Replace damaged deck with new materials.
- C. Clean deck surfaces thoroughly prior to installation of eaves protection membrane and underlayment.
- D. Starting from eave edge of roof apply one ply modified bitumen underlayment horizontally on roof. Weatherlap each sheet 4 inches over preceding sheet. Lap ends 6 inches minimum.
- E. Press to full bond with substrate without voids, wrinkles, bridging, or fishmouths. Seal ends

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and edges.

- F. Extend ice dam protection minimum 36 inches beyond interior face of heated walls.
- G. All sloped roof areas with a slope of less than 3:12 shall receive ice dam protection to cover roof sheathing in entirety.

### 3.2 INSTALLATION OF UNDERLAYMENT

- A. Starting at low edge, apply one 18-inch wide strip of underlayment horizontally over substrate including previously installed ice dam protection.
- B. Apply following strips full 36-inch width; weatherlap preceding strip by 19-inches so that not less than two plies cover substrate at any point.
- C. Lap ends 6 inches minimum.
- D. Fasten top of each strip under overlapping strip to hold strip in position until shingles are installed.
- E. Provide 18-inch weave pattern at valleys.
- F. Lap underlayment minimum 2-inches over hips and ridges from both sides. Apply 36-inch wide strip centered lengthwise over ridge. Nail at 12-inches on center on each side.
- G. Extend minimum 4-inches up abutting vertical surfaces.

### 3.3 FLASHINGS

#### A. Rake Edges:

- 1. Install metal drip edge at rake edges with top flange on top of underlayment.
- 2. Weather lap ends 2 inches minimum and seal with plastic cement.
- 3. Nail top flange to decking at 8 inches on center maximum.
- 4. Apply plastic cement to cover nail heads and at edge of flashings for entire length of metal.

#### B. Drip Edges:

- 1. Apply drip edge at eave with top flange directly on deck; extend underlayment to outer face of drip edge.
- 2. Lap ends 2 inches minimum and seal with plastic cement.
- 3. Nail in place at 8 inches on center maximum.
- 4. Apply plastic cement to cover nail heads and at edge of flashings for entire length of metal.

#### C. Valleys:

- 1. Apply one layer of 36 inch wide underlayment centered over valleys. Weather lap joints 12 inches minimum.
- 2. Nail at 18 inches on center, with nails located within 1 inch of edges.
- 3. Where valleys are indicated to be "closed valleys", install full shingle on lower roof plane to pass over center of valley by at least 12 inches beyond center of valley. Lap shingles from higher roof over center valley and cut 2" off center on lower roof with clean sharp line.

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## D. Stepped Flashings:

1. Install 6-inch high x 6-inch wide x 8-inch long tins concurrent with shingles. Place with ends slightly above with shingle butt ends.
2. Place stepped counterflashing over tins at masonry.
3. Round Penetrations:

## E. Place preformed flashing boot over penetration.

1. Fasten flange to deck with minimum of four fasteners.
2. Tighten draw band to watertight condition.

## F. Other Flashings:

1. Weather lap ends 2 inches minimum and seal with plastic cement.
2. Nail in place at 8 inches on center maximum.
3. Apply plastic cement to cover nail heads and at edge of flashings for entire length of metal.

## 3.4 INSTALLATION OF ROOF DETAIL SHEET

- A. Apply one layer 18-inch wide roof detail sheet centered over hips and ridges.
- B. Apply one layer 9-inch wide roof detail sheet along rake edges, drip edges and around penetrations through roof.

## 3.5 INSTALLATION OF RIDGE VENTS

- A. Cut 1-inch wide slot through sheathing under ridge vents, extending to within 6 inches of ends of vents.
- B. Center ridge vent over slot; fasten at maximum 12 inches on center with 3-inch nails.
- C. Apply shingles over vent; fasten with 3-inch nails.

## 3.6 INSTALLATION OF SHINGLES

- A. Install shingles in accordance with manufacturer's instructions.
- B. Place shingles in straight coursing pattern, in straight horizontal lines square with building lines, with 5-inch exposure to produce double thickness over roof area.
- C. Remove foreign matter between shingles to ensure uniform contact.
- D. Cut shingles at perimeter and around penetrations. Do not use damaged shingles.
- E. Provide triple course of shingles at eaves. Extend shingles 3/8 inch beyond metal drip edges.
- F. Extend shingles on both slopes across valley in a weave pattern and fasten. Extend shingles a minimum of 12 inches beyond valley centerline to achieve woven valley, concealing the valley protection.
- G. Fasten shingles along nailing guideline through laminated portion with minimum of four fasteners per shingle.

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- H. Cap hips and ridges with individual shingles, maintaining same exposure as shingles.

END OF SECTION

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SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SUMMARY

- A. General: The work of this Section consists of sheet metal flashing and trim as specified herein, where shown on the Drawings, and as additionally required for a complete and proper installation.
- B. Furnish and install the following:
  - 1. Copings.
  - 2. Edge flashings.
  - 3. Gutters and downspouts.
  - 4. Flashings and shingle roofing.

1.2 RELATED REQUIREMENTS

- A. Examine Contract Documents for requirements that affect Work of this Section. Other specification Sections that directly relate to Work of this Section include, but are not limited to:
  - 1. Section 07 28 00 – MOISTURE BARRIERS
  - 2. Section 07 31 13 – ASPHALT SHINGLES: Work to be completed to facilitate completion of work in this section.
  - 3. Section 07 92 00 - JOINT SEALANTS: Requirements for sealant and backing materials.

1.3 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
  - 1. 611 - Voluntary Specification for Anodized Architectural Aluminum.
  - 2. 620 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Aluminum Substrates.
  - 3. 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) and Zinc-Aluminum Coated Steel Substrates.
  - 4. 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Architectural Extrusions and Panels.
  - 5. 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.
  - 6. 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
- B. American National Standards Institute/Single Ply Roofing Institute (ANSI/SPRI) ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
- C. ASTM International (ASTM):
  - 1. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
  - 2. A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

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3. A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
4. B32 - Standard Specification for Solder Metal.
5. B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
6. B370 - Standard Specification for Copper Sheet and Strip for Building Construction.
7. B506 - Specification for Copper-Clad Stainless Steel Sheet and Strip for Building Construction.
8. B749 - Standard Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products.

- D. Copper Development Association (CDA) - Contemporary Copper, A Handbook of Sheet Copper Fundamentals, Design, Details and Specifications.
- E. Sheet Metal and Air Conditioning Manufacturer's Association International (SMACNA) - Architectural Sheet Metal Manual.

#### 1.4 SUBMITTALS

##### A. Submittals for Review:

1. Shop Drawings: Show locations, types and thicknesses of metal, profiles, dimensions, fastening methods, provisions for expansion and contraction, and joint details.
2. Samples:
  - a. Each flashing and trim profile, minimum 12 inches long. Include corners where applicable.
  - b. 3 x 3 inch prefinished metal samples showing available colors.
3. QUALITY ASSURANCE

##### B. Fabricator and Installer Qualifications: Minimum 5 years experience in work of this Section.

##### C. Design, fabricate, and install copings and edge flashings in accordance with ANSI/SPRI ES-1.

##### D. Conform to SMACNA Manual for nominal sizing of gutters and downspouts for rainfall intensity determined by a storm occurrence of 1 in 50 years.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

##### A. Acceptable Manufacturers: Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include the following, or approved equal:

1. Hussey Copper, Ltd.
2. Luvata, Inc.
3. PMX Industries Inc.
4. Revere Copper Products, Inc.

#### 2.2 MATERIALS

##### A. Aluminum-Zinc Alloy Coated Steel Sheet: ASTM A792/A792M, Commercial Quality, AZ50 aluminum-zinc alloy coating, 24-gage core steel unless noted otherwise.

##### B. Aluminum Sheet:



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1. ASTM B209, alloy 3003, temper H14, 0.063 inch thick.
2. Finish: Precoated with fluoropolymer coating, AAMA 2605, containing minimum 50 percent PVDF resins, three coat system, color to be selected from manufacturer's full color range, by Housing Authority.
3. Copper-Clad Lead Sheet: ASTM B749, Type L50049, common lead, weighing 2-1/2 pounds per square foot.

### 2.3 ACCESSORIES

- A. Miscellaneous Materials: Provide materials and types of fasteners, solder, protective coating, separators, sealants and accessory items as recommended by copper sheet manufacturer for copper roofing work, except as otherwise indicated.
- B. Metal Edge Flashing: Flat profile prefinished metal edge flashing attached with coated screws at 3-inches on center.
- C. Solder: ASTM B32.
- D. Sealing Tape: Pressure-sensitive 100 percent solids polyisobutylene compound sealing tape with release paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.
- E. Fasteners: Same material and finish as sheet metal, with neoprene gasketed washers where exposed.
- F. Joint Sealers: One-part, copper compatible elastomeric polyurethane, polysulfide, butyl or silicone rubber sealant as tested by sealant manufacturer for copper substrates.

### 2.4 FABRICATION

- A. Fabricate components in accordance with SMACNA Manual.
- B. Profiles:
  1. Gutters: SMACNA Plate.
  2. Downspouts: SMACNA Plate.
  3. Fabricate end caps, downspout outlets and headers, straps, brackets, and downspout strainers in profile to suit gutters and downspouts.
- C. Pre tin edges of copper sheet.
- D. Solder shop formed joints except at prefinished metal. After soldering, remove flux and wash clean.
- E. Fabricate corners in single units with minimum 18-inch long legs.
- F. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.
- G. Form sections accurate to size and shape, square and free from distortion and defects. Comply with material manufacturer's instructions and recommendations for forming material. Form exposed copper work without excessive oil-canning, buckling and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.
- H. Provide for thermal expansion and contraction in sheet metal:

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1. Gutters:
  - a. Place expansion joints at maximum 50 feet on center.
  - b. Locate expansion joints between downspouts; prevent water flow over joint.
  - c. Other sheet metal:
    - 1). Provide expansion joints in sheet metal exceeding 15 feet in running length.
    - 2). Place expansion joints at 10 feet on center maximum and maximum 2 feet from corners and intersections.
  - d. Joint width: Consistent with types and sizes of materials, minimum width 1/4 inch.
- I. Fabricate expansion joints in metal copings and edge flashings with cover plates formed to flashing profile and minimum 4-inches long.
- J. Unless otherwise indicated, provide minimum 3/4 inch wide flat lock seams; lap in direction of water flow.
- K. Fabricate cleats and starter strips of same material as sheet metal.

### PART 3 EXECUTION

#### 3.1 INSTALLATION

- A. Install flashing and sheet metal as indicated and in accordance with SMACNA Manual.
- B. Install cleats and starter strips before starting installation of sheet metal.
- C. Expansion Joints in Edge Flashings:
  1. Seal expansion space between ends of flashing sections.
  2. Apply continuous bead of joint sealer between cover plate and flashing sections at each end.
- D. Secure flashings with concealed fasteners where possible.
- E. Apply plastic cement between metal and bituminous flashings.
- F. Fit flashings tight, with square corners and surfaces true and straight.
- G. Seam and seal field joints.
- H. Separate dissimilar metals with bituminous coating or non-absorptive gaskets. For copper, use red rosin paper having minimum weight of 2 pounds per square. For galvanized metal, roofings felts may be used.
- I. Install underlayment and paper slip sheet on substrate under copper roofing to greatest extent possible unless otherwise recommended by manufacturer of sheet metal. Paper slip sheets must be installed over the underlayment. Use adhesive for temporary anchorage, where possible, to minimize use of mechanical fasteners under copper roofing. Lap joints 2-inch minimum.
- J. Gutters: Secure with straps spaced maximum 36 inches on center and within 12 inches of ends.
- K. Downspouts:
  1. Secure with straps spaced maximum 8 feet on center and within 2 feet of ends and elbows.

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2. Flash downspouts minimum 3 inches into gutters and fasten.
  3. Flash upper sections into lower sections minimum 2 inches at joints; fasten sections together.
- L. Apply joint sealers as specified in Section 07 92 00.
- 3.2 CLEANING
- A. Clean sheet metal; remove slag, flux, stains, spots, and minor abrasions without etching surfaces.

END OF SECTION

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## SECTION 07 92 00

### JOINT SEALANTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. General: This Section specifies general requirements, definition of joint sealer types, and application requirements for sealant work specified within other individual specification sections.
- B. Furnish and install the following:
  - 1. Prepare sealant substrate surfaces.
  - 2. Furnish and install sealant and backing materials.
  - 3. Furnish and install expanding foam sealant.

##### 1.2 RELATED REQUIREMENTS

- A. Section 06 10 00 - ROUGH CARPENTRY.
- B. Section 07 62 00 – SHEET METAL FLASHING AND TRIM: Sealant use for flashing installation.

##### 1.3 REFERENCES

- A. Comply with applicable requirements of the following standards and those others referenced in this Section, under the provisions of Section 01 42 00 - REFERENCES. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
  - 1. ASTM C 717 - Standard Terminology of Building Seals and Sealants.
  - 2. ASTM C 790 – Guide for Use of Latex Sealants
  - 3. ASTM C 804 - Use of Solvent-Release Type Sealants.
  - 4. ASTM C 834 - Latex Sealing Compounds.
  - 5. ASTM C 919 - Use of Sealants in Acoustical Applications.
  - 6. ASTM C 920 - Elastomeric Joint Sealants.
  - 7. ASTM C 962 - Use of Elastomeric Joint Sealants.
  - 8. ASTM C 1193 - Guide for Use of Joint Sealants.
  - 9. ASTM D 1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
  - 10. ASTM D 3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
  - 11. FS TT-S-00227E - Sealing Compound: Elastomeric Type, Multi-Component.
  - 12. FS TT-S-00230C - Sealing Compound: Elastomeric Type, Single-Component.
  - 13. FS TT-S-001543A - Sealing Compound, Silicone Rubber Base.
- B. The following reference materials are hereby made a part of this Section by reference thereto:
  - 1. SWRI – Sealant and Caulking Guide Specification.

##### 1.4 SEQUENCING

- A. Coordinate work of this Filed Subcontract with that of other trades, affecting or affected by this work, and cooperate with the other trades as is necessary to assure the steady progress of work.
- B. Do not order or deliver any materials until all submittals, required in the listed Specification Sections included as part of this Filed Subcontract, have been received and approved by the

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Architect.

- C. Before proceeding with installation work, inspect all project conditions and all work of other trades to assure that all such conditions and work are suitable to satisfactorily receive the work of this Section and notify the Architect in writing of any which are not. Do not proceed further until corrective work has been completed or waived.

## 1.5 SUBMITTALS

- A. Information and Review Submittals: Submit the following under provisions of Section 01 33 00 - SUBMITTAL PROCEDURES:
  - 1. Product Data: Manufacturer's product data sheets, specifications, performance data, chemical and physical properties and installation instructions for each item furnished hereunder.
    - a. Selection Samples: Sample card indicating Manufacturer's full range of colors available for selection by Architect.
    - b. Verification Samples: 12 inch long samples of sealant for verification of color, installed where directed by Architect.
    - c. Certificates: Manufacturer's certification that the Products supplied meet or exceed specified requirements.
    - d. Test and Evaluation Reports:
      - 1). Compatibility and adhesion test reports: Test reports from sealant manufacturer indicating that sealant proposed for use have been tested for compatibility and adhesion with actual samples of substrates to be used on this project. Include sealant manufacturer's interpretation of test results, and recommendations for primers and substrate preparation specific to this Project.
    - e. Closeout Submittals: Submit the following under provisions of Section 01 78 00 - CLOSEOUT SUBMITTALS.
      - 1). Bonds and Warranty Documentation: Manufacturer's standard Warranties and Guarantees.

## 1.6 QUALITY ASSURANCE

- A. General: Notify the Architect where conflicts apply between referenced standards and existing materials, and existing methods of construction.
- B. Sole Source: Provide sealants from a single manufacturer for all work of this Section to the greatest extent possible. Each individual type of sealant installed in the Work shall be from a single manufacturer.
- C. Qualifications:
  - 1. Installer/Applicator: Minimum of 3 years documented experience demonstrating previously successful work of the type specified herein.
    - a. Testing Agencies: To qualify for acceptance, an independent testing laboratory must demonstrate to Architect's satisfaction that it has the experience and capability to conduct satisfactory testing indicated without delaying progress of the Work.
  - 2. Preconstruction Compatibility and Adhesion Testing: Submit samples of all materials that will contact or affect joint sealers to joint sealer manufacturers for compatibility and adhesion testing, as indicated below:
    - a. Use test methods standard with manufacturer to determine if priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealers to joint substrates.

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- 1). Perform tests under normal environmental conditions that will exist during actual installation.
- b. Contractor shall submit for testing, and sealant manufacturer shall test at least 9 pieces of each type of material, including joint substrates, shims, and joint backer rods.
- c. Schedule testing so that it does not delay the work.
  - 1). Investigate materials failing these tests and obtain joint sealer manufacturer's written recommendations for corrective measures, including use of specially formulated primers.
  - 2). The Architect may waive part or all of these specific testing requirements if the sealant manufacturer is able to provide written certification, demonstration to the Architect's satisfaction, that sealant and substrates are compatible and that sealant performance and adhesion will not be compromised by project conditions.
3. Product Testing: Provide comprehensive test data for each type of joint sealer based on tests conducted by a qualified independent testing laboratory on current product formulations within 24-month period preceding date of Contractor's submittal of test results to Architect.
  - a. Test elastomeric sealant for compliance with requirements specified by reference to ASTM C920. Include test results for hardness, stain resistance, adhesion and cohesion under cyclic movement (per ASTM C719), low- temperature flexibility, modulus of elasticity at 100% strain, effects of heat aging, and effects of accelerated weathering.
  - b. Include test results performed on joint sealers after they have cured 1 year.
4. Preconstruction Field Testing: Prior to installation of joint sealants, field-test their adhesion to joint substrates as follows:
  - a. Locate test joints where indicated or, if not indicated, as directed by Architect.
  - b. Conduct field test for each type of elastomeric sealant and joint substrate indicated.
  - c. Arrange for tests to take place with both Architect and joint sealer manufacturer's technical representative present.
  - d. Test Method: Test joint sealers by hand pull method described below:
    - 1). Install joint sealant in 5-foot joint lengths using same materials and methods for joint preparation and joint sealant installation required for completed Work. Allow sealant to cure fully before testing.
    - 2). Make knife cuts as follows: A horizontal cut from one side of joint to the other followed by 2 vertical cuts approximately 2 inches long at side of joint and meeting horizontal cut at top of 2 inch cuts. Place a mark 1 in. from top of 2 inch piece.
    - 3). Use fingers to grasp 2 inch piece of sealant above 1 in. mark; pull firmly down at 90 degree angle or more while holding a straightedge along side of sealant. Pull sealant out of joint to the distance recommended by sealant manufacturer for testing adhesive capability, but not less than that equaling specified maximum movement capability in extension; hold this position for 10 seconds.
  - e. Evaluation of field test results:
    - 1). For sealant evidencing adhesive failure, determine if primer is required. If so, re-test using primer.
      - a. Sealant not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory.
      - b. Do not use sealant which fails to adhere to joint substrates during testing.

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- f. Submit report to Architect with description of test, results, and recommended installation procedures to obtain proper adhesion.
  - 1). Report whether or not sealant in joint connected to pull-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate.

#### 1.7 DELIVERY, STORAGE AND HANDLING

- A. Each container and package must bear an unbroken seal, test number and label of the manufacturer upon delivery to the site. Failure to comply with these requirements shall be sufficient cause for rejection of the material in question, by the Architect and his requiring its removal from the site. New material conforming to said requirements, shall be promptly furnished at no additional cost to the Contract.

#### 1.8 SITE CONDITIONS

- A. Do not install single component solvent curing sealant in enclosed building spaces.
- B. Environmental Requirements: Maintain temperature and humidity recommended by the sealant manufacturer during and 24 hours after installation. Do not proceed with installation of joint sealers under the following conditions:
  1. When ambient and substrate temperature conditions are below 40 degrees F.
  2. When joint substrates are wet due to rain, frost, condensation, or other causes.
- C. Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from substrates.

#### 1.9 WARRANTY

- A. Provide 5 year warranty under provisions of Section 01 78 00 - CLOSEOUT SUBMITTALS. Warranty shall include coverage of installed sealant and accessories which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

### PART 2 PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Specified Manufacturers and Products: To establish a standard of quality, design and function desired, Drawings and specifications have been based on the products specified under this section for each individual sealant type, for the applications scheduled at the end of Section, and as may be additionally identified on the Drawings.
- B. Acceptable Manufacturers: Subject to compliance with the requirements specified herein, manufacturers offering products which may be incorporated in the work include the following, or approved equal:
  1. BASF Construction Chemicals (Sonneborn), Shakopee MN.
    - a. Chem Link Inc., Schoolcraft, MI.
    - b. Dow Corning Corporation, Midland MI.
    - c. Emseal Joint Systems Ltd., Westborough MA.
    - d. Momentive Performance Materials (GE Silicones), Waterford NY.
    - e. Pecora Corporation, Harleysville PA.
    - f. Schul International Company, Inc., Pelham, NH.
    - g. Sika Corp, Lyndhurst NJ.



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- h. STS Coatings, Inc., Comfort TX.
- i. Tremco, Inc., Beachwood OH.
- j. United States Gypsum Company (USG), Chicago IL.
- k. Williams Products Inc., Troy MI.
- l. York Manufacturing, Inc., Sanford ME.

## 2.2 SEALANT MATERIALS

### A. Sealant Materials, General Requirements:

- 1. Only use sealant and primers that comply with the following limits for VOC content:
  - a. Architectural Sealants: 250 g/L.
  - b. Roofing Sealants: 420 g/L.
  - c. Roadway Sealants: 250 g/L.
  - d. Sealant primer: 250 g/L.
- 2. Sealants containing aromatic solvents, fibrous talc, formaldehyde, halogenated solvents, mercury, lead, cadmium, chromium and their compounds, are not permitted.
- 3. All sealants to be low VOC

### B. Joint Sealer Type AA (Acrylic acoustical): One component acrylic latex, permanently elastic, non-staining, non-shrinking, non-migrating and paintable.

- 1. Tremco, product "Tremco Acoustical Sealant".
- 2. USG, product "USG Acoustical Sealant".
- 3. Pecora, product "AC-20 FTR".

### C. Joint Sealer Type AP (Acrylic painters caulk): One component acrylic latex caulking compound, conforming to FS 19-TP-21M and ASTM C 834 Type P, Grade NF, paintable within 24 hours after application, with a minimum movement capability of

±12.5 percent, equal to one of the following:

- 1. BASF (Sonneborn), product, "Sonolac".
- 2. Tremco, product, "Tremflex 834".
- 3. Bostik, product, "Chem-Calk 600".
- 4. Pecora, product "AC-20+".

### D. Joint Sealer Type BP2 (Bitumen modified polyurethane, Multi-component): Pouring grade self-leveling bitumen modified two component urethane sealant, conforming to ASTM C920, Type M, Grade P, Class 25 and FS SS-S-00227E, Type 1, Class A, with a minimum movement capability of +50/-25 percent, equal to one of the following:

- 1. BASF (Sonneborn), product "Sonomeric 2".
- 2. Pecora, product "Urexpan NR-300".
- 3. Tremco, product "Vulkem 202".
- 4. Sika, product "Sikaflex 2CNS".

### E. Joint Sealer Type FSB (Expanding Foam type backer sealant): Low modulus secondary expanding foam sealant fabricated from stabilized acrylic impregnated expanding foam sealant and cross-linked ethylene vinyl acetate (EVA) closed cell foam equal to one of the following:

- 1. Emseal, product "Backerseal".
- 2. Schul (Sealtite Brand), product "Sealtite B".
- 3. Tremco, product "illmod 600".

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- F. Joint Sealer Type FJS (Expanding Foam Joint Sealant): Open cell polyurethane foam impregnated with an acrylic-polymer-modified, non-drying water-based asphalt emulsion.
1. Impregnation agent to have proven non-migratory characteristics.
  2. Compression when expanded in joint shall be at approximately 25% of its uncompressed dimension (4x compression).
  3. Material to be supplied in sticks or rolls, precompressed to less than joint size at mean temperature for ease of installation.
    - a. Roll material will contain a nylon mesh (to reduce stretching) embedded into a pressure-sensitive adhesive on one side of the material.
    - b. Stick material to contain a pressure-sensitive adhesive on one face for aide in application.
  4. Acceptable products, or approved equal:
    - a. Emseal, product "25V".
    - b. Schul (Sealtite Brand), product "Sealtite Standard".
- G. Joint Sealer Type FCJ (Expanding Foam-Colored Joint): Low modulus silicone faced and impregnated expanding foam sealant.
1. Performance Properties:
    - a. Shore A hardness per ASTM D 2240: 15 pts.
    - b. Staining per ASTM C 510: None.
    - c. Xenon arch weathermeter for 2000 hours per ASTM G26-77: No visible deterioration or performance change.
    - d. Surface weathering for 6000 hours per ASTM G26-77: Minimal hardness change.
  2. Acceptable products:
    - a. Emseal, product "ColorSeal".
    - b. Schul (Sealtite Brand), product "Color Econoseal B".
    - c. Williams, product "Everlastic Wide Joint Seal".
- H. Joint Sealer Type HL1 (Horizontal-self-Leveling, 1-component): Pouring grade self- leveling modified urethane or neutral cure silicone sealant, conforming to FS TT-S-000230C, Type I, Class A, and ASTM C 920 Type S, Grade P, Class 25, with a minimum movement capability of  $\pm 25$  percent, equal to the following:
1. BASF (Sonneborn), product, "SL1" (urethane).
  2. GE silicones, product "Tosseal 817" (silicone).
  3. Sika, product, "Sikaflex 1CSL" (urethane).
  4. Tremco, product "Vulkem 45" / 45 SSL (urethane).
- I. Joint Sealer Type HL2 (Horizontal-self-Leveling, 2-component): Pouring grade self- leveling multi-component urethane sealant, conforming to FS TT-S-000227E, Type I, Class A, and ASTM C 920, with a minimum movement capability of  $\pm 25$  percent, equal to the following:
1. BASF (Sonneborn), product, "Sonolastic SL 2" (self-leveling grade).
  2. Sika, product, "Sikaflex 2CSL".
  3. Tremco, product, "THC-900 / THC-901".
- J. Joint Sealer Type HT (Horizontal-Trowel): Trowel grade multi-component modified- urethane or neutral-cure silicone paste sealant, conforming to FS TT-S-000227E, Type I, Class A, and ASTM C 920, with a minimum movement capability of  $\pm 25$  percent, equal to the following:

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1. BASF (Sonneborn), product "Sonolastic SL 2 (slope grade)" (urethane).
  2. GE silicones, product "Tosseal 811" (silicone).
  3. Pecora, product "Dynatred" (urethane).
  4. Sika, product "Sikaflex 2CTG" (urethane).
  5. Tremco, product "THC-901" (urethane).
- K. Joint Sealer Type P1 (Polyurethane 1-component): Low modulus single component gun-grade polyurethane sealant, non-sagging, conforming to FS TT-S-000230C, Type II, Class A, and ASTM C 920, Type S, Class 35, Grade NS, use NT,M, A and O with a minimum movement capability of  $\pm 35$  percent, equal to the following:
1. BASF (Sonneborn), product "Sonolastic NP1".
  2. Sika, product "Sikaflex 1a".
  3. Tremco, product "Vulkem 116", or "Dymonic FC".
- L. Joint Sealer Type P2 (Polyurethane, Multi-component): Low modulus type, Multi- component non-sagging gun-grade polyurethane sealant, conforming to FS TT-S- 000227E, Type II, Class A, and ASTM C 920, Type M, Class 25, Grade NS, use NT,M, A and O with a minimum movement capability of  $\pm 25$  percent, equal to the following:
1. BASF (Sonneborn), product "Sonolastic NP2".
  2. Tremco, product "Dymeric 240 / Dymeric 240FC".
  3. Pecora, product "Dynatrol II".
  4. Sika, product "Sikaflex 2CNS".
- M. Joint Sealer Type PE (Polyether): Low modulus type, Single-component non- sagging gun-grade, low-odor, neutral curing polyether, sealant, conforming to FS TT-S-000227E, Type II, Class A, and ASTM C 920, Type S, Class 25, Grade NS,
- use NT, T, M, G, A and O with a minimum movement capability of  $\pm 25$  percent, equal to the following:
1. BASF (Sonneborn), product, "Sonolastic 150".
  2. STS Coatings, product "GreatSeal PE-150" Sealant.
  3. Chem Link, product "MetaLink".
  4. York Manufacturing, product: "PE-150 Liquid Tape".
- N. Joint Sealer Type SC (Silicone, general construction): One-part medium modulus, natural cure, synthetic sealant, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 25, use NT, G, A, M, O with a minimum movement capability of  $\pm 50$  percent, equal to the following:
1. Dow Corning, product, "791".
  2. GE Silicones, product, "Silpruf".
  3. Pecora, product, "895".
  4. Sika, product, "Sika Sil-C 995".
  5. Tremco, product, "Spectrem 2".
- O. Joint Sealer Type SE (Silicone, Exterior construction): One-part low modulus, moisture curing, synthetic rubber sealant, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 50, FS TT-S-001543A, Type, Class A with a minimum movement capability of +100 percent and -50 percent, equal to the following:
1. Dow Corning, product, "790".
  2. GE Silicones, product, "SCS9000 SilPruf NB".
  3. Sika, product "Sikasil-WS-290".

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4. Tremco, product "Spectrem 1".
- P. Joint Sealer Type SX (Silicone, Exterior construction): One-part low modulus, neutral curing, low to no bleed silicone, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 50, FS TT-S-00230C, Type II, Class A with a minimum movement capability of +50 percent and -50 percent, equal to the following:
1. Dow Corning, product, "790".
  2. GE Silicones, product, "SCS2700 SilPruf LM".
  3. Sika, product "Sikasil-WS-290".
  5. Tremco, product "Spectrem 4TS".
- Q. Joint Sealer Type SF (Silicone, Food contact): One component silicone rubber, acceptable to local health officials, conforming to U.S. Food and Drug Administration regulation 21 CFR 175.105 and 175.300, FS TT-S-001543A, Type Non-Sag, Class A, and ASTM C 920, Type NS, Class 25, Use NT, G, O and A with a minimum movement capability of  $\pm 25$  percent, and a Shore A minimum hardness of 20, equal to the following:
1. Dow Corning, product, "732".
  - B. GE Silicones, product "Series SCS1000".
- R. Joint Sealer Type SM (Silicone, Mildew-resistant): USDA approved one component acetoxy silicone rubber, mildew resistant, acceptable to local health officials, conforming to U.S. Food and Drug Administration regulation 21 CFR 177.2600, FS TT-S-001543A, Type Non-Sag, Class A, and FS TT-S-00230C, Type II, Class A and ASTM C 920, Type S, Class 25, Grade NS, use NT,G and A with a minimum movement capability of  $\pm 25$  percent, and a Shore A hardness of 20, equal to the following:
1. BASF (Sonneborn), product "OmniPlus".
  2. Dow Corning, product "786".
  3. GE Silicones, product "Sanitary 1700".
  4. Tremco, product "Tremsil 200".
  5. Pecora, product "898".
- S. Joint Sealer Type ST (Silicone, color Tintable): One-part low modulus, moisture curing, synthetic rubber sealant, having a useful life expectancy of at least 20 years, conforming to ASTM C 920, Type S, NS, Class 25, FS TT-S-001543A, Type, Class A with a minimum movement capability of +100 percent and -50 percent, equal to the following:
1. Tremco, product "Spectrem 4TS".
  2. Pecora, product, "890 FTS".
- 2.3 ACCESSORIES
- A. Compressible joint bead back-up: Compressible closed cell polyethylene, extruded polyolefin or polyurethane foam rod complying with ASTM C 1330, Type C, 1/3 greater in diameter than width of joint. Shape and size of compressible back-up shall be as recommended by manufacturer for the specific condition used. Provide one of the following, or equal.
1. Construction Foam Products (Division of Nomaco, Inc.), Zebulon, NC, product "HBR Closed Cell".
  2. Industrial Thermo Polymers Ltd., Brampton, Ontario CN, product "ITP Standard Backer Rod".
  3. BASF Construction Chemicals (Sonneborn), Shakopee MN, product "Sonolastic Closed

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Cell Backer Rod".

4. W.R. Meadows Inc., Hampshire, IL, product "Sealtight Kool-Rod".

- B. Primers: Furnish and install joint primers of the types, and to the extent, recommended by the respective sealant manufacturers for the specific joint materials and joint function.
- C. Bond-breaker tape, and temporary masking tape: Of types as recommended by the manufacturer of the specific sealant and caulking material used at each application, and completely free from contaminants which would adversely affect the sealant and caulking materials.

## 2.4 SCAFFOLDS AND STAGING

- A. General: Filed Subcontractors shall obtain required permits for, and provide scaffolds, staging, and other similar raised platforms, required to access their Work as specified in Section 01 50 00 - TEMPORARY FACILITIES AND CONTROLS and herein.
  1. Scaffolding and staging required for use by this Filed Subcontractor pursuant to requirements of Section 01 50 00 - TEMPORARY FACILITIES AND CONTROLS shall be furnished, erected, maintained in a safe condition, and dismantled when no longer required, by this Filed Sub-Trade requiring such scaffolding.
  2. Each Filed Subcontractor is responsible to provide, maintain and remove at dismantling, all tarpaulins and similar protective measures necessary to cover scaffolding for inclement weather conditions other than those required to be provided, maintained and removed by the General Contractor pursuant to MGL (Refer to Section 01 50 00 - TEMPORARY FACILITIES AND CONTROLS and as additionally required for dust control).
  3. Furnishing portable ladders and mobile platforms of all required heights, which may be necessary to perform the work of this trade, are the responsibility this Filed Subcontractor.
  4. Enclose all exterior scaffolding outside of the construction fence with 8-foot high plywood enclosure at end of each work day to prohibit access to the scaffolding by unauthorized individuals.

## 2.5 PART 3 - EXECUTION

### A. EXAMINATION

1. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

## 2.6 PREPARATION

### A. General:

1. Weather conditions must be dry and of the temperature, as recommended by sealant manufacturer, during application operations.
  2. Surface receiving work of this section must be absolutely dry and dust free. All joints receiving sealant/caulking materials and primers shall be subject to the approval of the sealant manufacturer for proper use of specified materials.
- B. Thoroughly clean all joints, removing all loose mortar, oil, grease, dust, frost, and other foreign materials that will prevent proper adhesion of primers and sealant materials.

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1. Clean ferrous metals of all rust and coatings by wire brush, grinding or sandblasting. Remove oil, grease and protective coatings with cleaners recommended by sealant manufacturer.
  2. Prime joint substrates, as recommended in writing by joint-sealant manufacturer, as based on preconstruction joint-sealant-substrate tests or as based upon prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with ASTM C 804 and C 790 for solvent and latex base solvents, respectively.

## 2.7 INSTALLATION

- A. General: Conform to SWRI requirements, and sealant manufacturer's written requirements for installation.
- B. Install joint bead back-up in all joints in excess of 5/8-inch depth, and joints that have no back-up therein, placing the joint bead in the joint in a manner that will assure a constant depth 1/8 inch greater than the sealant and caulking material depth tolerances.
1. Set beads into joints continuously, by slightly stretching during placement, to permit compression against sides of joint, without surface wrinkles or buckles.
  2. Do not stretch back-up material into joints.
- C. Install bond breaker in joints where shown in the Drawings and wherever recommended by the sealant manufacturer to prevent bond of the sealant to surfaces where such bond might impair the Work.
- D. Apply masking tape or other precautions to prevent migration or spillage of materials onto adjoining surfaces.
- E. Apply urethane sealant and latex caulking materials into joints in accordance with manufacturer's instructions, using mechanical or power caulking gun equipped with nozzle of appropriate size, with sufficient pressure to completely fill the joints.
1. The depth of sealant and caulking materials shall be in accordance with manufacturer's recommendations for the specific joint function, but in no case exceed 1/2-inch in depth, nor less than 1/4-inch, regardless of the joint width.
  2. Maintain the outer edge of the sealant and caulking materials, where side faces of joints are in the same plane, back 1/8-inch from the faces.
  3. Apply sealant in continuous beads without open joints, voids or air pockets so as to provide a watertight and airtight seal for the entire joint length.
  4. After placement of the sealant and caulking materials, concave-tool the surfaces to uniform density, using a water-wet tool. Do not use detergents or soapy water for the tooling operations.
  5. Remove the temporary masking tape immediately after tooling, and before the sealant or caulking material has taken initial set.
- F. Take care not to block-off weep tubes or any through wall opening constructed to allow weeping of accumulated water.
1. Apply pouring self-leveling urethane sealant (Sealant designation **HL**) into horizontal joints in accordance with manufacturer's instructions, to a level approximately 1/16 inch below

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adjacent surfaces.

- a. Apply sealant without open joints, voids or air pockets so as to provide a watertight and airtight seal for the entire joint length.
- b. After placement of the sealant and caulking materials, concave-tool the surfaces to uniform density, using a water-wet tool. Do not use detergents or soapy water for the tooling operations.
- c. Remove the temporary masking tape immediately after tooling, and before the sealant has taken initial set.

## 2.8 INSTALLATION PRE-FORMED FOAM SEALANTS

- A. General: The joint configuration and the joint surfaces shall be as detailed in the Drawings and in accordance with the current material Tech Data available from the Manufacturer. Field measurements of the depth and width of the joint shall be supplied to manufacturer before material is ordered.
- B. Joint sealer/expansion joint material to be installed in strict accordance with the manufacturer's instructions.
  1. Installed each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material.
  2. Install in manner to provide seal continuity at ends, turns and intersections of joints.
  3. Provide additional wet seal joints where required by manufacturer.
- C. Remove all strip-off waste materials and excess foam sealant from site immediately upon completion of work.

## 2.9 CLEANING

- A. Clean all surfaces of adjacent surfaces which have been marked or soiled by the work of this Section, removing all excess sealant and caulking materials with solvents which will not damage the surfaces in any way.

## 2.10 PROTECTION

- A. During the operation of sealant work, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled.

## 2.11 SCHEDULE

- A. General: Seal joints indicated and all interior and exterior joints, seams, and intersections between dissimilar materials.
- B. Sealant Colors:
  1. Colors for Sealant Types "P2" and "HL2": Match colors furnished by the Architect, or match other building materials as directed. Should such custom colors not be available from the approved manufacturer, except at additional charge, provide all such colors at no change in Contract Sum.
  2. Colors for Sealant Types "BP2", "P1", "HL1", "HT", "SC", "SE", and "SM": As selected by the Architect from manufacturer's standard colors.
  3. Color for Sealant Types "AA" and "AP": White.
  4. Color for Sealant Type "PE": Black.
  5. In concealed installation, and in partially or fully exposed installation where so approved by

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the Architect, standard gray or black sealant may be used.

END OF SECTION