

**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL**

**TOWN OF SHUTESBURY
1 COOLEYVILLE RD; P.O. BOX 276
SHUTESBURY, MA 01072**

April 26, 2023

Prepared For:

**Town of Shutesbury
1 Cooleyville Rd; P.O. Box 276
Shutesbury, MA 01072**

Prepared By:

**Gale Associates, Inc.
300 Ledgewood Place, Suite 300
Rockland, MA 02370**

GALE JN 840670

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TOWN OF

SHUTESBURY

1 Cooleyville Road
Shutesbury, MA 01072

Becky Torres
Town Administrator

Tel: (413)-259-1214
Fax: (413)-259-1107

INVITATION TO BID
Shutesbury Elementary School Asphalt Roof Replacement
Wednesday, April 26, 2023
TOWN OF SHUTESBURY, MA

The Town of Shutesbury, MA is requesting bids from qualified contractors for the replacement of the Shutesbury Elementary School Asphalt Roof. This replacement roof will be constructed at the Shutesbury Elementary School at 23 West Pelham Rd., Shutesbury, MA. General Bids must be received on or before **Wednesday, May 17, 2023 at 4:00 PM** and publicly opened online, forthwith. General bidders must be certified by the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) for the category of "ROOFING". General bids shall be accompanied by a DCAMM Certificate of Eligibility for the category, and an Update Statement.

A 5% Bid Bond must accompany the bid submittal. All bids are subject to prevailing wage and the weekly payroll reporting. No responsibility shall be attached to any person for the premature opening of bids not properly marked.

No bid will be accepted at any other location or after time and date specified. Bid Forms and Contract Documents in electronic form will be available at www.biddocs.com on **April 26, 2023 at 4:00 P.M.** Register, log in and search for the name of the project for a free, downloadable bid set. Bidders may request hard copies of the Contract Documents for a deposit of \$50.00 per set (maximum of 2 sets) payable to BidDocs ONLINE, Inc. via electronic payment or a certified or cashier's check. Hard copies may be picked up at Nashoba Blue, Inc. at 433 Main Street, Hudson, MA 01749. Bidders requesting Contract Documents to be mailed to them shall include a separate check for \$40.00 per set for UPS Ground (or \$65.00 per set for UPS overnight), nonrefundable, payable to BidDocs ONLINE, Inc. to cover mail handling costs.

This deposit will be refunded for up to two sets for general bidders upon return of the sets in good condition within thirty days of receipt of general bids. Otherwise the deposit shall be the property of the Awarding Authority. Additional sets may be purchased for \$50.00 per set. Neither Owner nor Architect/Engineer shall be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than BidDocs ONLINE, Inc.

Addenda, if issued, will be posted to www.biddocs.com accompanied by e-mail notification to every individual or firm on record as having received a set of Contract Documents. Hard copies of addenda will not be mailed or faxed. It shall be the sole responsibility of the Contractor to ascertain the existence of any and all addenda, whether or not the addenda is presented, or received by the Bidder.

The successful bidder must furnish a 100% payment bond, 100% performance bond and a certificate of insurance as detailed in the Article X of the Town's Standard Contract (attached). No bidder may withdraw his bid for a period of sixty days, excluding Saturdays, Sundays and Holidays, after the actual date of the bid opening. Funding for this project is contingent on the approval of Annual Town Meeting which will be held June 3, 2023. Wage rates are subject to the minimum rates per MGL Chapter 149, Section 26 to 27h, inclusive. These rates are included in the bid documents.

All bids for this project are subject to applicable bidding laws of Massachusetts, including MGL Ch. 149, s.44A through 44H and all amendments and all guidelines established by the Deputy Commissioner of the Division of Capital Asset Management and Maintenance regulation 810 C.M.R. 4.00. All work on this project must meet the requirements of all applicable state and local codes, laws and ordinances, as well as the requirements of the Specifications. Contractors shall schedule work, material deliveries and provide protection as required to cause as little interference as possible with the Owner's normal use of the building.

Sections 29, 34, 34A and 44A through 44J of Chapter 149 of the General Laws of the Commonwealth of Massachusetts are incorporated herein by reference, as well as Sections 39F through 39P and 39R and 39S of Chapter 30 of the General Laws of the Commonwealth of Massachusetts and all other provisions of the General Laws applicable to public construction on this Project. Any inconsistency between the Invitation to Bid, Information for Bidders, Bid Forms, Conditions or any other Contract Documents or potential Contract Document and these statutes, or any other applicable statutes, by-laws or regulations existing on the date on which a bid is submitted, shall not be grounds for invalidating the bidding procedure, but where required by law, such statute, by-law or regulation shall be deemed to govern.

The Town of Shutesbury reserves the right to accept any bid; reject any or all bids deemed not to be in the Town's best interest; reserves the right to waive or permit correction of minor informalities; and to conduct discussions with all qualified offers in any manner necessary to serve the best interests of the Town of Shutesbury and the bidders.

Rebecca Torres
Town Administrator
Town of Shutesbury

I. Purchase Description

A description of the work to be performed is detailed in the attached specifications. The work includes removal of the existing asphalt shingle roof assembly and replacement with Architectural shingle roof assembly. No asbestos was found in the existing work area. New gutters and downspouts will be provided and connected to the existing storm drain piping below grade.

No charges will be allowed for federal, state, or municipal sales and excise taxes, for which the Town of Shutesbury is exempt. The prices bid shall be net and shall not include the amount of any such tax.

1. Completion Date: All work shall be completed by August 25, 2023 with Substantial Completion by August 18, 2023.

Failure to meet this milestone will result in liquidated damages being incurred.

Liquidated damages for delays in the performance of the Work shall be \$1,000 per day, in accordance with Article XI of the Standard Contract.

2. Site Meeting: Any contractor wishing to visit the site at the Shutesbury Elementary School may attend a **Pre-Bid Meeting on May 3 at 9am**. Please contact Becky Torres, Town Administrator, 413-259-1214, if you plan on attending the Pre-Bid Meeting.

3. Addenda / Questions: All questions must be submitted via email by May 5, 2023 so that the Town, if necessary, can issue an addendum by May 10, 2023 at 4pm. The Engineer, Cole McCarthy and Christopher Musorofiti, should be copied on all questions.

Contact: Becky Torres
Town Administrator

Email: townadmin@shutesbury.org, ctm@gainc.com and cm@gainc.com

II. Evaluation Criteria

Eligible bids will first be examined for their responsiveness to what is requested in this Invitation for Bids. Responsibility of the bidder will then be ascertained. It is the intention of the Town to award the contract to the lowest responsive and responsible bidder.

1. Responsiveness

Bidders must completely fill out and submit the bid form and all other required forms. All supplies and services that are the subject of the bid must meet the minimum standards and specifications set forth in the purchase description including standards by which the procurement officer will determine acceptability as to quality, workmanship, results of inspections and tests, and suitability for a particular purpose.

2. Responsibility

Bidders must demonstrate that they meet the following measures of responsibility:

- (A) Bidder is licensed in the Commonwealth of Massachusetts to do the required work. The Town of Shutesbury will reject any bid from a bidder not appropriately licensed.

- (B) Bidder has successfully completed 3 projects of similar size and scope in the last three years. The Town of Shutesbury will reject any bid from a bidder that fails to demonstrate the necessary experience.
 - (C) General Bidders must be certified by the Division of Capital Asset Management and Maintenance (DCAMM) in the following category of work: Roofing, and must submit a current DCAMM Certificate of Eligibility and signed DCAMM Prime Update Statement (Form CQ 3).
 - (D) Bids are subject to M.G.L. c.149 §44A-J & to minimum wage rates as required by M.G.L. c.149 §§26 to 27H inclusive. Copies are bound in this Project Manual.
3. Requirements Regarding Osha Approved Safety And Health Training: Be advised that a new Massachusetts law has been enacted that requires all employees who work on Massachusetts public works construction sites must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004, which became effective July 1, 2006.
- (A) This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.
 - (B) The Contractor and all subcontractors on this project will be required to provide certification of compliance with this requirement. Non-compliance with this new Massachusetts Law will disqualify you from bidding on public contracts.
 - (C) The Contractor and filed subcontractors shall furnish to the Owner, with the first certified payroll report, 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).
 - (D) It is the responsibility of the General Contractor to ensure compliance with the above-referenced OSHA requirements for all subcontractors and filed subcontractors performing work on this project.

IV. Preparation of Bids

1. General Bids must be submitted on the prescribed forms. All blank spaces must be filled in, either in ink or typewritten, both in words and figures without alterations or erasures. Each General Bid shall include all documents required under Items IV.3.
2. The Bidder shall access the www.biddocs.com E-Bidding System by selecting the "Bid Listings" tab on the top right tool bar, search a word in the project title, selecting the name of the project, and then selecting "Submit Bid" on the left tool bar of the project's page. The bidder will then be prompted to fill out the "Form for General Bid", complete the "Bid Bond", complete the "Certificate of Eligibility", complete the "DCAMM Update Statement", and complete any other miscellaneous forms. After completing all bid forms, the bidder will be permitted to submit the bid using the "Submit Bid" button. Note that the bidder should receive a confirmation email that the bid has been successfully submitted.
3. Bidders may review ("View Submitted Bid"), resubmit ("Resubmit Bid"), or retract ("Retract Bid") their E-Bid at any time prior to the designated deadline. The server clock is displayed on the project's E-Bidding page and is the time of record. Bidders must select "Submit Bid" or "Resubmit Bid" prior to the designated deadline to officially submit their E-Bid online. Once submitted and after the deadline, an E-Bid cannot be edited. Upon resubmitting or retracting their E-Bid, Bidders will receive a confirmation email. Bidders are encouraged to contact BidDocs ONLINE if the email is not received.
4. Bidders are strongly encouraged to review their submitted E-Bid package by selecting "View Bid" from the project's E-Bidding page. Uploaded files may be reviewed individually by selecting the pdf icons next to the name of the file. It is the Bidder's responsibility to confirm online that their E-Bid package has been submitted successfully. Timely submission of an E-Bid shall be the full responsibility of the Bidder. It is also the Bidder's responsibility to ensure that their submitted bid is 100% true, complete, and accurate.
5. See the Invitation to Bid for the dates, times and places for General and Filed Sub-Bid openings.
6. A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
7. Any bid may be withdrawn prior to the scheduled time for the opening of bids or authorized postponement. No telephone or telegraphic bid, change in bid or withdrawal of bid will be received or recognized. All bidders are cautioned to allow ample time for transmittal of Bids. Any bid received after the time and date specified for opening of bids shall not be considered.

V. Drawings and Specifications

1. Bid Forms and Contract Documents in electronic format will be available at www.biddocs.com on **April 26, 2023 at 4:00 P.M.**
2. This project is being Electronically Bid (E-Bid). All bids shall be submitted online at www.biddocs.com. Hard copy bids will not be accepted by the Awarding Authority. Tutorials and instructions are available online at www.biddocs.com. For assistance, contact BidDocs ONLINE, Inc. at (978) 888-3350.
3. Preparation and Submission of Bids
 - (A) All required bid forms must be completed and submitted in PDF formatted files. The Bidder must fill-in all required fields and signatures digitally.
 - (B) Bid Security Deposit shall be at least five percent (5%) of the greatest possible bid amount, considering all alternates. Bid Bonds issued by a surety company must be uploaded with the other required forms. Bidders providing bid bonds in the form of cash or check must also complete the "Bid Bond" form.
 - (C) The Bidder must enter their bid price as a numeric, whole dollar value only with no punctuation.
 - (D) Bidders may review, resubmit, or retract an E-Bid at any time prior to bid close. Once submitted and after the deadline, a bid cannot be edited. Upon resubmitting or retracting a bid, the Bidder will receive a confirmation email. Bidders are encouraged to contact BidDocs ONLINE if the email is not received.
 - (E) If a bid is submitted prior to an Addendum being issued, the Bidder will receive an e-mail notification for informational purposes only. The Bidder must review the addendum, acknowledge all addenda, and re-submit the bid. If a Bidder fails to acknowledge all addenda their bid may be rejected by the Awarding Authority.
4. Timely submission of an E-Bid shall be the full responsibility of the Bidder. The server clock is displayed on the project's E-Bid page and is the time of record. It is the Bidder's responsibility to review and confirm online that their bid has been submitted and/or retracted and that the bid is 100% true, complete, and accurate. All Bidders are required to review their submitted E-Bid by selecting "View Bid" on the E-Bid page.
5. Bidders shall use complete sets of Bidding Documents in preparing Bids; neither the Owner nor the Designer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
6. Any interpretations, corrections or changes of the Bidding Documents will be made by Addendum, Interpretations, corrections or changes made in any other manner shall have no standing and Bidders shall not rely upon such interpretations, corrections or changes.

7. Addenda will be sent to all Bidders of record at the respective addresses furnished by the Bidders for such purposes. Each Bidder and Sub-Bidder shall ascertain prior to submitting a Bid that he has received all Addenda issued and shall acknowledge their receipt in his Bid.
8. The Owner makes no warranty, express or implied, that the Contract Documents and any estimates provided in connection therewith are accurate as to the kind or quantity of work required, and any such warranties are hereby expressly disclaimed. Each Bidder shall proceed at his own risk in investigating the proposed work, reviewing Contract Areas and conditions and the proposed Contract Documents, and in submitting a Bid. Any estimates of quantities of materials that may be provided by the Owner or its designers, engineers or other consultants are for purposes of bid comparison only and are not guaranteed.
9. Owner reserves the right to reduce the project scope by the elimination of bid items, reduction of quantities on unit price bid items, or deleting elements of lump sum bid items. No adjustment to other bid items prices will be permitted. In the case of reduction of quantities on unit price items, the unit price will not be adjusted.

VI. Bid Submission Requirements

1. The Town shall award a contract according to the evaluation criteria set forth in Section II of the Invitation for Bids within **30 days** of the receipt of bids, pending approval of funds at the Town meeting. The time for acceptance may be extended by mutual agreement of the successful bidder and the Town. A contract shall be awarded to the lowest responsive and responsible bidder.
2. A bidder may correct, modify or withdraw a bid by written notice received prior to the time and date set for the bid opening. After bid opening, a bidder may not change the price or any other provision of the bid in a manner prejudicial to the interest of the Town or fair competition. The Town shall waive minor informalities or allow the bidder to correct them.
3. The following forms must be submitted with each bid package, copies of which are provided as attachments to this Invitation for Bids:
 - (A) Division of Capital Asset Management and Maintenance (DCAMM) Certificate of Eligibility
 - (B) DCAMM Contractor Qualification Update Statement
 - (C) Bid Deposit
 - (D) Attachment A
 - (1.) Certificate As To Corporate Bidder
 - (2.) Certificate as to Payment of State Taxes
 - (3.) Certificate of Non-collusion
 - (4.) Certificate of Fair Labor Practices
 - (5.) Performance Bond
 - (6.) Payment Bond
 - (E) General Bid Form
 - (F) Unit Prices Form

4. Award Contingency

The award of this project is contingent on meeting the requirements of Bid Documents:

Project Schedule

April 26, 2023 – Solicitation Released

April 26, 2023 – Bid Document Available

May 17, 2023 – Bids Due

June 1, 2023 – Notice of Award to the Lowest Responsive & Responsible Bidder

June 5, 2023 – Execute Contract

June 26, 2023 - and weather permitting Commence Work

August 18, 2023 Substantial Completion

August 25, 2023 Work Complete

5. Communication – All communication with regard to this solicitation must be made to the Shutesbury Town Administrator. Verbal communication is not binding and shall not alter a specification, term or condition of this solicitation.
6. Subcontractors – If a bidder intends to use a subcontractor to conduct any of the work in this project, the bidder must identify the subcontractor; provide a summary of each subcontractor’s qualifications, experience and duties to be performed.

VII. Project Specifications

The Town of Shutesbury is seeking contractors to provide bids for the turnkey procurement and construction of an Asphalt Roof Replacement at the Shutesbury Elementary School. This Replacement Asphalt Roof will be located at 23 West Pelham Rd., Shutesbury, MA 01072.

1. Bids to provide procurement and installation service must include:
 - Obtaining all relevant local permits and inspections, which include building permits.
 - The contractor, subcontractor and employees for the project shall possess certifications and/or licenses as required by the Commonwealth of MA.
 - Installation must be in compliance with all local, state and federal codes and standards including the most recent addition of the MA Building and Electric Codes.
 - Proof of insurance coverage must be compliant with the requirements of the Town of Shutesbury.
2. Technical Requirements
 - In accordance with the documents prepared by Gale Associates, Inc. dated April 26, 2023.

VIII. Project Execution

Schedule – Work shall be completed in coordination with the Shutesbury Town Administrator.

Location – Shutesbury Elementary School, 23 West Pelham Rd., Shutesbury, MA

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eBIDDING INSTRUCTIONS TO BIDDERS

THIS PROJECT IS BEING ELECTRONICALLY BID AND HARD COPY BIDS WILL NOT BE ACCEPTED. Please review the instructions in the bid documents on how to register as an electronic bidder. The bids are to be prepared and submitted at www.biddocsonline.com . Tutorials and instructions on how to complete the electronic bid documents are available online (click on the "Tutorial" tab at the bottom footer).

ARTICLE 1 - BIDDER'S REPRESENTATION

- 1.1 Each General Bidder or Sub-bidder (hereinafter called the "**Bidder**") by making a bid or sub-bid (hereinafter called "**bid**") represents that:
1. The Bidder has read and understands the Contract Documents and the bid 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 bid as submitted.

ARTICLE 2 - GENERAL BIDDER'S AND FILED SUB-BIDDER'S CERTIFICATION

- 2.1 General bids shall be submitted with the following:
1. A Certificate of Eligibility on the appropriate form prescribed and issued by the Division of Capital Asset Management and Maintenance (DCAM), showing that the Bidder is eligible to bid on projects of this size in the specified category of work (create a pdf file of the Certificate and browse & attach at www.biddocsonline.com); and
 2. A Contractor Update Statement, DCAM Form CQ3 (create a pdf file of the Update Statement and browse & attach at www.biddocsonline.com or complete the Update Statement online at www.biddocsonline.com).
 3. The Contractor Update Statement (CQ3) is not a public record as defined in DCAM regulation 810 CMR 8.06 and will not be open to public inspection.
- 2.2 Filed sub-bids shall be submitted with the following:
1. A Sub-Bidder Certificate of Eligibility on the appropriate form prescribed and issued by DCAM showing that the sub-bidder is eligible to bid on public projects in the specified category of work (create a pdf file of the Certificate and browse & attach at www.biddocsonline.com); and
 2. A Sub-Bidder Update Statement on a form prescribed by DCAM (create a pdf file of the Update Statement and browse & attach at www.biddocsonline.com or complete the Update Statement online at www.biddocsonline.com).
 3. The Sub-Bidder Update Statement is not a public record as defined in DCAM regulation 810 CMR 8.06 and will not be open to public inspection.
- 2.3 It is the Bidder's responsibility to obtain the necessary forms from DCAM and make application in sufficient time for evaluation of the application and issuance of a Certificate of Eligibility prior to bid.
- 2.4 **Be advised that a new Massachusetts law has been enacted that requires all employees who work on Massachusetts public works construction sites must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004, which will become effective July 1, 2006.**
1. **This requirement will apply to any general bid or sub bid submitted on or after July 1, 2006 and to any contract awarded on or after July 1, 2006.**
 2. This law directs the Massachusetts Attorney General to restrain the award of construction contracts to any contractor who is in violation to this requirement and to restrain the performance of these contracts by non-complying contractors.

3. The Contractor and all subcontractors on this project will be required to provide certification of compliance with this requirement in accordance with the provisions of Section 01100 of these Contract Documents. Non-compliance with this new Massachusetts Law will disqualify you from bidding on public contracts.

ARTICLE 3 - REQUESTS FOR INTERPRETATION

- 3.1 Bidders shall promptly notify the Designer of any ambiguity, inconsistency, or error which they may discover upon examination of the Contract Documents, the site, and local conditions.
- 3.2 Bidders requiring clarification or interpretation of the Contract Documents shall make a written request to the Designer. The Designer will answer such requests if received seven (7) calendar days before the date for receipt of the bids.
- 3.3 Interpretation, correction, or change in the Contract Documents will be made by written Addendum which will become part of the Contract Documents. Neither the Awarding Authority nor the Designer will be held accountable for any oral interpretations, corrections, or changes.
- 3.4 Copies of addenda will be made available for inspection at the locations listed in the Advertisement where Contract Documents are on file or online at www.biddocsonline.com. **Hard copies of the addenda will not be forwarded to the plan holders. The bidder is solely responsible for reviewing all addenda posted on the project website.**

ARTICLE 4 - PREPARATION AND SUBMISSION OF BIDS

4.1 Forms and Bid Preparation

Bids shall be submitted electronically on the "**Form for General Bid**" or the "**Form for Sub-Bid**" at www.biddocsonline.com, as appropriate and available at no cost. The forms enclosed in the Project Manual shall not be extracted or used.

- 4.1.1 All bidders must complete and submit the electronic bidder registration form (**Electronic Bidder Signature Authorization Form** – hard copy) to BidDocs ONLINE Inc. The form must be received by BidDocs ONLINE Inc. at least three business days prior to the bidding opening for processing. The Awarding Authority, the Designer or BidDocs ONLINE Inc. will not be held accountable if the bidder fails to submit the electronic bidder registration form in a timely manner. Instructions to submit the form are in the Contract Documents and are available at www.biddocsonline.com (click on the "Tutorial" tab at the bottom footer).
- 4.1.2 All entries on the bid form shall be made online. Any documents that are attached to the bid must be in a pdf format.
- 4.1.3 Sums shall be expressed in both words and figures in the space indicated on the bid form. Where there is a discrepancy between the bid sum expressed in words and the bid sum expressed in figures, the words shall control. Note: **The electronic bid forms match the "word" amount to the numeric "figure" amount entered.**
- 4.1.4 If the requirement of Performance and Payment Bonds for filed sub-contractors is left blank by the General Bidder on the Form for General Bid, the Awarding Authority shall interpret this as a "yes". No increase in contract price will be allowed for providing these bonds. Note: **The system requires that the general bidder explicitly acknowledge yes or no.**
- 4.1.5 Costs for subcontractor's bond premiums shall be paid for by the General Contractor in accordance with M.G.L. c.149 §44F.

4.2 Bid Deposits shall be:

- 4.2.1 at least five percent (5%) of the greatest possible bid amount, considering all alternates;
- 4.2.2 made payable to the **Awarding Authority**;
- 4.2.3 conditioned upon faithful performance by the principal of the agreements contained in the bid, and

- 4.2.4 in the form of:
- .1 cash,
 - .2 certified check, treasurer's or cashier's check issued by a responsible bank or trust company, or
 - .3 bid bond issued by a surety company licensed to do business in the Commonwealth of Massachusetts.

Note: Both the "bid bond" or "check" bid deposits are to be scanned and uploaded to the system as a pdf file. **IMPORTANT NOTICE:** If the bidder elects to make a bid deposit in the form of "cash" or "check" the bidder must have the cash or check physically delivered to the Awarding Authority prior to the date and time of the bid opening.

- 4.2.5 retained until the execution and delivery of the Owner/Contractor Agreement if they represent the bid deposit of one of the three (3) lowest responsible and eligible General Bidders or one of the three (3) lowest Sub-bidders in a filed sub-bid trade, or a sub-bidder listed by one of the three (3).lowest General Bidders.

4.3 Electronic Submission of Filed Sub-Bids

Sub-bids, including the bid deposit, DCAM Sub-Bidder Certificate of Eligibility, DCAM Sub-Bidder Update Statement and required miscellaneous forms noted in the bid documents shall be submitted electronically online at www.biddocsonline.com. No hard copy bids will be accepted.

You will receive an email confirming submission of your bid. Click on the email link to review and print the submitted bid documents. Keep the email as a **receipt** that your bid was submitted. **Note:** You may modify your bid at any time prior to the bid date and time advertised. You will receive a new email each time you re-submit your bid.

4.3.1 Date and time for receipt of bids is set forth in the Advertisement.

4.3.2 Timely submission of a bid online shall be the full responsibility of the Bidder. **Note:** The project countdown clock on the website is the official clock that will determine when the bids are due.

4.4 Electronic Submission of General Bids

General Bids, including the bid deposit, DCAM Certificate of Eligibility, Prime /General Contractor Update Statement (CQ3) and required miscellaneous forms noted in the bid documents shall be submitted electronically online at www.biddocsonline.com . No hard copy bids will be accepted.

You will receive an email confirming submission of your bid. Click on the email link to review and print the submitted bid documents. Keep the email as a **receipt** that your bid was submitted. **Note:** You may modify your bid at any time prior to the bid date and time advertised. You will receive a new email each time you re-submit your bid.

4.4.1 Date and time for receipt of bids is set forth in the Advertisement.

4.4.2 Timely submission of a bid online shall be the full responsibility of the Bidder. **Note:** The project countdown clock on the website is the official clock that will determine when the bids are due.

4.5 Sub-Trade Solicitations

4.5 .1 If the General Bidders are instructed to carry an amount for a given sub-trade listed under Item 2, General Bidders shall list the sub-trade, and amount provided by the Awarding Authority. The line under **bonds required** on the General Bid Form should be marked "no" in order for subparagraph 4.5.2.2 to be applicable.

4.5 .2 Upon solicitation of a subcontractor to perform the work required by the sub-trade as mentioned in subparagraph 4.5.1, the selected General Contractor's contract amount will be adjusted as follows:

- .1 The difference between the subcontract amount and the amount carried in the bid.
- .2 The total cost of the subcontractor's bonds, if the selected General Contractor requires such bonds after the solicitation is completed and if the selected General Contractor complied with 4.4.1 above, and
- .3 The resultant cost difference for General Contractor's Bonds premiums.

4.5.3 Overhead and Profit for supervision of the sub-trade in question shall be included by all General Bidders in Item 1.

4.5.4 Additional overhead and profit is not allowed on the incremental difference as stated in M.G.L. c.149 §44F (4)(a)(2) nor on the costs for the additional bond premiums.

4.6 Addenda

4.6 .1 All modifications to the bid documents will be issued via an addendum. All registered plan holders will be electronically notified when addenda are issued. Hard copies of the addenda will not be forwarded to the plan holders. The bidder is solely responsible for reviewing all addenda posted on the project website. The bidder must acknowledge all addenda have been reviewed by selecting “yes” or “no” as part of the eBidding process. If the bidder selects “no”, the bidder will automatically be directed to the Addenda icon on the project page.

ARTICLE 5 - ALTERNATES

- 5.1 Each General Bidder shall acknowledge Alternates in Section C on the Form for General Bid by entering the dollar amount of addition or subtraction necessitated by each Alternate.
- 5.2 In the event an Alternate does not involve a change in the amount of the base bid, the Bidder shall so indicate by entering **"0" (numeric figure)** in the “Add” space provided for that Alternate.
- 5.3 Sub-bidders shall enter on the Form for Sub-bid the amount of addition or subtraction necessitated by each Alternate which pertains to the work of that trade. If an Alternate does not involve a change in the bid amount, indicate by entering **"0" (numeric figure)** in the “Add” space provided for that Alternate.
- 5.4 General Bidders shall enter on the Form for General Bid a single amount for each Alternate which shall consist of the Sub-bidders' amounts and the amount for work performed by the General Contractor.
- 5.5 The low Bidder will be determined on the basis of the sum of the base bid and the accepted alternates.

ARTICLE 6 - WITHDRAWAL OF BIDS

6.1 Before Opening of Bids

- 6.1.1 Any bid may be withdrawn (retracted) prior to the time designated for receipt of bids upon clicking the tab to “Retract Bid”. The bidder and Awarding Authority will receive an email confirming that the bidder retracted the bid.
- 6.1.2 Withdrawn bids may be modified and resubmitted up to the time designated for the receipt of bids.

6.2 After Opening of Bids

Bidders may withdraw a bid, without penalty, any time up to the time of Award as defined in paragraph 6.1, and upon demonstrating, to the satisfaction of the Awarding Authority, that a bona fide clerical error was made during the preparation of the bid. Failure to conclusively demonstrate a bona fide clerical error may result in forfeiture of the bid deposit.

6.3 In the event of a general bid withdrawal after opening of bids, the Awarding Authority shall consider the bid from next lowest eligible and responsible bidder.

6.4 Sub-bid Withdrawal/Substitution

- 6.4.1 **Selection** - Should a filed sub-bidder listed on the Form for General Bid of the selected General Contractor (per Article 7 of these instructions) withdraw its bid, be unable to provide performance and payment bonds as required by the selected General Contractor, or otherwise refuse to sign a subcontract with the selected General Contractor, the Awarding Authority and the selected General Contractor shall consider the other sub-bids to which the Awarding Authority and the selected General Contractor make no objection and substitute a new sub-bidder for such trade.
- 6.4.2 **Process:** If the selected General Contractor:
- .1 **required bonds (on the Form for General Bid) for the sub-bidder who withdrew** then the selected General Contractor's contract amount shall be adjusted to account for:
- .1 the difference between the amount of the sub-bid listed on the Form for General Bid and the amount of the replacement sub-bid, and
- .2 the incremental difference in the cost of the General Contractor bonds premiums, but

- .3 there will be no compensation for additional subcontractor bond premiums
- .2 **did not require bonds (on the Form for General Bid) for the sub-bidder who withdrew** and now the selected General Contractor wants bonds from the replacement sub-bidder, then the selected General Contractor's contract amount shall be adjusted:
 - .1 to account for the difference between the amount of the sub-bid listed on the Form for General Bid and the amount of the replacement sub-bid,
 - .2 the amount for the new sub-bidder's performance and payment bonds, and
 - .3 the incremental difference in the cost of the General Contractor bond premiums.
- 6.4.3 There shall be no adjustment to the selected General Contractor's contract amount except as set forth in 6.4.2.1 and 6.4.2.2. Additional overhead and profit is not allowed on the incremental difference in the sub-bids or on the costs for the additional bond premiums.

ARTICLE 7 - CONTRACT AWARD

- 7.1 **Award** means both the determination and selection of the lowest, responsible and eligible bidder, by the Awarding Authority.
- 7.2 The Awarding Authority will award the contract to the lowest responsible and eligible bidder within thirty days, Saturdays, Sundays, and legal holidays excluded after the opening of bids in accordance with M.G.L. c.149 §44A.
- 7.3 The Contract will be awarded to the lowest responsible and eligible Bidder, except in the event of substitution as provided under M.G.L. c.149 §§44E and 44F, in which cases the procedure as required by said sections shall govern the award of the Contract.
- 7.4 The award of this Contract is subject to the approval of the Awarding Authority. Contracts without approval shall not be considered valid.
- 7.5 The Awarding Authority reserves the right to waive any informalities in or to reject any or all Bids if it be in the public interest to do so.
- 7.6 The Awarding Authority also reserves the right to reject any sub-bid if it determines that such sub-bid does not represent the bid of a person competent to perform the work as specified, or if less than three sub-bids are received for a sub-trade, or if bid prices are not reasonable for acceptance without further competition.
- 7.7 As used herein, the term "lowest responsible and eligible bidder" shall mean the General Bidder whose bid is the lowest of those Bidders demonstrably possessing the skill, ability, and integrity necessary for the faithful performance of the work, and who meets the requirements for Bidders set forth in M.G.L. c.149 §44A-J and is not debarred from bidding under M.G.L. c.149 §44C; and who shall certify that they are able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work.

ARTICLE 8 - FORMS REQUIRED FOR CONTRACT APPROVAL

- 8.1 Upon Award, the General Bidder shall complete the following forms to ensure prompt contract validation. These forms will be provided to the selected General Bidder by the Awarding Authority. Submit (3) originals of each.
- 8.2 **Owner/Contractor Agreement and Form of Corporate Vote.**
- 8.3 **Form of Contractor's Equal Employment Certification in accordance with the General Conditions. Form of Sub-Contractor's Equal Employment Certification in accordance with the General Conditions.**
- 8.4.1 **Form of Performance Bond and Form of Payment Bond** must be submitted by the General Contractor on the Awarding Authority'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.

- 8.4.2 Performance and Payment Bonds** must also be submitted for all filed subcontractors, if required by the General Bidder on its Form for General Bid, in the total amount of the subcontract payable to the General Contractor.
- 8.5.1 Insurance Certificates** for the General Contractor and all **filed subcontractors** are required and must be submitted in accordance with the General Conditions.
- 8.5.2** General Contractors must indicate on special perils insurance or installation floater if stored materials are covered.
- 8.6 Form of Subcontract for all filed subcontractors** - executed and submitted on the statutory subcontract form.
- 8.7 Statement of Management on Internal Accounting Controls and a Statement prepared by a CPA** expressing an opinion to the state of Management Controls, as required by M.G.L. c.30 §39R. This applies to the General Contractor only.

ARTICLE 9 - CONTRACT VALIDATION

- 9.1** The Owner-Contractor Agreement shall not be valid until signed by Awarding Authority.
- 9.2** The Notice to Proceed for construction shall not be issued until the Owner/Contractor Agreement has been validated by the Awarding Authority.
- 9.3** Incomplete or unacceptable submissions of forms required by paragraphs 8.2 - 8.7 will delay the validation of the Owner/Contractor Agreement by the Awarding Authority.

END OF SECTION

Attachment A—(1) Certificate As to Corporate Bidder; (2) Certificate as to Payment of State Taxes; (3) Certificate of Non-collusion; (4) Certificate of Fair labor practices; (5) Performance Bond; (6) Payment Bond; and (7) Form of General Bid.

(1) CERTIFICATE AS TO CORPORATE BIDDER

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

(Corporate Seal)

(Secretary-Clerk)

Dated: _____

(2) CERTIFICATE AS TO PAYMENT OF STATE TAXES

Pursuant to M.G.L. Ch. 62C, sec. 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

Social Security Number or
Federal Identification Number

Signature of Individual or Corporate
Name

By: _____
Corporate Officer (if applicable)

(3) CERTIFICATE OF NON-COLLUSION

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

(Name of person signing bid or proposal)

(Name of Business)

(4) CERTIFICATE OF FAIR LABOR PRACTICES

The undersigned certifies under penalties of perjury that in accordance with Section 504 of the (Federal) Rehabilitation Act of 1973 and 31 Code of Federal Regulations, Part 51, his/her company does not discriminate on its employment, procurement and marketing activities on the basis of race, creed, color national origin, sex, handicap or age.

(Name of person signing bid or proposal)

(Name of Business)

(5) PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____
(Name of Contractor)

a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture or Individual)

_____ of _____, State of _____
(Surety) (City & State)

_____ hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the Town of _____, _____, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20____ (the "Construction Contract"), for the construction described as follows: _____

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

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after (1) the Owner has declared the Principal in default of the Construction Contract or any provision thereof or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to execute the work consistent with, and in conformance to, the Construction Contract (collectively referred to as a "Contractor Default"). The determination of a Contractor Default shall be made solely by the Owner. The Owner need not terminate the Construction Contract to declare a Contractor Default or to invoke its rights under this Bond.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of the following steps: (1) arrange for the Principal to perform and complete the work of the Construction Contract; (2) arrange for a contractor other than the Principal to perform and complete the work of the Construction Contract; (3) reimburse the Owner, in a manner and at such time as the Owner shall decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Construction Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

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

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Construction Contract; (2) additional design, professional services, and legal costs, including attorneys' fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Construction Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligation of the Principal, if any, as provided in the Construction Contract; and (5) liquidated damages as provided in the Construction Contract, or if none are so specified, actual and foreseeable consequential damages resulting from the Contractor Default or default of the Surety under this Bond.

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

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

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

ATTEST:

_____ (Principal Secretary) By _____ Principal

_____ (Address-Zip Code)

Witness as to Principal (SEAL)

_____ (Address-Zip Code)

ATTEST:

_____ (Attorney-in-Fact) By _____ Surety

_____ (Attorney-in-Fact)

_____ (Address-Zip Code)

Witness as to Surety (SEAL)

_____ (Address-Zip Code)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

(6) PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____

_____ a _____
(Name of Contractor) (Corporation, Partnership, Joint Venture or Individual)

hereinafter called "Principal" and _____ of _____,
(Surety)

State of _____ hereinafter called the "Surety" and licensed by the State
(City and State)

Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the Town of _____, _____, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars

(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that Whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, 20____, for the construction described as follows:

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

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

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of the following steps: (1) arrange for the Principal to make payment to subcontractors and suppliers; (2) make payments to all subcontractors and suppliers; or (3) reimburse the Owner, in a manner and at such time as the Owner shall decide, for all costs and expenses incurred by the Owner in reimbursing the subcontractors and suppliers. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

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

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond for all payments to subcontractors and suppliers.

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

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

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

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

ATTEST:

_____	By	_____ Surety
_____		_____ (Attorney-in-Fact)
_____		_____ (Address-Zip Code)
_____ (SEAL)		
Witness as to Surety		

_____ (Address-Zip Code)		

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

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FORM FOR GENERAL BID

TO THE AWARDING AUTHORITY

A. The undersigned proposes to furnish all labor and materials required for _____ for the
PROJECT
in _____, Massachusetts,
in accordance with the accompanying plans and specifications prepared by _____

Name of Engineer/Architect

For the contract price specified below, subject to additions and deductions according to the terms of the specifications.

B. This bid includes addenda numbered: _____

C. The proposed contract price is:

Dollars \$ _____

Bid Amount in Words	Bid Amount in Numbers
---------------------	-----------------------

For Alternate	No. _____	Add \$ _____	Subtract \$ _____
	No. _____	\$ _____	\$ _____
	No. _____	\$ _____	\$ _____
	No. _____	\$ _____	\$ _____
	No. _____	\$ _____	\$ _____

Each Alternate shall be listed separately

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

ITEM 1. The work of the general contractor, being all work other than that covered by **ITEM 2.**

TOTAL OF ITEM 1\$ _____

ITEM 2. Sub-bids as follows:

Sub-trade	Name of Filed Sub-bidder	Sub-bid Amount	Bond Required	
			Yes	No
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

TOTAL OF ITEM 2\$ _____

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

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

- E. The undersigned agrees that, if he is selected as general contractor, he will within five days, Saturdays, Sundays, and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price; provided, however, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

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

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 presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

NAME OF BIDDER

SIGNATURE AND TITLE OF PERSON SIGNING BID

BUSINESS ADDRESS

Date: _____

ELECTRONIC BID - HARD COPY SUBMISSIONS WILL NOT BE ACCEPTED

**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

UNIT PRICE ATTACHMENT

Quantities/costs listed in the table below are above and beyond quantities shown in the drawings. Quantities/costs listed in the table below are to be included in the base bid AND are applicable for further additions and/or deductions to the contract price as defined in this section. General Bidder is to carry unit prices from their selected filed sub bidder for the category of work specific to the filed sub bid scope.

Each unit price will appear on the Contractor's Schedule of Values and will be tabulated as part of the final contract amount. Should the quantities listed below not be used by the Contractor, the total amount (or partial amount if some quantities are used) shall be credited to the Owner via change order. If additional quantities are encountered above those included in these tables, they shall be reimbursed to the Contractor on the unit price value.

Base Bid Unit Prices:

Section	Item	Estimated Quantity	Unit of Measure	Unit Price Dollar/Cents	Total Amount Dollar/Cents
061000	Replace deteriorated plywood decking designated to remain.	640	Square Feet	\$ _____	\$ _____
061000	Re-secure loose plywood roof decking at 12-inches on center	200	Linear Feet	\$ _____	\$ _____
062013	Re-secure loose sections of wood siding designated to remain.	200	Linear Feet	\$ _____	\$ _____
062013	Replace deteriorated tongue & groove fascia boards scheduled to be covered by new PVC trim fascia (5/4" thick x 5" wide) at eaves with 5/4" lumber (cut to fit) before installing new 1" nominal thick PVC trim board. The new lumber shall be pre-primed and shall be painted to match existing tongue and groove wood fascia boards.	400	Linear Feet	\$ _____	\$ _____

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**STANDARD CONTRACT
TOWN OF SHUTESBURY
1 Cooleyville Road, Shutesbury, MA 01072**

CONTRACT FOR: Roof Replacement and Associated Work at **Shutesbury Elementary School**
This Contract is made this ___ day of _____, by and between the Town of Shutesbury, a municipal corporation located within the Commonwealth of Massachusetts, acting through its Chief Procurement Officer (hereinafter, the "Town"), and _____, a company with a business address at _____.

**ARTICLE I
SCOPE OF SERVICES**

The Contractor shall furnish **Shutesbury Elementary School Asphalt Roof Replacement Bid** as requested in a (bid dated; telephone quote; etc.) by the Town on April 26, 2023. Contract documents shall include this Contract; the Town's Request for Bid; insurance certificates; Specifications and any addenda and Performance and Payment Bonds; and all of which are incorporated herein by reference.

**ARTICLE II
TERM OF CONTRACT**

This Contract shall be effective as of the date first written above and shall terminate September 30, 2023.

**ARTICLE III
COMPENSATION**

1. **Contract Sum:** The Town shall pay the Contractor in current funds for the performance of the work described in the Scope of Services at the price quoted, for a Contract Sum not to exceed the prices quoted on, _____ for the amount of \$ _____.
2. **Payment Schedule:** Compensation for the services pursuant to this Contract shall be paid on proper acceptance by the Town of the services provided pursuant to the Specifications.

**ARTICLE IV
AFFIRMATIVE ACTION**

The parties hereto agree that it shall be a material breach of this Contract for the Contractor to engage in any practice which shall violate any provision of Massachusetts General Laws, Chapter 151B, relative to discrimination or privileges of employment on basis of race, color, religion, sex, national origin, ancestry, age, sexual orientation or disability.

ARTICLE V
COMPLIANCE WITH LAWS

The Contractor shall comply with all Federal, State and local laws, rules, regulations and orders applicable to the services provided pursuant to this Contract, and shall be responsible for obtaining all necessary licenses, permits, and approvals.

To the extent that the Contractor is responsible for wages, benefits, overtime wages or other labor related costs, expenses or penalties as a result of applicable laws, the Contractor shall be and is solely responsible for such wages, other labor related costs, expenses and/or penalties and the Town shall not have any responsibility to make any such payment, and further the Contractor shall indemnify and hold the Town harmless for all such wages, labor costs, expenses and/or penalties, including, but not limited to, any determination or judgment related thereto and any attorney's fees incurred by the Town in relation thereto or the defense thereof.

ARTICLE VI
INCORPORATION OF G. L.

This Contract shall be considered to include all terms required to be included by the General Laws of the Commonwealth of Massachusetts, as amended, and any other laws as though such terms were set forth in full herein, to the extent that the same are applicable to this Contract and the Contractor.

ARTICLE VII
INDEPENDENT CONTRACTOR

The Contractor acknowledges and agrees that it is acting as an independent Contractor for all work and services rendered pursuant to this Contract, and shall not be considered an employee or agent of the Town for any purpose.

ARTICLE VIII
TOWN'S LIABILITY

The Town's liability under this Contract shall be to make all payments when they shall become due, and the Town shall be under no further obligation or other liability. Nothing in this Contract shall be construed to render the Members of the Board of Selectmen, the Board of Health, or any other officer of the Town, or their successors in office, personally liable or any obligation under this Contract.

ARTICLE IX
INDEMNIFICATION

The Contractor shall indemnify and hold harmless the Town, its officers, boards, agents and employees from any loss, damage, cost, charge, expense or claim for injury to person or property, which may be made as a result of any act, omission or default on the part of the Contractor, or any of its agents or employees, and will pay promptly on demand all costs and expenses of the investigation thereof, including attorney's fees and expenses. If any such claim is made, the Town may retain out of any payments, then or thereafter due to the Contractor, a sufficient amount to protect the Town against such claims, costs and expenses.

ARTICLE X
INSURANCE

The Contractor shall be responsible to the Town or any third party for any property damage or bodily injury caused by it, any of its subcontractors, employees or agents in the performance of, or as a result of, the work under this Agreement. The Contractor, on behalf of itself and any subcontractors used, hereby certifies that the Contractor and such subcontractors are insured for workers' compensation, and claims on account of property damage, bodily injury, personal and product liability. The Contractor and all subcontractors it uses shall purchase, and maintain in full force and effect insurance policies in the amounts here indicated.

General Liability

Bodily Injury Liability:	\$1,000,000 per occurrence
Property Damage Liability	\$1,000,000 per occurrence
(or combined single limit)	\$1,000,000 per occurrence

Automobile Liability

Bodily Injury Liability:	\$,000,000 per occurrence
Property Damage Liability	\$1,000,000 per occurrence
(or combined single limit)	\$1,000,000 per occurrence

Workers' Compensation Insurance

Coverage for all employees in accordance with Massachusetts General Laws

Professional Liability Insurance

Minimum Coverage	\$1,000,000 per claim.
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Prior to commencement of any work under this Agreement, the Contractor shall provide the Town with Certificates of Insurance which include the Town and the Designer as an additional named insured for the General Liability and Automobile Liability policies and which include a thirty-day notice of cancellation to the Town.

ARTICLE XI
LIQUIDATED DAMAGES

It is expressly understood and agreed, by and between the Contractor and Owner, that the time for the completion of the Work described herein is a reasonable time for the completion of same, taking into consideration the average climatic range and usual industrial and/or residential conditions prevailing in this locality. If the said Contractor shall neglect, fail or refuse to substantially complete the Work within the times herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Agreement not as a penalty but as liquidated damages for such breach of contract, for each and every calendar day that the Contractor shall be in default after the time stipulated for completing the Work. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be deducted by the Owner from periodic payments. The said amount may

STANDARD CONTRACT

be withheld from periodic or final payments due to the Contractor, in addition to retainage and other back charges. Nothing in this section shall preclude the Owner from recovering its actual damages on account of the failure of the contractor to perform the Work within the time required, nor from pursuing any other remedy available to it at law or under the Contract Documents.

ARTICLE XII
ASSIGNMENT

The Contractor shall not assign, sublet, or otherwise transfer the work required under this Contract, in whole or in part, without the prior written consent of the Town, and shall not, either legally or equitably assign any or the moneys payable under this Contract, except by and with the written consent of the Town.

ARTICLE XIII
INSPECTION AND REPORTS

The Town shall have the right at any time to inspect the equipment and premises of the Contractor, including the right to enter upon any property owned or occupied by the Contractor, whether situated within or beyond the limits of the Town. Whenever requested, the Contractor shall immediately furnish to the Town full and complete written reports of his operation under this Contract in such detail and with such information as the Town may request.

ARTICLE XIV
TERMINATION FOR CAUSE

If at any time during the term of this Contract the Town determines that the Contractor has breached the terms of this Contract by negligently or incompetently performing the work, or any part thereof, or by failing to perform the same, to the satisfaction of the Town, or by not complying with the direction of the Town or its agents, or by otherwise failing to perform this Contract in accordance with all of its terms and provisions, the Town shall notify the Contractor in writing stating therein the nature of the alleged breach and directing the Contractor to cure such service breach within ten (10) days. The Contractor specifically agrees that it shall indemnify and hold harmless the Town as provided in Article IX from any loss, damage, costs, charge, expense or claim arising out of or resulting from such breach regardless of its knowledge or authorization of the actions resulting in the breach. If the Contractor fails to cure said breach within ten (10) days, the Town may, at its election at any time after the expiration of said ten (10) days, terminate this Contract by giving written notice thereof to the Contractor specifying the effective date of the termination. Such termination shall not prejudice or waive any rights or action which the Town may have against the Contractor because of any default or failure in performance of this Contract up to the date of such termination, and the Contractor shall be liable to the Town for any amount which it may be required to pay in excess of the Contract Sum provided herein in order to complete the work specified herein in a timely manner.

ARTICLE XV
NOTICE

Any and all notices, or other communications required or permitted under this Contract, shall be in writing and delivered by hand or mailed postage prepaid, return receipt requested, by registered or certified mail or by other reputable delivery service, to the parties at the addresses set forth on Page 1 or furnished from time to time in writing hereafter by one party to the other party.

Any such notice or correspondence shall be deemed given when so delivered by hand, if so mailed, when deposited with the U.S. Postal Service or, if sent by private overnight or other delivery service, when deposited with such delivery service.

ARTICLE XVI
SEVERABILITY

If any term or condition of this Contract or any application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Contract shall not be deemed affected thereby unless one or both parties would be substantially or materially prejudiced.

ARTICLE XVII
GOVERNING LAW

This Contract shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Massachusetts and the Contractor submits to the jurisdiction of any of its appropriate courts for the adjudication of disputes arising out of this Contract.

ARTICLE XVIII
ENTIRE AGREEMENT

This Contract, including all documents incorporated herein by reference, constitutes the entire integrated agreement between the parties with respect to the matters described. This agreement supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the parties hereto.

ARTICLE XIX
REAP STATEMENT

The Contractor shall sign the following statement: Pursuant to Massachusetts General Laws, Chapter 626, Section 49A, I certify under penalties of perjury that I have filed all State Tax Returns and paid all State Taxes required under the Law.

(signature of individual or Corporate name - Corporate Officer)

Social Security # or FIN #

EXECUTION

TOWN OF SHUTESBURY:
(By its Chief Executive Officer)

Date

Rita Farrell, Selectboard Chair

CONTRACTOR:

_____. (Company)

(Signature of Authorized Individual/Corporate Officer)

_____. (address)

_____ (city) _____ (state)

(telephone number) (email) (fax number)

Date

**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

CERTIFICATE OF VOTE

I, _____, Clerk of _____ hereby certify that, at a meeting of the Board of Directors of said Corporation duly held on _____, _____
(DATE MUST BE EARLIER THAN DATE OF CONTRACT)
at which a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

“VOTED: That _____
(Name of Officer authorized to sign for Corp.)

be and hereby is authorized, directed and empowered for, in the name and on behalf of this Corporation, to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts, bonds and other obligations of the Corporation; the execution of any such contract, bond or obligations by such _____
(Name of Officer)

to be valid and binding upon this Corporation for all purposes, and that a Certificate of the Clerk of the Corporation setting forth this vote shall be delivered to the Town of Shutesbury and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation is delivered to the Town of Shutesbury.

I further certify that _____ is the duly elected _____
(Name of Officer) (Title)

of said Corporation."

Signed _____
(Clerk-Secretary)

Place of Business: _____

Date of Contract: _____

AFFIX CORPORATE SEAL

COUNTERSIGNATURE: _____
(Name and Title of Officer)

In the event that the Clerk or Secretary is the same person as the Officer authorized to sign that contract or other instrument for the Corporation, this certificate must be countersigned by another authorized officer of the Corporation.

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**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

**CERTIFICATE OF VOTE
LIMITED LIABILITY COMPANY**

I, _____, Manager of _____ (the
"LLC") hereby certify that, at a meeting of the members of the LLC duly held on
_____, _____, at which a quorum was present

(DATE MUST BE EARLIER THAN DATE OF CONTRACT)

and voting throughout, the following vote was duly passed and is now in full force and effect:

"VOTED: That _____
(Name of Manager or Member authorized to sign for LLC)

be and hereby is authorized, directed and empowered for, in the name and on behalf of this
LLC, to sign, seal, execute, acknowledge and deliver all contracts, bonds and other obligations of
the LLC; the execution of any such contract, bond or obligations by
_____ to be valid and binding upon this

(Name of Manager or Member authorized to sign for LLC)

LLC for all purposes, and that a Certificate of the Manager of this LLC setting forth this vote shall
be delivered to the Town of Shutesbury and that this vote shall remain in full force and effect
unless and until the same has been altered, amended or revoked by a subsequent vote of the
members of the LLC and a certificate of such later vote attested by a Manager or Member of the
LLC is delivered to the Town of Shutesbury.

I further certify that _____ is a member in good
(Name of Manager or Member authorized to sign for LLC)
standing of the LLC or is the duly appointed Manager of the LLC.

Signed: _____ , _____
(Name of Certifying Member or Manager) [Title]

Place of Business: _____

Date of Contract: _____

COUNTERSIGNATURE: _____

In the event that the certifying manager or member is the same person as the manager or member
authorized to sign that contract or other instrument for the LLC, this certificate must be
countersigned by another authorized partner of the LLC.

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**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

**CERTIFICATE OF VOTE
PARTNERSHIP**

I, _____, Partner of _____
hereby certify that, at a meeting of the governing body of said Partnership duly held on
_____, _____ at which a quorum was present

(DATE MUST BE EARLIER THAN DATE OF CONTRACT)

and voting throughout, the following vote was duly passed and is now in full force and effect:

“VOTED: That _____

(Name of Partner authorized to sign for Partnership)

be and hereby is authorized, directed and empowered for, in the name and on behalf of this
Partnership, to sign, seal, execute, acknowledge and deliver all contracts, bonds and other
obligations of the Partnership; the execution of any such contract, bond or obligations by such
_____ to be valid and binding upon this Partnership for all

(Name of Partner authorized to sign for Partnership)

purposes, and that a Certificate of the Partner of the Partnership setting forth this vote shall be
delivered to the Town of Shutesbury and that this vote shall remain in full force and effect unless
and until the same has been altered, amended or revoked by a subsequent vote of such governing
body of the Partnership and a certificate of such later vote attested by a Partner of the Partnership
is delivered to the Town of Shutesbury.

I further certify that _____ is a partner in good
(Name of Partner authorized to sign for Partnership)

standing of the Partnership.

Signed: _____, Partner
(Name of Certifying Partner)

Place of Business: _____

Date of Contract: _____

COUNTERSIGNATURE: _____

In the event that the certifying partner is the same person as the partner authorized to sign that
contract or other instrument for the Partnership, this certificate must be countersigned by another
authorized partner of the Partnership.

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**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

CONTRACTOR GUARANTEE

WHEREAS _____ of _____
(General Contractor) (Address)

herein called "the Contractor" has completed construction of the following project:

Owner: Town of Shutesbury
Address of Owner: 1 Cooleyville Rd; P.O. Box 276, Shutesbury, Massachusetts 01072
Title of Project: Roof Replacement and Associated Work at Shutesbury Elementary School
Location: 23 W Pelham Rd, Shutesbury, Massachusetts 01072
Date of Completion: _____
Date Guarantee Expires: _____

Whereas, at the inception of such work the Contractor agreed to guarantee the construction against faulty materials or workmanship for a limited period and subject to the conditions set forth:

Now, therefore, the Contractor hereby guarantees, subject to the conditions herein set forth, that during a period of two (2) years from the date of completion of said construction, it shall, at its own cost and expense, following receipt of written notice, make or cause to be made such repairs to said construction resulting from faulty construction or defects in materials or workmanship or resulting from failure to conform to the Contract Documents applied by or through the Contractor as may be necessary to maintain the construction in defect-free and watertight condition. If the Contractor shall neglect to commence such repairs or replacements to the satisfaction of the Owner within ten (10) days from the date of the giving or mailing such notice, then the Owner may employ other persons to make such repairs or replacements. The Contractor agrees, upon demand, to pay to the Owner all amounts which the Owner expends for such repairs or replacements including, but not limited to, the cost to correct defects, the costs incurred for services of an architect, engineer project manager, separate contractors and attorneys' fees. All corrective work shall be performed by the Contractor in accordance with the applicable terms of the Contract.

Approximately 30 days prior to the expiration of the comprehensive two-year guarantee period of this Guarantee, the Contractor shall schedule an appointment with the Owner for a re-inspection of the Work with the Owner and shall thereafter inspect the work at the time scheduled. Based on this inspection and on prior inspections, the Owner shall issue a "Guarantee Repair List" of items to be corrected by the Contractor. The Contractor shall make the repairs and/or replacements listed within 30 days of the issuance of the Guarantee Repair List unless otherwise agreed by the Owner in writing. The Contractor shall maintain all liability insurance in effect until such time as the repairs and/or replacements have been made by the Contractor and accepted by the Owner.

This guarantee is made subject to the following conditions:

1. Specifically excluded from this guarantee is any and all damage caused by the following: lightning, hailstorm or other unusual phenomena of the elements; foundation settlement or cracking; defects or failure of materials not installed by the Contractor; faulty construction other than that installed by or for the Contractor; or fire. If the construction is damaged by reason of any of the foregoing, then with respect to such particular defect or failure of materials only, this guarantee shall thereupon become null and void for the balance of the guarantee period unless such damage is repaired by the Contractor at the expense of the party requesting such repairs.
2. This guarantee shall not be or become effective unless and until the Contractor has been paid in full for all their work.
3. This guarantee shall not be or become effective unless and until the Contractor has been paid in full for all their work; notwithstanding the foregoing, this guarantee shall be and become effective in the event that disputed sums have not been paid in full.
4. This guarantee runs in favor of Owner and the Town of Shutesbury only and is not transferable.
5. This Contractor Warranty is in Addition to and not in substitution of all other legal and specified Warranties and Guarantees required in the project's Contract Documents for materials, systems and performance of the manufacturer or supplier.

If the Contractor makes any repairs in accordance with this guarantee, then as to such repairs the Owner shall have a guarantee for two years with respect to materials and workmanship for such repaired work extending from the date of such repair.

This Guarantee must be delivered to the Engineer and the Owner before final payment to the Contractor may be made, or in the case of guarantees and warranties which original with a sub-contractor's section of the Work, before final payment for the amount of that subtrade or for the phase of Work to which the guarantee or warranty relates. The failure to deliver a required guarantee or warranty shall constitute a failure to fully complete the Work in accordance with the Contract Documents.

In Witness whereof, this instrument has been duly executed this _____ day of _____, 20__.

Name of General Contractor

By: _____
Authorized Name and Title

(Seal)

Signature

**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

Date: _____

CERTIFICATE OF DUMPING FACILITIES

I, _____ certify that I have dumping facilities available
at _____ and use of such facilities during the term
of the contract will comply with State and local requirements.

Signature of Authorized Representative of Contractor

Name and Address of Contractor

I:\840670\02 Design\specs\840670 Shutesbury Elementary School - 000017 - certificate of dumping facilities.doc

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**ROOF REPLACEMENT AND ASSOCIATED WORK AT
SHUTESBURY ELEMENTARY SCHOOL
SHUTESBURY, MASSACHUSETTS
GALE JN 840670**

CONTRACTOR'S EQUAL EMPLOYMENT CERTIFICATION

_____ certifies that

1. The undersigned intends to use the following listed construction trades in the work under the contract:

2. The undersigned shall comply with the minority manpower ratio and specific affirmative action steps contained herein; and
3. The undersigned shall obtain from each of its Subcontractors and submit to the Awarding Authority prior to the award of any subcontract under the Contract the Subcontractor certification.

Signature of authorized representative of Contractor

Type Name and Title

Date

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MAURA HEALEY
Governor

KIM DRISCOLL
Lt. Governor

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

Prevailing Wage Rates

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

LAUREN JONES
Secretary

MICHAEL FLANAGAN
Director

Awarding Authority: Town of Shutesbury
Contract Number: 23-101 **City/Town:** SHUTESBURY
Description of Work: Replacement of the 32,000 square foot asphalt roof at the elementary school
Job Location: 23 West Pelham Rd.

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
Construction						
(2 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$35.95	\$13.41	\$16.01	\$0.00	\$65.37
(3 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.02	\$13.41	\$16.01	\$0.00	\$65.44
(4 & 5 AXLE) DRIVER - EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.14	\$13.41	\$16.01	\$0.00	\$65.56
ADS/SUBMERSIBLE PILOT <i>PILE DRIVER LOCAL 56 (ZONE 3)</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 3 (BUILDING & SITE)</i>	12/01/2022	\$34.38	\$9.10	\$16.19	\$0.00	\$59.67
	06/01/2023	\$35.00	\$9.10	\$16.19	\$0.00	\$60.29
	12/01/2023	\$35.63	\$9.10	\$16.19	\$0.00	\$60.92
For apprentice rates see "Apprentice- LABORER"						
AIR TRACK OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.75	\$9.35	\$14.41	\$0.00	\$57.51
	06/01/2023	\$34.37	\$9.35	\$14.41	\$0.00	\$58.13
	12/01/2023	\$35.00	\$9.35	\$14.41	\$0.00	\$58.76
	06/01/2024	\$36.20	\$9.35	\$14.41	\$0.00	\$59.96
	12/01/2024	\$37.40	\$9.35	\$14.41	\$0.00	\$61.16
	06/01/2025	\$38.65	\$9.35	\$14.41	\$0.00	\$62.41
	12/01/2025	\$39.89	\$9.35	\$14.41	\$0.00	\$63.65
	06/01/2026	\$41.19	\$9.35	\$14.41	\$0.00	\$64.95
	12/01/2026	\$42.48	\$9.35	\$14.41	\$0.00	\$66.24
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
ASBESTOS WORKER (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	12/01/2020	\$34.29	\$12.80	\$8.95	\$0.00	\$56.04
ASPHALT RAKER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
ASPHALT RAKER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
	12/01/2026	\$41.98	\$9.35	\$14.41	\$0.00	\$65.74
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BACKHOE/FRONT-END LOADER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
BARCO-TYPE JUMPING TAMPER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
BATCH/CEMENT PLANT - ON SITE <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
BLOCK PAVER, RAMMER / CURB SETTER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$34.38	\$9.10	\$16.19	\$0.00	\$59.67
	06/01/2023	\$35.00	\$9.10	\$16.19	\$0.00	\$60.29
	12/01/2023	\$35.63	\$9.10	\$16.19	\$0.00	\$60.92
For apprentice rates see "Apprentice- LABORER"						
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.75	\$9.35	\$14.41	\$0.00	\$57.51
	06/01/2023	\$34.37	\$9.35	\$14.41	\$0.00	\$58.13
	12/01/2023	\$35.00	\$9.35	\$14.41	\$0.00	\$58.76
	06/01/2024	\$36.20	\$9.35	\$14.41	\$0.00	\$59.96
	12/01/2024	\$37.40	\$9.35	\$14.41	\$0.00	\$61.16
	06/01/2025	\$38.65	\$9.35	\$14.41	\$0.00	\$62.41
	12/01/2025	\$39.89	\$9.35	\$14.41	\$0.00	\$63.65
	06/01/2026	\$41.19	\$9.35	\$14.41	\$0.00	\$64.95
12/01/2026	\$42.48	\$9.35	\$14.41	\$0.00	\$66.24	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
BOILER MAKER <i>BOILERMAKERS LOCAL 29</i>	01/01/2023	\$47.37	\$7.07	\$20.31	\$0.00	\$74.75
	01/01/2024	\$48.12	\$7.07	\$20.60	\$0.00	\$75.79

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - BOILERMAKER - Local 29

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	65	\$30.79	\$7.07	\$13.22	\$0.00	\$51.08
2	65	\$30.79	\$7.07	\$13.22	\$0.00	\$51.08
3	70	\$33.16	\$7.07	\$14.23	\$0.00	\$54.46
4	75	\$35.53	\$7.07	\$15.24	\$0.00	\$57.84
5	80	\$37.90	\$7.07	\$16.25	\$0.00	\$61.22
6	85	\$40.26	\$7.07	\$17.28	\$0.00	\$64.61
7	90	\$42.63	\$7.07	\$18.28	\$0.00	\$67.98
8	95	\$45.00	\$7.07	\$19.32	\$0.00	\$71.39

Effective Date - 01/01/2024

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

Notes:

Apprentice to Journeyworker Ratio:1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	02/01/2023	\$48.76	\$11.49	\$20.37	\$0.00	\$80.62
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	08/01/2023	\$50.81	\$11.49	\$20.37	\$0.00	\$82.67
	02/01/2024	\$52.06	\$11.49	\$20.37	\$0.00	\$83.92
	08/01/2024	\$53.31	\$11.49	\$20.37	\$0.00	\$85.17
	02/01/2025	\$54.61	\$11.49	\$20.37	\$0.00	\$86.47
	08/01/2025	\$56.76	\$11.49	\$20.37	\$0.00	\$88.62
	02/01/2026	\$58.11	\$11.49	\$20.37	\$0.00	\$89.97
	08/01/2026	\$60.31	\$11.49	\$20.37	\$0.00	\$92.17
	02/01/2027	\$61.71	\$11.49	\$20.37	\$0.00	\$93.57

Apprentice - BRICK/PLASTER/CEMENT MASON - Local 3 Springfield/Pittsfield

Effective Date - 02/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$24.38	\$11.49	\$20.37	\$0.00	\$56.24
2	60	\$29.26	\$11.49	\$20.37	\$0.00	\$61.12
3	70	\$34.13	\$11.49	\$20.37	\$0.00	\$65.99
4	80	\$39.01	\$11.49	\$20.37	\$0.00	\$70.87
5	90	\$43.88	\$11.49	\$20.37	\$0.00	\$75.74

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$25.41	\$11.49	\$20.37	\$0.00	\$57.27
2	60	\$30.49	\$11.49	\$20.37	\$0.00	\$62.35
3	70	\$35.57	\$11.49	\$20.37	\$0.00	\$67.43
4	80	\$40.65	\$11.49	\$20.37	\$0.00	\$72.51
5	90	\$45.73	\$11.49	\$20.37	\$0.00	\$77.59

Notes:

Apprentice to Journeyworker Ratio:1:5

BULLDOZER/POWER SHOVEL/TREE SHREDDER	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
/CLAM SHELL OPERATING	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
ENGINEERS LOCAL 98	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
CAISSON & UNDERPINNING BOTTOM MAN	12/01/2022	\$43.73	\$9.35	\$17.97	\$0.00	\$71.05
LABORERS - FOUNDATION AND MARINE	06/01/2023	\$44.73	\$9.35	\$17.97	\$0.00	\$72.05
	12/01/2023	\$45.98	\$9.35	\$17.97	\$0.00	\$73.30
	06/01/2024	\$47.46	\$9.35	\$17.97	\$0.00	\$74.78
	12/01/2024	\$48.93	\$9.35	\$17.97	\$0.00	\$76.25
	06/01/2025	\$50.43	\$9.35	\$17.97	\$0.00	\$77.75
	12/01/2025	\$51.93	\$9.35	\$17.97	\$0.00	\$79.25
	06/01/2026	\$53.48	\$9.35	\$17.97	\$0.00	\$80.80
	12/01/2026	\$54.98	\$9.35	\$17.97	\$0.00	\$82.30
For apprentice rates see "Apprentice- LABORER"						
CAISSON & UNDERPINNING LABORER	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
LABORERS - FOUNDATION AND MARINE	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
CAISSON & UNDERPINNING TOP MAN <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						
CARBIDE CORE DRILL OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
CARPENTER <i>CARPENTERS LOCAL 336 - HAMPDEN HAMPSHIRE FRANKLIN</i>	03/01/2023	\$39.76	\$7.71	\$18.15	\$0.00	\$65.62

Apprentice - CARPENTER - Local 336 Hampden Hampshire Franklin

Effective Date - 03/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.88	\$7.71	\$1.38	\$0.00	\$28.97
2	60	\$23.86	\$7.71	\$1.38	\$0.00	\$32.95
3	70	\$27.83	\$7.71	\$13.95	\$0.00	\$49.49
4	75	\$29.82	\$7.71	\$13.95	\$0.00	\$51.48
5	80	\$31.81	\$7.71	\$15.35	\$0.00	\$54.87
6	80	\$31.81	\$7.71	\$15.35	\$0.00	\$54.87
7	90	\$35.78	\$7.71	\$16.75	\$0.00	\$60.24
8	90	\$35.78	\$7.71	\$16.75	\$0.00	\$60.24

Notes:

% Indentured After 10/1/17; 45/45/55/55/70/70/80/80
Step 1&2 \$26.46/ 3&4 \$31.82/ 5&6 \$50.38/ 7&8 \$55.77

Apprentice to Journeyworker Ratio:1:5

CARPENTER WOOD FRAME <i>CARPENTERS-ZONE 3 (Wood Frame)</i>	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 - 04/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71
2	60	\$14.50	\$7.21	\$0.00	\$0.00	\$21.71
3	65	\$15.70	\$7.21	\$0.00	\$0.00	\$22.91
4	70	\$16.91	\$7.21	\$0.00	\$0.00	\$24.12
5	75	\$18.12	\$7.21	\$3.80	\$0.00	\$29.13
6	80	\$19.33	\$7.21	\$3.80	\$0.00	\$30.34
7	85	\$20.54	\$7.21	\$3.80	\$0.00	\$31.55
8	90	\$21.74	\$7.21	\$3.80	\$0.00	\$32.75

Notes:
 % Indentured After 10/1/17; 45/45/55/55/70/70/80/80
 Step 1&2 \$17.86/ 3&4 \$20.22/ 5&6 \$27.57/ 7&8 \$29.94

Apprentice to Journeyworker Ratio:1:5

CEMENT MASONRY/PLASTERING	01/01/2023	\$44.81	\$12.70	\$17.97	\$0.87	\$76.35
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	07/01/2023	\$45.82	\$12.70	\$17.97	\$0.87	\$77.36
	01/01/2024	\$46.83	\$12.70	\$17.97	\$0.87	\$78.37

Apprentice - CEMENT MASONRY/PLASTERING - Springfield/Pittsfield

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.41	\$12.70	\$15.49	\$0.00	\$50.60
2	60	\$26.89	\$12.70	\$17.97	\$0.87	\$58.43
3	65	\$29.13	\$12.70	\$17.97	\$0.87	\$60.67
4	70	\$31.37	\$12.70	\$17.97	\$0.87	\$62.91
5	75	\$33.61	\$12.70	\$17.97	\$0.87	\$65.15
6	80	\$35.85	\$12.70	\$17.97	\$0.87	\$67.39
7	90	\$40.33	\$12.70	\$17.97	\$0.87	\$71.87

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.91	\$12.70	\$15.49	\$0.00	\$51.10
2	60	\$27.49	\$12.70	\$17.97	\$0.87	\$59.03
3	65	\$29.78	\$12.70	\$17.97	\$0.87	\$61.32
4	70	\$32.07	\$12.70	\$17.97	\$0.87	\$63.61
5	75	\$34.37	\$12.70	\$17.97	\$0.87	\$65.91
6	80	\$36.66	\$12.70	\$17.97	\$0.87	\$68.20
7	90	\$41.24	\$12.70	\$17.97	\$0.87	\$72.78

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

Apprentice to Journeyworker Ratio:1:3

CHAIN SAW OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42

For apprentice rates see "Apprentice- LABORER"

COMPRESSOR OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

CRANE OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$41.71	\$13.38	\$15.00	\$0.00	\$70.09
	06/01/2023	\$42.66	\$13.38	\$15.00	\$0.00	\$71.04
	12/01/2023	\$43.61	\$13.38	\$15.00	\$0.00	\$71.99

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

DELEADER (BRIDGE) <i>PAINTERS LOCAL 35 - ZONE 3</i>	01/01/2023	\$56.06	\$8.65	\$23.05	\$0.00	\$87.76
	07/01/2023	\$57.26	\$8.65	\$23.05	\$0.00	\$88.96
	01/01/2024	\$58.46	\$8.65	\$23.05	\$0.00	\$90.16
	07/01/2024	\$59.66	\$8.65	\$23.05	\$0.00	\$91.36
	01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$8.65	\$0.00	\$0.00	\$36.68
2	55	\$30.83	\$8.65	\$6.27	\$0.00	\$45.75
3	60	\$33.64	\$8.65	\$6.84	\$0.00	\$49.13
4	65	\$36.44	\$8.65	\$7.41	\$0.00	\$52.50
5	70	\$39.24	\$8.65	\$19.63	\$0.00	\$67.52
6	75	\$42.05	\$8.65	\$20.20	\$0.00	\$70.90
7	80	\$44.85	\$8.65	\$20.77	\$0.00	\$74.27
8	90	\$50.45	\$8.65	\$21.91	\$0.00	\$81.01

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$8.65	\$0.00	\$0.00	\$37.28
2	55	\$31.49	\$8.65	\$6.27	\$0.00	\$46.41
3	60	\$34.36	\$8.65	\$6.84	\$0.00	\$49.85
4	65	\$37.22	\$8.65	\$7.41	\$0.00	\$53.28
5	70	\$40.08	\$8.65	\$19.63	\$0.00	\$68.36
6	75	\$42.95	\$8.65	\$20.20	\$0.00	\$71.80
7	80	\$45.81	\$8.65	\$20.77	\$0.00	\$75.23
8	90	\$51.53	\$8.65	\$21.91	\$0.00	\$82.09

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

DEMO: ADZEMAN LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
	06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25

For apprentice rates see "Apprentice- LABORER"

DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
	12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25

For apprentice rates see "Apprentice- LABORER"

DEMO: BURNERS LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
	06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
	12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00

For apprentice rates see "Apprentice- LABORER"

DEMO: CONCRETE CUTTER/SAWYER LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2022	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	06/01/2023	\$45.33	\$9.10	\$17.57	\$0.00	\$72.00
	12/01/2023	\$46.58	\$9.10	\$17.57	\$0.00	\$73.25

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
DEMO: JACKHAMMER OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$44.08	\$9.10	\$17.57	\$0.00	\$70.75
	06/01/2023	\$45.08	\$9.10	\$17.57	\$0.00	\$71.75
	12/01/2023	\$46.33	\$9.10	\$17.57	\$0.00	\$73.00
For apprentice rates see "Apprentice- LABORER"						
DEMO: WRECKING LABORER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$43.33	\$9.10	\$17.57	\$0.00	\$70.00
	06/01/2023	\$44.33	\$9.10	\$17.57	\$0.00	\$71.00
	12/01/2023	\$45.58	\$9.10	\$17.57	\$0.00	\$72.25
For apprentice rates see "Apprentice- LABORER"						
DIVER <i>PILE DRIVER LOCAL 56 (ZONE 3)</i>	08/01/2020	\$68.70	\$9.40	\$23.12	\$0.00	\$101.22
For apprentice rates see "Apprentice- PILE DRIVER"						
DIVER TENDER <i>PILE DRIVER LOCAL 56 (ZONE 3)</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 3)</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 3)</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 (Including Core Drilling) <i>ELECTRICIANS LOCAL 7</i>	01/01/2023	\$47.01	\$12.50	\$13.96	\$0.00	\$73.47

Apprentice - ELECTRICIAN - Local 7

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.80	\$7.50	\$0.56	\$0.00	\$26.86
2	45	\$21.15	\$7.50	\$0.63	\$0.00	\$29.28
3	50	\$23.51	\$12.50	\$7.26	\$0.00	\$43.27
4	55	\$25.86	\$12.50	\$7.33	\$0.00	\$45.69
5	65	\$30.56	\$12.50	\$9.27	\$0.00	\$52.33
6	70	\$32.91	\$12.50	\$10.54	\$0.00	\$55.95

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>	01/01/2022	\$58.62	\$16.03	\$20.21	\$0.00	\$94.86
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Apprentice - ELEVATOR CONSTRUCTOR - Local 41

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>	01/01/2022	\$41.03	\$16.03	\$20.21	\$0.00	\$77.27
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"						
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
	12/01/2026	\$41.98	\$9.35	\$14.41	\$0.00	\$65.74
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$18.84	\$4.80	\$4.10	\$0.00	\$27.74
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$21.33	\$4.80	\$4.10	\$0.00	\$30.23
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY <i>OPERATING ENGINEERS LOCAL 98</i>	06/01/1999	\$22.33	\$4.80	\$4.10	\$0.00	\$31.23
FIRE ALARM INSTALLER <i>ELECTRICIANS LOCAL 7</i>	01/01/2023	\$47.01	\$12.50	\$13.96	\$0.00	\$73.47
For apprentice rates see "Apprentice- ELECTRICIAN"						
FIRE ALARM REPAIR / MAINTENANCE / COMMISSIONING <i>ELECTRICIANS LOCAL 7</i>	01/01/2023	\$47.01	\$12.50	\$13.96	\$0.00	\$73.47
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"						
FIREMAN <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - OPERATING ENGINEERS - Local 98 Class 3

Effective Date - 12/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.61	\$12.47	\$14.50	\$0.00	\$49.58
2	70	\$26.38	\$12.47	\$14.50	\$0.00	\$53.35
3	80	\$30.14	\$12.47	\$14.50	\$0.00	\$57.11
4	90	\$33.91	\$12.47	\$14.50	\$0.00	\$60.88

Effective Date - 06/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.18	\$12.47	\$14.50	\$0.00	\$50.15
2	70	\$27.04	\$12.47	\$14.50	\$0.00	\$54.01
3	80	\$30.90	\$12.47	\$14.50	\$0.00	\$57.87
4	90	\$34.77	\$12.47	\$14.50	\$0.00	\$61.74

Notes:

Steps 1-2 are 1000 hrs.; Steps 3-4 are 2000 hrs.

Apprentice to Journeyworker Ratio:1:6

FLAGGER & SIGNALER (HEAVY & HIGHWAY)	12/01/2022	\$25.23	\$9.35	\$14.41	\$0.00	\$48.99
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2023	\$25.98	\$9.35	\$14.41	\$0.00	\$49.74
	12/01/2023	\$25.98	\$9.35	\$14.41	\$0.00	\$49.74
	06/01/2024	\$27.01	\$9.35	\$14.41	\$0.00	\$50.77
	12/01/2024	\$27.01	\$9.35	\$14.41	\$0.00	\$50.77
	06/01/2025	\$28.09	\$9.35	\$14.41	\$0.00	\$51.85
	12/01/2025	\$28.09	\$9.35	\$14.41	\$0.00	\$51.85
	06/01/2026	\$29.21	\$9.35	\$14.41	\$0.00	\$52.97
	12/01/2026	\$29.21	\$9.35	\$14.41	\$0.00	\$52.97

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

FLOORCOVERER	03/01/2022	\$39.66	\$7.71	\$18.15	\$0.00	\$65.52
FLOORCOVERERS LOCAL 2168 ZONE III						

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - FLOORCOVERER - Local 2168 Zone III

Effective Date - 03/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.83	\$7.71	\$1.40	\$0.00	\$28.94
2	55	\$21.81	\$7.71	\$1.40	\$0.00	\$30.92
3	60	\$23.80	\$7.71	\$13.95	\$0.00	\$45.46
4	65	\$25.78	\$7.71	\$13.95	\$0.00	\$47.44
5	70	\$27.76	\$7.71	\$15.35	\$0.00	\$50.82
6	75	\$29.75	\$7.71	\$15.35	\$0.00	\$52.81
7	80	\$31.73	\$7.71	\$16.75	\$0.00	\$56.19
8	85	\$33.71	\$7.71	\$16.75	\$0.00	\$58.17

Notes: Steps are 750 hrs.
 % After 10/1/17; 45/45/55/55/70/70/80/80 (1500hr Steps)
 Step 1&2 \$26.21/ 3&4 \$31.49/ 5&6 \$49.96/ 7&8 \$55.29

Apprentice to Journeyworker Ratio:1:1

FORK LIFT <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.90	\$13.38	\$15.00	\$0.00	\$66.28
	06/01/2023	\$38.85	\$13.38	\$15.00	\$0.00	\$67.23
	12/01/2023	\$39.80	\$13.38	\$15.00	\$0.00	\$68.18

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATORS/LIGHTING PLANTS <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$34.45	\$13.38	\$15.00	\$0.00	\$62.83
	06/01/2023	\$35.40	\$13.38	\$15.00	\$0.00	\$63.78
	12/01/2023	\$36.35	\$13.38	\$15.00	\$0.00	\$64.73

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) <i>GLAZIERS LOCAL 1333</i>	06/01/2020	\$39.18	\$10.80	\$10.45	\$0.00	\$60.43
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Apprentice - GLAZIER - Local 1333

Effective Date - 06/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.59	\$10.80	\$1.80	\$0.00	\$32.19
2	56	\$22.04	\$10.80	\$1.80	\$0.00	\$34.64
3	63	\$24.49	\$10.80	\$2.45	\$0.00	\$37.74
4	69	\$26.94	\$10.80	\$2.45	\$0.00	\$40.19
5	75	\$29.39	\$10.80	\$3.15	\$0.00	\$43.34
6	81	\$31.83	\$10.80	\$3.15	\$0.00	\$45.78
7	88	\$34.28	\$10.80	\$10.45	\$0.00	\$55.53
8	94	\$36.73	\$10.80	\$10.45	\$0.00	\$57.98

Notes:

Apprentice to Journeyworker Ratio:1:3

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
GRADER/TRENCHING MACHINE/DERRICK <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
HVAC (DUCTWORK) <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2023	\$41.30	\$10.64	\$17.54	\$2.05	\$71.53
	07/01/2023	\$42.55	\$10.64	\$17.54	\$2.05	\$72.78
	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (ELECTRICAL CONTROLS) <i>ELECTRICIANS LOCAL 7</i>	01/01/2023	\$47.01	\$12.50	\$13.96	\$0.00	\$73.47
For apprentice rates see "Apprentice- ELECTRICIAN"						
HVAC (TESTING AND BALANCING - AIR) <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2023	\$41.30	\$10.64	\$17.54	\$2.05	\$71.53
	07/01/2023	\$42.55	\$10.64	\$17.54	\$2.05	\$72.78
	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53
For apprentice rates see "Apprentice- SHEET METAL WORKER"						
HVAC (TESTING AND BALANCING -WATER) <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2023	\$46.96	\$9.55	\$17.10	\$0.00	\$73.61
	09/17/2023	\$47.96	\$9.55	\$17.10	\$0.00	\$74.61
	03/17/2024	\$49.21	\$9.55	\$17.10	\$0.00	\$75.86
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HVAC MECHANIC <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2023	\$46.96	\$9.55	\$17.10	\$0.00	\$73.61
	09/17/2023	\$47.96	\$9.55	\$17.10	\$0.00	\$74.61
	03/17/2024	\$49.21	\$9.55	\$17.10	\$0.00	\$75.86
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
HYDRAULIC DRILLS (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.75	\$9.35	\$14.41	\$0.00	\$57.51
	06/01/2023	\$34.37	\$9.35	\$14.41	\$0.00	\$58.13
	12/01/2023	\$35.00	\$9.35	\$14.41	\$0.00	\$58.76
	06/01/2024	\$36.20	\$9.35	\$14.41	\$0.00	\$59.96
	12/01/2024	\$37.40	\$9.35	\$14.41	\$0.00	\$61.16
	06/01/2025	\$38.65	\$9.35	\$14.41	\$0.00	\$62.41
	12/01/2025	\$39.89	\$9.35	\$14.41	\$0.00	\$63.65
	06/01/2026	\$41.19	\$9.35	\$14.41	\$0.00	\$64.95
	12/01/2026	\$42.48	\$9.35	\$14.41	\$0.00	\$66.24
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
INSULATOR (PIPES & TANKS) <i>HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)</i>	09/01/2022	\$44.05	\$13.80	\$17.14	\$0.00	\$74.99

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

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

Effective Date - 09/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$22.03	\$13.80	\$12.42	\$0.00	\$48.25
2	60	\$26.43	\$13.80	\$13.36	\$0.00	\$53.59
3	70	\$30.84	\$13.80	\$14.31	\$0.00	\$58.95
4	80	\$35.24	\$13.80	\$15.25	\$0.00	\$64.29

Notes:
Steps are 1 year

Apprentice to Journeyworker Ratio:1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 (SPRINGFIELD AREA)	03/16/2023	\$38.91	\$8.25	\$22.70	\$0.00	\$69.86
	09/16/2023	\$39.81	\$8.25	\$22.70	\$0.00	\$70.76
	03/16/2024	\$40.66	\$8.25	\$22.70	\$0.00	\$71.61

Apprentice - IRONWORKER - Local 7 Springfield

Effective Date - 03/16/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.35	\$8.25	\$22.70	\$0.00	\$54.30
2	70	\$27.24	\$8.25	\$22.70	\$0.00	\$58.19
3	75	\$29.18	\$8.25	\$22.70	\$0.00	\$60.13
4	80	\$31.13	\$8.25	\$22.70	\$0.00	\$62.08
5	85	\$33.07	\$8.25	\$22.70	\$0.00	\$64.02
6	90	\$35.02	\$8.25	\$22.70	\$0.00	\$65.97

Effective Date - 09/16/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.89	\$8.25	\$22.70	\$0.00	\$54.84
2	70	\$27.87	\$8.25	\$22.70	\$0.00	\$58.82
3	75	\$29.86	\$8.25	\$22.70	\$0.00	\$60.81
4	80	\$31.85	\$8.25	\$22.70	\$0.00	\$62.80
5	85	\$33.84	\$8.25	\$22.70	\$0.00	\$64.79
6	90	\$35.83	\$8.25	\$22.70	\$0.00	\$66.78

Notes:

Apprentice to Journeyworker Ratio:1:4

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS - ZONE 3 (BUILDING & SITE)	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER	12/01/2022	\$33.63	\$9.10	\$16.19	\$0.00	\$58.92
LABORERS - ZONE 3 (BUILDING & SITE)	06/01/2023	\$34.25	\$9.10	\$16.19	\$0.00	\$59.54
	12/01/2023	\$34.88	\$9.10	\$16.19	\$0.00	\$60.17

Apprentice - LABORER - Zone 3 Building & Site

Effective Date - 12/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.18	\$9.10	\$16.19	\$0.00	\$45.47
2	70	\$23.54	\$9.10	\$16.19	\$0.00	\$48.83
3	80	\$26.90	\$9.10	\$16.19	\$0.00	\$52.19
4	90	\$30.27	\$9.10	\$16.19	\$0.00	\$55.56

Effective Date - 06/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.55	\$9.10	\$16.19	\$0.00	\$45.84
2	70	\$23.98	\$9.10	\$16.19	\$0.00	\$49.27
3	80	\$27.40	\$9.10	\$16.19	\$0.00	\$52.69
4	90	\$30.83	\$9.10	\$16.19	\$0.00	\$56.12

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER (HEAVY & HIGHWAY)	12/01/2022	\$33.00	\$9.35	\$14.41	\$0.00	\$56.76
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2023	\$33.62	\$9.35	\$14.41	\$0.00	\$57.38
	12/01/2023	\$34.25	\$9.35	\$14.41	\$0.00	\$58.01
	06/01/2024	\$35.45	\$9.35	\$14.41	\$0.00	\$59.21
	12/01/2024	\$36.65	\$9.35	\$14.41	\$0.00	\$60.41
	06/01/2025	\$37.90	\$9.35	\$14.41	\$0.00	\$61.66
	12/01/2025	\$39.14	\$9.35	\$14.41	\$0.00	\$62.90
	06/01/2026	\$40.44	\$9.35	\$14.41	\$0.00	\$64.20
	12/01/2026	\$41.73	\$9.35	\$14.41	\$0.00	\$65.49

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - LABORER (Heavy & Highway) - Zone 3

Effective Date - 12/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$19.80	\$9.35	\$14.41	\$0.00	\$43.56
2	70	\$23.10	\$9.35	\$14.41	\$0.00	\$46.86
3	80	\$26.40	\$9.35	\$14.41	\$0.00	\$50.16
4	90	\$29.70	\$9.35	\$14.41	\$0.00	\$53.46

Effective Date - 06/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$20.17	\$9.35	\$14.41	\$0.00	\$43.93
2	70	\$23.53	\$9.35	\$14.41	\$0.00	\$47.29
3	80	\$26.90	\$9.35	\$14.41	\$0.00	\$50.66
4	90	\$30.26	\$9.35	\$14.41	\$0.00	\$54.02

Notes:

Apprentice to Journeyworker Ratio:1:5

LABORER: CARPENTER TENDER
LABORERS - ZONE 3 (BUILDING & SITE) 12/01/2022 \$33.63 \$9.10 \$16.19 \$0.00 \$58.92

06/01/2023 \$34.25 \$9.10 \$16.19 \$0.00 \$59.54

12/01/2023 \$34.88 \$9.10 \$16.19 \$0.00 \$60.17

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER
LABORERS - ZONE 3 (BUILDING & SITE) 12/01/2022 \$33.63 \$9.10 \$16.19 \$0.00 \$58.92

06/01/2023 \$34.25 \$9.10 \$16.19 \$0.00 \$59.54

12/01/2023 \$34.88 \$9.10 \$16.19 \$0.00 \$60.17

For apprentice rates see "Apprentice- LABORER"

LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER
LABORERS - ZONE 3 (BUILDING & SITE) 12/01/2022 \$33.48 \$9.10 \$16.44 \$0.00 \$59.02

06/01/2023 \$34.10 \$9.10 \$16.44 \$0.00 \$59.64

12/01/2023 \$34.73 \$9.10 \$16.44 \$0.00 \$60.27

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER
LABORERS - ZONE 3 (BUILDING & SITE) 12/01/2022 \$34.63 \$9.10 \$16.19 \$0.00 \$59.92

06/01/2023 \$35.25 \$9.10 \$16.19 \$0.00 \$60.54

12/01/2023 \$35.88 \$9.10 \$16.19 \$0.00 \$61.17

For apprentice rates see "Apprentice- LABORER"

LABORER: MASON TENDER (HEAVY & HIGHWAY)
LABORERS - ZONE 3 (HEAVY & HIGHWAY) 12/01/2022 \$33.25 \$9.35 \$14.41 \$0.00 \$57.01

06/01/2023 \$33.87 \$9.35 \$14.41 \$0.00 \$57.63

12/01/2023 \$34.50 \$9.35 \$14.41 \$0.00 \$58.26

06/01/2024 \$35.70 \$9.35 \$14.41 \$0.00 \$59.46

12/01/2024 \$36.90 \$9.35 \$14.41 \$0.00 \$60.66

06/01/2025 \$38.15 \$9.35 \$14.41 \$0.00 \$61.91

12/01/2025 \$39.39 \$9.35 \$14.41 \$0.00 \$63.15

06/01/2026 \$40.69 \$9.35 \$14.41 \$0.00 \$64.45

12/01/2026 \$41.98 \$9.35 \$14.41 \$0.00 \$65.74

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

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
LABORER: MULTI-TRADE TENDER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.63	\$9.10	\$16.19	\$0.00	\$58.92
	06/01/2023	\$34.25	\$9.10	\$16.19	\$0.00	\$59.54
	12/01/2023	\$34.88	\$9.10	\$16.19	\$0.00	\$60.17
For apprentice rates see "Apprentice- LABORER"						
LABORER: TREE REMOVER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.63	\$9.10	\$16.19	\$0.00	\$58.92
	06/01/2023	\$34.25	\$9.10	\$16.19	\$0.00	\$59.54
	12/01/2023	\$34.88	\$9.10	\$16.19	\$0.00	\$60.17
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 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
LASER BEAM OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
	12/01/2026	\$41.98	\$9.35	\$14.41	\$0.00	\$65.74
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
MARBLE & TILE FINISHERS <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	02/01/2023	\$39.73	\$11.49	\$19.53	\$0.00	\$70.75
	08/01/2023	\$41.37	\$11.49	\$19.53	\$0.00	\$72.39
	02/01/2024	\$42.37	\$11.49	\$19.53	\$0.00	\$73.39
	08/01/2024	\$44.05	\$11.49	\$19.53	\$0.00	\$75.07
	02/01/2025	\$45.90	\$11.49	\$19.53	\$0.00	\$76.92
	08/01/2025	\$46.81	\$11.49	\$19.53	\$0.00	\$77.83
	02/01/2026	\$47.89	\$11.49	\$19.53	\$0.00	\$78.91
	08/01/2026	\$49.65	\$11.49	\$19.53	\$0.00	\$80.67
	02/01/2027	\$50.77	\$11.49	\$19.53	\$0.00	\$81.79

Apprentice - MARBLE-TILE FINISHER-Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 02/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.87	\$11.49	\$19.53	\$0.00	\$50.89
2	60	\$23.84	\$11.49	\$19.53	\$0.00	\$54.86
3	70	\$27.81	\$11.49	\$19.53	\$0.00	\$58.83
4	80	\$31.78	\$11.49	\$19.53	\$0.00	\$62.80
5	90	\$35.76	\$11.49	\$19.53	\$0.00	\$66.78

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$20.69	\$11.49	\$19.53	\$0.00	\$51.71
2	60	\$24.82	\$11.49	\$19.53	\$0.00	\$55.84
3	70	\$28.96	\$11.49	\$19.53	\$0.00	\$59.98
4	80	\$33.10	\$11.49	\$19.53	\$0.00	\$64.12
5	90	\$37.23	\$11.49	\$19.53	\$0.00	\$68.25

Notes:

Apprentice to Journeyworker Ratio:1:5

MARBLE MASON/TILE LAYER(SP/PT)SeeBrick
BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE

See "BRICK/STONE/ARTIFICIAL MASONRY(INCL.MASONRY WATERPROOFING)

MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 98	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MECHANIC/WELDER/BOOM TRUCK OPERATING ENGINEERS LOCAL 98	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

MILLWRIGHT (Zone 3) MILLWRIGHTS LOCAL 1121 - Zone 3	01/02/2023	\$40.16	\$8.58	\$21.57	\$0.00	\$70.31
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Apprentice - MILLWRIGHT - Local 1121 Zone 3

Effective Date - 01/02/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	55	\$22.09	\$8.58	\$5.72	\$0.00	\$36.39
2	65	\$26.10	\$8.58	\$17.93	\$0.00	\$52.61
3	75	\$30.12	\$8.58	\$18.98	\$0.00	\$57.68
4	85	\$34.14	\$8.58	\$20.01	\$0.00	\$62.73

Notes: Step 1&2 Appr. indentured after 1/6/2020 receive no pension, but do receive annuity. (Step 1 \$5.72, Step 2 \$6.66)
Steps are 2,000 hours

Apprentice to Journeyworker Ratio:1:4

MORTAR MIXER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42

For apprentice rates see "Apprentice- LABORER"

OILER <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$33.37	\$13.38	\$15.00	\$0.00	\$61.75
	06/01/2023	\$34.32	\$13.38	\$15.00	\$0.00	\$62.70
	12/01/2023	\$35.27	\$13.38	\$15.00	\$0.00	\$63.65

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

OTHER POWER DRIVEN EQUIPMENT - CLASS VI <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$32.80	\$12.47	\$14.50	\$0.00	\$59.77
	06/01/2023	\$33.75	\$12.47	\$14.50	\$0.00	\$60.72
	12/01/2023	\$34.70	\$12.47	\$14.50	\$0.00	\$61.67

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

PAINTER (BRIDGES/TANKS) <i>PAINTERS LOCAL 35 - ZONE 3</i>	01/01/2023	\$56.06	\$8.65	\$23.05	\$0.00	\$87.76
	07/01/2023	\$57.26	\$8.65	\$23.05	\$0.00	\$88.96
	01/01/2024	\$58.46	\$8.65	\$23.05	\$0.00	\$90.16
	07/01/2024	\$59.66	\$8.65	\$23.05	\$0.00	\$91.36
	01/01/2025	\$60.86	\$8.65	\$23.05	\$0.00	\$92.56

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 - BRIDGES/TANKS

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.03	\$8.65	\$0.00	\$0.00	\$36.68
2	55	\$30.83	\$8.65	\$6.27	\$0.00	\$45.75
3	60	\$33.64	\$8.65	\$6.84	\$0.00	\$49.13
4	65	\$36.44	\$8.65	\$7.41	\$0.00	\$52.50
5	70	\$39.24	\$8.65	\$19.63	\$0.00	\$67.52
6	75	\$42.05	\$8.65	\$20.20	\$0.00	\$70.90
7	80	\$44.85	\$8.65	\$20.77	\$0.00	\$74.27
8	90	\$50.45	\$8.65	\$21.91	\$0.00	\$81.01

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$28.63	\$8.65	\$0.00	\$0.00	\$37.28
2	55	\$31.49	\$8.65	\$6.27	\$0.00	\$46.41
3	60	\$34.36	\$8.65	\$6.84	\$0.00	\$49.85
4	65	\$37.22	\$8.65	\$7.41	\$0.00	\$53.28
5	70	\$40.08	\$8.65	\$19.63	\$0.00	\$68.36
6	75	\$42.95	\$8.65	\$20.20	\$0.00	\$71.80
7	80	\$45.81	\$8.65	\$20.77	\$0.00	\$75.23
8	90	\$51.53	\$8.65	\$21.91	\$0.00	\$82.09

Notes:
Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, NEW) *	01/01/2023	\$38.93	\$8.65	\$19.15	\$0.00	\$66.73
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	07/01/2023	\$39.98	\$8.65	\$19.15	\$0.00	\$67.78
	01/01/2024	\$41.08	\$8.65	\$19.15	\$0.00	\$68.88
	07/01/2024	\$42.13	\$8.65	\$19.15	\$0.00	\$69.93
	01/01/2025	\$43.23	\$8.65	\$19.15	\$0.00	\$71.03

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - New

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.47	\$8.65	\$0.00	\$0.00	\$28.12
2	55	\$21.41	\$8.65	\$4.13	\$0.00	\$34.19
3	60	\$23.36	\$8.65	\$4.50	\$0.00	\$36.51
4	65	\$25.30	\$8.65	\$4.88	\$0.00	\$38.83
5	70	\$27.25	\$8.65	\$16.90	\$0.00	\$52.80
6	75	\$29.20	\$8.65	\$17.28	\$0.00	\$55.13
7	80	\$31.14	\$8.65	\$17.65	\$0.00	\$57.44
8	90	\$35.04	\$8.65	\$18.40	\$0.00	\$62.09

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.99	\$8.65	\$0.00	\$0.00	\$28.64
2	55	\$21.99	\$8.65	\$4.13	\$0.00	\$34.77
3	60	\$23.99	\$8.65	\$4.50	\$0.00	\$37.14
4	65	\$25.99	\$8.65	\$4.88	\$0.00	\$39.52
5	70	\$27.99	\$8.65	\$16.90	\$0.00	\$53.54
6	75	\$29.99	\$8.65	\$17.28	\$0.00	\$55.92
7	80	\$31.98	\$8.65	\$17.65	\$0.00	\$58.28
8	90	\$35.98	\$8.65	\$18.40	\$0.00	\$63.03

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	01/01/2023	\$36.25	\$8.65	\$19.15	\$0.00	\$64.05
PAINTERS LOCAL 35 - ZONE 3	07/01/2023	\$37.30	\$8.65	\$19.15	\$0.00	\$65.10
	01/01/2024	\$38.40	\$8.65	\$19.15	\$0.00	\$66.20
	07/01/2024	\$39.45	\$8.65	\$19.15	\$0.00	\$67.25
	01/01/2025	\$40.55	\$8.65	\$19.15	\$0.00	\$68.35

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - Spray/Sandblast - Repaint

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.13	\$8.65	\$0.00	\$0.00	\$26.78
2	55	\$19.94	\$8.65	\$4.13	\$0.00	\$32.72
3	60	\$21.75	\$8.65	\$4.50	\$0.00	\$34.90
4	65	\$23.56	\$8.65	\$4.88	\$0.00	\$37.09
5	70	\$25.38	\$8.65	\$16.90	\$0.00	\$50.93
6	75	\$27.19	\$8.65	\$17.28	\$0.00	\$53.12
7	80	\$29.00	\$8.65	\$17.65	\$0.00	\$55.30
8	90	\$32.63	\$8.65	\$18.40	\$0.00	\$59.68

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.65	\$8.65	\$0.00	\$0.00	\$27.30
2	55	\$20.52	\$8.65	\$4.13	\$0.00	\$33.30
3	60	\$22.38	\$8.65	\$4.50	\$0.00	\$35.53
4	65	\$24.25	\$8.65	\$4.88	\$0.00	\$37.78
5	70	\$26.11	\$8.65	\$16.90	\$0.00	\$51.66
6	75	\$27.98	\$8.65	\$17.28	\$0.00	\$53.91
7	80	\$29.84	\$8.65	\$17.65	\$0.00	\$56.14
8	90	\$33.57	\$8.65	\$18.40	\$0.00	\$60.62

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, NEW) *	01/01/2023	\$37.53	\$8.65	\$19.15	\$0.00	\$65.33
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 - ZONE 3	07/01/2023	\$38.58	\$8.65	\$19.15	\$0.00	\$66.38
	01/01/2024	\$39.68	\$8.65	\$19.15	\$0.00	\$67.48
	07/01/2024	\$40.73	\$8.65	\$19.15	\$0.00	\$68.53
	01/01/2025	\$41.83	\$8.65	\$19.15	\$0.00	\$69.63

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER - Local 35 Zone 3 - BRUSH NEW

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$18.77	\$8.65	\$0.00	\$0.00	\$27.42
2	55	\$20.64	\$8.65	\$4.13	\$0.00	\$33.42
3	60	\$22.52	\$8.65	\$4.50	\$0.00	\$35.67
4	65	\$24.39	\$8.65	\$4.88	\$0.00	\$37.92
5	70	\$26.27	\$8.65	\$16.90	\$0.00	\$51.82
6	75	\$28.15	\$8.65	\$17.28	\$0.00	\$54.08
7	80	\$30.02	\$8.65	\$17.65	\$0.00	\$56.32
8	90	\$33.78	\$8.65	\$18.40	\$0.00	\$60.83

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$19.29	\$8.65	\$0.00	\$0.00	\$27.94
2	55	\$21.22	\$8.65	\$4.13	\$0.00	\$34.00
3	60	\$23.15	\$8.65	\$4.50	\$0.00	\$36.30
4	65	\$25.08	\$8.65	\$4.88	\$0.00	\$38.61
5	70	\$27.01	\$8.65	\$16.90	\$0.00	\$52.56
6	75	\$28.94	\$8.65	\$17.28	\$0.00	\$54.87
7	80	\$30.86	\$8.65	\$17.65	\$0.00	\$57.16
8	90	\$34.72	\$8.65	\$18.40	\$0.00	\$61.77

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER / TAPER (BRUSH, REPAINT)	01/01/2023	\$34.85	\$8.65	\$19.15	\$0.00	\$62.65
PAINTERS LOCAL 35 - ZONE 3	07/01/2023	\$35.90	\$8.65	\$19.15	\$0.00	\$63.70
	01/01/2024	\$37.00	\$8.65	\$19.15	\$0.00	\$64.80
	07/01/2024	\$38.05	\$8.65	\$19.15	\$0.00	\$65.85
	01/01/2025	\$39.15	\$8.65	\$19.15	\$0.00	\$66.95

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - PAINTER Local 35 Zone 3 - BRUSH REPAINT

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.43	\$8.65	\$0.00	\$0.00	\$26.08
2	55	\$19.17	\$8.65	\$4.13	\$0.00	\$31.95
3	60	\$20.91	\$8.65	\$4.50	\$0.00	\$34.06
4	65	\$22.65	\$8.65	\$4.88	\$0.00	\$36.18
5	70	\$24.40	\$8.65	\$16.90	\$0.00	\$49.95
6	75	\$26.14	\$8.65	\$17.28	\$0.00	\$52.07
7	80	\$27.88	\$8.65	\$17.65	\$0.00	\$54.18
8	90	\$31.37	\$8.65	\$18.40	\$0.00	\$58.42

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$17.95	\$8.65	\$0.00	\$0.00	\$26.60
2	55	\$19.75	\$8.65	\$4.13	\$0.00	\$32.53
3	60	\$21.54	\$8.65	\$4.50	\$0.00	\$34.69
4	65	\$23.34	\$8.65	\$4.88	\$0.00	\$36.87
5	70	\$25.13	\$8.65	\$16.90	\$0.00	\$50.68
6	75	\$26.93	\$8.65	\$17.28	\$0.00	\$52.86
7	80	\$28.72	\$8.65	\$17.65	\$0.00	\$55.02
8	90	\$32.31	\$8.65	\$18.40	\$0.00	\$59.36

Notes:

Steps are 750 hrs.

Apprentice to Journeyworker Ratio:1:1

PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	12/01/2022	\$33.00	\$9.35	\$14.41	\$0.00	\$56.76
LABORERS - ZONE 3 (HEAVY & HIGHWAY)	06/01/2023	\$33.62	\$9.35	\$14.41	\$0.00	\$57.38
	12/01/2023	\$34.25	\$9.35	\$14.41	\$0.00	\$58.01
	06/01/2024	\$35.45	\$9.35	\$14.41	\$0.00	\$59.21
	12/01/2024	\$36.65	\$9.35	\$14.41	\$0.00	\$60.41
	06/01/2025	\$37.90	\$9.35	\$14.41	\$0.00	\$61.66
	12/01/2025	\$39.14	\$9.35	\$14.41	\$0.00	\$62.90
	06/01/2026	\$40.44	\$9.35	\$14.41	\$0.00	\$64.20
	12/01/2026	\$41.73	\$9.35	\$14.41	\$0.00	\$65.49

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

PANEL & PICKUP TRUCKS DRIVER	12/01/2021	\$35.78	\$13.41	\$16.01	\$0.00	\$65.20
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B						

PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	08/01/2020	\$43.53	\$9.40	\$23.12	\$0.00	\$76.05
PILE DRIVER LOCAL 56 (ZONE 3)						

For apprentice rates see "Apprentice- PILE DRIVER"

PILE DRIVER	08/01/2020	\$43.53	\$9.40	\$23.12	\$0.00	\$76.05
PILE DRIVER LOCAL 56 (ZONE 3)						

Apprentice - PILE DRIVER - Local 56 Zone 3

Effective Date - 08/01/2020

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Notes: Apprentice wages shall be no less than the following Steps;
 (Same as set in Zone 1)
 1\$57.06/2\$61.96/3\$66.87/4\$69.32/5\$71.78/6\$71.78/7\$76.68/8\$76.68

Apprentice to Journeyworker Ratio:1:5

PIPELAYER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42

For apprentice rates see "Apprentice- LABORER"

PIPELAYER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
	12/01/2026	\$41.98	\$9.35	\$14.41	\$0.00	\$65.74

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

PLUMBER & PIPEFITTER <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2023	\$46.96	\$9.55	\$17.10	\$0.00	\$73.61
	09/17/2023	\$47.96	\$9.55	\$17.10	\$0.00	\$74.61
	03/17/2024	\$49.21	\$9.55	\$17.10	\$0.00	\$75.86

Apprentice - PLUMBER/PIPEFITTER - Local 104

Effective Date - 03/17/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$21.13	\$9.55	\$10.10	\$0.00	\$40.78
2	50	\$23.48	\$9.55	\$10.10	\$0.00	\$43.13
3	55	\$25.83	\$9.55	\$10.10	\$0.00	\$45.48
4	60	\$28.18	\$9.55	\$10.10	\$0.00	\$47.83
5	65	\$30.52	\$9.55	\$10.10	\$0.00	\$50.17
6	70	\$32.87	\$9.55	\$10.10	\$0.00	\$52.52
7	75	\$35.22	\$9.55	\$10.10	\$0.00	\$54.87
8	80	\$37.57	\$9.55	\$10.10	\$0.00	\$57.22
9	80	\$37.57	\$9.55	\$17.10	\$0.00	\$64.22
10	80	\$37.57	\$9.55	\$17.10	\$0.00	\$64.22

Notes: **1:1,2:5,3:9,4:12

Apprentice to Journeyworker Ratio:**

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
PNEUMATIC CONTROLS (TEMP.) <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2023	\$46.96	\$9.55	\$17.10	\$0.00	\$73.61
	09/17/2023	\$47.96	\$9.55	\$17.10	\$0.00	\$74.61
	03/17/2024	\$49.21	\$9.55	\$17.10	\$0.00	\$75.86
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"						
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
POWDERMAN & BLASTER <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$34.63	\$9.10	\$16.19	\$0.00	\$59.92
	06/01/2023	\$35.25	\$9.10	\$16.19	\$0.00	\$60.54
	12/01/2023	\$35.88	\$9.10	\$16.19	\$0.00	\$61.17
For apprentice rates see "Apprentice- LABORER"						
POWDERMAN & BLASTER (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.75	\$9.35	\$14.41	\$0.00	\$57.51
	06/01/2023	\$34.37	\$9.35	\$14.41	\$0.00	\$58.13
	12/01/2023	\$35.00	\$9.35	\$14.41	\$0.00	\$58.76
	06/01/2024	\$36.20	\$9.35	\$14.41	\$0.00	\$59.96
	12/01/2024	\$37.40	\$9.35	\$14.41	\$0.00	\$61.16
	06/01/2025	\$38.65	\$9.35	\$14.41	\$0.00	\$62.41
	12/01/2025	\$39.89	\$9.35	\$14.41	\$0.00	\$63.65
	06/01/2026	\$41.19	\$9.35	\$14.41	\$0.00	\$64.95
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)						
PUMP OPERATOR (CONCRETE) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$38.21	\$13.38	\$15.00	\$0.00	\$66.59
	06/01/2023	\$39.16	\$13.38	\$15.00	\$0.00	\$67.54
	12/01/2023	\$40.11	\$13.38	\$15.00	\$0.00	\$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
PUMP OPERATOR (DEWATERING, OTHER) <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
READY-MIX CONCRETE DRIVER <i>TEAMSTERS 404 - Construction Service (Northampton)</i>	05/01/2020	\$22.44	\$11.07	\$6.50	\$0.00	\$40.01
RIDE-ON MOTORIZED BUGGY OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
ROLLER OPERATOR <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.07	\$13.38	\$15.00	\$0.00	\$65.45
	06/01/2023	\$38.02	\$13.38	\$15.00	\$0.00	\$66.40
	12/01/2023	\$38.97	\$13.38	\$15.00	\$0.00	\$67.35
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
ROOFER (Coal tar pitch) ROOFERS LOCAL 248	07/01/2022	\$38.16	\$10.35	\$17.25	\$0.00	\$65.76
	07/01/2023	\$38.66	\$10.35	\$18.75	\$0.00	\$67.76
For apprentice rates see "Apprentice- ROOFER"						
ROOFER (Inc.Roofing Waterproofing &Roofing Damproofing) ROOFERS LOCAL 248	07/01/2022	\$37.66	\$10.35	\$16.75	\$0.00	\$64.76
	07/01/2023	\$39.16	\$10.35	\$18.25	\$0.00	\$67.76

Apprentice - ROOFER - Local 248

Effective Date - 07/01/2022

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$22.60	\$10.35	\$0.00	\$0.00	\$32.95
2	65	\$24.48	\$10.35	\$16.75	\$0.00	\$51.58
3	70	\$26.36	\$10.35	\$16.75	\$0.00	\$53.46
4	75	\$28.25	\$10.35	\$16.75	\$0.00	\$55.35
5	80	\$30.13	\$10.35	\$16.75	\$0.00	\$57.23
6	85	\$32.01	\$10.35	\$16.75	\$0.00	\$59.11
7	90	\$33.89	\$10.35	\$16.75	\$0.00	\$60.99
8	95	\$35.78	\$10.35	\$16.75	\$0.00	\$62.88

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	60	\$23.50	\$10.35	\$0.00	\$0.00	\$33.85
2	65	\$25.45	\$10.35	\$18.25	\$0.00	\$54.05
3	70	\$27.41	\$10.35	\$18.25	\$0.00	\$56.01
4	75	\$29.37	\$10.35	\$18.25	\$0.00	\$57.97
5	80	\$31.33	\$10.35	\$18.25	\$0.00	\$59.93
6	85	\$33.29	\$10.35	\$18.25	\$0.00	\$61.89
7	90	\$35.24	\$10.35	\$18.25	\$0.00	\$63.84
8	95	\$37.20	\$10.35	\$18.25	\$0.00	\$65.80

Notes:

Steps are 750 hrs.Roofing(Tear Off)1:1; Same as above

Apprentice to Journeyworker Ratio:1:3

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 248	07/01/2022	\$38.16	\$10.35	\$17.25	\$0.00	\$65.76
	07/01/2023	\$38.66	\$10.35	\$18.75	\$0.00	\$67.76
For apprentice rates see "Apprentice- ROOFER"						
SCRAPER OPERATING ENGINEERS LOCAL 98	12/01/2022	\$37.68	\$13.38	\$15.00	\$0.00	\$66.06
	06/01/2023	\$38.63	\$13.38	\$15.00	\$0.00	\$67.01
	12/01/2023	\$39.58	\$13.38	\$15.00	\$0.00	\$67.96
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS) OPERATING ENGINEERS LOCAL 98	12/01/2022	\$37.07	\$13.38	\$15.00	\$0.00	\$65.45
	06/01/2023	\$38.02	\$13.38	\$15.00	\$0.00	\$66.40
	12/01/2023	\$38.97	\$13.38	\$15.00	\$0.00	\$67.35
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SELF-PROPELLED POWER BROOM <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$34.45	\$13.38	\$15.00	\$0.00	\$62.83
	06/01/2023	\$35.40	\$13.38	\$15.00	\$0.00	\$63.78
	12/01/2023	\$36.35	\$13.38	\$15.00	\$0.00	\$64.73

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

SHEETMETAL WORKER <i>SHEETMETAL WORKERS LOCAL 63</i>	01/01/2023	\$41.30	\$10.64	\$17.54	\$2.05	\$71.53
	07/01/2023	\$42.55	\$10.64	\$17.54	\$2.05	\$72.78
	01/01/2024	\$43.80	\$10.64	\$17.54	\$2.05	\$74.03
	07/01/2024	\$45.05	\$10.64	\$17.54	\$2.05	\$75.28
	01/01/2025	\$46.30	\$10.64	\$17.54	\$2.05	\$76.53

Apprentice - SHEET METAL WORKER - Local 63

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$18.59	\$4.79	\$4.76	\$0.92	\$29.06
2	50	\$20.65	\$5.32	\$5.29	\$1.03	\$32.29
3	55	\$22.72	\$5.85	\$5.82	\$1.13	\$35.52
4	60	\$24.78	\$6.38	\$6.35	\$1.23	\$38.74
5	65	\$26.85	\$6.92	\$6.88	\$1.33	\$41.98
6	70	\$28.91	\$7.45	\$7.41	\$1.44	\$45.21
7	75	\$30.98	\$7.98	\$7.94	\$1.54	\$48.44
8	80	\$33.04	\$8.51	\$15.42	\$1.64	\$58.61
9	85	\$35.11	\$9.04	\$15.95	\$1.74	\$61.84
10	90	\$37.17	\$9.58	\$16.48	\$1.85	\$65.08

Effective Date - 07/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$19.15	\$4.79	\$4.76	\$0.92	\$29.62
2	50	\$21.28	\$5.32	\$5.29	\$1.03	\$32.92
3	55	\$23.40	\$5.85	\$5.82	\$1.13	\$36.20
4	60	\$25.53	\$6.38	\$6.35	\$1.23	\$39.49
5	65	\$27.66	\$6.92	\$6.88	\$1.33	\$42.79
6	70	\$29.79	\$7.45	\$7.41	\$1.44	\$46.09
7	75	\$31.91	\$7.98	\$7.94	\$1.54	\$49.37
8	80	\$34.04	\$8.51	\$15.42	\$1.64	\$59.61
9	85	\$36.17	\$9.04	\$15.95	\$1.74	\$62.90
10	90	\$38.30	\$9.58	\$16.48	\$1.85	\$66.21

Notes:

Apprentice to Journeyworker Ratio:1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	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>	12/01/2021	\$36.53	\$13.41	\$16.01	\$0.00	\$65.95

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
SPRINKLER FITTER <i>SPRINKLER FITTERS LOCAL 669</i>	04/01/2021	\$43.14	\$10.55	\$16.41	\$0.00	\$70.10

Apprentice - SPRINKLER FITTER - Local 669

Effective Date - 04/01/2021

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	45	\$19.41	\$7.75	\$0.00	\$0.00	\$27.16
2	50	\$21.57	\$7.75	\$0.00	\$0.00	\$29.32
3	55	\$23.73	\$10.55	\$8.15	\$0.00	\$42.43
4	60	\$25.88	\$10.55	\$8.15	\$0.00	\$44.58
5	65	\$28.04	\$10.55	\$8.40	\$0.00	\$46.99
6	70	\$30.20	\$10.55	\$8.40	\$0.00	\$49.15
7	75	\$32.36	\$10.55	\$8.40	\$0.00	\$51.31
8	80	\$34.51	\$10.55	\$8.40	\$0.00	\$53.46
9	85	\$36.67	\$10.55	\$8.40	\$0.00	\$55.62
10	90	\$38.83	\$10.55	\$8.40	\$0.00	\$57.78

Notes:

Apprentice to Journeyworker Ratio:1:1

TELECOMMUNICATION TECHNICIAN <i>ELECTRICIANS LOCAL 7</i>	01/01/2023	\$47.01	\$12.50	\$13.96	\$0.00	\$73.47
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Apprentice - TELECOMMUNICATION TECHNICIAN - Local 7

Effective Date - 01/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	40	\$18.80	\$7.35	\$0.56	\$0.00	\$26.71
2	45	\$21.15	\$7.35	\$0.63	\$0.00	\$29.13
3	50	\$23.51	\$12.25	\$7.20	\$0.00	\$42.96
4	55	\$25.86	\$12.25	\$7.27	\$0.00	\$45.38
5	65	\$30.56	\$12.25	\$9.14	\$0.00	\$51.95
6	70	\$32.91	\$12.25	\$10.37	\$0.00	\$55.53

Notes:

Steps are 800 hours

Apprentice to Journeyworker Ratio:1:1

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TERRAZZO FINISHERS <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	02/01/2023	\$59.29	\$11.49	\$22.34	\$0.00	\$93.12
	08/01/2023	\$61.34	\$11.49	\$22.34	\$0.00	\$95.17
	02/01/2024	\$62.59	\$11.49	\$22.34	\$0.00	\$96.42
	08/01/2024	\$64.69	\$11.49	\$22.34	\$0.00	\$98.52
	02/01/2025	\$65.99	\$11.49	\$22.34	\$0.00	\$99.82
	08/01/2025	\$68.14	\$11.49	\$22.34	\$0.00	\$101.97
	02/10/2026	\$69.49	\$11.49	\$22.34	\$0.00	\$103.32
	08/01/2026	\$71.69	\$11.49	\$22.34	\$0.00	\$105.52
	02/01/2027	\$73.09	\$11.49	\$22.34	\$0.00	\$106.92

Apprentice - TERRAZZO FINISHER-Local 3 Marble/Tile (Spr/Ptt)

Effective Date - 02/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$29.65	\$11.49	\$22.34	\$0.00	\$63.48
2	60	\$35.57	\$11.49	\$22.34	\$0.00	\$69.40
3	70	\$41.50	\$11.49	\$22.34	\$0.00	\$75.33
4	80	\$47.43	\$11.49	\$22.34	\$0.00	\$81.26
5	90	\$53.36	\$11.49	\$22.34	\$0.00	\$87.19

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.67	\$11.49	\$22.34	\$0.00	\$64.50
2	60	\$36.80	\$11.49	\$22.34	\$0.00	\$70.63
3	70	\$42.94	\$11.49	\$22.34	\$0.00	\$76.77
4	80	\$49.07	\$11.49	\$22.34	\$0.00	\$82.90
5	90	\$55.21	\$11.49	\$22.34	\$0.00	\$89.04

Notes:

Apprentice to Journeyworker Ratio:1:5

TERRAZZO MECHANIC <i>BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE</i>	02/01/2023	\$60.37	\$11.49	\$22.31	\$0.00	\$94.17
	08/01/2023	\$62.42	\$11.49	\$22.31	\$0.00	\$96.22
	02/01/2024	\$63.67	\$11.49	\$22.31	\$0.00	\$97.47
	08/01/2024	\$65.77	\$11.49	\$22.31	\$0.00	\$99.57
	02/01/2025	\$67.07	\$11.49	\$22.31	\$0.00	\$100.87
	08/01/2025	\$69.22	\$11.49	\$22.31	\$0.00	\$103.02
	02/01/2026	\$70.57	\$11.49	\$22.31	\$0.00	\$104.37
	08/01/2026	\$72.77	\$11.49	\$22.31	\$0.00	\$106.57
	02/01/2027	\$74.17	\$11.49	\$22.31	\$0.00	\$107.97

Classification

Effective Date Base Wage Health Pension Supplemental Unemployment Total Rate

Apprentice - TERRAZZO MECH - Local 3 Marble/Tile (Spr/Pitt)

Effective Date - 02/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$30.19	\$11.49	\$22.31	\$0.00	\$63.99
2	60	\$36.22	\$11.49	\$22.31	\$0.00	\$70.02
3	70	\$42.26	\$11.49	\$22.31	\$0.00	\$76.06
4	80	\$48.30	\$11.49	\$22.31	\$0.00	\$82.10
5	90	\$54.33	\$11.49	\$22.31	\$0.00	\$88.13

Effective Date - 08/01/2023

Step	percent	Apprentice Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
1	50	\$31.21	\$11.49	\$22.31	\$0.00	\$65.01
2	60	\$37.45	\$11.49	\$22.31	\$0.00	\$71.25
3	70	\$43.69	\$11.49	\$22.31	\$0.00	\$77.49
4	80	\$49.94	\$11.49	\$22.31	\$0.00	\$83.74
5	90	\$56.18	\$11.49	\$22.31	\$0.00	\$89.98

Notes:

Apprentice to Journeyworker Ratio:1:5

TEST BORING DRILLER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2022	\$46.58	\$9.35	\$17.97	\$0.00	\$73.90
	06/01/2023	\$47.58	\$9.35	\$17.97	\$0.00	\$74.90
	12/01/2023	\$48.83	\$9.35	\$17.97	\$0.00	\$76.15
	06/01/2024	\$50.31	\$9.35	\$17.97	\$0.00	\$77.63
	12/01/2024	\$51.78	\$9.35	\$17.97	\$0.00	\$79.10
	06/01/2025	\$53.28	\$9.35	\$17.97	\$0.00	\$80.60
	12/01/2025	\$54.78	\$9.35	\$17.97	\$0.00	\$82.10
	06/01/2026	\$56.33	\$9.35	\$17.97	\$0.00	\$83.65
	12/01/2026	\$57.83	\$9.35	\$17.97	\$0.00	\$85.15

For apprentice rates see "Apprentice- LABORER"

TEST BORING DRILLER HELPER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2022	\$42.70	\$9.35	\$17.97	\$0.00	\$70.02
	06/01/2023	\$43.70	\$9.35	\$17.97	\$0.00	\$71.02
	12/01/2023	\$44.95	\$9.35	\$17.97	\$0.00	\$72.27
	06/01/2024	\$46.43	\$9.35	\$17.97	\$0.00	\$73.75
	12/01/2024	\$47.90	\$9.35	\$17.97	\$0.00	\$75.22
	06/01/2025	\$49.40	\$9.35	\$17.97	\$0.00	\$76.72
	12/01/2025	\$50.90	\$9.35	\$17.97	\$0.00	\$78.22
	06/01/2026	\$52.45	\$9.35	\$17.97	\$0.00	\$79.77
	12/01/2026	\$53.95	\$9.35	\$17.97	\$0.00	\$81.27

For apprentice rates see "Apprentice- LABORER"

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TEST BORING LABORER <i>LABORERS - FOUNDATION AND MARINE</i>	12/01/2022	\$42.58	\$9.35	\$17.97	\$0.00	\$69.90
	06/01/2023	\$43.58	\$9.35	\$17.97	\$0.00	\$70.90
	12/01/2023	\$44.83	\$9.35	\$17.97	\$0.00	\$72.15
	06/01/2024	\$46.31	\$9.35	\$17.97	\$0.00	\$73.63
	12/01/2024	\$47.78	\$9.35	\$17.97	\$0.00	\$75.10
	06/01/2025	\$49.28	\$9.35	\$17.97	\$0.00	\$76.60
	12/01/2025	\$50.78	\$9.35	\$17.97	\$0.00	\$78.10
	06/01/2026	\$52.33	\$9.35	\$17.97	\$0.00	\$79.65
	12/01/2026	\$53.83	\$9.35	\$17.97	\$0.00	\$81.15
For apprentice rates see "Apprentice- LABORER"						
TRACTORS <i>OPERATING ENGINEERS LOCAL 98</i>	12/01/2022	\$37.07	\$13.38	\$15.00	\$0.00	\$65.45
	06/01/2023	\$38.02	\$13.38	\$15.00	\$0.00	\$66.40
	12/01/2023	\$38.97	\$13.38	\$15.00	\$0.00	\$67.35
For apprentice rates see "Apprentice- OPERATING ENGINEERS"						
TRAILERS FOR EARTH MOVING EQUIPMENT <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.82	\$13.41	\$16.01	\$0.00	\$66.24
TUNNEL WORK - COMPRESSED AIR <i>LABORERS (COMPRESSED AIR)</i>	12/01/2022	\$54.81	\$9.35	\$18.42	\$0.00	\$82.58
	06/01/2023	\$55.81	\$9.35	\$18.42	\$0.00	\$83.58
	12/01/2023	\$57.06	\$9.35	\$18.42	\$0.00	\$84.83
	06/01/2024	\$58.54	\$9.35	\$18.42	\$0.00	\$86.31
	12/01/2024	\$60.01	\$9.35	\$18.42	\$0.00	\$87.78
	06/01/2025	\$61.51	\$9.35	\$18.42	\$0.00	\$89.28
	12/01/2025	\$63.01	\$9.35	\$18.42	\$0.00	\$90.78
	06/01/2026	\$64.56	\$9.35	\$18.42	\$0.00	\$92.33
	12/01/2026	\$66.06	\$9.35	\$18.42	\$0.00	\$93.83
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE) <i>LABORERS (COMPRESSED AIR)</i>	12/01/2022	\$56.81	\$9.35	\$18.42	\$0.00	\$84.58
	06/01/2023	\$57.81	\$9.35	\$18.42	\$0.00	\$85.58
	12/01/2023	\$59.06	\$9.35	\$18.42	\$0.00	\$86.83
	06/01/2024	\$60.54	\$9.35	\$18.42	\$0.00	\$88.31
	12/01/2024	\$62.01	\$9.35	\$18.42	\$0.00	\$89.78
	06/01/2025	\$63.51	\$9.35	\$18.42	\$0.00	\$91.28
	12/01/2025	\$65.01	\$9.35	\$18.42	\$0.00	\$92.78
	06/01/2026	\$66.56	\$9.35	\$18.42	\$0.00	\$94.33
	12/01/2026	\$68.06	\$9.35	\$18.42	\$0.00	\$95.83
For apprentice rates see "Apprentice- LABORER"						
TUNNEL WORK - FREE AIR <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2022	\$46.88	\$9.35	\$18.42	\$0.00	\$74.65
	06/01/2023	\$47.88	\$9.35	\$18.42	\$0.00	\$75.65
	12/01/2023	\$49.13	\$9.35	\$18.42	\$0.00	\$76.90
	06/01/2024	\$50.61	\$9.35	\$18.42	\$0.00	\$78.38
	12/01/2024	\$52.08	\$9.35	\$18.42	\$0.00	\$79.85
	06/01/2025	\$53.58	\$9.35	\$18.42	\$0.00	\$81.35
	12/01/2025	\$55.08	\$9.35	\$18.42	\$0.00	\$82.85
	06/01/2026	\$56.63	\$9.35	\$18.42	\$0.00	\$84.40
	12/01/2026	\$58.13	\$9.35	\$18.42	\$0.00	\$85.90
For apprentice rates see "Apprentice- LABORER"						

Classification	Effective Date	Base Wage	Health	Pension	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR (HAZ. WASTE) <i>LABORERS (FREE AIR TUNNEL)</i>	12/01/2022	\$48.88	\$9.35	\$18.42	\$0.00	\$76.65
	06/01/2023	\$49.88	\$9.35	\$18.42	\$0.00	\$77.65
	12/01/2023	\$51.13	\$9.35	\$18.42	\$0.00	\$78.90
	06/01/2024	\$52.61	\$9.35	\$18.42	\$0.00	\$80.38
	12/01/2024	\$54.08	\$9.35	\$18.42	\$0.00	\$81.85
	06/01/2025	\$55.58	\$9.35	\$18.42	\$0.00	\$83.35
	12/01/2025	\$57.08	\$9.35	\$18.42	\$0.00	\$84.85
	06/01/2026	\$58.63	\$9.35	\$18.42	\$0.00	\$86.40
	12/01/2026	\$60.13	\$9.35	\$18.42	\$0.00	\$87.90
For apprentice rates see "Apprentice- LABORER"						
VAC-HAUL <i>TEAMSTERS JOINT COUNCIL NO. 10 ZONE B</i>	12/01/2021	\$36.24	\$13.41	\$16.01	\$0.00	\$65.66
WAGON DRILL OPERATOR <i>LABORERS - ZONE 3 (BUILDING & SITE)</i>	12/01/2022	\$33.88	\$9.10	\$16.19	\$0.00	\$59.17
	06/01/2023	\$34.50	\$9.10	\$16.19	\$0.00	\$59.79
	12/01/2023	\$35.13	\$9.10	\$16.19	\$0.00	\$60.42
For apprentice rates see "Apprentice- LABORER"						
WAGON DRILL OPERATOR (HEAVY & HIGHWAY) <i>LABORERS - ZONE 3 (HEAVY & HIGHWAY)</i>	12/01/2022	\$33.25	\$9.35	\$14.41	\$0.00	\$57.01
	06/01/2023	\$33.87	\$9.35	\$14.41	\$0.00	\$57.63
	12/01/2023	\$34.50	\$9.35	\$14.41	\$0.00	\$58.26
	06/01/2024	\$35.70	\$9.35	\$14.41	\$0.00	\$59.46
	12/01/2024	\$36.90	\$9.35	\$14.41	\$0.00	\$60.66
	06/01/2025	\$38.15	\$9.35	\$14.41	\$0.00	\$61.91
	12/01/2025	\$39.39	\$9.35	\$14.41	\$0.00	\$63.15
	06/01/2026	\$40.69	\$9.35	\$14.41	\$0.00	\$64.45
12/01/2026	\$41.98	\$9.35	\$14.41	\$0.00	\$65.74	
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"						
WATER METER INSTALLER <i>PLUMBERS & PIPEFITTERS LOCAL 104</i>	03/17/2023	\$46.96	\$9.55	\$17.10	\$0.00	\$73.61
	09/17/2023	\$47.96	\$9.55	\$17.10	\$0.00	\$74.61
	03/17/2024	\$49.21	\$9.55	\$17.10	\$0.00	\$75.86
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"						

Additional Apprentice Information:

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

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

All steps are six months (1000 hours.)

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

** Multiple ratios are listed in the comment field.

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

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

SECTION 011100

SUMMARY OF WORK

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, materials, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work, as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer. The work includes, but is not limited to, the following items:
1. Supply all temporary shoring, lighting, barricades, signage, and protection necessary to protect the building areas, building systems, and building patrons and public. Maintain such protection for the complete duration of the project.
 2. Supply all disposal facilities, transportation, and labor necessary to dispose of all demolished materials, dirt, and debris off-site in a legal dumping area. The Contractor shall obtain all permits necessary to transport and dispose of all materials, rubbish, and debris.
 3. The Contractor shall provide all lifts, cranes, generators, and equipment necessary to perform the work.
 4. The Contractor shall provide all temporary protection of new and existing construction.
 5. Remove and replace designated existing asphalt shingle roofing systems, and associated components down to the existing roof deck. Refer to Sections 024100 – SELECTIVE DEMOLITION and 073113 – ASPHALT SHINGLE ROOFING for additional information.
 6. Install a new asphalt shingle roofing, underlayment, self-adhered modified bitumen membrane, and associated components. Refer to Section 073113 – ASPHALT SHINGLE ROOFING for additional information.
 7. Remove, replace, and install designated wood blocking, plywood sheathing and associated components as indicated on the Contract Drawings. Refer to Section 061000 – ROUGH CARPENTRY for additional information.
 8. Remove and replace areas of deteriorated roof decking as required to provide an adequate roofing substrate. Refer to Section 061000 – ROUGH CARPENTRY for additional information.

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9. Remove, replace, and install designated exterior PVC trim, wood siding, and associated components as indicated on the Contract Drawings. Refer to Section 062013 – EXTERIOR FINISH CARPENTRY for additional information.
10. Remove and replace designated sheet metal flashings, gutters, and downspouts. Refer to Section 076200 – SHEET METAL FLASHING AND TRIM.
11. Disconnect all rooftop mechanical equipment, conduits, and penetrations as required to install the flashing depicted in the Contract Drawings. Refer to Section 261000 – TEMPORARY MECHANICAL/ELECTRICAL DISCONNECTS for additional information.
12. Remove and dispose of existing photovoltaic panel system. Refer to Section 021400 – SELECTIVE DEMOLITION for additional information.
13. Perform Unit Price work as in accordance with the project specifications. Refer to Section 012200 – UNIT PRICES for additional information.
14. Perform all other miscellaneous work as required to complete the project in its entirety.
15. Complete all associated work in accordance with the project specifications.
16. Coordinate the work with that of the Owner.
17. Clean and restore all areas affected by the work.

1.3 PROJECT CONDITIONS

- A. The Owner's Representative shall review the Contractor's work schedule submittal prior to the start of any work. After defining the locations of the work progress, the Owner shall arrange to control occupancy in the building area adjacent to each day's work. It shall be the responsibility of the Contractor to inform the Owner's Representative if their work location(s) for each day is different from the schedule and to update any changes into the schedule.
- B. The Contractor will be required to provide their own fall protection system as required to access and work onsite, as no arrest systems are currently in place.
- C. The Contractor is required to coordinate all mechanical and electrical disconnects/reconnects with the Owner. The Contractor shall provide a minimum 72- hour notice prior to any potential shut down and must secure Owner's approval prior to disconnecting any building services.
- D. The Contractor shall provide their own access to the roof which does not require entry to the building. The Contractor shall secure access point(s) and coordinate locations with the Owner.
- E. The Contractor shall supply, install, and maintain all barriers, protection, warning lines, lighting and personnel required to segregate the work area(s) and to prevent damage to the buildings, their occupants, and the surrounding paved areas. All applicable OSHA and D.L.I. requirements shall be observed by the Contractor.

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Refer to Section 015000 – TEMPORARY FACILITIES AND CONTROLS for additional information.

- F. The Owner requires the Contractor to conform to all requirements of this specification as well as those of the approved manufacturers.
- G. All materials and workmanship shall be of the best construction practice. Refer to the requirements of the manufacturer, recommendations and these specifications for handling and installation of all materials.
- H. Protect the building and site areas not included in the construction. The Contractor shall replace or repair all building and site damage as a result of the construction to the satisfaction of the Owner at no cost to the Owner.
- I. The Contractor shall provide protection for existing roofing and other roof top equipment, fenestration, penetrations, and similar items to protect from damage. Items damaged as a result of the work in this section shall be repaired or replaced by the Contractor to the satisfaction of and at no additional cost to the Owner.
- J. Supply all labor, vacuums, tools, appliances, shoring, supports, or other items required to properly support, elevate, and protect fixtures, equipment, and facilities affected by the work and to properly install the work.
- K. The building and site will be occupied and in use during construction. The Contractors shall take all necessary precautions to create as little disturbance or disruption to the building and their occupants as possible during the course of the work. All entries and exits outside the immediate work area must be kept clear at all times and accessible by all parties. All access for emergency equipment must be kept clear at all times.
- L. At the end of each workday, the Contractor shall confirm and make the site safe and secure to all public access to the building's interior.
- M. The Contractor shall notify the Owner at least 72-hours in advance of doing any interior work so that the Owner may provide entry into the required areas.
- N. All debris, dust and dirt shall be swept clean from all exterior and interior surfaces affected by the work. Any interior finishes and floors which are damaged, soiled or affected by the work shall be cleaned, repaired, or replaced by the Contractor with a system equal in color, texture, and finish at no additional cost to the Owner.
- O. Any open ducts, grills, electric boxes or similar fixtures and items which can be soiled or affected by the work shall be masked, protected, and cleaned by the Contractor at no additional cost to the Owner.

- P. Provide an adequate number of skilled workers who are trained and experienced in the necessary crafts and are completely familiar with the specified requirements and the methods needed for proper performance of the work of each trade.
- Q. Schedule and execute all work without exposing the interior of the building to the effects of inclement weather. Protect the building, its contents, and occupants against such risks, and repair/replace all work-related damage to the satisfaction of the Owner.
- R. Upon completion of the work, all temporary protection installed by the Contractor shall be removed and areas shall be cleaned to the satisfaction of the Owner.

1.4 PRE-CONSTRUCTION CONFERENCE

- A. A pre-construction conference will be held with the Owner, Owner's Representatives, Contractor and involved trades to discuss all aspects of the project. The Contractor's superintendent or field representative will attend this conference. The superintendent must be able to effectively communicate in English (both written and spoken) and shall be on site at all times that work is performed.
- B. The Owner shall reserve the right to require an alternate Superintendent and/or Foreman when deemed to be in the best interest of the Owner.
- C. Delivery of materials and commencement of construction shall not proceed until the preconstruction conference is held. Delays in obtaining a complete set of submittals shall not extend the contracted completion date.
- D. At the preconstruction conference, the Contractor shall provide a complete set of manufacturer's Safety Data Sheets (SDSs) to the Owner for all products to be used on the project. Information shall be provided electronically and in a labeled three ring binder. The providing of the SDS information is in addition to any other contract requirement contained elsewhere in the Contract Documents.

1.5 EMERGENCY RESPONSE

- A. The Contractor shall provide the Owner with after-hours (24-hour) emergency telephone numbers of the Contractor's Project Manager, Superintendent and Foreman.
- B. The Contractor must respond to emergency situations or calls within two (2) hours.

1.6 CONSTRUCTION SCHEDULE

- A. The Owner shall review the Contractor's Construction Schedule prior to the start of any work. It shall be the responsibility of the Contractor to supply the Owner with written notice, 72-hours in advance, if their work location(s) for a workday differs from the schedule. The Contractor shall submit the original schedule in

accordance with Section 013300 – SUBMITTAL PROCEDURES, and shall update their Construction Schedule weekly, and submit a copy each week to the Owner for review.

1.7 PROGRESS MEETINGS

- A. The Owner shall schedule progress meetings as deemed necessary.
- B. The Contractor's Project Manager and Superintendent and/or Foreman shall attend each project meeting.

1.8 DIMENSIONS AND QUANTITIES

- A. All dimensions and quantities shall be field verified by the Contractor. The Contract Documents have been compiled from various sources and may not reflect the actual field conditions at the time of construction.
- B. The Contractor is cautioned to take all necessary precautions and make all necessary investigations to properly supply and install the proposed work.
- C. The Owner will not consider unfamiliarity with the project as a basis for any additional compensation.
- D. The general nature, quantity and distribution of the various work items are shown on the Contract Drawings.

1.9 GUARANTEES / WARRANTIES

- A. Refer to specific Sections of this specification for systems and product warranty requirements. Verify with Manufacturer of proposed systems and products that specified warranty requirements are acceptable, without exception, prior to selecting materials for use on this project.
- B. Upon completion of the work, and prior to final payment, the Contractor shall submit a Full Warranty of all work performed under the Contract to be free from defect in materials and workmanship. This Warranty shall be for a period of two (2) years, from substantial completion or from the final day of work on the specific warranty item, whichever is longer or greater. The warranty shall be signed by a Principal of the Contractor's firm and sealed if a Corporation. All repair work performed by the Contractor shall be done so as to return the envelope system, building and grounds to like new condition, as it existed prior to the requiring repairs.

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PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 012200

UNIT PRICES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. This Section contains instructions and references other Contract Documents that relate to Unit Prices. The Owner may elect certain aspects of the work, whose quantities cannot be determined at this time, to be performed or deleted by the Contractor. If such work items are elected, the Contract price will be adjusted by the Unit Price amount shown for each item in the Bid Forms.
- B. A Unit Price is an amount proposed by Bidders and stated on the Bid Form as a price per unit of measurement for materials or services that will be added to or deducted from the Contract Sum by Change Order in the event the estimated quantities of Work required by the Contract Documents are increased or decreased.
- C. The Bidders shall submit with their Bids, prices for the performance of Unit Price work. The general scope of the Unit Price work is defined within this section.
- D. The successful Bidder shall coordinate related work and modify or adjust adjacent work as necessary to ensure that work affected by each Unit Price Item is complete and fully integrated into the project.
- E. The specific quantities of Unit Price Work included in the Base Bid and Alternate (if required) scope of work are provided herein. This applies to items whose exact quantities are unknown but are anticipated to exist, for example, deteriorated roof deck.
- F. The quantities of Unit Price Work listed in this Section and the bid and contract forms are in addition to the quantities shown on the Contract Drawings.
- G. The Unit Prices requested herein shall include a pro-rata share of all costs for materials, labor, equipment costs, overhead, profit, and applicable taxes.
- H. Where not otherwise specified, Unit Prices cover net costs and credits to the Owner for executing authorized changes in the Work. No separate adjustments are made for labor, materials, transportation, handling, storage, overhead, profit, or other related work expenses.

- I. If unit price quantities vary twenty (20) percent greater than the amounts carried in the Base Bid, the Owner reserves the right to re-negotiate unit price costs during the project.
- J. Should the Unit Prices referenced in this section not be used as part of the project, they shall be credited back to the Owner, less fifteen (15) percent for overhead and profit.

1.3 SCOPE OF WORK

- A. The Unit Prices for items of Work, as set forth in the Schedule of Unit Prices, shall be used to determine adjustments to the Contract Amount when changes in the Work involving said items are made in accordance with the Contract Documents.
- B. Materials, methods of installation, and definitions of terms set forth under the various Unit Price items in the Schedule of Unit prices shall be as indicated in the Contract Documents.
- C. The successful Bidder shall coordinate related work and modify or adjust adjacent work as necessary to ensure that work affected by each Unit Price Item is complete and fully integrated into the project.

1.4 APPLICABILITY OF UNIT PRICES

- A. Prior to commencing removal or replacement of materials set forth in the schedule of Unit Prices, the Contractor shall notify the Owner in sufficient time to permit proper inspection and measurements to be taken. Only quantities that have been approved in writing by the Owner will be considered in the determination of adjustments to the Contract Sum.
- B. Unit Price Work includes providing and installing all accessories and appurtenant work necessary to properly execute the Unit Price Work.
- C. Performance of work not required by the Contract Documents, or which is not authorized by Change Order or Field Order, whether or not such work is set forth hereunder as a Unit Price item, shall not be considered cause for extra payment. The Contractor will be held fully responsible for such unauthorized work, including the performance of all corrective measures required by the Owner.

1.5 VERIFICATION OF UNIT PRICE QUANTITIES

- A. The following minimum procedures must be included by the Contractor for each of the indicated unit repair items for the duration of the project:
 - 1. The Contractor is required to track and record actual placed and completed Unit Price Work throughout the course of construction and submit a breakdown to the Owner and Designer on a weekly basis or as requested. The breakdown shall include the following for each Unit Price item:

- a. Completed quantity to date.
 - b. Remaining quantity to date.
 - c. Percentage of total quantity remaining.
2. The Contractor shall contact the Owner and Designer if a Unit Price quantity is anticipated to be reached prior to exceeding that quantity. No additional costs will be awarded to the Contractor for additional Unit Price Work without written approval from the Owner and/or Designer.
 3. The Contractor must provide safe, adequate, and ample access to the Owner and Designer for verification of the Unit Price Work throughout the course of construction.
 4. Photographic documentation of Unit Price work, with an approximate scaling devise, must be performed if an Owner's representative is not available at the time of the work being performed.

1.6 SCHEDULE OF UNIT PRICES

- A. The unit prices listed below are above and beyond those shown on the Contract Drawings and shall be included by the Contractor under the appropriate Base Bid or Alternate Scope of Work. The Contractor's Schedule of Values will carry each item under the bid amount selected for this project. Should the unit price work not be performed on this project, the total amount, or remaining amount if portions of unit price work are performed, shall be credited to the Owner.

Base Bid Unit Prices:

Section	Item	Estimated Quantity (<u>beyond drawings</u>)	Unit of Measure
061000	Replace deteriorated plywood decking designated to remain.	640	Square Feet
061000	Re-secure loose plywood roof decking at 12-inches on center	200	Linear Feet
062013	Re-secure loose sections of wood siding designated to remain.	200	Linear Feet

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Section	Item	Estimated Quantity (beyond drawings)	Unit of Measure
062013	Replace deteriorated tongue & groove fascia boards scheduled to be covered by new PVC trim fascia (5/4" thick x 5" wide) at eaves with 5/4" lumber (cut to fit) before installing new 1" nominal thick PVC trim board. The new lumber shall be pre-primed and shall be painted to match existing tongue and groove wood fascia boards.	400	Linear Feet

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. This Section contains instructions for submittals and shop drawings required at various stages of the project. The following will be required for all construction components and systems:
1. List of materials stating manufacturer's name and address, as well as material trade name and manufacturer's designation.
 2. Shop Drawings.
 3. Samples.
 4. Catalog Data.
 5. Mockups.
 6. Manufacturer's Instructions.
 7. Contractor's Schedule as it affects the contracted completion date and sequence of construction.
 8. Certificate of Dumping Facilities.
 9. Safety Data Sheets (SDS).

1.3 TIME OF SUBMITTALS

- A. The following submittals are required during the various phases of the Contract. Each submittal item shall have the technical section and paragraph number clearly indicated. All submittal items without the proper designations will be returned and will not be reviewed.
1. Bid Submission: shall include all items required under the Information to Bidders Section.
 - a. Refer to Instructions to Bidders regarding information to accompany Bid Form.
 2. Contract Submissions: After the successful Bidder has received the Notice to Proceed or Letter of Intent to Enter the Contract the Bidder shall, within ten (10) business days, provide electronic copies of the following submittals to the Designer:
 - a. Proposed Construction Schedule and Sequencing for completion of the Work specified in this project manual.
 - b. Complete Materials List
 - c. Manufacturer's Technical Literature as selected
 - d. Manufacturer's Instructions

- e. Catalog Data ("SPEC-DATA" Sheets)
 - f. Safety Data Sheets (SDS)
 - g. Samples of all materials of construction, including caulking, sealers, fasteners, and sheet metal.
 - h. Shop Drawings
 - i. Certificates as approved Applicator by Manufacturer
 - j. List of proposed storage facilities and their location(s)
 - k. Proposed location(s) of dumpsters
 - l. Schedule of Values (Note: each trade including labor and materials, as well as all unit price items, are to be included in the schedule of values)
 - m. The Contractor shall provide a job specific health and safety plan, a temporary protection program and work schedule as they relate to the construction project.
 - n. The Contractor shall provide a detailed safety plan outlining the fall arrest, tie-off anchorage, securement of equipment, etc. related to the activities associated with working at the site.
 - o. The Contractor shall provide an overhead and sidewalk protection plan.
 - p. The Contractor shall comply with NFPA 241.
3. The Contractor shall make contract submissions in full packages. Any list of required submittals provided to the Contractor shall be responded to fully by the Contractor. Formal submissions by the Contractor which do not address every open article of the submittal list shall be returned to the Contractor for completion prior to review. Time issues resulting from the above shall be borne by the Contractor.
4. Weekly Submissions: At the end of each week during construction, the Contractor shall submit an updated construction schedule which will show the status of the work with respect to the schedule and anticipated completion date. A list of all completed work is also required.
5. Prior to start of construction, the Contractor is to provide the Owner with copies of all building permits, etc.

1.4 SHOP DRAWINGS

- A. Original Submittal: One (1) electronic copy of all shop drawings shall be submitted for approval.
- B. Shop drawings for all aspects of this project shall be submitted. The shop drawings shall include existing conditions, all applicable dimensions, new products to be installed, locations, etc.
- C. Resubmittal: When a resubmittal is required, the original so indicating will be returned to the Contractor. After revision of the original, a new electronic copy shall be submitted for review.

- D. Review: The above procedure shall be repeated until approval is obtained. The original electronic copy of the reviewed shop drawing will be returned to the Contractor, at which time the Contractor shall make prints in sufficient numbers for the Owner (if requested), as well as sufficient copies for his use.
- E. Shop drawings of an engineering nature shall be sent directly to the Designer for review, with a copy of the electronic transmittal and submittal sent to the Owner.

1.5 SAMPLES

- A. Original Submittal: Two (2) samples, unless otherwise specified, of each item for which samples are required shall be furnished for approval. Approval shall be obtained prior to delivery of the materials to the project site. Such samples shall be representative of the actual material proposed for use in the project and of sufficient size to demonstrate design, color, texture, and finish when these attributes will be exposed to view in the finished work.
- B. Resubmittal: All rejected samples will be returned upon request, and any or all resubmittals shall consist of two (2) new samples.
- C. Review: Upon approval by the Designer, one sample so noted will be returned and the remainder will be retained by the Designer until completion of the work. When requested, all approved samples will be returned for installation, provided their identity is maintained in an approved manner until final acceptance of the project.
- D. Important specific samples are specified in Technical Sections of the Specifications. The Contractor is cautioned to quickly provide specified samples.
- E. Each submittal item shall have the technical section and paragraph number clearly indicated. All submittal items without the proper designations will be returned and will not be reviewed.

1.6 CATALOG DATA

- A. Submittals: Electronic copies of catalog data are required for the original submittal and each subsequent resubmittal along with shop drawings. Following review, one an electronic copy will be returned with its status noted. If approved, such additional copies may be requested by the Designer or Owner and shall be furnished without additional cost.
- B. Data: Each submittal shall have all pertinent data contained therein that is applicable to the item submitted for review, adequately and permanently designated.

1.7 MANUFACTURER'S INSTRUCTIONS

- A. Where in these specifications an item is called for to be installed in accordance with the manufacturer's directions, specifications or recommendations, the Contractor shall furnish the Designer with electronic copies of said directions, specifications, or recommendations, before the item is installed.

1.8 CERTIFICATES AND GUARANTEES

- A. Certificates of performance, treatment, and conformance to specified standards shall be submitted prior to initiating work on the project.
- B. Copies of all guarantees required on the project shall be submitted for review and acceptance as to form.

1.9 IDENTIFICATION

- A. Data: All submittals for review shall have the following identification data, as applicable, contained thereon, or permanently adhered thereto:
 - 1. Project name and location.
 - 2. Designer's name.
 - 3. Subcontractor's, Vendor's, and/or Manufacturer's name and address.
 - 4. Product Identification. (It is important that the specific product intended for use is indicated on manufacturer's literature).
 - 5. Shop drawing title, drawing number, revision number, and date of drawing and revision.
 - 6. Applicable Contract Drawings and Specification Section numbers.
- B. Catalog Data: Each separate catalog, brochure, or single page submitted shall have the identification required hereinbefore.
 - 1. Catalogs or brochures submitted containing multiple items for approval need the identification on the exterior and on each specific item clearly circled, flagged, or otherwise identified.
 - 2. In the event that one or more of the multiple items are not approved in any submittal, the additional copies required will not be requested until all items are approved.
- C. Space: Vacant space approximately two and one-half inches wide by four inches high shall be provided adjacent to the identification data to receive the Designer's status stamp.

1.10 CONTRACTOR'S RESPONSIBILITY

- A. Representation: By their submittal of any shop drawing or catalog data, the Contractor thereby represents that they have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, or will do so, and that they have checked and coordinated each item with other applicable approved shop drawings and the Contract requirements. Certification shall appear on each shop drawing stating that the Contractor has made this check. All drawings without this certification will be returned without examination.
- B. Deviations: Changes on the submitted shop drawings that deviate from the Design Drawings must be brought to the Owners and Designers attention in writing prior to review. Changes must be clearly visible on the shop drawings in the form of written notation, ballooning or highlighting the intended change. A written description for the proposed change must also be included and submitted on company letterhead.

Changes to drawings and details not submitted in accordance with these requirements will not be recognized as an approved deviation from the Design of Record. Construction repairs, renovations, or replacements required as a result of shop drawing and submittal deviations that are not documented in accordance with these requirements are subject to removal and/or replacement by the Contractor, at the sole cost of the Contractor.

- C. Commencement: Order, fabricate, and install materials requiring a submittal only after the approval of the submittals and shop drawings related to such items. Any items installed prior to approval may be required to be removed and replaced with an approved item at no additional cost to the Owner and with no extension of the completion date of the contract.
- D. Acceptance: Project Work, materials, fabrication and installation shall conform to accepted submittals, shop drawings, and catalog data.
- E. Manufacturer's Information: Where manufacturer's directions, specifications or requirements are called for, the Contractor shall have the responsibility of determining whether such directions, specifications, or requirements may safely and suitably be employed in the work. Notification of the Owner must be made, in writing, if deviations or modifications are necessary for installation safety or proper operations.
- F. Concealed Conditions: If an unspecified or undetailed condition is discovered during the work, the Contractor shall submit scaled shop drawings indicating specific components and configurations planned for use. Provide temporary protection for the duration of the review process. Shop drawings must be approved and accepted by the Owner and/or the Owner's Representative prior to installation of the related work.
- G. Non-Submittal: Failure by the Contractor to submit shop drawings or submittals in ample time for review or resubmission (if required) prior to the commencement of construction shall not affect the completion date of the contract. Materials or methods of construction utilized in the Work by the Contractor without written acceptance by the Owner shall be done at the Contractor's own risk. Such materials or methods shall be subject to rejection by the Owner.
- H. Prohibitions: No portion of the work requiring a shop drawing, sample or catalog data shall be started, nor shall any materials be fabricated or installed, prior to the approval of such item.
- I. Review: Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples and catalog data.
- J. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Designer's receipt of submittal.

1. Initial Review: Allow ten (**10**) business days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Designer will advise the Contractor when a submittal being processed must be delayed for coordination.
2. Concurrent Review: Where concurrent review of submittals by the Designer's consultants, or other parties is required, allow ten (**10**) business days for initial review of each submittal.
3. Direct Transmittal to Consultant: Where the Contract Documents indicate that submittals may be transmitted directly to Designer's consultants, provide duplicate copy of the transmittal to the Designer. The submittal will be returned to Designer before being returned to Contractor.
4. If intermediate submittal is necessary, process it in same manner as initial submittal.
5. Allow ten (**10**) business days for processing each re-submittal.
6. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
7. The Designer will schedule one working day for submittal review for this project, typically on a Wednesday of each week. Unless a time critical submittal requires immediate attention, all individual, or partial submittal packages will be retained, and not reviewed until multiple items are provided until said designated day. The Contractor shall take this into account when scheduling and coordinating submittal and construction activities to prevent delays in their work activities.
8. Multiple individual submittal reviews or incomplete packages are subject to potential back charges to the Contractor due to unreasonable review times which may be required. The Contractor is to provide complete submittal packages for technical section.

1.11 RECORD DRAWINGS

- A. The Contractor shall provide a copy of all Contract Drawings showing as-built conditions and any Contract changes to the Owner at the completion of the project.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. This Section contains instructions and requirements for the provision and utilization of temporary facilities to protect the Owner's property, the site, and construction materials, and daily maintenance and cleanup of the site during the project.

1.3 CONTRACTORS USE OF EXISTING FACILITIES

- A. The Contractor is hereby made aware that the Owner's daily operations shall not be affected by the work and shall conform to the Owner's site/facility requirements. Furthermore, the Owner may require that the Contractor relocate to other work areas at times to avoid conflicts with the Owner's operations. Therefore, the Contractor will be required to provide the Owner with a 72-hours' notice on anticipated work areas.
- B. The building will be occupied and in use during construction. The Contractor shall provide all protection, guards and barriers necessary to segregate the work area and the areas adjacent to or below ongoing work from pedestrian and vehicular traffic. Protect existing building, building finishes, landscaping, and paved areas from damage.
- C. Limit the use of the premises to the work indicated, so as to allow for the Owner's uninterrupted occupancy and use. Confine operations to the areas indicated under the Contract. Conformance to the regulations set forth by the Owner regarding use of existing facilities is mandatory.
- D. The Owner may assist in controlling occupancy. Contractor shall provide and place portable barricades, as coordinated with the Owner.
- E. Take any and all precautions necessary and provide equipment, materials and labor to adequately protect previous construction, the building, its contents and occupants, and surrounding landscaped areas from damage due to construction as well as from inclement weather during construction.
- F. Clean interior and exterior areas affected by the construction on a daily basis. Do not allow construction debris, waste materials, tools, excess packaging materials or other construction related materials to accumulate on the roof, work platforms, in the facility, or at the exterior grounds and paved areas.

1.4 SANITARY FACILITIES

- A. Sanitary facilities shall be provided as required by local and state statute. They are to be provided by the Contractor in a location designated by the Owner. Units shall be ballasted to prevent overturning and secured to prevent un-authorized access.
- B. Sanitary facilities shall not be stored on the roof at any time during the project.

1.5 BARRIERS

- A. The Contractor shall install temporary fencing, warning lines, barriers, and the like, as required, to segregate the construction areas from existing facilities, occupants, and the public. In the event that access cannot be interrupted in the construction area, the Contractor shall provide protection above doorways and walks in the construction area.
- B. The Contractor is required to conform to OSHA requirements and all local, state, and federal safety regulations.
- C. The Contractor shall provide guard lights on all barriers and all lighting necessary to prevent vandalism of work and storage areas. The Owner is not responsible for the Contractor's losses due to damage or theft by vandals.
- D. The Contractor shall provide warning lines inside of doors and adjacent to roof areas being renovated.

1.6 SCAFFOLDING AND STAGING

- A. Where scaffolding and staging is required for the proper installation of the work it shall be erected to provide a minimal impact on the site.
- B. All barriers and warning lines shall be installed at the base of any scaffolding or staging and around ground areas below elevated staging.
- C. Provide walk through overhead protection where work areas are above doors, walkways, or sidewalks.
- D. All scaffolding and staging shall be erected in conformance with all applicable state, federal and local codes. The Contractor shall follow all applicable local, state, and federal requirements regarding the construction of scaffolding and staging and the protection of public safety. Specific reference shall be made to the OSHA Construction Safety Regulations and all requirements of the Massachusetts Department of Labor and Industries.
- E. Should scaffolding be provided over the existing roof system, the Contractor shall provide a visual observation report of the existing roof components prior to setting up any equipment and report any pre-existing damages to the Owner's representative. Provide temporary protection as outlined within these documents.

1.7 FIRE PROTECTION

- A. The Contractor shall provide all necessary temporary fire protection for the buildings, building contents and materials during construction. The Contractor shall provide incombustible protective blankets where necessary to protect surfaces or building contents from damage.
- B. At no time shall any combustibles be stored inside the building. All adhesives, caulks and cleaning solvents shall be stored well away from the building in a method approved by local fire officials.
- C. Should any cutting, burning, or welding be necessary, the Contractor shall provide a fire watch. This watch will continue during the operations and for four (4) hours minimum after completion.
- D. At no time shall open flames be present around adhesives, caulks, or cleaning solvents as they will readily ignite. Rags soaked with cleaning solvents shall not be discarded in the dumpsters but shall be stored in a metal receptacle and removed from the site daily.
- E. The Contractor shall be required to comply with all local fire codes and shall obtain all permits necessary from the local fire department and provide one (1) copy to the Designer.
- F. The Contractor shall provide recently tested, fully charged fire extinguishers around the storage area, rubbish receptacle and two (2) within 100-feet of the work area or as specifically required by the Fire Department.

1.8 HOT WORK REQUIREMENTS

- A. Hot work shall comply with NFPA 51B, *Fire Prevention During Welding, Cutting, And Other Hot Work* and Factory Mutual Global (FMG)'s Hot Work Permit System.
- B. The definition of Hot Work as listed in 527 CMR 1.00 and NFPA 51B 3.3.2 and 3.3.6 shall include 1) welding and allied processes, 2) heat treating, 3) grinding, 4) thawing pipes, 5) powder-driven fasteners, 6) hot riveting, 7) torch-applied roofing, and 8) similar applications producing or using sparks, flame, or heat.
- C. All hot work including cutting, welding, brazing, etc. shall require a permit from the local Fire Department. The cost of any required fire watch required as a condition of the permit shall be the responsibility of the Contractor. The cost of any local Fire Department paid details is the responsibility of the Contractor.
- D. All welding and cutting shall be in accordance with the local Fire Department's regulations.
- E. The Contractor shall confirm that all persons engaged in hot work operations on the work site have completed a Hot Work Safety Certificate. Certificate shall be provided by the National Fire Protection Association (NFPA), or equivalent certificate or course completion as determined and approved by the Head of the Fire Department.

- F. The Contractor will ensure that the requirements in the Contract Documents and any and all permit requirements regarding fire protection and prevention, including fire watch, are strictly adhered to during the entire duration of the Contract, until Final Completion of the Work.
- G. Torch cutting and/or welding operations by sub-contractors shall have the approval of the Contractor prior to start of such operations, and sub-contractors shall also submit Hot Work safety certificates.
- H. Wherever electric or gas welding or cutting work is done in the vicinity of combustible material, or over areas where persons may be found, interposed shields of fireproof material shall be used to protect against fire damage or injury.
- I. Personnel with suitable fire extinguishing equipment, experience, and training shall be stationed near welding and cutting operations to prevent the sparks from lodging in floor cracks or passing through floor or wall openings and from lodging in combustible materials.
- J. Chemical extinguishers shall be available and ready for use in all locations where torch cutting and/or welding operations are in progress. At a minimum, chemical extinguishers shall be 10lb ABC fire extinguishers or as directed by the fire department.

1.9 UTILITIES

- A. Electrical service will be provided to the Contractor free of charge by the Owner through exterior electrical outlets if operable. Use shall be limited to construction hours. The Contractor or Sub-Contractor will be required to provide their own generators as required to operate dust collection devices and/or equipment which may require large amperage than that available on site. The Owner reserves the right to charge the Contractor for excessive electrical service usage (i.e., wasteful usage). Should charges be considered, the Owner will notify the Contractors in writing of their intent, 72-hours in advance. Should the Contractor need to use generators to operate their equipment, it will be the responsibility of the Contractor to supply these units.
- B. Water for construction purposes will be provided to the Contractors free of charge by the Owner through exterior water spigots if operable. The Owner reserves the right to charge the Contractor for excessive or wasteful use. Should charges be considered, the Owner will notify the Contractor in writing of their intent, 72-hours in advance. Drinking water shall be provided by the Contractor.
- C. All other utilities (phone, fax, access to the site, sanitary facilities, etc.) required will be provided by the Contractor.

- D. Plumbing, heating, and electrical work, including reinstallation of equipment and other work to be performed by the Contractor, shall be carried out without interference to the building's normal operation. Where work requires interruption of service, the Contractor shall make advance arrangements with the Owner for dealing with such interruption.
- E. Ensure proper and safe operation and maintenance of utility systems within the construction limits, whether these are supplied by the Owner's distribution system or otherwise, until the work is accepted by the Owner. Maintain and operate appurtenances within the construction area which serve the distribution system, subject to periodic inspection by the Owner's operating personnel. Inspection by any representative or personnel of the Owner shall not relieve the Contractor of his responsibilities in connection with the operation and maintenance of these facilities and equipment.

1.10 TEMPORARY PROTECTION

- A. Provide suitable Owner approved temporary protection to prevent the entrance of debris and obstructions into the building. Provide warning signs to reroute personnel around areas of dangerous work. Schedule operations to allow for completion of work over a predetermined area within a day's work.
- B. Protect materials scheduled to be reused from damage by placing them in labeled containers or wrappings stored in a weathertight trailer.
- C. Provide temporary protection such as plywood and tarps for streets, drives, curbs, sidewalks, landscaping, and existing exterior improvements during all phases of the project.
- D. Provide temporary protection over fenestrations such as windows/doors/vents/etc. as required to prevent dust migration into the building and to prevent damage to the fenestration.
- E. Provide temporary interior protection should there be interior masonry work performed under the Contract.
- F. Roof Protection:
 - 1. All new and existing roof areas, trafficked during construction, shall be protected.
 - 2. Phase work so as to minimize foot traffic on newly installed asphalt shingles.
 - 3. The Contractor is responsible for the prompt repair of any damage to the new or existing roof systems resulting from the work at the project.
 - 4. Should construction be interrupted for an extended period of time due to winter weather conditions, the Contractor shall provide all necessary means of temporary protection required to maintain a watertight roof assembly.

1.11 WALKWAY COVERING

- A. Install walkway coverings above all entrances and at locations required to properly protect all construction and pedestrian personnel from falling debris. Roof coverings over entrances shall be constructed with layers of 3/4-inch thick plywood with a roof span rating of not less than 32-inches. Roof covering supports shall be placed at not more than 32-inches on center for the length of the coverings. The framework supporting the walkway covering shall be free-standing and well braced. The roof covering and support framing shall be designed to support a live load of at least 150 psf. The roof coverings shall be of width sufficient to cover the entrance doorway and extend 8-feet away from the building face. A minimum height clearance of 8-feet, 6-inches shall be maintained for temporary overhead protection. Protection shall be in accordance with all applicable OSHA standards.
- B. Provide temporary 60-watt lighting under overhead staging locations where the general public may frequent. Temporary lighting shall be spaced 8-feet minimum on center.
- C. Provide temporary signage as required to show access/egress areas, or temporary closures of entrance ways.

1.12 DEBRIS REMOVAL

- A. The Contractor shall supply adequate covered receptacles for waste, debris, and rubbish.
- B. All receptacles must be immediately removed from the site when full.
- C. The grounds in the area of the receptacle must be cleaned daily and prior to moving the receptacle to another location on the project. Disposal shall be off-site in a legal dump intended for that use.
- D. The receptacles shall be located in areas designated by the Owner. Receptacles shall not remain adjacent to the building overnight.
- E. Receptacles shall be removed from the site daily. Should, for any reason, receptacle removal is not possible on any given day, the Contractor shall move the receptacle a minimum of 50-feet from the building or as required by local fire officials.

1.13 EXISTING COMPONENT REMOVAL

- A. Under no circumstances shall the Contractor remove the existing systems to the ground in an uncontrolled manner. Machinery or devices used shall be manufactured for this purpose. Adjacent building and property areas shall be protected from airborne debris.

1.14 VOLATILE MATERIALS

- A. The Contractor is reminded that the adhesives, solvents, etc., are highly volatile and flammable materials. These materials, along with tools and applicators and rags, shall not be stored on or within the building. Do not transport materials through the building. Take precautions and closely follow the Specification requirements for fire protection on site during construction.
- B. Locate and use flame-heated equipment so as not to endanger the structure, other materials on site, or adjacent property. Locate and use flame-heated equipment in specific areas approved by the Owner. Do not relocate flame-heated equipment without prior approval from the Owner.

1.15 PREPARATORY WORK BY THE OWNER

- A. The Owner will perform the following preparatory work to the building contents below the work areas:
 - 1. Coordinate the potential relocation of occupancy adjacent to the work areas. Note however that the building will be considered occupied at all times.
 - 2. Upon written notification from the Contractor, the Owner may relocate adjacent building activities should it be anticipated that the construction renovations may affect the adjacent operations. The Contractor will be required to provide a description of the activities, duration, and suggested solutions to reduce potential issues.
 - 3. Aside from the work outlined above, the Owner will not perform any other preparatory work. The Owner shall be provided with sufficient notice (72-hours minimum) as to the location of the work, should it differ from the submitted work schedule.

1.16 PREPARATORY WORK BY THE CONTRACTOR

- A. Prior to beginning any work on site, the Contractor shall coordinate and perform an interior leak audit of the level below the roof with the Owner's facilities management staff. Existing leak areas shall be documented on a plan and provided to the Designer and Owner. Any new leaks that occur during construction shall be addressed by the Contractor at no additional cost to the Owner.
- B. The Contractor will perform the following preparatory work to the building contents below the work areas:
 - 1. Cover open shelving and office equipment including suspended ceilings, and furniture. No fixtures or appliances will be protected by the Owner.
 - 2. Mask openings to closets, encased bookshelves, cabinets, and similar fixed storage areas.
 - 3. Temporarily mask window openings to reduce dust infiltration.
 - 4. The Contractor shall coordinate the shutdown of air intakes with the Owner's representative so as to prevent intake of dust and fumes.
 - 5. Upon completion of the work, remove all masking and protection and clean and restore the area to the satisfaction of the Owner.

6. Soiled, stained, or damaged floor areas will be cleaned, repaired, or replaced by the Contractor to the satisfaction of and at no additional cost to the Owner.

1.17 SIGNAGE

- A. If requested by the Owner, the Contractor shall conspicuously post a project sign at ground level. This sign shall designate the project entrance. Only one (1) entry may be used by the Contractor at each site. The entry location shall be as directed by the Owner.

1.18 ACCESS TO THE WORK

- A. Do not interfere with the Owner's normal business operations. Coordinate activities and sequencing of the Work with the Owner.
- B. The Contractor must secure the permission of the Owner prior to entering the building or performing work at the building interior. All access to the Work areas shall be provided by the Contractor from the exterior of the facility. An access tower shall be located at an Owner approved location for this purpose, and shall be made secure at the end of each work day to prevent un-authorized access onto the unit.
- C. The Owner will designate which portions of the site the Contractor may utilize and access for the performance of the work. The Contractor must submit a site plan indicating their locations of set up, material storage, and parking. Parking at other locations throughout the lot, without prior authorization, is subject to vehicle removal at no cost to the Owner.
- D. All hoisting of equipment and materials must be done on the exterior of the building. No tools will be permitted inside the building unless specifically required to perform the designated scopes of work.
- E. The Contractor will be required to provide a clean change of clothes and shall be responsible for any damages or stained interior components should access to the interior be required.

1.19 PARKING

- A. The Contractor is encouraged to carpool to the site. Contractor parking at the site may be available at Owner approved locations. Contractor to coordinate all parking locations with the Owner. All emergency fire lanes shall remain free and clean at all times.

1.20 TEMPORARY SITE OFFICE

- A. The Owner will not provide the Contractor with a temporary office or telephone line within the building.

1.21 TRAFFIC CONTROL

- A. The Contractor shall arrange and pay for all police details required to control traffic affected by any part of the work.
- B. The Contractor shall coordinate with the Owner daily to avoid disruptions to the school bus lanes.
- C. At times, it will be the responsibility of the Contractor to assist and direct traffic while erecting scaffolding and accepting material and equipment deliveries.

1.22 CLEAN-UP

- A. Site clean-up shall be to the conditions prior to construction, and to the satisfaction of the Owner. Site clean-up shall be performed daily.
- B. All roof, building (interior and exterior), landscape, and parking areas shall be cleaned of all trash, debris, and dirt caused by or associated with the work.
- C. All landscape areas damaged or littered due to the work shall be raked clean and re-seeded if required.
- D. All paved areas shall be swept clean of debris daily.
- E. Any accumulated debris as a result of the roof renovations on the suspended ceiling tiles, or mechanical ductwork, shall be cleaned by the Contractor at no additional cost to the Owner.
- F. All areas stained, dirtied, discolored, or otherwise damaged due to the work shall be cleaned, restored or replaced as required.
- G. All trash and debris shall be completely removed from the site daily during the work and at the completion of the project. All debris shall be legally disposed of offsite.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 016500

PRODUCT DELIVERY REQUIREMENTS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. This Section contains instructions and requirements for the provision and maintenance of adequate delivery, storage, and handling on site of products and materials to be utilized in the Work.

1.3 IN GENERAL

- A. The Contractor shall take the necessary precautions and provide all equipment, materials, and labor necessary to adequately protect the Contract Area, previous construction, the buildings, their contents, and occupants, surrounding landscaped and paved areas from damage due to the construction or inclement weather during construction.
- B. No storage on or within the building will be allowed without prior authorization from the Owner and Designer.

1.4 WEATHER PROTECTION

- A. Weather protection shall mean the temporary protection of that work adversely affected by moisture, wind, heat and cold by covering, patching, sealing, enclosing, ventilating, cooling and/or heating. This protection shall be provided for all work areas, the buildings, and their contents, trafficked adjacent areas, and all construction materials and accessories.
- B. The cost of heat, fuel, and power necessary for proper weather protection shall be the responsibility of the Contractor.
- C. Installation of weather protection shall comply with all safety regulations, including provisions for adequate ventilation and fire protection devices.

1.5 MATERIAL STORAGE, STORAGE, AND HANDLING

- A. All materials shall be stored in trailers onsite or brought to the site daily. Storage trailers will be allowed in the location(s) designated by the Owner. All flammable substances cannot be stored along the building.

- B. In the event that materials are exposed to the elements, they shall be marked as unacceptable and immediately removed from the site. They may not be used.
- C. The Contractor will be required to provide additional tarps or canvas covers over any materials that may be stored with the Owner's permission at the site. The Contractor will not be permitted to rely on the manufacturer's shrink wrap material as the sole source of weather protection. These covers are to be adequately ballasted and secured to prevent wind uplift.
- D. Protect all existing and new wood stored on site to prevent moisture absorption. Use tarps over the wood pile (top, sides and bottom) elevated on pallets (one side lower to shed water).
- E. Onsite storage of materials is the responsibility of the Contractor. The Owner is not responsible for the Contractor's losses due to damage or vandalism.

1.6 TOOLS AND EQUIPMENT

- A. Contractor is responsible for delivery, storage, maintenance, and security of tools and equipment.

1.7 INSPECTION NOTIFICATION

- A. Materials stored on site and subject to damage from wind, precipitation, or other potential climactic conditions will be subject to inspection on a daily basis by the Owner or Owner's Representative.
- B. If, during the Contract period, the Contractor is notified of insufficient weather protection, they shall, within 24-hours, properly restore the weather protection and repair or replace any damaged unprotected materials and systems.
- C. Should the Contractor not enact immediate repair or replacement when notified, the Owner shall have the proper protection installed at the Contractor's expense. The Contractor is responsible for all damages to the building as a result of leaks.

1.8 MANUFACTURER'S INFORMATION

- A. The manufacturers of all the materials shall supply written instructions concerning the storage and handling of all supplied materials, including sealants, and accessories. The manufacturer shall also provide information concerning storage and handling of flammable or volatile materials.
- B. Storage facilities shall be acceptable to the manufacturer and conform to his written requirements concerning temperature, humidity, ventilation, and the like.
- C. The "shelf-life" of materials shall be provided with the date of manufacture of all perishables, including volatiles, caulking, and mastics.

- D. The Contractor shall supply a copy of all manufacturers' written instructions to the Owner and Designer as outlined in Section 013300 – SUBMITTAL REQUIREMENTS. The Contractor shall comply with all storage and handling requests and instructions of the manufacturer.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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Roof Replacement and Associated Work at
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Shutesbury, MA
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SECTION 017000

PROJECT CLOSE-OUT

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. This Section contains requirements for items to be completed by the Contractor prior to Owner's final acceptance.

1.3 SUBSTANTIAL COMPLETION

- A. Substantial completion for this project is defined as the date when the Owner and Owner's Representative mutually agree and certify that all project related work has been properly installed and completed in a manner conforming to the Contract Documents. Work specified within the Contract Documents which has not been performed or has been performed in a manner which does not conform with the Contract Documents shall be deemed as not achieving substantial completion.

1.4 CLOSE-OUT PUNCH LIST REVIEW

- A. Notify the Owner or Owner's Representative in writing that the Contract Work of the project has been completed and is ready for close-out punch list review. After work is deemed substantially complete, and only minor repair items remain, the Owner's Representative shall tour the project site and compile a list of these items. Minor repair items are those items which have been properly installed and are functional, but which require cosmetic repair or cleaning that does not affect the systems' integrity. A copy of the list shall be sent to the Contractor who shall then correct each item. The Contractor shall certify completion of the itemized repair list to the Owner's Representative and request a re-review in writing. Should the Contractor delay correction of the list of items for more than thirty (30) days, the Owner may have the deficiencies repaired by others at the Contractor's expense.
- B. Any work specified within the Contract Documents, which has not been performed, or has been performed in a non-conforming manner to the Contract Documents shall not be defined as minor "punch-list" items and must be performed or corrected as appropriate in order to achieve substantial completion.

1.5 PUNCH LIST RE-REVIEWS

- A. After providing written notification to the Owner and Designer that the punch list work has been completed, the Owner and Designer will perform one (1) final review. Should additional re-reviews be required due to punch list items which are not completed or improperly completed, the costs of these re-reviews will be assessed to the Contractor.

1.6 MANUFACTURER'S INSPECTION

- A. After the re-inspection by the Owner's representative, the Materials Manufacturer's representative will be required to tour the site. The representative shall determine if the materials have been installed as required by the Manufacturer. Any items the representative determines were not so installed shall be reinstalled so as to comply with the Manufacturer's intended use. The Manufacturer shall forward a copy of the list of all items determined to be not installed as intended by the Manufacturer to the General Contractor and Designer.

1.7 WARRANTIES AND GUARANTEES

- A. When both the Owner's representative and the Manufacturer's representative agree that the Contractor has performed according to the Specifications and has installed the materials to the satisfaction of the Manufacturer, the Contractor shall petition the Manufacturer for the materials guarantee. They shall forward this guarantee to the Owner and provide a copy for the Designer.

1.8 PROJECT CLOSE-OUT SUBMITTALS

- A. A minimum of four (4) sets of close-out documents are to be placed in individual three ring binders and submitted to the Designer for review. Three (3) sets will be issued to the Owner, and one (1) set retained by the Designer. One (1) thumb-drive of all the documents will also be provided to the Designer and Owner at a special closeout meeting once the package has been accepted.
1. Specified Contractor's and Materials Manufacturer's Warranties and Guaranties.
 2. Executed Punch-List Inspection letter.
 3. Consent of Surety to Final Payment (AIA Form G707).
 4. Lien Releases from Contractor, subcontractor and suppliers (AIA Form G706A).
 5. Contractor's Affidavit of Payment of Debts and Claims (AIA Form G706).
 6. Final Application and Certificate for Payment (AIA Form G702).
 7. As-Built Drawings.
 8. Other documents which may be specifically required by the Owner, or the Designer.

1.9 RETAINAGE RELEASE

- A. When guaranties, warranties, certificates of compliance, and lien releases have been received by the Owner, and the Work has been accepted by the Owner as complete, the Owner shall release retainage monies to the Contractor and other monies retained by the Owner to ensure project completion in accordance with the Conditions of the Contract.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

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SECTION 024100

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 061000 – Rough Carpentry
B. Section 062013 – Exterior Finish Carpentry
C. Section 073113 – Asphalt Shingle Roofing
D. Section 076200 – Sheet Metal Flashing and Trim
E. Section 261000 – Temporary Mechanical/Electrical Disconnects

1.3 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer, as amended. The work under this Section generally includes the following:
1. Demolition and removal of selected portions of buildings and structures and as required for new work. Refer to the appropriate technical Section and Contract Drawings for additional requirements.
 2. Salvage of existing items to be reused or turned over to the facility.
 3. Removal and legal disposal of demolished materials off site. Except those items specifically designated to be relocated, reused, or turned over to the facility, all existing removed materials, items, trash and debris shall become property of the Contractor and shall be completely removed from the site and legally disposed of at her/his expense. Salvage value belongs to the Contractor. On-site sale of materials is not permitted.
 4. Scheduling and sequencing operations without interrupting utilities serving occupied areas. If interruption is required, obtain written permission from the utility company and the Owner. Schedule interruption when the least amount of inconvenience will result.
 5. De-energize the existing photovoltaic system and shut off the main breaker. It is the intent of this project to remove the photovoltaic system from the roof, disconnect the wiring from the breaker system and terminate the existing wires in a new junction box below the roof deck mounted to the existing rafter system. Infill the wood roof deck. Refer to Sections 061000 – ROUGH CARPENTRY and 261000 – TEMPORARY MECHANICAL/ELECTRICAL DISCONNECTS for additional information.

1.4 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to the User Agency ready for reuse, at a location designated by the User Agency. Protect from weather until accepted by User Agency.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated. Protect from weather until reinstallation.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.5 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques, antiques, and other items of interest or value to the Owner that may be encountered during selective demolition remain property of the Commonwealth or user Agency as applicable. Carefully remove each item or object in a manner to prevent damage and deliver promptly to a location acceptable to the Owner.

1.6 SUBMITTALS

- A. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with early and late starting and finishing dates for each activity. Ensure User Agency's on-site operations are uninterrupted if applicable.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Locations of proposed dust- and noise-control temporary partitions and means of egress, including for other occupants affected by selective demolition operations.
 - 5. Coordination of User Agency's continuing occupancy of portions of existing building and of User Agency's partial occupancy of completed Work.
 - 6. Means of protection for items to remain and items in path of waste removal from building.
- B. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged, and turned over to the User Agency.
- C. Predemolition Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Comply with Division 01. Submit before Work begins.

- D. Landfill Records: Provide trip tickets (receipts) indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.7 QUALITY ASSURANCE

- A. Examination of Existing Conditions: The Contractor shall examine the Contract Drawings for demolition and removal requirements and provisions for new work. Verify all existing conditions and dimensions before commencing work. The Contractor shall visit the site and examine the existing conditions as he finds them and shall inform herself/himself of the character, extent and type of demolition and removal work to be performed. Submit any questions regarding the extent and character of the demolition and removal work in the manner and within the time period established for receipt of such questions during the bidding period.
- B. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- C. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.
- D. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- E. Standards: Comply with ANSI A10.6 and NFPA 241.
- F. Pre-demolition Conference: Conduct conference at Project site to comply with requirements of the specification. Review methods and procedures related to selective demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.8 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Designer.
- E. Engage a professional engineer registered in the Commonwealth of Massachusetts to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- F. Survey of Existing Conditions: Record existing conditions by use of preconstruction videotapes.
 - 1. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
- G. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off indicated utilities with utility companies and User Agency.
 - 2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

4. Prior to commencing cutting work in existing surfaces, take all precautionary measures to assure that mechanical and electrical services to the particular area have been made inactive. Coordinate with any subcontractors. Only licensed tradesmen of that particular trade shall disconnect and cap existing mechanical and electrical items that are to be removed, abandoned and/or relocated.
5. If, during the process of cutting work, existing utility lines are encountered which are not indicated on the Drawings, regardless of their condition, immediately report such items to the Designer. Do not proceed with work in such areas until instructions are issued by the Designer. Continue work in other areas.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Comply with requirements for access and protection specified in Section 015000 – TEMPORARY FACILITIES AND CONTROLS.
 2. Maintain adequate passage to and from all exits at all times. Before any work is done which significantly alters access or egress patterns, consult with the Designer and obtain approval of code required egress. Under no condition block or interfere with the free flow of people at legally required exits, or in any way alter the required condition of such exits.
- B. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 1. Strengthen or add new supports when required during progress of selective demolition.
 2. Remove temporary shoring, bracing and structural supports when no longer required.
 3. Post warning signs and place barricades as applicable during placement and removal of temporary shoring.
- C. Conduct demolition operations to prevent injury to people and damage to adjacent buildings and facilities to remain. Ensure safe passage of people around demolition area(s).
 1. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction. Provide temporary barricades as required to limit access to demolition areas.
 2. Protect existing site improvements, appurtenances, and landscaping to remain.
- D. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during and after flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to User Agency.
 4. Transport items to storage area designated by the Owner.
 5. Protect items from damage during transport and storage.
- C. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Designer, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- E. Items for Re-use and Preservation of Existing Surfaces to Remain:
1. The Contractor shall inspect closely each item specifically designated to be relocated, re-used, or turned over to the Owner prior to its removal, and immediately report damages and defects to the Designer and Owner. The Contractor shall be responsible for any subsequent damage to the same other than latent defects not readily apparent from close inspection and shall bear responsibility for its repair or same replacement as directed by the Designer, to the satisfaction of the Owner.
 2. Unless special surface preparation is specified under other Specification Sections, leave existing surfaces that are to remain in a condition suitable to receive new materials and/or finishes.

3.5 PROTECTION OF PUBLIC AND PROPERTY

- A. Provide all measures required by federal, state and municipal laws, regulations, and ordinances for the protection of surrounding property, the public, workmen, and Commonwealth's employees during all demolition and removal operations. Measures are to be taken, but not limited to installation of sidewalks, sheds, barricades, fences, warning lights and signs, trash chutes and temporary lighting.
- B. Protect all walks, roads, streets, curbs, pavements, trees and plantings, on and off premises, and bear all costs for correcting such damage as directed by the Designer, and to the satisfaction of the Owner.
- C. Demolition shall be performed in such a manner that will insure the safety of adjacent property. Protect adjacent property from damage and protect persons occupying adjacent property from injuries which might occur from falling debris or other cause and so as not to cause interference with the use of other portions of the building, of adjacent buildings or the free access and safe passage to and from the same.
- D. Every precaution shall be taken to protect against movement or settlement of the building, of adjacent buildings, structures, sidewalks, roads, streets, curbs and pavements. Provide and place at the Contractor's own expense, all necessary bracing and shoring in connection with demolition and removal work.

- E. Remove portions of structures with care by using tools and methods that will not transfer heavy shocks to existing and adjacent building structures, both internal and external of the particular work area.
- F. Provide and maintain in proper condition, suitable fire resistive dust barriers around areas where interior demolition and removal work is in progress. Dust barriers shall prevent dust migration to adjacent areas. Remove dust barriers upon completion of major demolition and removal in the particular work area.
- G. Protect unaltered portions of existing construction, including finishes, furnishings and equipment.
- H. Provide secure weather protection where demolition has removed a portion of the exterior envelope.

3.6 DISCOVERY OF HAZARDOUS MATERIALS

- A. If hazardous materials, such as chemicals, asbestos-containing materials, or other hazardous materials are discovered during the course of the work, cease work in affected area only and immediately notify the Designer and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Designer. Continue work in other areas.
- B. If unmarked containers are discovered during the course of the work, cease work in the affected area only and immediately notify the Designer and the Owner of such discovery. Do not proceed with work in such areas until instructions are issued by the Designer. Take immediate precautions to prohibit endangering the containers integrity. Continue work in other areas.

3.7 CUTTING

- A. Perform all cutting of existing surfaces in a manner which will ensure a minimal difference between the cut area and new materials when patched. Use extreme care when cutting existing surfaces containing concealed utility lines which are indicated to remain and bear full responsibility for repairing or replacement of all such utilities that are accidentally damaged.
- B. Provide a flush saw cut edge where pavement, curb and concrete removals abut new construction work or existing surfaces to remain undisturbed.
- C. Provide fire safing through all interior penetration walls to seal around new penetrations.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. Do not allow demolished materials to accumulate on-site.
- B. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

- C. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- D. Burning: Do not burn demolished materials.

3.9 CLEAN-UP

- A. Site clean-up shall be complete and performed daily to the satisfaction of the Owner.
- B. All roof, building (interior and exterior), landscape, and parking areas shall be cleaned of all trash, debris and dirt caused by, or associated with, the work.
- C. All trash and debris shall be completely removed from the site daily during the work and at the completion of the work. All debris shall be legally disposed of off-site.
- D. Prior to acceptance of the work, the Contractor shall perform a thorough clean-up of the work site, building surfaces, landscaping, etc. Any items damaged shall be repaired or replaced to the satisfaction of, and at no additional cost to, the Owner
- E. The Contractor shall not demobilize the site until the completed work is toured by the Owner and Designer. Any unsatisfactory items observed will be reported in "punch-list" form. These items shall be corrected immediately by the Contractor prior to demobilization from the job site.
- F. All scaffolding, barriers, temporary facilities, and the like shall be removed upon completion of the work. Areas damaged as a result of the Contractor's equipment shall be restored to their original condition, all to the satisfaction of the Owner.
- G. Refer to the Close-Out Procedures described in Division One for additional information.

END OF SECTION

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Roof Replacement and Associated Work at
Shutesbury Elementary School
Shutesbury, MA
Gale JN 840670

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SECTION 061000

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 024100 – Selective Demolition
- B. Section 062013 – Exterior Finish Carpentry
- C. Section 073113 – Asphalt Shingle Roofing
- D. Section 076200 – Sheet Metal Flashing and Trim

1.3 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer, as amended. The work under this Section generally includes the following:
 - 1. Coordinate this work with all trades to provide orderly progress of the tasks.
 - 2. Install new wood nailers as required to properly terminate the new roofing and flashing systems.
 - 3. Install plywood sheathing where indicated on the Contract Drawings.
 - 4. Perform Unit Price work as indicated. Refer to Section 012200 – UNIT PRICES for additional information.
 - 5. Clean and restore all areas affected by the work.

1.4 JOB CONDITIONS

- A. All surfaces to receive the new wood blocking shall be thoroughly dry. Should surface moisture such as dew exist, the Contractor shall provide the necessary equipment to dry the surface prior to application. Do not dry with open flames.
- B. Coordinate this work with the work described in other Sections of this Specification.
- C. Do not leave any newly installed wood blocking exposed. Cover and protect all newly installed wood daily with the new flashing system.
- D. Protect all existing and new wood stored on site to prevent moisture absorption. Use tarps over the wood pile (top, sides, and bottom) elevated on pallets (one side lower to shed water).

- E. Verify condition and securement of existing wood blocking and decking designated to remain.
- F. If delays in the project exceeding one (1) week are anticipated due to inclement weather (or due to any other condition), all wood shall be stored in weatherproof box trailers or storage sheds in locations to be designated by the Owner

1.5 REFERENCE STANDARDS

- A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- B. APA – THE ENGINEERED WOOD ASSOCIATION
- C. NATIONAL DESIGN SPECIFICATION (NDS)
- D. AMERICAN FOREST AND PAPER ASSOCIATION (AFPA)
- E. AWPA – AMERICAN WOOD PROTECTION ASSOCIATION

1.6 SUBMITTALS

- A. Submittals shall be in accordance with the General Conditions and Section 013300 – SUBMITTAL PROCEDURES.
- B. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
 - 3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
 - 4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.7 QUALITY ASSURANCE

- A. Forest Certification: Provide rough carpentry produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC's "Principles and Criteria for Forest Stewardship."

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

1.9 UNIT PRICES

- A. The Contractor shall carry the additional units outlined in Section 012200 – UNIT PRICES under their contract amount in the event that additional deterioration is encountered. Any work in addition to those shown on the Contract Drawings shall be either added or deducted based on the unit costs.

1.10 GUARANTEE

- A. The Contractor shall supply the Owner with a minimum two-year workmanship warranty for their work. In the event any work related to this section is found to be defective within two years of substantial completion, the Contractor shall remove and replace such at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 DIMENSIONAL LUMBER

- A. All dimensional lumber for shall be construction grade Douglas Fir, Hem-Fir or Southern Yellow Pine, formed to the dimensions shown on the Detail Drawings and as required for proper installation of the new work. All new exterior perimeter woodwork, nailers, and wood blocking used on the building shall be minimum 6-inch wide, except where otherwise detailed.
- B. All woodwork shall have a maximum moisture content of 19% by weight on a dry weight basis. Kiln drying may be required to conform to maximum 19% moisture content.

2.2 PLYWOOD

- A. Plywood shall be APA Grade CDX, Exterior, minimum 5/8-inch thick for wall/roof systems to match the thickness of the existing sheathing, unless designated otherwise on the detail drawings.

2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
 - 1. Nailers.
 - 2. Trim.

- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 15 percent moisture content.

2.4 FASTENERS

- A. In general, all fasteners, anchors, nails, straps and other accessories shall be of stainless steel, galvanized steel or fluorocarbon coated steel. Galvanizing shall be hot dip in accordance with ASTM A153 Specifications. Electro-galvanized items shall not be used.
- B. Fasteners for securing wood blocking to wood blocking (or plywood to wood blocking) shall be galvanized annular threaded ring shank nails. Fasteners shall be of sufficient length to penetrate the receiving member 1-1/2-inch minimum, except full depth into plywood.
- C. Fasteners for securing to pressure treated wood blocking shall be stainless steel.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.

3.2 REMOVAL OF WOOD BLOCKING

- A. Remove and dispose of all deteriorated wood blocking and all blocking scheduled to be removed and replaced in accordance with the Contract Drawings and this Specification.

- B. During removal and replacement of woodwork, the Contractor shall report to the Owner and Designer any existing wood blocking designated to remain which is deteriorated or unsuitable. Do not cover unacceptable areas until reviewed by the Designer and provide temporary protection to the area in question. Existing blocking scheduled to remain shall be re-secured with the appropriate fasteners spaced 24-inches on center to the existing roof deck or structure.

3.3 FASTENING OF WOODWORK

- A. Wood blocking to wood blocking connections shall be made using the specified nails spaced 12-inches on center maximum and staggered off the centerline of the woodwork being secured. Nails shall be of sufficient length to penetrate the receiving member 1-1/2-inches minimum.
- B. Plywood shall be fastened to the wood framing with the specified fasteners spaced 6-inches on center maximum vertically.

3.4 PLYWOOD SHEATHING INSTALLATION

- A. Coordinate this work with that of the other trades to provide the orderly progress of construction and a watertight condition. It is the intent of these specifications to install plywood sheathing where designated on the Contract Drawings.

3.5 CLEAN-UP

- A. Site clean-up shall be complete and performed daily to the satisfaction of the Owner.
- B. All roof, building (interior and exterior), landscape, and parking areas shall be cleaned of all trash, debris and dirt caused by, or associated with, the work.
- C. All trash and debris shall be completely removed from the site daily during the work and at the completion of the work. All debris shall be legally disposed of off-site.
- D. Prior to acceptance of the work, the Contractor shall perform a thorough clean-up of the work site, building surfaces, landscaping, etc. Any items damaged shall be repaired or replaced to the satisfaction of, and at no additional cost to, the Owner
- E. The Contractor shall not demobilize the site until the completed work is toured by the Owner and Designer. Any unsatisfactory items observed will be reported in "punch-list" form. These items shall be corrected immediately by the Contractor prior to demobilization from the job site.
- F. All scaffolding, barriers, temporary facilities, and the like shall be removed upon completion of the work. Areas damaged as a result of the Contractor's equipment shall be restored to their original condition, all to the satisfaction of the Owner.

- G. Refer to the Close-Out Procedures described in Division One for additional information.

END OF SECTION

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SECTION 062013

EXTERIOR FINISH CARPENTRY

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 024100 – Selective Demolition
- B. Section 061000 – Rough Carpentry
- C. Section 073113 – Asphalt Shingle Roofing
- D. Section 076200 – Sheet Metal Flashing and Trim

1.3 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer, as amended. The work under this Section generally includes the following:
 - 1. Coordinate this work with all trades to provide orderly progress of the tasks.
 - 2. Remove and replace wood siding as required to properly install the new roof flashing and associated components.
 - 3. Install new cellular PVC trim where indicated on the Contract Drawings.
 - 4. Paint siding and trim where indicated on the Contract Drawings.
 - 5. Perform Unit Price work as indicated. Refer to Section 012200 – UNIT PRICES for additional information.
 - 6. Clean and restore all areas affected by the Work.

1.4 UNIT PRICES

- A. Technical requirements for related Unit Price work are defined in this section. Refer to Section 012200 – UNIT PRICES for quantities to be carried in the Base Bid and provided on the Bid Form. Any work in addition to those shown on the Contract Drawings shall be either added or deducted based on the unit costs.

1.5 SUBMITTALS

- A. Refer to Section 013300 – SUBMITTAL PROCEDURES for additional information.
- B. Provide a project specific safety plan and job hazard analysis.

- C. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- D. Samples for Verification: Before erecting mockup, submit samples of the following:
 - 1. 1 linear foot (1 LF) of lumber siding containing two (2) coats of the approved paint color for review.
- E. Submittals shall be made in accordance with the General Conditions and Section 013300 – SUBMITTAL PROCEDURES.
- F. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
 - 1. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced before shipment to Project site to levels specified.
 - 2. Include copies of warranties from chemical-treatment manufacturers for each type of treatment.
- G. Compliance Certificates:
 - 1. For lumber that is not marked with grade stamp.
 - 2. For preservative-treated wood that is not marked with treatment-quality mark.

1.6 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. Regulatory Requirements: Comply with requirements of authorities having jurisdiction and applicable codes at the location of the project.
- C. Manufacturer Qualification: Minimum 5-years' experience manufacturing similar products.
- D. Installer Qualifications: Minimum 2-years' experience installing similar products.
- E. Mock-ups: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Install minimum 2 linear feet of trim board.
 - 2. Install minimum 2 lumber siding boards.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, and trim flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

- B. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- C. Comply with manufacturer's recommendations. Handle materials to avoid damage.

1.8 JOB CONDITIONS

- A. The Contractor shall supply, install and maintain all shoring, supports, barriers, protection, temporary heat, warning lines, lighting and personnel required to support the structure, fixtures and facilities affected by his work and segregate the work area(s) from pedestrian or vehicular traffic, as well as to prevent damage to the building, occupants and the surrounding landscaped and paved areas.
- B. Schedule and execute all work without exposing the interior building areas to inclement weather. Protect the existing building and its contents against all risks, and repair or replace all damage to the Owner's satisfaction.
- C. Coordinate the work in this section with the work by other trades to ensure the orderly progress of the work.
- D. Under no circumstances shall the Contractor remove existing materials and systems to the ground in an uncontrolled manner. Machinery or devices used shall be manufactured for this purpose. Adjacent building and property areas shall be protected from airborne debris.
- E. During removal operations, the Contractor is responsible for the containment of all dust, dirt, debris, overspray, and run-off resulting from the work. The Contractor shall collect and contain all materials and repair any resulting damage to adjacent surfaces, site fixtures or personal property. Specific attention is drawn to the use of chemicals and cleaners.
- F. Fully charged, inspected, and approved fire extinguishers shall be on site at all times. No cutting, grinding, or welding of any kind shall proceed without an approved, fully charged fire extinguisher.
- G. The Contractor shall utilize skilled and experienced specialty workers to install all aspects of the work.
- H. Maintain environmental conditions (temperature, humidity, ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
- I. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.
- J. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

1.9 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official.
- B. Provide manufacturer's standard limited warranty for products, stating that components will be free from defects in material that occur as a direct result of the manufacturing process, occur under normal use and service, occur during the warranty period and result in blistering, peeling, flaking, cracking, splitting, cupping, rotting, or structural defects from termites or fungal decay.
 - 1. Trim warranty period: 20 years.

1.10 TECHNICAL REFERENCES

- A. Current versions of the following:
 - 1. American Softwood Lumber Standard PS 1.
 - 2. American Softwood Lumber Standard PS 20.
 - 3. American Wood Council's Wood Frame Construction Manual (WFCM).
 - 4. ASTM D 570 – Water Absorption of Plastics
 - 5. ASTM E 84 – Surface Burning Characteristics of Building Materials
 - 6. FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship"

1.11 GUARANTEES

- A. Upon completion of the work and prior to final payment, the Contractor shall submit a guarantee of his work as free from defect in materials and workmanship. The guarantee shall be for a period of two (2) years. The guarantee shall be signed by an officer of the Contractor's firm and sealed if a corporation.

PART 2 – PRODUCTS

2.1 CELLULAR PVC TRIM

- A. Trim boards shall be manufactured of free foam cellular PVC that is homogenous with a small-cell microstructure, having density of 0.55 grams/cm³, and free of voids, holes, cracks, and foreign inclusions and other defects. Edges must be square and top and bottom surfaces shall be flat with no convex or concave deviation as manufactured by Azek Building Products, Inc., CertainTeed Corp., Versatex Building Products, LLC, or approved equal.
- B. Flame spread index shall be less than 25 when tested in accordance with ASTM E 84.
- C. Water absorption shall be less than 0.50 percent when tested in accordance with ASTM D 570.

- D. Boards shall be sized to match the existing wood trim component scheduled for replacement or as indicated on the Contract Drawings.

2.2 TONGUE AND GROOVE REPLACEMENT BOARDS

- A. Lumber for replacement of tongue and groove fascia board shall be 5/4-inch thick Douglas Fir, Hem-Fir, or Southern Yellow Pine formed to the dimensions shown on the Detail Drawings and as required for proper installation of new work.
- B. Boards shall be pre-primed and shall be painted to match the existing tongue and groove wood fascia.

2.3 LUMBER SIDING

- A. Provide kiln-dried lumber siding complying with DOC PS 20.
- B. Species and Grade: Clear VG (Vertical Grain) Heart western red cedar; NLGA, WCLIB, or WWPA.
- C. Pattern: Bevel siding, S1S2E, actual overall dimensions of 5-1/2 by 11/16 inch measured on the face and thick edge at 19 percent moisture content or as required to match the existing siding.
- D. Fasteners for Exterior Finish Carpentry: Provide hot-dip galvanized smooth-shank nails, in sufficient length to penetrate not less than 1-1/2 inches into wood substrate.

2.4 CELLULAR PVC TRIM ACCESSORIES

- A. Fasteners:
 - 1. Use 12-gauge stainless steel fasteners designed for trim and siding. Fasteners should have sufficient flexural and tensile strength to resist bending.
 - 2. Use fasteners with thin shanks, blunt points, and full round heads that are long enough to penetrate the substrate a minimum 1-1/4-inches.
 - 3. Do not use staples, small brads, and wire nails. Avoid using fine threaded wood screws and ring shank fasteners.
 - 4. Use standard nail guns with a pressure setting between 70psi and 100psi or as recommended by the manufacturer. The recommended pressure depends on the type of gun, type of nail, ambient temperature, and the substrate. Care should be taken not to overdrive the nail into the material.
 - 5. Pre-drilling is not typically required unless large fasteners are used, or the product is installed during temperatures below 40 degrees F.
 - 6. Use two (2) fasteners for every framing member for trim board applications. Sheet and trim boards 8-inches and wider require additional fasteners.
 - 7. Install fasteners no more than 2-inches from the end of each board.
 - 8. Avoid fastening over hollow or uneven areas. Fasten onto flat, solid substrates.
 - 9. The trim manufacturer's recommended screws and PVC caps will also be accepted in lieu of nails.

- B. Adhesives:
 - 1. All bonded surfaces must be smooth, clean, and in complete contact with each other for best results.
 - 2. Adhere trim boards to itself with PVC cement or cellular PVC adhesives to prevent joint separation. Adhesives shall be recommended by the manufacturer.
 - 3. Bonded joints should be secured with fasteners and fastened with two rows on each side of the joint.
- C. Sealants:
 - 1. Use urethane, polyurethane, polymer blends, or acrylic based sealants as recommended by the manufacturer. Silicone based sealants will not be allowed.
 - 2. Color to match trim board and molding color.
- D. Nail Hole Filler:
 - 1. Fill nail holes with nail hole filler recommended by the manufacturer.

2.5 PAINT FOR LUMBER SIDING

- A. Paint used for replacement siding boards shall be an exterior grade, mildew resistant, self-priming, water-based (acrylic) coating as manufactured by Sherwin Williams, Benjamin Moore, PPG, or approved equal.
- B. Color shall match the existing siding color and shall be approved by the Owner.

2.6 PAINT FOR PVC TRIM

- A. Paint used for new PVC trim boards shall be an exterior grade, 100% water-based (acrylic) coating as manufactured by Sherwin Williams, Benjamin Moore, PPG, or approved equal and shall be as recommended by the PVC trim manufacturer.
- B. Color shall be selected and approved by the Owner.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.

- B. Prime lumber and moldings to be painted, including both faces and edges, unless factory primed. Cut to required lengths and prime ends.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Shop-apply finish prior to installation. Obtain Designer's approval prior to installation.
- C. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut exterior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 3. Coordinate exterior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.

3.4 CELLULAR PVC TRIM INSTALLATION

- A. Install in accordance with manufacturer's instruction.
- B. Cutting:
 - 1. PVC trim can be cut using standard woodworking saws. Conventional carbide-tipped blades designed for cutting wood are preferred. Avoid using fine-tooth metal-cutting blades.
 - 2. Rough-cut edges are typically caused by excessive friction, poor board support, or worn or improper tooling.
- C. Drilling:
 - 1. PVC trim can be drilled using standard woodworking drill bits.
 - 2. Avoid frictional heat build-up.
 - 3. Remove shavings periodically from a drill hole, as necessary.
- D. Milling and molding:
 - 1. PVC trim can be milled or molded using standard milling or molding machines found in millwork shops.
 - 2. Rake angle 20 to 30 degrees. 25 degrees is recommended.
 - 3. Cutting speed to be optimized with the number of knives and feed rate.
- E. Routing:
 - 1. PVC trim can be routed with standard woodworking routing equipment.

2. Carbide tipped router bits are recommended.
 3. Machinery that allows for multiple cutting speeds will allow for a smoother finished product.
- F. Edge Finishing:
1. Traditional sanding, grinding, or filing tools used for woodworking are preferred.
- G. Fastener Location:
1. For trim board applications use minimum two (2) fasteners per framing member.
 2. Install fasteners at a maximum of 2-inches from the end of each board.
- H. Expansion and Contraction:
1. Properly fasten along the entire length of trim to minimize expansion and contraction.
 2. Allow 3/16-inch space per 18-foot run of trim for expansion and contraction.
 3. Bond joints between pieces of trim to eliminate separation.
 4. Allow expansion and contraction space at the end of long runs.
- I. Cleaning:
1. Clean trim with mild detergent and water.
 2. Products with pumice may be applied with a nylon brush.
 3. For more stubborn stains use a mild household cleaner and degreaser with a nylon brush.

3.5 SIDING INSTALLATION

- A. Install siding to comply with manufacturer's written instructions.
- B. Horizontal Lumber Siding: Apply starter strip along bottom edge of sheathing or sill. Install first course of siding with lower edge at least 1/8 inch below starter strip and subsequent courses lapped 1 inch over course below. Nail at each stud. Do not allow nails to penetrate more than one thickness of siding.
1. Leave 1/8-inch gap at trim and corners, unless otherwise recommended by manufacturer, and apply sealant.
 2. Butt joints only over framing or blocking, nailing top and bottom on each side and staggering joints in subsequent courses.
- C. Finish: Apply finish within two weeks of installation.

3.6 PAINTING

- A. Comply with paint manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Infill nail holes and voids prior to applying paint.

- C. Apply products in accordance with manufacturer's instructions. Rate of application of coating shall be as specified but shall not exceed that as recommended by paint manufacturer for purpose of surface involved.
- D. Allow sufficient drying time between coats as recommended by coating manufacturer.
- E. Lightly sand and dust between each coat to remove defects visible from 5-feet. Finish coats shall be smooth, free from brush marks, streaks, laps, sags, skips, holidays, etc.
- F. Do not apply additional coats until previously installed coat has been reviewed and accepted by Owner. Only accepted coats of paint will be considered in determining number of coats applied.
- G. Refinish entire sections if areas which have been previously repaired are rejected.

3.7 ADJUSTING

- A. Replace exterior finish carpentry that is damaged or does not comply with requirements. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.8 CLEAN-UP

- A. Clean exterior finish carpentry on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.
- B. Complete site cleanup shall be performed daily, and throughout the day as required, to the satisfaction of the Owner.
- C. All roof, building (interior and exterior), landscaping, parking, and other areas shall be cleaned of all trash, debris, and dirt caused by or associated with the work.
- D. All trash and debris shall be completely removed from the site daily during the work and at the completion of work. All debris shall be legally disposed of offsite.
- E. Prior to acceptance of the work of this Section, the Contractor shall perform a thorough cleaning of all areas. Any new or existing items damaged shall be repaired or replaced to the satisfaction of the Owner at no additional cost.

3.9 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet, or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

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2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

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SECTION 073113

ASPHALT SHINGLES

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 024100 – Selective Demolition
- B. Section 061000 – Rough Carpentry
- C. Section 062013 – Exterior Finish Carpentry
- D. Section 076200 – Sheet Metal Flashing and Trim
- E. Section 261000 – Temporary Mechanical/Electrical Disconnects

1.3 SCOPE OF WORK

- A. In general, the Contractor shall supply all labor, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer, as amended. The work under this Section generally includes the following:
 - 1. Furnish and install new asphalt shingles, underlayment, and accessories on properly prepared roof deck.
 - 2. Remove and replace roof ventilation components.
 - 3. Coordinate removal and disposal of the existing photovoltaic system.
 - 4. Coordinate the installation of miscellaneous wood blocking and plywood. Refer to Section 061000 – ROUGH CARPENTRY for additional information.
 - 5. Coordinate the replacement of deteriorated plywood roof decking. Refer to Section 061000 – ROUGH CARPENTRY for additional information.
 - 6. Coordinate the removal and replacement of isolated exterior siding and trim components where indicated on the Contract Drawings. Refer to Section 062013 – EXTERIOR FINISH CARPENTRY for additional information.
 - 7. Coordinate the installation of new sheet metal flashing, gutters, downspouts, valleys, vent pipes, penetrations, and edge metal. Refer to Section 076200 – SHEET METAL FLASHING AND TRIM for additional information.
 - 8. Clean and restore all areas affected by the work.

1.4 REFERENCES

- A. National Roofing Contractors Association (NRCA) Roofing Manual: Steep-slope Roof Systems

1.5 SUBMITTALS

- A. Submittals shall be made in accordance with the General Conditions and Section 013300 – SUBMITTAL PROCEDURES.
- B. A sample roofing system warrantee and letter of confirmation from the roof shingle manufacturer stating that the Contract Documents have been reviewed and that there are no exceptions to the Specifications and Contract Drawings shall be submitted. The roofing system must meet UL 790, Class A and be in conformance with all local and state building codes and is accepted by the manufacturer for the required warranty.
- C. The Contractor shall provide adequate staging and protection of the interior building as required to perform the work. Provide submittals for site protection and staging as specified in Section 013300 – SUBMITTAL PROCEDURES.
- D. Submit a temporary site protection plan for the Owner to review and annotate.
- E. The Contractor shall submit the following procedural items with their submittal package:
 - 1. Methods of removal of materials
 - 2. Temporary protection procedures
 - 3. Fire watch procedures (if needed)
 - 4. List of local emergency numbers
 - 5. Staging/set-up procedures
 - 6. Schedule of roof renovations with coordination of structural improvements
- F. The Contractor shall submit the following samples with their submittal package:
 - 1. Color samples of asphalt shingles
 - 2. Manufacturer's literature and sample warranties
 - 3. Shingle manufacturer's installation instructions
 - 4. Confirmation letter from the shingle manufacturer acknowledging the project and that the warranty will be issued upon completion of the project.
- G. Provide the manufacturer's product and installation literature for each item listed in Part 2 and other material anticipated for use on the project, for approval. Shop drawings are required indicating any anticipated changes.

1.6 QUALITY ASSURANCE

- A. Fire-Resistance Characteristics: Where indicated, provide asphalt shingles and related roofing materials identical to those of assemblies tested for fire resistance per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify products with appropriate markings of applicable testing agency.
- B. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790, for application and roof slopes indicated.

1.7 SPECIAL JOB CONDITIONS

- A. The building occupants are highly sensitive to fumes, odors, noise, and disturbances. The Contractor shall submit a detailed sequence schedule for the roof area prior to the start of work and shall coordinate daily schedules with the Owner.

1.8 JOB CONDITIONS

- A. Carefully coordinate the work in this section with the work in other sections to be sure the Contract Areas are in weather tight condition at the end of each day's work. This includes flashing work.
- B. All surfaces to receive underlayment, shingle roofing or flashings shall be thoroughly dry. Should surface moisture such as dew exist, the Contractor shall provide the necessary equipment to dry the surface prior to application of roofing materials. No open flames will be allowed.
- C. Completed roof areas shall be trafficked as little as practical. Work shall be coordinated to prevent this situation by working toward the roof edges and access ways. The Contractor shall provide protection for existing roof areas trafficked during construction.
- D. Prior to, and during, asphalt shingle installation, all dirt and debris shall be removed from surfaces by sweeping and/or by similar methods.
- E. The Contractor shall take all precautions to properly install the specified materials at cold temperatures. Consult with and follow all manufacturer requirements. Materials which have a temperature other than the recommended application temperature of the manufacturer shall not be installed.
- F. The Contractor shall provide and equip as much labor force as is necessary to complete the project within the Contract period and in accordance with the Contract Documents without sacrificing workmanship quality.
- G. Materials, equipment, and demolition debris shall not be stored on roof decks in such a manner as to overstress and/or damage the existing composite panels, deck and supporting structure. Placing of loads at midspans of framing shall be avoided. Superimposed loads shall be well distributed and shall not exceed 20 psf at any given point of the roof at any time during the construction. Equipment, apparatus, construction materials, and demolition debris shall not, in any case, be allowed to load the roof structures in combination with any standing snow or ice upon the roofs.
- H. The Contractor will be responsible for providing the staging/scaffolding required to access the roof area to perform the work.

- I. The Contractor shall supply, install and maintain all shoring, supports, barriers, protection, warning lines, lighting and personnel required to support the structure, fixtures and facilities affected by his work and segregate the work area(s) from pedestrian or vehicular traffic, as well as to prevent damage to the building, occupants and the surrounding landscaped and paved areas.
- J. The Contractor, his workmen, all his suppliers and agents shall make every effort to work in harmony with the building occupants.
- K. All new and temporary construction, including equipment and accessories, shall be secured from vandalism or abuse.
- L. Stored shingle bundles are not to be stacked more than six feet high. Rolled underlayments shall be stored on ends, not laid flat.
- M. The Contractor shall provide all necessary temporary protection and barriers to segregate the work area and to prevent damage to adjacent areas.
- N. Under no circumstances shall the Contractor remove existing materials and systems to the ground in an uncontrolled manner. Adjacent building and property areas shall be protected from airborne debris.

1.9 WARRANTY

- A. Special Warranty: Standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period.
 - 1. Material Warranty Period: Limited lifetime warranty but not less than 40 years, with first 5 years non-prorated.
 - 2. Algae-Discoloration Warranty Period: Asphalt shingles will not discolor 10 years from date of Substantial Completion.
- B. See Section 011100 – SUMMARY OF WORK for contractor’s guarantee.

PART 2 – PRODUCTS

2.1 ASPHALT SHINGLES

- A. Asphalt shingles shall be architectural type, laminated type, algae-resistant, asphalt-impregnated fiberglass type with a granule surface, having a minimum exposure of 5-5/8-inches. Shingles shall be self-sealing wind resistant type with a U.L. 790 Class “A” fire rating classification, conforming to requirements of ASTM D3018, Type 1. Shingles shall also conform to ASTM D3462, ASTM D3161; Class F, and ASTM D7158; Class H (150 mph). Color shall be selected from manufacturer’s standard color chart by Owner. Shingles shall meet the minimum specifications herein or shall be one of the following:

1. Timberline Ultra HD as manufactured by GAF.
2. Landmark Premium as manufactured by CertainTeed.
3. Duration Premium COOL by Owens Corning.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

2.2 UNDERLAYMENT MATERIALS

- A. Modified Bitumen Underlayment: Self-Adhering Membrane Underlayment, High Temperature: ASTM D 1970, minimum of 30-mil thick, slip-resisting, polyethylene-film-reinforced top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release paper backing; cold applied. Modified bitumen underlayment shall be as required by the manufacturer to meet their specific warranty requirements, Grace Ultra by GCP, WinterGuard HT by CertainTeed, WIP 300HT by Carlisle, or approved equal. Provide underlayment manufacturer's recommended accessories.
1. Thermal Stability: Stable after testing at 240 deg F; ASTM D 1970.
 2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F.
- B. Synthetic Underlayment: High-performance synthetic roofing polymer-based scrim-reinforced water-resistant underlayment for use beneath asphalt shingles such as DiamondDeck as manufactured by CertainTeed, Deck-Armor by GAF, Slope Shield by VaproShield, or approved equal to meet the manufacturer's installation warranty requirements. Provide underlayment manufacturer's recommended accessories.
- C. Slip sheet to be used between the underlayment and sheet metal, if required by the manufacturer to prevent adhesion shall be five pound (5 lb.) red rosin paper

2.3 ROOF CEMENT

- A. Plastic roof cement shall be asphalt based, asbestos-free conforming to ASTM D4586, Type I or II. Plastic roof cement shall be provided in caulking gun tube containers where required for spot applications.

2.4 RIDGE VENTS

- A. High density polypropylene with minimum net free area of 18 square inches per foot such as CobraVent as manufactured by GAF Materials Corporation, Xtractor Vent X18 Ridge Vent as manufactured by Obdyke Benjamin, Inc., Ridge Vent as manufactured by CertainTeed, or accepted substitute to meet the manufacturer's specific warranty requirements.

2.5 STATIC ROOF RELIEF VENTS

- A. Low-Profile Gravity Ventilator:
1. Material: Aluminum
 2. Net Free Area (NFA): 60 sq. in.
 3. Opening Size: 10-inches
 4. Style: Slant-Back

5. Color: Black
6. Dimensions: 16-inches wide, 5-1/2-inches high
7. Basis of Design: MasterFlow Roof Louver SSB960 Slant-Back as manufactured by GAF Materials Corporation.

2.6 ACCESSORIES

- A. Roofing Nails: ASTM F 1667; #304 stainless steel wire roofing nails, minimum 0.120-inch diameter, ring shanked, with a minimum 3/8-inch diameter flat head and of sufficient length to penetrate 3/4-inch into solid wood decking or extend at least 1/8-inch through sheathing.
- B. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
- C. Underlayment Nails: Aluminum or hot-dip galvanized-steel nails with 1-inch minimum diameter low-profile metal heads or plastic disc caps.

PART 3 – EXECUTION

3.1 GENERAL WORKMANSHIP

- A. Refer to the Residential Asphalt Roofing Manual and all recommendations of the Asphalt Roofing Manufacturers Association for the installation of roofing and flashing at this project.
- B. The prepared existing roof surface must be dry, clean, and smooth with no obtrusions or irregularities.
- C. Comply with the manufacturer's written instructions and these Specifications for all renovations and associated work.
- D. Handle materials to prevent damage to building components and project site areas.
- E. Flashings shall be installed along with roof systems to assure weathertight termination.
- F. Do not cut any material with a solvent or dilutant unless specifically instructed by the manufacturer in writing.

3.2 PROTECTION OF ROOF SURFACES

- A. Equipment (i.e. staging) and techniques shall be used which prevent damage to the roof as a result of foot or material traffic. The progression of work shall be laid out and presented to the Owner and Designer to prevent other trades from working on or above completed roofing. Personnel who are working on the roof shall have proper shoes which will not damage the asphalt shingles, and shoe soles shall be made of a material which will aid in preventing falls.

3.3 REMOVAL OF EXISTING SHINGLES

- A. All existing asphalt shingles and felt underlayments included in this Contract shall be removed down to the existing plywood roof sheathing. The Contractor shall follow the recommendations published in the NRCA Roofing Manual – Steep-slope Roof Systems.
- B. Remove only as many shingles and flashings that can be made weather tight the same day. The entire existing asphalt shingle roof system shall be removed, and the underlayments installed, prior to the installation of the new shingle system.
- C. Should damaged new shingles be encountered as a result of trafficking the roof system and where work involves partial replacement or repair of the roof, the Contractor shall remove and replace the damaged units at no additional cost to the owner.

3.4 PREPARATION OF EXISTING ROOF DECK

- A. The Contractor shall inspect the roof deck following removal of the existing roof systems. Deck areas found to have surface defects or otherwise unsuitable shall be repaired; refer to Section 012200 – UNIT PRICES. Determination and extent of repairs shall be made by the Owner and Designer. Do not cover over areas of unsuitable decking.
- B. Ensure that surfaces to receive the roofing are clean, thoroughly dry, and free from loose boards, and projecting ends that might damage the roofing. Provide the necessary equipment to dry the surface prior to application should surface moisture such as dew exist. Do not dry with open flames.
- C. Foreign particles shall be cleaned from interlocking areas to ensure proper seating and to prevent water damming. Prior to installation of vents and other projections through roofs shall be properly flashed and secured in position, and projecting nails shall be driven firmly home.
- D. Coordinate re-securement of existing loose plywood roof decking with Section 061000 – ROUGH CARPENTRY.
- E. Clean deck surfaces using brooms, air spray or other means necessary to provide a clean, smooth, uniform deck.

3.5 UNDERLAYMENT INSTALLATION

- A. General: Comply with underlayment manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

- B. Modified Bitumen Underlayment: Install modified bitumen underlayments atop roof decks as described in these specifications, as shown on the Contract Drawings, and recommended by the manufacturer. Modified bitumen underlayment sheets shall have 6" minimum horizontal laps and 6" end laps unless otherwise specified so as not to buck water. Modified bitumen sheets shall be installed per manufacturer's instructions and shall be sealed without wrinkles. Roll in all underlayment with rollers to assure 100% adhesion. In general, modified bitumen underlayment shall be installed as follows:
1. At all eave and rake edge locations modified bitumen sheets shall extend up the roof deck 36" minimum beyond the interior face of the existing exterior walls.
 2. At all ridges, minimum 24" on both sides of ridge.
 3. At valleys, modified bitumen sheet shall extend 24" minimum up slope on both sides of valley. Form 6" wide end and side laps per membrane manufacturer's written instructions. Membrane shall be applied starting at the low point and working upwards. All sheets shall be overlapped a minimum of 6 inches.
 4. At all roof penetrations, modified bitumen sheets shall extend 36" minimum onto the roof deck above and on all sides of the penetration.
 5. Modified bitumen underlayment shall not be left permanently exposed to sunlight. Membrane shall be covered with exposed roofing materials as soon as possible. Membrane damaged due to exposure to sunlight shall be patched prior to the application of final roof covering.
 6. Membrane shall be applied only in fair weather when air and surface temperatures are above 40 degrees F.
- C. Synthetic Membrane Underlayment: Synthetic membrane underlayments shall be installed in a two-ply application across the roof slope lapped to shed water. Underlayments shall be side lapped 4" minimum and shall have 6" minimum end laps. Torn or otherwise damaged underlayments shall be replaced. Underlayments shall be secured with nails through tin disks as required to prevent wind damage and traffic damage during the roof renovations. All damaged sections shall be removed and replaced at no additional cost to the Owner.
- D. Provide and install red rosin slip sheets at all locations where sheet metal flashings will rest over modified bitumen underlayments, or as required for separation between dissimilar metals.

3.6 SHEET METAL FLASHING INSTALLATION

- A. General: Install metal flashings and other sheet metal to comply with requirements in Section 076200 – SHEET METAL FLASHING AND TRIM.
- B. Install metal flashings according to recommendations in ARMA's "Residential Asphalt Roofing Manual" and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."

3.7 STATIC ROOF VENT INSTALLATION

- A. Remove the existing static roof vents and associated flashings, filters, etc.
- B. Determine the location of the new static roof vents. The intent is to replace the existing vents with the new vents in the same locations.
- C. Confirm the opening in the wood roof deck matches the opening size required by the new vent. Cut the existing plywood roof deck if required to meet the static vent manufacturer's requirements.
- D. Position the static roof vent and nail into place using the specific fasteners. Nail the vent securely into place around the perimeter, spacing the nails at 4-inches on center. The nails should be 1-inch from the edge of the vent flange.
- E. Seal all seams and nail heads with the approved sealant material. Install high-temperature resistant modified bitumen membrane over the vent flange prior to installing the new asphalt shingles.

3.8 RIDGE VENT INSTALLATION

- A. Remove the existing ridge vents and associated flashings, filters, etc.
- B. Determine the location of the new ridge vents. The intent is to replace the existing ridge vents with the new vents in the same locations.
- C. Confirm the existing ridge allows for a minimum 1-inch opening on either side of the ridge beam. Cut the existing plywood roof deck if required to meet the ridge vent manufacturer's requirements.
- D. Mark and cut the slot opening, making sure the ends of the opening stop at least 6-inches from any end walls and 12-inches from hip and ridge intersections or chimneys.
- E. Locate, center, and conform the ridge vent of the slot with the vent resting firmly against the roof surface. Attach the vent using the fasteners recommended by the vent manufacturer through the pre-punched nail holes in the vent. Nails must penetrate fully through wood deck.
- F. Install cap shingles directly to the vent using the fasteners recommended by the vent manufacturer. Nails must penetrate fully through the wood roof deck.

3.9 ASPHALT SHINGLE INSTALLATION

- A. Install shingles in accordance with manufacturer's instructions and these specifications. Remove manufacturer's cellophane protection strip from bottom surface of shingles to expose wind tab sealants.

- B. Apply a starter course of shingles with the five-inch (5") exposure surface cut off. Install bottom edge of starter course overhanging the sheet metal counterflashing four inches (4"). Nail all shingles to deck at top of tabs and one-inch (1") in from each side along a line 1-1/2" above the lower edge install two (2) nails in center (6 nails per shingle). Install asphalt roofing cement at each shingle as indicated on the Contract Drawings.
- C. Beginning at the starter course, install asphalt shingles. Apply subsequent courses of shingles allowing a five-inch (5") weather exposure of the course below. Stagger butt joints six inches (6") minimum between courses.
- D. Remove six inches (6") from the end of the first shingle in the second course to be installed. Remove twelve inches (12") from the end of the first shingle in the third course, eighteen inches (18") from the end of the first shingle in the fourth course and so on. The first shingle in the seventh course will be a full shingle. Do not "rack" shingles by installing them with the end joints aligned over alternate courses.
- E. Nail all shingles at third points and one-inch (1") in from each end along a line 5/8" above the five-inch (5") exposure. Install two (2) nails at center point for a total of six (6) nails per shingle. Nails shall be below the line of wind seal adhesive. Trim to extend beyond the rake edge by 1/4" and as required to neatly extend existing rake lines.
- F. Each course of shingles shall be installed neat and straight with no visible variation between adjoining shingles or cut-out lines. Utilize chalk lines, tape measures.
- G. Partial shingles may be used only along roof to wall or edge locations, as required to stagger butt joints and shingle cutouts or as required to properly tie-into adjacent shingle roofing to remain.
- H. Apply the plastic cement to each of the shingle tabs.
- I. Open Valleys: Install sheet metal valley flashing in accordance with Section 076200 – SHEET METAL FLASHING AND TRIM. Cut and fit asphalt shingles at open valleys, trimming upper concealed corners of shingle strips. Widen exposed portion of open valley 1/8-inch in 12-inches from highest to lowest point.
- J. Ridge and Hip Cap Shingles: Maintain same exposure of cap shingles as roofing shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds. Fasten with roofing nails of sufficient length to penetrate sheathing.
- K. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.
- L. Racking or stacking of the shingles will not be permitted and will require removal and replacement at no additional cost to the Owner.

3.10 CLEAN-UP

- A. Site clean-up shall be complete and performed daily to the satisfaction of the Owner.
- B. All roof, building (interior and exterior), landscape, and parking areas shall be cleaned of all trash, debris and dirt caused by, or associated with, the work.
- C. All trash and debris shall be completely removed from the site daily during the work and at the completion of the work. All debris shall be legally disposed of off-site.
- D. Prior to acceptance of the work, the Contractor shall perform a thorough clean-up of the work site, building surfaces, landscaping, etc. Any items damaged shall be repaired or replaced to the satisfaction of, and at no additional cost to, the Owner
- E. The Contractor shall not demobilize the site until the completed work is toured by the Owner and Designer. Any unsatisfactory items observed will be reported in "punch-list" form. These items shall be corrected immediately by the Contractor prior to demobilization from the job site.
- F. All scaffolding, barriers, temporary facilities, and the like shall be removed upon completion of the work. Areas damaged as a result of the Contractor's equipment shall be restored to their original condition, all to the satisfaction of the Owner.
- G. Refer to the Close-Out Procedures described in Division One for additional information.

END OF SECTION

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Roof Replacement and Associated Work at
Shutesbury Elementary School
Shutesbury, MA
Gale JN 840670

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SECTION 076200

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 024100 – Selective Demolition
B. Section 061000 – Rough Carpentry
C. Section 062013 – Exterior Finish Carpentry
D. Section 073113 – Asphalt Shingle Roofing
E. Section 261000 – Temporary Mechanical/Electrical Disconnects

1.3 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, equipment, temporary protection, tools, and appliances necessary for the proper completion of the work as required in the Specifications, in accordance with good construction practice, and as required by the materials manufacturer, as amended. The work under this Section generally includes the following:
1. Supply all necessary chutes, disposal facilities, transportation, and labor necessary to dispose of all demolished materials, dirt, and debris off-site in a legal dumping area. The Contractor shall obtain all permits necessary to transport and dispose of all materials, rubbish, and debris.
 2. Provide all necessary underlayment, miscellaneous flashing, attachment clips, and closure members to ensure a weathertight installation.
 3. Install new metal drip edge, fascia, rake edge, gutters, downspouts, valley flashings, apron flashings, step flashings, miscellaneous flashings and trim, and associated components as shown on the Contract Drawings at designated locations.
 4. Install new cleanout connection at locations where the downspout enters the below-grade drainage system.
 5. Cleanout below-grade drainage systems to provide a free-flowing system.
 6. Complete all associated work.
 7. Clean and restore all areas affected by the work.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.

- B. Fabricate and install roof edge flashing and copings capable of resisting the Wind Zone forces required by Code according to recommendations in FMG Loss Prevention Data Sheet 1-49.
- C. Thermal Movements: Provide sheet metal flashing and trim that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of sheet metal and trim thermal movements. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F material surfaces.
- D. Water Infiltration: Provide sheet metal flashing and trim that do not allow water infiltration to building interior.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show layouts of sheet metal flashing and trim, including plans and elevations. Distinguish between shop- and field-assembled work. Include the following:
 - 1. Identify material, thickness, weight, and finish for each item and location in Project.
 - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 - 3. Details for fastening, joining, supporting, and anchoring sheet metal flashing and trim, including fasteners, clips, cleats, and attachments to adjoining work.
- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
 - 1. Sheet Metal Flashing: 12-inches long. Include fasteners, cleats, clips, closures, and other attachments.
 - 2. Trim: 12-inches long. Include fasteners and other exposed accessories.
 - 3. Accessories: Full-size Sample.

1.6 QUALITY ASSURANCE

- A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

- B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01.
1. Meet with the Owner, Designer, Owner's insurer if applicable, Installer, and installers whose work interfaces with or affects sheet metal flashing and trim including installers of roofing materials, roof accessories, and roof-mounted equipment.
 2. Review methods and procedures related to sheet metal flashing and trim.
 3. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
 4. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

1.7 TEST AREAS

- A. Before full scale work is commenced, execute the following work for trial work areas to be reviewed by the Owner as to acceptability of color, texture, and appearance match with the existing construction. Test areas will be at locations established by the Owner.
1. Three linear feet (3 LF) of gutter including drip edge flashing and strap
 2. Three linear feet (3 LF) of rake flashing
 3. Three linear feet (3 LF) of valley flashing
 4. Three linear feet (3 LF) of apron flashing
 5. Three linear feet (3 LF) of step flashing
 6. One (1) vent pipe flashing

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing and trim materials and fabrications during transportation and handling.
- B. Unload, store, and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.

1.9 COORDINATION

- A. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leak proof, secure, and noncorrosive installation.

1.10 WARRANTY AND GUARANTEE

- A. Upon completion of the work, and prior to final payment, the Contractor shall submit a Guarantee of his work to be free from defect in materials and workmanship. This Guarantee shall be for a period of two (2) years and shall be signed by a Principal of the Contractor's firm and sealed if a corporation.
- B. Finish Warranty – 20-years for aluminum sheets.

PART 2 - PRODUCTS

2.1 SHEET METALS

- A. Aluminum shall be 0.032", 0.040", and 0.050" thick Kynar 500 Fluoropolymer painted aluminum as shown on the Contract Drawings. Color(s) to be selected by the Owner. Aluminum shall have a mill finish for concealed items. Aluminum shall be 3003 alloy, H-14 temper.
- B. Tin-Zinc alloy coated copper shall be cold rolled sheet copper conforming to ASTM B-101-78, and shall be 16, 20, and 24 oz. as specified. Tin-Zinc coating shall be applied by hot dip process to achieve a coating approximately 0.5 mils thick. Sheet length shall be 8' maximum.
- C. All accessories, including but not limited to nails, screws and clips shall be stainless steel or galvanized steel and completely compatible with the surrounding metal to prevent galvanic reaction. Galvanizing shall be per ASTM A153-09.
- D. Termination bars shall be 1/8" x 1" stainless steel or aluminum bar (as required to prevent galvanic action with the flashings being secured) with pre-punched holes at 6" on center.
- E. Clamps shall be screw adjustable stainless steel hose clamps with a minimum 3/8" band width.
- F. Rivets shall be 3/16" diameter copper or stainless steel as required by the metal being secured.
- G. Sheet metal flashings shall be shop fabricated. All breaks, bends and hems shall be uniform, clean, straight lines.
 - 1. All aluminum joints shall be adequately overlapped, back-sealed, and riveted.
 - 2. Flanges shall be 4" wide minimum.
 - 3. Drip edges shall be hemmed 3/4-inch wide and break at a 30° angle.
 - 4. Clips shall be 2-inch wide.
 - 5. All flanges to be covered with roofing or flashing membranes shall have a 1/4-inch minimum hem on the edge.
 - 6. All sheet metal joints shall have 6-inch wide cover and backer plates.
 - 7. Maintain equal fascia height around entire perimeter of each roof area and where fascias abut.

2.2 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Solder for Tin-Zinc Alloy Coated Copper: ASTM B 32, pure tin or lead-free high-tin of type recommended by the tin-zinc alloy coated copper sheet manufacturer.
- C. Wire Ball Downspout Strainer: Prefabricated stainless-steel heavy-duty wire strainers, 0.018" thick minimum wire.
- D. Sealing Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealing tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape.
- E. Sealant for sheet metal flashings and other exposed locations shall be a one part polyurethane conforming to ASTM C 920 Type S, Grade NS, Class 50, Uses NT, M, A and O Specifications such as manufactured by Tremco, BASF-Sonneborn, Sika Corp., or approved equal.
 - 1. Color(s) shall be selected by the Owner from the approved manufacturer's premium color chart.
 - 2. Cleaners and primers shall be as recommended by the manufacturer of the caulking.
 - 3. Compressible backer rod shall be continuous length, closed cell polyethylene foam, as recommended by the sealant manufacturer. Backer rod shall be compressible, resilient, non-waxing, non-extruding and non-staining. Backer rod shall be of sufficient size to be compressed 30% of maximum joint width and shall be totally compatible with the sealant, primer and substrates. Backers shall conform to the requirements of ASTM C 962 - Type A, ASTM D 1622, ASTM D 1623 and ASTM D 5249 such as Green Rod by Nomaco, Sonofoam by Sonneborn, ITP soft type backer rod or approved equal.
 - 4. Bond breaker tape shall be self-adhesive polyethylene tape as recommended by the sealant manufacturer.
- F. Masking material shall be commercially available masking tape of appropriate width or other material recommended by the sealant manufacturer. Self-adhesive masking materials shall be of low tack and completely strippable, leaving no adhesive residue behind when removed.
- G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

- H. Self-Adhering Modified Bitumen shall be a 32-mil thick minimum with 4-mil, high-density polyethylene film and release paper backing formulated for high temperature installation in accordance with ASTM D 1970, such as Grace Ice & Water Shield HT, as manufactured by GCP, WinterGuard HT by CertainTeed, WIP 300HT by Carlisle, or approved equal.
- I. Bituminous Coating to separate incompatible metals: Cold-applied asphalt mastic, SSPC-Paint 12, compounded for 15-mil dry film thickness per coat.
- J. Mastic for back-sealing sheet metal against non-metal substrates shall be as recommended by the underlayment manufacturer. Concealed sealant for back-sealing metal-to-metal connections shall be single-component, butyl (polyisobutylene) rubber sealant, heavy bodied for joints with limited movement.
- K. Red Rosin paper (separation layer) shall be 5-pound kraft paper.
- L. Slip sheet shall be 15-pound red rosin paper.

2.3 FABRICATION SCHEDULE

- A. Note, similar flashing components have been listed under multiple metal fabrications type and thicknesses. The Contractor shall coordinate the use of compatible metals to prevent galvanic corrosion and coordinate painted finish components at visible locations.
 - 1. 16 oz. Tin-Zinc Coated Copper
 - a. Vent Pipe Sleeve/Cover
 - b. Downspout Cleanout Covers
 - c. Apron Flashing (at cricket pan locations)
 - d. Step Flashing (at cricket pan locations)
 - e. Pipe (Cone) Flashing
 - 2. 20 oz. Tin-Zinc Coated Copper
 - a. Cricket Pans
 - b. Valley Flashing
 - 3. 24 oz. Tin-Zinc Coated Copper
 - a. Cleats/Clips
 - 4. 0.032 Thick Coated Aluminum:
 - a. Step Flashing
 - b. Gutter Backer Fascia
 - 5. 0.040" Thick Coated Aluminum:
 - a. Apron Flashing
 - b. Drip Edge
 - c. Miscellaneous Flashings
 - d. Gutter End Caps
 - e. Downspout
 - f. Downspout Straps
 - 6. 0.050" Thick Coated Aluminum:
 - a. Gutter
 - b. Gutter Baffles

7. 0.050" Thick Coated, or Mill Finished Aluminum:
 - a. Continuous Hook Strips
 - b. 2-inch Wide Clips
 - c. Cleats/Clips
 - d. Outlet Tube
8. 0.125 Thick Mill Finished Aluminum:
 - a. Gutter Stiffener
9. 0.25" Thick Mill Finished Aluminum:
 - a. Gutter Straps

2.4 DOWNSPOUT CLEANOUT

- A. New cleanout valves at the connection between the new downspouts and the existing below-grade drainage system shall consist of a Schedule 40 coated cast iron wye fitting capped with a removable cleanout plug.
- B. Elastomeric joint couplings to be used only at tie-ins from new to existing pipe shall conform to the Cast Iron Soil Pipe Institute (CISPI). Couplings shall be made using neoprene sleeves with stainless steel draw band clamp connections, four clamps per sleeve.

2.5 FASTENERS

- A. In general, fasteners, straps and other hardware shall be copper, brass, stainless steel, or hot-dip galvanized steel. Galvanizing shall be per ASTM A 153 specifications. Electro-galvanizing will not be accepted.
- B. Sheet metal to wood blocking connections and mechanical unit securement (exposed securement): Self-drilling, self-tapping, Number 10, stainless steel hex-head screws, 1-1/2-inch long, equipped with metal capped EPDM washers.
- C. Nails for flashing securement at wood substrates shall be No. 12 Stubbs gauge, large head, threaded shank, copper, or stainless-steel nails minimum 1-1/2-inch long.
- D. Gutter straps shall be secured to wood blocking substrates with minimum 2-inch long exterior grade stainless-steel screws. The screws shall penetrate the full depth of the wood blocking.
- E. Sheet metal to sheet metal connections shall be Self-drilling, self-tapping, Number 10, stainless steel hex-head screws, 1-1/2-inch long, equipped with metal capped EPDM washers.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of work.

1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
1. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by fabricator or manufacturers of dissimilar metals.
1. Coat side of stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim will contact wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip-sheet or install a course of polyethylene underlayment.
 3. Bed flanges in thick coat of asphalt roofing cement where required for waterproof performance.
- C. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
- D. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and elastomeric sealant.
- E. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
1. Space cleats not more than 12-inches apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
- F. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10-feet with no joints allowed within 24-inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used, or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1-inch-deep, filled with elastomeric sealant concealed within joints.
- G. Fasteners: Use fasteners of sizes that will penetrate substrate not less than 1-1/4-inches for nails and not less than 3/4-inch for wood screws.

1. Galvanized or Prepainted, Metallic-Coated Steel: Use stainless-steel fasteners.
 2. Aluminum: Use aluminum or stainless steel fasteners.
 3. Stainless Steel: Use stainless-steel fasteners.
- H. Seal joints with elastomeric sealant as required for watertight construction.
1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1-inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is moderate, between 40 and 70 deg F set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
- I. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Prein edges of sheets to be soldered to a width of 1-1/2-inches except where pretinned surface would show in finished Work.
1. Do not solder aluminum sheet.
 2. Stainless-Steel Soldering: Prein edges of uncoated sheets to be soldered using solder recommended for stainless steel and phosphoric acid flux. Promptly wash off acid flux residue from metal after soldering.
 3. Do not use open-flame torches for soldering. Heat surfaces to receive solder and flow solder into joints. Fill joints completely. Completely remove flux and spatter from exposed surfaces
- J. Aluminum Flashing: Rivet or weld joints in uncoated aluminum where necessary for strength.

3.3 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal roof flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight.
1. Secure in a waterproof manner by means of snap-in installation and sealant.
- B. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending a minimum of 4-inches over base flashing. Install stainless steel draw band and tighten.
- C. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4-inches over base flashing. Lap counterflashing joints a minimum of 4-inches and bed with elastomeric sealant.
1. Secure in a waterproof manner by means of snap-in installation and sealant.

3.4 CONTINUOUS CLEATS AND HOOK STRIPS

- A. Form continuous cleats/hook strips with $\frac{3}{4}$ -inch kicks, bent out at a 30° angle to the face or wall. Height of continuous cleats/hook strips shall be as indicated on the Detail Drawings.
- B. Secure continuous cleats/hook strips to wood blocking with the specified fasteners spaced at 6-inches on center.
- C. Provide 1/8-inch butt joints between hook strip sections.

3.5 SECUREMENT CLIPS

- A. Secure clips to substrate with the specified fasteners at minimum 6-inches on center, or as indicated on the Detail Drawings.
- B. Bend clips a minimum of 1-inch over bottom drip edge of flashing and crimp tightly.

3.6 GUTTERS AND ASSOCIATED COMPONENTS

- A. Fabricate and install gutter and downspout assemblies where shown on the roof area plan and as detailed.
- B. Gutter shall be formed to the profile shown in the Contract Drawings. The dimensions shown on the roof details are approximate and shall be confirmed in the field. Overlap each section 3" minimum, rivet with 2 fasteners per inch per lap to provide a watertight connection. The gutter girth is intended to be 24-inches.
- C. The bead (front edge) of the gutter shall be minimum 1-inch lower than the roof edge. All gutter fasteners shall be minimum 1/2-inch above the bead.
- D. Nail gutter flange 3" on center maximum into wood blocking.
- E. Install gutter stiffening bar and straps as shown in the Contract Drawings.
- F. Maximum length of gutter sections shall be 10 feet.
- G. Gutter expansion joints shall be installed for gutter sections greater than 50-feet.
- H. Gutter straps shall be spaced at 24" on center. Gutter straps shall be screwed to the wood blocking at the vertical face of the fascia into the wood framing beyond.
- I. Install gutter end caps and baffles as shown on the Contract Drawings.
- J. Locate outlet tubes as shown on the Roof Area Plan, and to match that of the existing configuration. Outlet tubes shall extend 3" minimum into downspout. Tubes shall be constructed with a longitudinal seam and the upper edge flanges $\frac{1}{2}$ ". Flange shall be riveted and sealed to gutter.

- K. Insert downspout strainers at each downspout location and solder units in place.
- L. Install cleanout box at the connection between the downspout and below-grade drainage system. Where no below-grade drainage system exists, provide downspout kicks onto landscaped area.

3.7 SEALANT INSTALLATION

- A. Clean and prime substrates in strict accordance with sealant manufacturer's requirements.
- B. Precondition sealants to a temperature between 60 and 70 degrees or as required by the manufacturer. Apply sealant to clean dry surfaces only when the ambient temperature is between 60 and 85 degrees F.
- C. Ensure all work by others occurring at sealant joint locations has been completed prior to the start of sealant installation.
- D. Clean all substrates to receive the joint sealant using the manufacturers recommended cleaners and surface preparation techniques.
- E. Ensure all existing sealants and other materials have been removed down to clean sound original substrates. Saw-cut, wire brush, chip, or grind as required to achieve suitable substrates for sealant installation.
- F. All bonding surfaces shall be cleaned with a minimum of two applications of solvent followed by wiping with clean white rags. Solvent shall be applied with brushes and wiped from substrate with rags while it is still wet. Additional application shall be performed if dirt remains after two applications until all dirt is removed.

3.8 CLEAN-UP

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal filings, pop rivet stems, and pieces of flashing. Maintain in a clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

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SECTION 261000

TEMPORARY MECHANICAL/ELECTRICAL DISCONNECTS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 024100 – Selective Demolition
B. Section 073113 – Asphalt Shingle Roofing
C. Section 076200 – Sheet Metal Flashing and Trim

1.3 DESCRIPTION OF WORK

- A. In general, the Contractor shall supply all labor, materials, equipment, temporary protection, tools and appliances necessary for the proper completion of the work in this Section, as required in the Specifications and in accordance with good construction practice. The work under this Section generally includes the following:
1. Provide all temporary protection, lifts, manpower, and equipment to protect the building and its components.
 2. The Contractor shall disconnect designated rooftop mechanical equipment and electrical conduit(s) servicing equipment and re-locate electrical conduits and/or roof and wall penetrations to accommodate the new roof system. The Contractor will be responsible to coordinate all work (equipment shutdown and interior access/protection) with the Owner.
 3. Temporarily disconnect, remove, or support of existing roof top mechanical units and equipment. Mechanical units and equipment shall be re-installed and reconnected after installation of roofing and flashing of roof curbs and/or sleepers/equipment supports.
 4. Disconnect existing photovoltaic system and terminate the wiring in a new junction box below the roof deck mounted to the existing rafter system.
 5. The Contractor shall coordinate the required electrical / mechanical shutdown(s) of the designated mechanical units with the Owner where the existing equipment requires raising or temporary removal to perform the work and reinstallation, where indicated on the Contract Drawings.
 6. Coordinate the work in this section with the appropriate trades to insure the proper work sequence.

1.4 JOB CONDITIONS

- A. Schedule and execute all work without exposing the building interiors to inclement weather. Protect all new and existing roof work, the building and its contents from staining and damages. Segregate all work areas from the building occupants.
- B. Notify the Owner at least two (2) weeks in advance of doing any interior demolition work so that the Owner may remove any portable items, such as furniture, from the area. Fixed items will not be removed and are to be protected by the Contractor.
- C. The Contractor shall be responsible for shutting down, removal, temporary support/shoring, proper reinstallation with ductwork and electrical extensions as required, and turning on of each mechanical unit by the end of the workday as it relates to the removal and reinstallation of the mechanical equipment. If the mechanical unit is found operational prior to the shutdown procedures, and does not operate upon completion of the work and restarting the equipment, the Contractor will be responsible for repairing/replacing said unit at no additional cost to the Owner.
- D. The Contractor is cautioned to take all necessary precautions and make all investigations necessary to install the work. The Owner will not consider unfamiliarity with the job conditions as a basis for additional compensation.
- E. The Contractor shall provide a minimum of two (2) weeks' notice prior to shutting down any mechanical services.

1.5 SUBMITTALS

- A. The Contractor shall submit project literature and samples for the items listed in this section in accordance with Section 013300 – SUBMITTAL PROCEDURES.
- B. Submit proposed lead times of materials and coordination efforts associated with replacement of units.
- C. Submit proposed temporary shoring details and methods of re-attachment.
- D. Contractor to provide site safety plan to Owner.

1.6 WARRANTY

- A. The Contractor shall supply the Owner with a minimum two (2) year workmanship guarantee starting at the date of Substantial Completion. In the event any work related to the temporary mechanical/electrical disconnects is found to be defective within two (2) years of substantial completion, the Contractor shall remove and replace such at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 FASTENERS AND ACCESSORIES

- A. In general, fasteners shall be stainless steel. All accessories, including, but not limited to nails, screws, clips, fastening strips, etc. shall be completely compatible with the material being fastened to prevent galvanic reaction and premature deterioration.
- B. Fasteners for securing fan and vent unit covers and termination bars to existing wood construction shall be stainless steel hex head self-drilling screws. At fan and vent unit cover resecurement use stainless steel capped EPDM washers of the next larger size than the existing fastener.

2.2 SHEET METAL, PREFORMED FLASHINGS AND ACCESSORIES

- A. Aluminum shall be .032-inch thick, constructed per SMACNA standards for 2-inch w.c. static pressure. Aluminum shall have a mill finish. Aluminum shall be 3003 alloy, H-14 temper.
- B. Stainless steel shall be 24-gauge AISI 18-8 type 304, 2D finish. Sheet length shall be 8-foot maximum.
- C. Galvanized steel shall be constructed per SMACNA standards for 2-inch w.c. static pressure.
- D. All accessories, including but not limited to nails, screws and clips shall be copper, brass, stainless steel or galvanized steel and completely compatible with the surrounding metal to prevent galvanic reaction.
- E. Rivets shall be 3/16-inch diameter stainless steel.

PART 3 - EXECUTION

3.1 GENERAL

- A. All work in this Section shall be coordinated with roof replacement work.
- B. All flashing-in of the mechanical work shall be the responsibility of and provided by the roofing contractor under Section 73113 – ASPHALT SHINGLE ROOFING.
- C. The Contractor is cautioned to investigate all existing conditions and materials of construction.

- D. Follow all applicable local, state, and federal requirements regarding construction of scaffolding and protection of the public safety for the work items included in this section. Specific reference should be made to OSHA Construction Safety Regulations. Provide warning lines, barricades, and similar items as required to restrict pedestrian access to hazardous areas. Job site safety shall be the Contractor's responsibility.

3.2 DISCONNECTION AND RECONNECTION OF MECHANICAL UNITS

- A. Contractor shall coordinate with building Owner prior to any work performed on the mechanical units.
- B. The following is the scope of work required where the existing exhaust fans, mechanical equipment, and/or antennas located on the roof or adjacent surfaces must be disconnected, removed, and reconnected.
 - 1. Prior to temporarily lifting of any existing exhaust fans and mechanical equipment, the Contractor shall test the exhaust fans and mechanical equipment to ensure they are functioning properly and report any problems to the owner.
 - 2. The Contractor shall coordinate all interruptions of power to existing exhaust fans and mechanical equipment with the Owner prior to any work. Note, the Owner does not have the technical support to perform renovations at the site, and therefore, all renovations, including the interruption and reconnecting of the power, will be borne by the Contractor.
 - 3. The Contractor shall ensure that the power to existing exhaust fans and mechanical equipment is turned off. The Contractor shall use lockout / tag-out procedures to ensure that the power is not turned on.
 - 4. The Contractor shall temporarily disconnect, remove, and support the existing roof-mounted exhaust fans, mechanical equipment, ductwork and wiring and reconnect the same, as required by job condition, after installation of a new roof and flashing of the roof curbs.
 - 5. The Contractor shall coordinate the heights of the existing mechanical unit curbs and fan curbs with that of the new insulation height to confirm which of the units will require raising and new duct and electrical extensions as required.
 - 6. The Contractor shall turn power back on to the exhaust fans and mechanical equipment after work has been completed by all other trades.
 - 7. After the existing exhaust fans and mechanical equipment have been reconnected, the Contractor shall test the exhaust fans and mechanical equipment to ensure they are functioning properly and report any problems to the Owner.

3.3 REINSTALLATION OF EQUIPMENT

- A. Contractor shall coordinate with building Owner prior to any work performed on the mechanical units.
- B. Rooftop unit installation shall be coordinated to prevent exposing the interior to inclement weather. Utilize stainless steel capped EPDM washers at all fastener locations.

3.4 SHEET METAL FLASHINGS

- A. Provide sheet metal stainless steel, aluminum or galvanized as specified herein and as required, to match the existing sheet metal systems. Refer to the publication, "Copper and Common Sense" by Revere Copper and Brass and all recommendations of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) concerning methods and materials to be used in the fabrication and construction of sheet metal flashings.
- B. Ductwork shall be crimped and riveted to prevent displacement associated with unit vibration.

3.5 CLEAN-UP

- A. All floors, roofs, and adjacent areas, both interior and exterior, damaged by the installation of the work specified within this specification shall be repaired and cleaned of all dust, debris and any other materials to the Owner's satisfaction.
- B. The Contractor shall not demobilize the site until the completed work is toured by the Owner and Designer. Any unsatisfactory items observed will be reported in "punch-list" form. These items shall be corrected immediately by the Contractor prior to demobilization from the job site. Final payment will not be made until all punch list items are complete and guarantees have been received.
- C. All scaffolding, barriers, temporary facilities and the like shall be removed upon completion of the work. Areas damaged as a result of the Contractors equipment shall be restored to their original condition, all to the satisfaction of the Owner.
- D. Refer to the Close-Out Procedures described in Division One for additional information.

END OF SECTION

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